McCloud Partners, LLC Use Permit
(UP-19-01)
Draft Initial Study/Mitigated Negative Declaration

County of Siskiyou
806 S. Main Street
Yreka, CA 96097

June 2020

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Table of Contents

Contents

Appendices

Tables

Figures

1.0 Introduction

1.0 Introduction

1.1 Introduction and Regulatory Guidance

This document is an Initial Study, with supporting environmental studies, which concludes that a Mitigated Negative Declaration is the appropriate CEQA document for the McCloud Partners LLC Use Permit (UP-19-01). This Mitigated Negative Declaration has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the State CEQA Guidelines, California Code of Regulations Section 15000 et seq.

An initial study is conducted by a lead agency to determine if a project may have a significant effect on the environment. In accordance with CEQA Guidelines Section 15063, an environmental impact report (EIR) must be prepared if an initial study indicates that the proposed project under review may have a potentially significant impact on the environment that cannot be initially avoided or mitigated to a level that is less than significant. A negative declaration may be prepared if the lead agency also prepares a written statement describing the reasons why the proposed project would not have a significant effect on the environment and therefore why it does not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a negative declaration shall be prepared for a project subject to CEQA when either:

a) *The initial study shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or*

b) *The initial study identifies potentially significant effects, but:*

   (1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and

   (2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

If revisions are adopted in the proposed project in accordance with CEQA Guidelines Section 15070(b), including the adoption of mitigation measures included in this document, a Mitigated Negative Declaration is prepared.

1.2 Lead Agency

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b)(1), “The lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose.” Based on the criteria above, the County of Siskiyou (County) is the lead agency for the proposed McCloud Partners LLC Use Permit (UP-19-01).

1.3 Purpose and Document Organization

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed McCloud Partners LLC Use Permit (UP-19-01). This document is divided into the following sections:

1.0 Introduction: This section provides an introduction and describes the purpose and organization of the document.

2.0 Project Information: This section provides general information regarding the project, including the project title, lead agency and address, contact person, brief description of the project location, general plan land use designation, zoning district, identification of surrounding land uses, and identification of other public agencies whose review, approval, and/or permits may be required. Also listed in this section is a checklist of the environmental factors that are potentially affected by the project.

3.0 Project Description: This section provides a detailed description of the proposed project.

4.0 Environmental Checklist: This section describes the environmental setting and overview for each of the environmental subject areas, evaluates a range of impacts classified as “no impact,” “less than significant,” “less than significant with mitigation incorporated,” and “potentially significant” in response to the environmental checklist.

5.0 References: This section identifies documents, websites, people, and other sources consulted during the preparation of this Initial Study.

1.4 Evaluation of Environmental Impacts

Section 4.0, Environmental Checklist, is the analysis portion of this Initial Study. The section provides an evaluation of the potential environmental impacts of the project. There are nineteen environmental issue subsections within Section 4.0, including CEQA Mandatory Findings of Significance. The environmental issue subsections, numbered 1 through 19, consist of the following:

1. Aesthetics
2. Agriculture and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources
6. Energy
7. Geology and Soils
8. Greenhouse Gas Emissions
9. Hazards and Hazardous Materials
10. Hydrology and Water Quality
11. Land Use and Planning
12. Mineral Resources
13. Noise
14. Population and Housing
15. Public Services
16. Recreation
17. Transportation
18. Tribal Cultural Resources
19. Utilities and Service Systems
20. Wildfire
21. Mandatory Findings of Significance

Each environmental issue subsection is organized in the following manner:

The **Environmental Setting** summarizes the existing conditions at the regional, subregional, and local level, as appropriate, and identifies applicable plans and technical information for the particular issue area.

The **Checklist Discussion/Analysis** provides a detailed discussion of each of the environmental issue checklist questions. The level of significance for each topic is determined by considering the predicted magnitude of the impact. Four levels of impact significance are evaluated in this Initial Study:

> **No Impact:** No project-related impact to the environment would occur with project development.
>
> **Less Than Significant Impact:** The impact would not result in a substantial adverse change in the environment. This impact level does not require mitigation measures.
>
> **Less Than Significant with Mitigation Incorporated:** An impact that may have a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (CEQA Guidelines Section 15382). However, the incorporation of mitigation measures that are specified after analysis would reduce the project-related impact to a less than significant level.
>
> **Potentially Significant Impact:** An impact that is "potentially significant" but for which mitigation measures cannot be immediately suggested or the effectiveness of potential mitigation measures cannot be determined with certainty, because

more in-depth analysis of the issue and potential impact is needed. In such cases, an EIR is required.

2.0 Project Information

2.0 Project Information

1. Project title:	McCloud Partners LLC Use Permit (UP-19-01)
2. Lead agency name and address:	Siskiyou County Community Development – Planning Division 806 South Main Street Yreka, CA 96097
3. Contact Person and phone number:	Kirk Skierski, Deputy Director or Planning; (530) 841-2100
4. Project Location	The proposed project is located at 909 Mill Road in the community of McCloud in Siskiyou County, California. The project area, which totals 20 acres, is situated within portions of Assessor's Parcel Numbers (APNs): 028-530-020 & 050, which are situated in Section 6 of Township 39 North, Range 2 West; Section 1 of Township 39 North, Range 3 West; Section 31 of Township 40 North, Range 2 West; Section 36 of Township 40 North, Range 3 West; all in the Mount Diablo Base and Meridian. (See Figure **3.0-1** for project location.)
5. Project sponsor's name and address:	McCloud Partners, LLC 29 Shell Road Mill Valley, CA 94941
6. General Plan designation:	Soil Erosion Hazard (High), Building Foundation Limitations Area (with Severe Pressure Limitations Soil), Severe Septic Tank Limitations (Moderate), Wildfire Hazard Area (High), and Woodland Productivity Area (High Suitability).
7. Zoning:	Heavy Industrial (M-H) District

8. Description of project:

The proposed project entails development of a commercial 5 megawatt (MW) solar photovoltaic (PV) solar generation facility on a 20 acre portion of the 118.30 acre property. The site needs to be graded for solar installation. 100 percent of the 20 acre solar PV generation facility will be graded. The Community Development Department (Rick Dean and Sandy Roper) conducted a site visit on September 26, 2019.

McCloud Partners, LLC owns an additional 157.16 acres (APNs: 028-240-320, 028-440-430, 028-440-550, 028-530-010, 028-530-060, & 028-530-070) that is not included in UP-19-01 and not analyzed in this proposed Initial Study/Mitigated Negative Declaration (IS/MND). There is an additional 13 acre site (on APN: 028-530-050) for possible future expansion of the solar farm that may be graded at a future date. However, any future solar expansion would require the submittal of a new Use Permit Application and the preparation of a new environmental review document pursuant to the California Environmental Quality Act (CEQA).

9. Surrounding land uses and setting:

Surrounding land uses within ½-mile of the project site include Assemblies of God, residential subdivisions, rural residential subdivisions, apartments, McCloud High School, McCloud Elementary School, McCloud Community Services District, Squaw Valley Mobile Home & Trailer Park, Neighborhood Commercial Uses, Town Center District Uses, Heavy

Industrial Uses, First Baptist Church of McCloud, McCloud Health Care Clinic, McCloud RV Resort, State Route 89, and Timberland Production Uses.

10. Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

- Siskiyou County Air Pollution Control District (SCAPCD)
- California Department of Forestry and Fire Protection (Cal Fire)
- Central Valley Regional Water Quality Control Board (CVRWQCB)
- State Water Resources Control Board (SWRCB)
- California Department of Fish and Wildlife (CDFW)
- California Department of Transportation (Caltrans)
- California Public Utilities Commission (CPUC)

11. Environmental factors potentially affected:

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology and Soils	☐ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☒ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☒ Utilities and Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

12. Determination: (To be completed by the lead agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED

NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

June 5, 2020
Date

Kirk Skierski
Printed Name

Deputy Director of Planning
Title

County of Siskiyou,
Community Development Department
Lead Agency

3.0 Project Description

3.0 Project Description

3.1 Project Location

The proposed project is located at 909 Mill Road in the community of McCloud in the unincorporated area of Siskiyou County. Interstate 5 (I-5) provides regional access to the project site and links the site with other northern California communities to the north and south. Local access to the town of McCloud is provided by State Route 89 (SR 89). The project site is accessed from SR 89 at Broadway, which connects to Mill Road.

The approximately 20-acre project site is located on a portion of the 118.30 acre property, which is in the Heavy Industrial (M-H) District. Specifically, the project site is located on Siskiyou County Assessor's Parcel Numbers (APNs): 028-530-020 & 050, which are situated in Section 6 of Township 39 North, Range 2 West; Section 1 of Township 39 North, Range 3 West; Section 31 of Township 40 North, Range 2 West; Section 36 of Township 40 North, Range 3 West; all in the Mount Diablo Base and Meridian. (See **Figures 3.0-1 and 3.0-2, Regional Location and Project Location**.)

3.2 Existing Site Conditions

The McCloud Mill was started in 1892 and continued as an industrial site until closing in 2002. Since this site is in the Heavy Industrial (M-H) District and it was operating as a sawmill, it was not designated for timber production; however, it does contain areas of timber. The property was formerly used by the previous lumber mill owners (the McCloud River Lumber Company, US Plywood, Champion International and P&M Cedar Products) for their lumber milling operations. McCloud Partners, LLC, acquired the mill from Nestle International on July 1, 2014. McCloud Partners, LLC is cleaning up and repurposing the mill site into new businesses. They have already done timber harvests on portions of the project site with licensed timber operators and approved timber harvest plans. (See **Figure 3.0-3, Existing Conditions**.) There are eight (8) certified septic fields and five (5) operating bathrooms that exist on the McCloud Partners, LLC property, as well as 72 functioning fire hydrants. McCloud Partners, LLC also owns two (2) porta potties that are available for deployment on the project site. There are seven (7) access gates for the property owned by McCloud Partners, LLC and there are multiple routes to and from the site.

3.3 Adjacent Land Uses

Timberland Production Uses are located north of the project site. Residential subdivisions, rural residential subdivisions, Light Industrial Uses, and Timberland Production Uses are located east of the project site. Residential subdivisions, apartments, McCloud High School, McCloud Elementary School, Squaw Valley Mobile Home & Trailer Park, McCloud RV Resort, McCloud Health Care Clinic, Assemblies of God, First Baptist Church of McCloud, McCloud Community Services District, Limited

Industrial Uses, Light Industrial Uses, Heavy Industrial Uses, and State Route 89 are located south of the project site. Heavy Industrial Uses and Timberland Production Uses are located west of the project site.

3.4 Project Overview

The proposed project proposes to clear and grade a 20 acre portion of the 118.30 acre property to construct a commercial 5 megawatt (MW) solar photovoltaic (PV) generation facility (See **Figure 3.0-4, Solar Map**). It should be noted that permitted uses in the Limited Industrial (M-L) District and Light Industrial (M-M) District are permitted uses in the Heavy Industrial (M-H) District and do not require a use permit or environmental review. As a result, the light manufacturing facility is not part of UP-19-01 and is not subject to environmental review. There is an additional 13 acre site for possible future expansion of the solar farm that may be graded at a future date. However, any future solar expansion would require the submittal of a new Use Permit Application and the preparation of a new environmental review document pursuant to the California Environmental Quality Act (CEQA).

It is estimated that construction of the solar PV generation facility will begin during the spring of 2021 and will last 3-4 months. 17,500 panels are proposed to be installed at the project site. At its peak, approximately 20-30 workers would be required per day, resulting in approximately 24-26 daily vehicle trips due to ride sharing, which would be approximately 12-13 round trips per day. In addition, delivery truck trips would occur and the maximum number of truck trips per day would be 10 truck trips (5 round trips). Thus, construction activities would result in approximately 40 total truck/vehicle trips (i.e., 20 round trips) per day during the peak construction period. Construction will typically occur Monday through Friday from 7:30 am to 5:00 pm; however, it may be necessary for construction to occur on some Saturdays. During the operational phase of the proposed project solar facility will be unmanned. During the operational phase, maintenance personnel (typically 1-2) will be dispatched to the site for operations and maintenance on an as-needed basis, typically 3-4 times per month. The expected lifespan of the solar PV generation facility is 35-40 years. However, after 35-40 years the solar panels will still have value and will produce around 60%-80% compared to year 1.

The project would consist of the following components: (1) solar PV modules; (2) mounting structures; (3) inverters and transformers; (4) electrical collection and distribution system; (5) generation step-up transformer; and (6) on-site switchgear. The Point of Interconnection for power generated from the project would be the Pacific Corp “McCloud Substation” 12.5 KV Bus located on APN: 028-240-320, just north of the 2.6 acre Solar Parcel shown on **Figure 3.0-4**.

A solar panel converts the sun’s radiant energy into electricity using photovoltaic cells commonly known as solar cells. Key ingredients in a solar panel include solar cells,

photovoltaic modules, and semiconductors. The solar cell is the first building block of a solar panel. Within each solar cell are semiconductors that perform an important role in the overall function of the solar panel. Semiconductors contained beneath the antireflective surface absorb photons of sunlight energy and turn that energy into electric current. Each cell is soldered together in series into one large unit called a photovoltaic module. Multiple photovoltaic modules are soldered together to form a larger unit called a solar panel. Electrons leaving the solar panel require an inverter to convert the electron flow from DC current into usable AC current to power devices such as TVs, computers or hair dryers. Solar panels are increasingly used by homeowners and industry as an alternative to non-renewable energy.

The solar panels would be installed on RBI Solar's Dahlia (4) fixed tilt ground mount photovoltaic (PV) system and the tilt would be approximately 22 degrees. The lower side of each panel would be approximately 36 inches from the ground surface while the higher side would be about 6.5 feet above the ground. The solar panels would be light absorbing with anti-reflective coatings that virtually eliminate glare. The project is intended to operate year-round and would generate electricity during daylight hours. Panel washing would occur twice per year. 250-500 gallons of water, each of the two times per year that panel washing occurs, would be brought to the solar PV generation facility site in a water truck with water from adjacent property that is owned by McCloud Partners, LLC, which has 9,112 acre feet (per year) of water rights (State Water Licenses 832 and 5150).

There is an existing Timber Harvest Plan (THP) 2-14-110-SIS, Old Mill THP[1], for the property which was approved on February 15, 2015. The THP is currently in the process of being amended through Cal Fire for the purpose of conversion of a portion of the existing plan and an addition of 44 acres adjacent to the existing plan, all of which is to be converted for the purpose of solar power generation. Cal Fire has reviewed the proposed THP amendment and determined it satisfies their requirements. Prior to Cal Fire's approval of the Timber Harvest Plan amendment, the Use Permit must be granted including adoption of this Initial study/Mitigated Negative Declaration. The specific areas that are the subject of the amendment to the THP were designated commercial thinning, shelterwood removal, and non-harvest under the existing plan. Operations have been completed on the existing plan.

The amended area includes 20 acres of the original plan that has been logged under the plan. This includes 8 acres that were logged under Commercial Thinning silviculture, 5 acres that were logged under Shelterwood Removal Stem silviculture, and 7 acres that were designated "Non-Timberland Area" under the original plan.

1 Timber Harvesting Plan (THP) No. 2-14-110-SIS (McCloud Mill THP), approved by the California Department of Forestry and Fire Protection (CAL FIRE) on February 10, 2015.

The amendment to the THP states that the objective is to develop the proposed conversion area for commercial purposes consistent with Siskiyou County zoning (heavy industrial). Approximately 80% of the area will be developed for a solar farm to provide power to the electrical grid via the sub-station located immediately north of the project. The remainder will be developed into a commercial facility. These uses will result in increased energy independence, reduced greenhouse gas emissions, and additional employment opportunities for the community and Siskiyou County. This will necessitate the removal of most existing vegetation. Following conversion, the site will be maintained for the intended commercial purposes which may include limited landscaping, but will result in reduced long-term fire hazard potential to the community of McCloud.

The landowners' purchased the McCloud Mill site as an investment. The original intent was to use the existing structures for commercial ventures as they were identified. However, the age of the structures combined with current building codes made cost to retrofit of the original structures prohibitive. The current project is needed to contribute to the landowners' need to realize a return on their investment and is critical in order to continue to maintain the property.

In addition, there is a need regionally and nationally to develop resilience and capacity of our electric grid. The proposed solar farm not only contributes to that need but does it in a way that reduces greenhouse gas production by offsetting energy production from carbon fuel sources such as biomass and fossil fuels. Lastly, the project will contribute to employment for the community as well as the county.

Potential impacts that could result from timber harvest operations, including but not limited to wildlife habitat and fisheries, have been addressed in the amendment to the THP. The THP that is in the process of being amended through Cal Fire, states that with all the mitigation measures to be adopted, the amendment to the THP will not result in significant adverse environmental effects. The amendment to the THP states that it includes resource protection measures that greatly exceed current standard Forest Practice Rules (FPRs).

3.5 Project Approvals

The County of Siskiyou Community Development Department is the Lead Agency for this project. Because power generation plants are conditionally permitted uses in the M-H District in the County, approval of a use permit will be necessary for the proposed commercial solar PV generation facility. Permitted uses in the Limited Industrial (M-L) District and Light Industrial (M-M) District are permitted uses in the M-H District and do not require a use permit or environmental review. The County will require a building

permit for construction of the solar farm and any new facilities. In addition, permits and/or approvals may be required from the following agencies:

California Department of Forestry and Fire Protection (Cal Fire)
Cal Fire provides wildland fire protection services to the project area, which has been identified as being located within a State Responsibility Area (SRA). Fire Safe Regulations have been prepared and adopted by the state to establish minimum wildfire protection standards for development within the SRA. Fire Safe Regulations are not intended to apply to existing structures, roads, streets, private lanes, or facilities. However, these regulations are applicable to all construction activities in conjunction with the creation of new parcels, new roads, use permit, and building permit approvals within the SRA, approved after January 1, 1991.

Regional Water Quality Control Board - Central Valley Region (CVRWQCB)
The CVRWQCB typically requires a General Permit for Discharges of Storm Water Runoff (Construction General Permit) be obtained under the National Pollution Discharge Elimination System (NPDES) for projects that disturb more than one acre of soil. Typical conditions associated with such a permit include the submittal of and adherence to a stormwater pollution and prevention plan (SWPPP), as well as prohibitions on the release of oils, grease or other hazardous materials.

State Water Resources Control Board (SWRCB)
As the agency with primary jurisdiction for NPDES permitting in California, applicants for projects subject to the Storm Water General Permit (referenced under CVRWQCB above) are required to file a Notice of Intent (NOI) with the SWRCB indicating the intent to comply with the General Permit and to prepare a SWPPP.

California Department of Fish and Wildlife (CDFW)
As a trustee for the State's fish and wildlife resources, the CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and their habitat. As a responsible agency, the Department administers the California Endangered Species Act and other provisions of the Fish and Game Code (FGC) that conserve the State's fish and wildlife public trust resources. The CDFW also comments and make recommendations on projects in their role as the State's trustee for fish and wildlife resources, and as a responsible agency under the California Environmental Quality Act (CEQA), California Public Resources Code section 21000 et seq.

California Department of Transportation (Caltrans)
Single-trip transportation permits for oversized or excessive loads on State highways. Permits are issued in coordination with the California Highway Patrol.

California Public Utilities Commission (CPUC)
Notification of Construction. Sole authority for approval of PacifiCorp Transmission actions which would include the interconnection to the proposed solar facility. PacifiCorp Transmission would notify and seek approval from CPUC regarding its actions under the proposed project.

Siskiyou County Air Pollution Control District (SCAPD)

SCAPCD is responsible for enforcing federal, state, and local air quality regulations and ensuring that federal and state air quality standards are met within the County. These standards are set to protect the health of sensitive individuals by restricting how much pollution is allowed in the air. To meet the standards, SCAPCD enforces federal laws and state laws on stationary sources of pollution and passes and enforces its own regulations as necessary to address air quality concerns. SCAPCD has promulgated numerous rules and regulations governing the construction and operation of new or modified sources of air pollutants emissions within the air basin.

3.6 Relationship of Project to Other Plans

Siskiyou County General Plan

The proposed project is entirely within the unincorporated McCloud community of Siskiyou County. The Siskiyou County General Plan is the fundamental document governing land use development in the unincorporated areas of the county. The General Plan includes numerous goals and policies pertaining to land use, circulation, noise, open space, scenic highways, seismic safety, safety, conservation, energy, and geothermal. The General Plan Land Use Element was most recently adopted on August 12, 1980. Future development within the project site will be required to abide by all applicable goals and policies included in the County's adopted General Plan.

Basin Plan for the Central Valley Regional Water Quality Control Board

The project site is located within the Sacramento River Basin, which is under the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). One of the duties of the RWQCB is development of "basin plans" for the hydrologic area over which it has jurisdiction. The Basin Plan sets forth water quality objectives for both surface water and groundwater for the region, and it describes implementation programs to achieve these objectives. The Basin Plan provides the foundation for regulations and enforcement actions of the Central Valley RWQCB.

In May 2018, the Central Valley RWQCB revised the Water Quality Control Plan for the Central Valley (Basin Plan). The Basin Plan defines existing and potential beneficial uses of surface water and groundwater in the Sacramento River Basin and sets forth water quality objectives for these waters (RWQCB, 2018[2].

3.7 Consultation with California Native American Tribes

Assembly Bill (AB) 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if:

2 RWCQB (Central Valley Regional Water Quality Control Board). 2018. Water Quality Control Plan for the Central Valley Region.
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

(1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. Siskiyou County sent notice to the Karuk Tribe, Winnemem Wintu Tribe, and the Torres Martinez Band of Desert Cahuilla Indians on April 19, 2019. None of the tribes provided comments on the proposed project. Further information on potential Tribal Cultural Resources in the project area is provided in **Section 4.18** of this Initial Study.

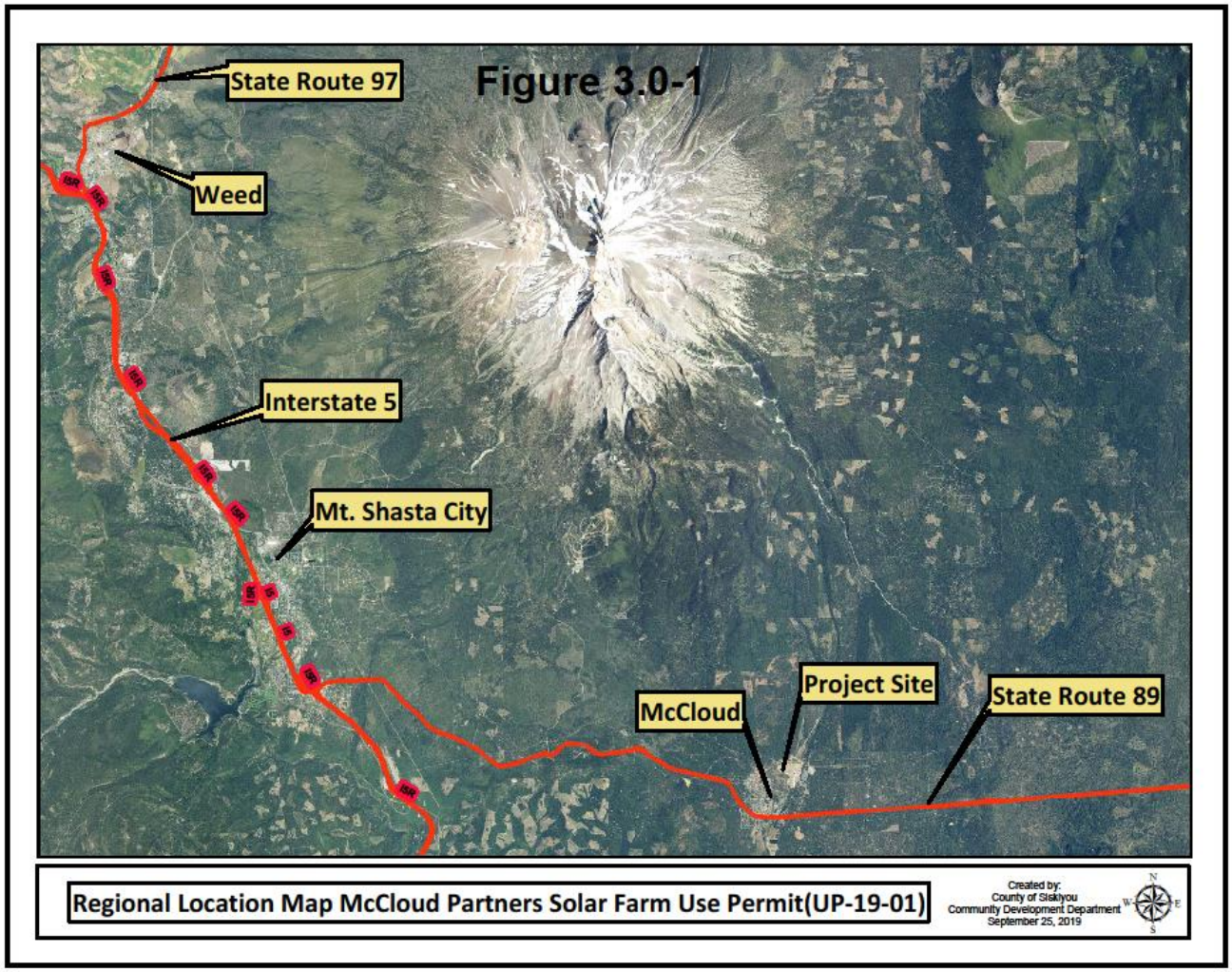
Figure 3.0-1
State Route 97
Weed
Interstate 5
Mt. Shasta City
McCloud
Project Site
State Route 89
Regional Location Map McCloud Partners Solar Farm Use Permit(UP-19-01)
Created by:
County of Siskiyou
Community Development Department
September 25, 2019

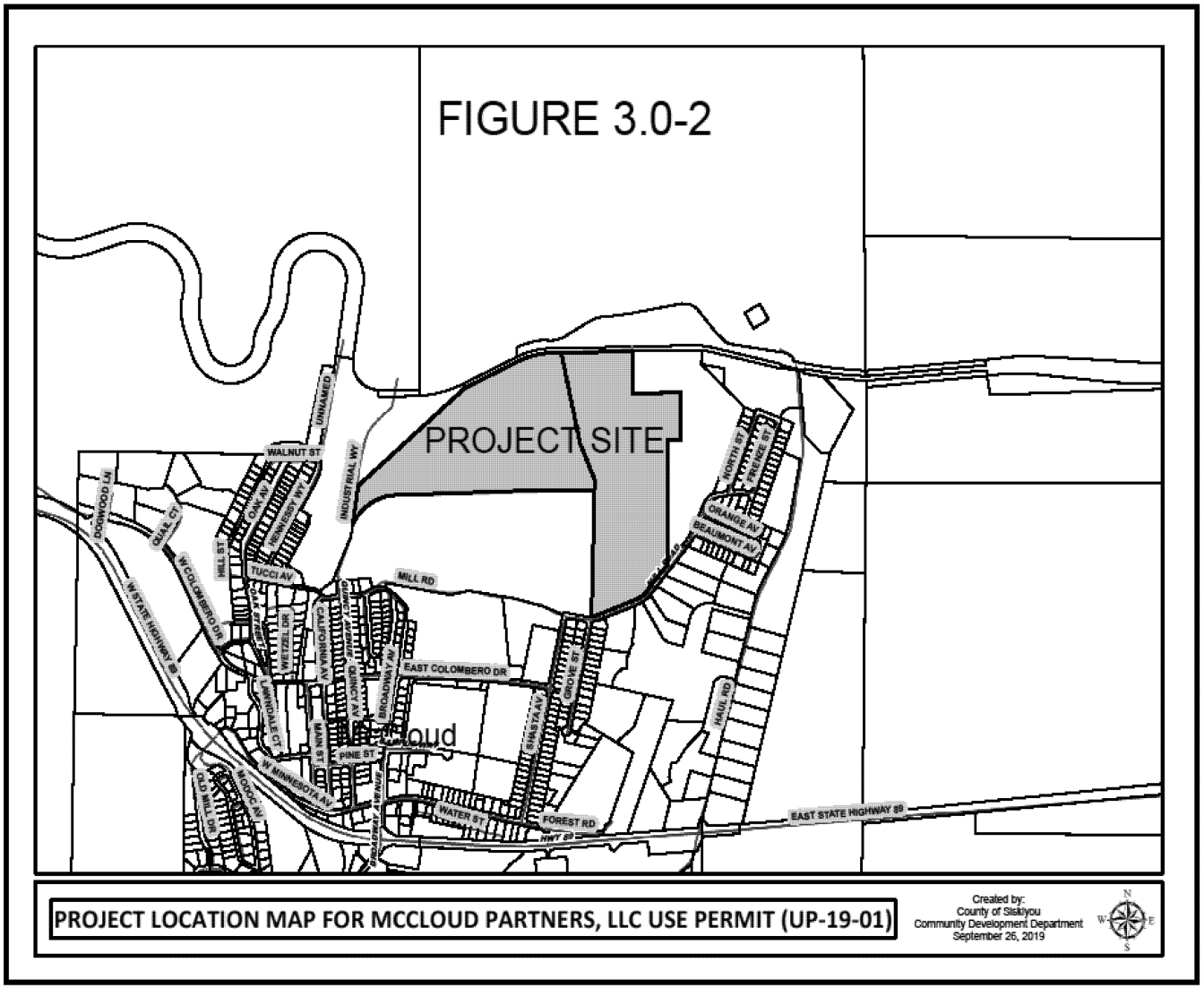
FIGURE 3.0-2
PROJECT SITE
WALNUT ST
UNNAMED
INDUSTRIAL WY
DOGWOOD LN
QUAIL CT
HILL ST
TUCCI AV
MILL RD
W COLOMBERO DR
W STATE HIGHWAY 89
CALIFORNIA AV
BROADWAY AV
EAST COLOMBERO DR
MAIN ST
PINE ST
W MINNESOTA AV
OLD MILL DR
WATER ST
FOREST RD
HWY 89
EAST STATE HIGHWAY 89
SHASTA AV
GROVE ST
RAUL RD
NORTH ST
ORANGE ST
ORANGE AV
BEAUMONT AV
PROJECT LOCATION MAP FOR MCCLOUD PARTNERS, LLC USE PERMIT (UP-19-01)
Created by:
County of Siskiyou
Community Development Department
September 26, 2019
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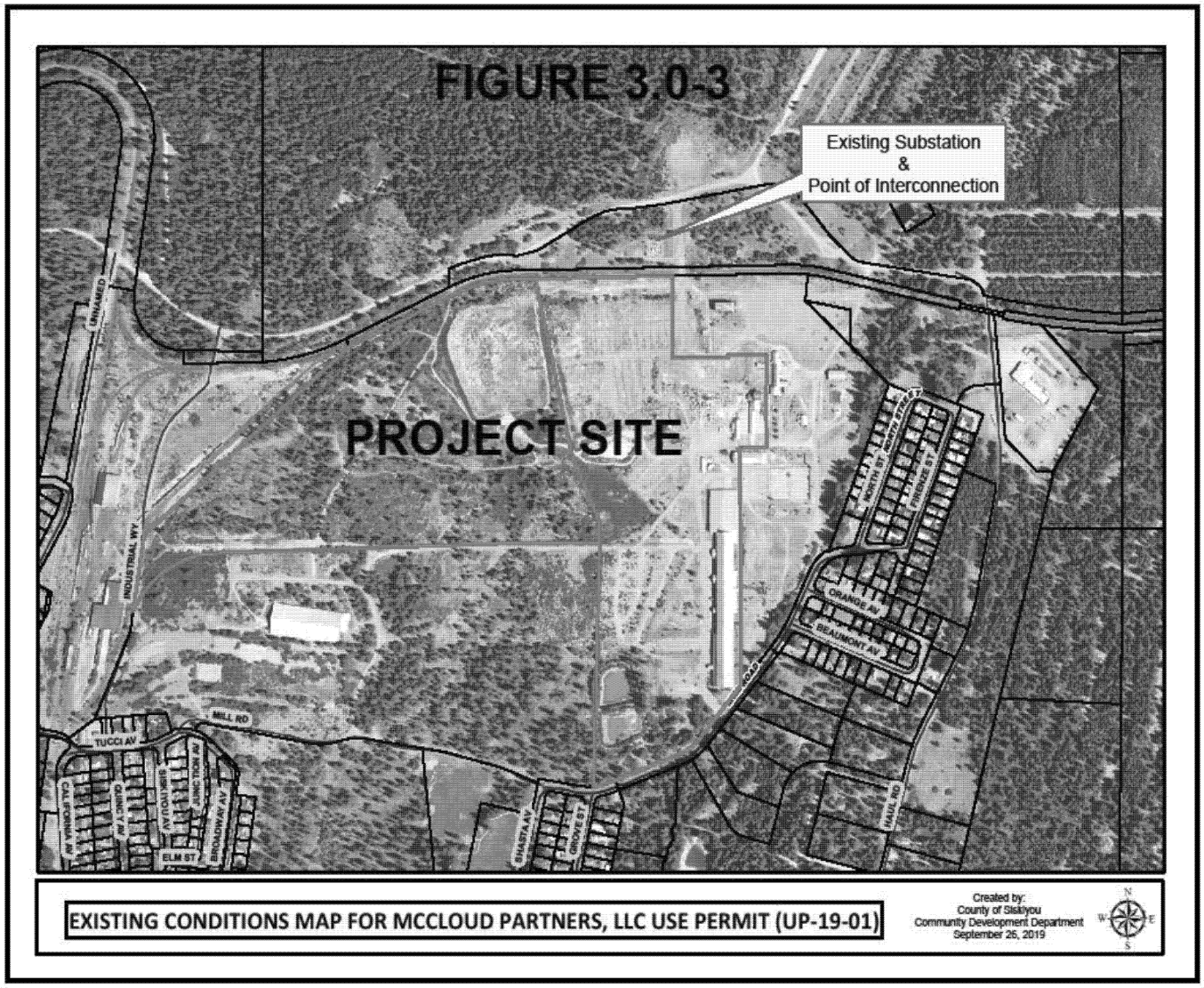
FIGURE 3.0-3
Existing Substation
&
Point of Interconnection
PROJECT SITE
UNNAMED
INDUSTRIAL WY
MILL RD
TUCCI AV
CALIFORNIA AV
ELM ST
BROADWAY AV
SHASTA AV
GROVE ST
HAUL RD
NORTH ST
ORANGE ST
ORANGE AV
BEAUMONT AV
EXISTING CONDITIONS MAP FOR MCCLOUD PARTNERS, LLC USE PERMIT (UP-19-01)
Created by:
County of Siskiyou
Community Development Department
September 26, 2019
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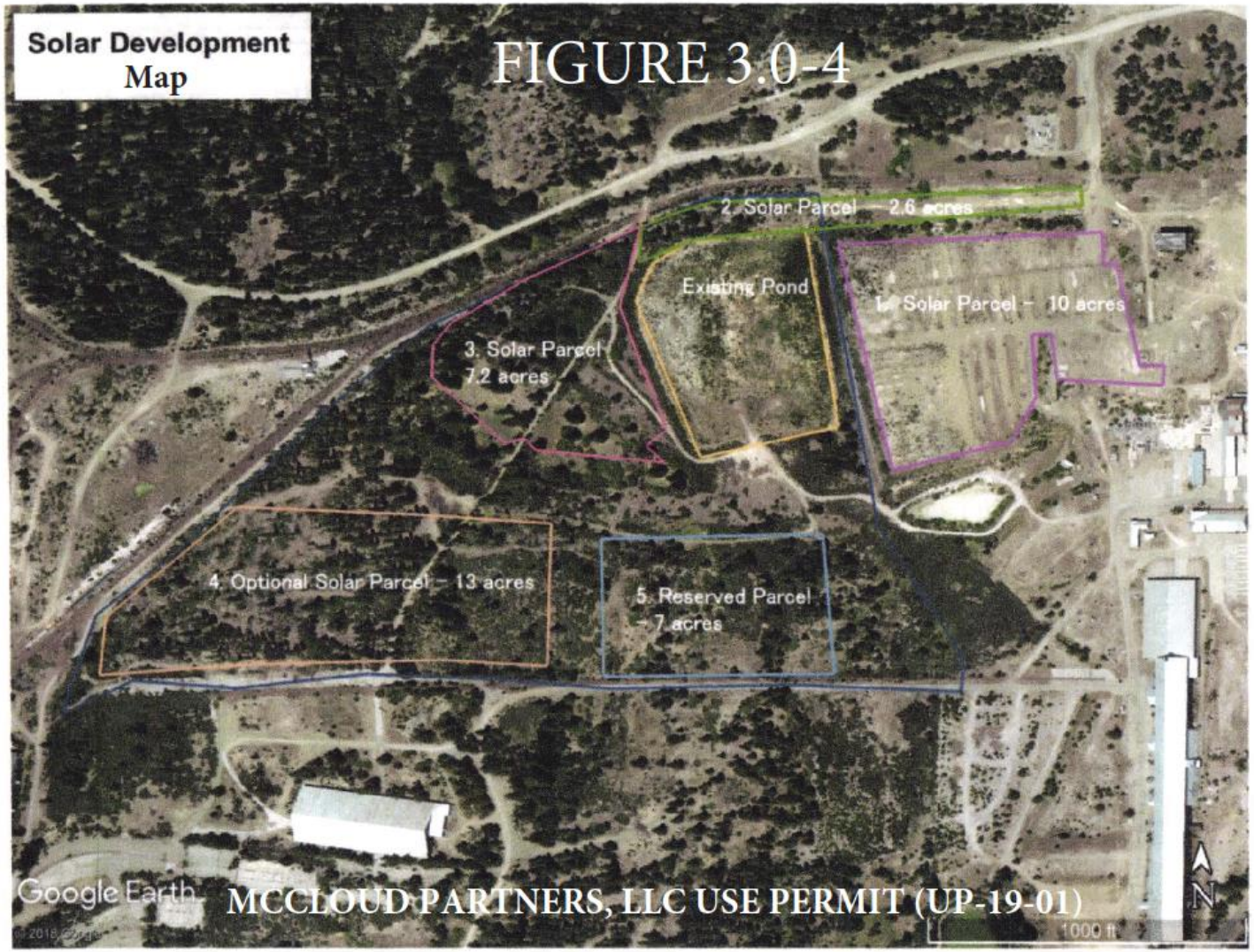

Solar Development Map
FIGURE 3.0-4
2. Solar Parcel – 2.6 acres
Existing Pond
1. Solar Parcel – 10 acres
3. Solar Parcel 7.2 acres
4. Optional Solar Parcel – 13 acres
5. Reserved Parcel – 7 acres
Google Earth
MCCLOUD PARTNERS, LLC USE PERMIT (UP-19-01)
1000 ft
N

4.0 Environmental Checklist

4.0 Environmental Checklist

4.1 Aesthetics

	Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Setting:

The project site is located immediately adjacent to Mill Road and is at the eastern edge of the community of McCloud. The most prominent nearby feature is Mount Shasta, a 14,179-foot dormant volcano that is visible throughout much of the region. Also nearby are Black Butte, a 6,634-foot satellite cone of Mount Shasta and Mt. Eddy, the highest summit in the Trinity Mountains, at 9,025 feet.

The project site is relatively level. The site is characterized by open coniferous forest and shrubs. The project site is surrounded by Timberland Production Uses located north of the project site. Residential subdivisions, rural residential subdivisions, Light Industrial Uses, and Timberland Production Uses are located east of the project site. Residential subdivisions, apartments, McCloud High School, McCloud Elementary School, Squaw Valley Mobile Home & Trailer Park, McCloud RV Resort, McCloud Health Care Clinic, Assemblies of God, First Baptist Church of McCloud, McCloud Community Services District (MCSD), Limited Industrial Uses, Light Industrial Uses, Heavy Industrial Uses, and State Route 89 are located south of the project site. Heavy Industrial Uses and Timberland Production Uses are located west of the project site. The California Department of Transportation (Caltrans) has a road maintenance facility (sand house) southwest of the project site on the south side of Hwy 89.

There are no officially designated state scenic highways in the project vicinity; however, the segment of State Route 89 (SR 89) located approximately half a mile south of the project site is eligible for designation as a State Scenic Highway (Caltrans, 2015) and is

identified as a scenic highway in the Scenic Highways Element of the Siskiyou County General Plan. Further, it has been designated as part of the Volcanic Legacy Scenic Byway All-American Road, which is a nationally recognized scenic route that extends from Crater Lake in Oregon to Mount Lassen in California.

Discussion of Impacts:

a) **Would the project have a substantial adverse effect on a scenic vista?** *Less Than Significant Impact*. Although the project site is located in a scenic area, it is not part of a scenic vista. The project site is located immediately adjacent to Mill Road and is at the eastern edge of the community of McCloud. The project site is approximately half a mile north of SR 89. While the project would allow for the development of a solar PV generation facility, the solar facility would be established in a Heavy Industrial (M-H) District. The project's solar arrays will not exceed 6.5 feet in height, and thus would not block views of the hills and mountains. In addition, the proposed solar PV generation facility would not be visible to any off-site land uses surrounding the project site due to existing trees surrounding the project site that would act as a visual barrier. Existing trees located within the area that the solar PV generation facility is proposed to be constructed would be removed. However, existing trees on the property that are outside the area that the solar PV generation facility would remain and would provide a visual barrier to screen the project from the view of surrounding land uses. Therefore, potential changes to the visual character of the project site are considered less than significant.

b) **Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?** *Less Than Significant Impact*. There are no state scenic highways in the project vicinity; however, as noted above, SR 89 is part of the Volcanic Legacy Scenic Byway and is designated as a scenic highway in the Siskiyou County General Plan. The construction of the solar facility would result in the removal of some trees and other vegetation. However, there is an existing Timber Harvest Plan (THP) (2-14-110-SIS, Old Mill THP) for the property which was approved on February 15, 2015. The THP is currently in the process of being amended through Cal Fire for the purpose of conversion of a portion of the existing plan and an addition of 44 acres adjacent to the existing plan, all of which is to be converted for the purpose of solar power generation. The amendment to the THP states that the objective is to develop the proposed conversion area for commercial purposes consistent with Siskiyou County zoning (heavy industrial). Approximately 80% of the area will be developed for a solar PV generation facility to provide power to the electrical grid via the sub-station located immediately north of the project. The remainder will be developed into a commercial facility. There are no rock outcroppings or historic structures at the site. The anticipated removal of a limited number of trees would not significantly alter the existing landscape. Therefore, because development would be relatively limited, the proposed project would not

significantly impact scenic resources along the Scenic Byway. Additionally, no other scenic resources would be damaged as a result of the project.

c) **Would the project in nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?** *Less Than Significant Impact*. See the substantiation for 4.1(a) and 4.1(b) above.

d) **Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?** *Less Than Significant Impact*. It's anticipated that any future outdoor lighting resulting from the solar facility and commercial development would be consistent with the community of McCloud. Additionally, development of the project site would be subject to Section 10-6.5602 of the Siskiyou County Zoning Ordinance, which requires that exposed sources of light, glare, or heat be shielded so as not to be directed outside the premises. In addition, the proposed solar PV generation facility would not be visible to any off-site land uses surrounding the project site due to existing trees surrounding the project site that would act as a visual barrier. Adherence to County Code Section 10-6.5602 would ensure that potential impacts associated with light or glare would remain less than significant.

Mitigation: None

4.2 Agriculture and Forestry Resources:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resource Board.

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Setting:

The project site is located in the M-H District and it is adjacent to property in the RR-B-2.5, RES-1, RES-2, PD (RES-1), M-L, M M, and TP Districts. There is no Farmland at or adjacent to the project site according to the California Department of Conservation, Farmland Mapping and Monitoring Program. Further, there are no Williamson Act contracted lands in the vicinity of the project site.

Discussion of Impacts:

a) **Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?** *No Impact*. As identified on the 2010 Siskiyou County Important Farmland Map, published by the California Department of Conservation's Farmland Mapping and Monitoring Program, none of the land within the project site is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. In addition, the nearest Farmland that is designated as Prime Farmland that is located approximately 11.3 miles northwest of the project site.

b) **Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?** *No Impact*. The project site is located in the Heavy Industrial (M-H) District. Section 10-6.4703(n) of the Siskiyou County Zoning Ordinance lists power generation plants, all energy sources, including biomass as conditional uses in the M-H District. Section 10-6.4702 lists any use permitted by right in the M-L or M-M District as permitted uses in the M-H District. Therefore, the proposed solar PV generation facility and light manufacturing facility will not conflict with existing zoning for agricultural use. The project site is not subject to a Williamson Act contract and is not located near any contracted lands. Therefore, the project will not adversely impact agricultural activity and/or a Williamson Act contract.

c) **Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?** *No Impact*. The project site is located within an existing Heavy Industrial (M-H) District. Therefore, the project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

d) **Would the project result in the loss of forest land or conversion of forest land to non-forest use?** Less Than Significant Impact. According to the USDA, the site is classified as forest lands pursuant to PRC Section 12220(g) due to the 10 percent or more native tree cover at the site. The project site is also identified in the Siskiyou County General Plan as being in an area of Woodland Productivity – High Suitability. Portions of the project site include potentially harvestable timber. However, the site is not currently used or anticipated for use as forest lands, as it is zoned Heavy Industrial (M-H), and is surrounded by both Timber Preserve and non-forestry uses. There is an existing Timber Harvest Plan (THP) (2-14-110-SIS, Old Mill THP) for the property which was approved on February 15, 2015. The THP is currently in the process of being amended through Cal Fire for the purpose of conversion of a portion of the existing plan and an addition of 44 acres adjacent to the existing plan, all of which is to be converted for the purpose of solar power generation. The amendment to the THP states that the objective is to develop the proposed conversion area for commercial purposes consistent with Siskiyou County zoning

(heavy industrial). Approximately 80% of the area will be developed for a solar PV generation facility to provide power to the electrical grid via the sub-station located immediately north of the project. The remainder will be developed into a commercial facility. The proposed development will result in loss of trees; however, such loss is not considered substantial. Given these factors, the impact to forest resources is considered less than significant.

e) **Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?** *Less Than Significant Impact*. See the substantiation for 4.2(a) and 4.2(d) above.

Mitigation Measures: None

4.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Result in other emissions, such as those leading to odros adversely affecting a substantial number of people?	☐	☐	☒	☐

Setting:

The project site is located in a region identified as the Northeast Plateau Air Basin (NEPAB), which principally includes Siskiyou, Modoc, and Lassen counties. This larger air basin is divided into local air districts, which are charged with the responsibility of implementing air quality programs. The local air quality agency affecting the project area is the Siskiyou County Air Pollution Control District (SCAPCD). Within the SCAPCD, the primary sources of air pollution are wood burning stoves, wildfires, farming operations, unpaved road dust, managed burning and disposal, and motor vehicles.

As noted above, the SCAPCD is the local air quality agency with jurisdiction over the project site. The SCAPCD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs and regulates agricultural and non-agricultural burning. Other SCAPCD responsibilities include monitoring air quality, preparing air quality plans, and responding to citizen air quality complaints.

Ambient Air Quality Standards

Air quality standards are set at both the federal and state levels of government (Table 4.3-1). The federal Clean Air Act requires the Environmental Protection Agency (EPA) to establish ambient air quality standards for six criteria air pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and suspended particulate matter. The California Clean Air Act also sets ambient air quality standards. The state standards are more stringent than the federal standards, and they include other pollutants as well as those regulated by the federal standards. When the concentrations of pollutants are

below the allowed standards within an area, that area is considered to be in attainment of the standards.

Table 4.3-1
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary[1]	Federal Secondary[1]	California[2]
Ozone	8 Hour 1 Hour	0.07 ppm --	0.07 ppm --	0.07 ppm 0.09 ppm
Carbon Monoxide	8 Hour 1 Hour	9 ppm 35 ppm	-- --	9 ppm 20 ppm
Nitrogen Dioxide	Annual 1 Hour	0.053 ppm 100 ppb	0.053 ppm --	0.03 ppm 0.18 ppm
Sulfur Dioxide	Annual 24 Hour 3 Hour 1 Hour	0.03 ppm 0.14 ppm -- 75 ppb	-- -- 0.5 ppm --	-- 0.04 ppm -- 0.25 ppm
Fine Suspended Particulate Matter ($PM_{2.5}$)	Annual 24 Hour	12.0 µg/m^3 35.0 µg/m^3	15.0 µg/m^3 35.0 µg/m^3	12 µg/m^3 --
Suspended Particulate Matter (PM_{10})	Annual 24 Hour	-- 150 µg/m^3	-- 150 µg/m^3	20 µg/m^3 50 µg/m^3
Sulfates	24 Hour	--	--	25 µg/m^3
Lead	30 Day Calendar Qtr	-- 1.5 µg/m^3	-- 1.5 µg/m^3	1.5 µg/m^3 --
Hydrogen Sulfide	1 Hour	--	--	0.03 ppm
Vinyl Chloride	24 Hour	--	--	0.01 ppm
Visibility-Reducing Particles	8 Hour (10 am - 6 pm PST)	--	--	(3)

Source: California Air Resources Board 2016

[1] *National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public.*

National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

[2] *California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter - PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

[3] *Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more (0.07 - 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.*

Air Quality Monitoring

Ozone (hourly and 8-hour average) is the only contaminant that receives continuous monitoring in Siskiyou County, while suspended particulate matter (PM2.5 and PM10) is monitored every six days.

The closest SCAPCD air quality monitoring station to the project site is located in the City of Yreka approximately 31 miles from the project site. This station monitors ozone and particulate matter (PM10 and PM2.5). Table 4.3-2 shows particulate matter from monitoring efforts from 2013 - 2015 at the Yreka station.

Table 4.3-2
Siskiyou County Air Quality Data

Pollutant	Standard	Year		
		2016	2017	2018
Ozone (O_3)				
Maximum 1-Hour Concentration (ppm)		0.092	0.053	0.089
Maximum 8-Hour Concentration (ppm)		0.068	0.049	0.075
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	0	0	0
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.07 ppm	0	0	4
Ultra-Fine Particulates ($PM_{2.5}$)				
Maximum 24-Hour Concentration ($\mu g/m^3$)		25.1	78.8	143.2
Estimated No. of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	*	26	37

Source: California Air Resources Board 2019
** Insufficient data*

Monitored and Previously Monitored Air Pollutants

Ozone is a gas comprised of three oxygen atoms. It occurs both in the earth's upper atmosphere and at ground level. Ozone can be either beneficial or detrimental to human health, depending on its concentration and where it is located. Beneficial ozone occurs naturally in the earth's upper atmosphere, where it acts to filter out the sun's harmful ultraviolet rays. Bad ozone occurs at ground level and is created when cars, industry, and other sources emit pollutants that react chemically in the presence of sunlight. Ozone exposure can result in irritation of the respiratory system, decreased lung function, aggravated asthma, and possible lung damage with persistent exposure.

PM10 (i.e., suspended particulate matter less than 10 microns) is a major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited.

PM2.5 (i.e., suspended particulate matter less than 2.5 microns) is similar to PM10 in that it is an air contaminant that consists of tiny solid or liquid particles; though in this case the particles are about 0.0001 inches or smaller (often referred to as fine particles). PM2.5 is typically formed in the atmosphere from primary gaseous emissions that include sulfates emitted by power plants and industrial facilities and nitrates emitted by power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions.

Inhalation of PM2.5 and PM10 can cause persistent coughing, phlegm, wheezing, and other physical discomfort. Long-term exposure may increase the rate of respiratory and cardiovascular illness.

As shown in **Table 4.3-2** above, neither the project site nor Siskiyou County have been identified as having significant air quality problems and are considered to be in attainment or unclassified for all federal and state air quality standards. As a result, the County is not subject to an air quality attainment or maintenance plan.

Discussion of Impacts:

a) **Would the project conflict with or obstruct implementation of the applicable air quality plan?** *No Impact*. Siskiyou County is classified as being in attainment or unclassified for all federal and state air quality standards and, as a result, is not subject to an air quality plan.

b) **Would the project Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard?** *Less Than Significant Impact*. See the substantiation for 4.3(a) above. While particulate matter (i.e., dust) and diesel emissions could be generated during development of the project site, the amount of construction emissions likely to be generated during the development is minor. Further, construction emissions would be temporary and cease once construction is complete. As a result, there would not be a violation of air quality standards associated with the project site nor would project-related emissions contribute substantially to an existing or projected air quality violation. Any air contaminants likely to be generated as a result of the development would have a negligible impact on the County's ability to meet federal and state air quality standards.

c) **Would the project expose sensitive receptors to substantial pollutant concentrations?** *Less Than Significant Impact*. Sensitive receptors are generally defined as facilities that house or attract groups of children, the elderly, persons with illnesses, and others who are especially sensitive to the effects of air pollutants. Schools, hospitals, residential areas, and senior care facilities are examples of

sensitive receptors. The nearest home sites are approximately 577 feet west of the project site. McCloud Elementary School is nearest school and is located approximately 2,840 feet south of the southern edge of the proposed solar PV generation facility. The soils at the site (Shasta loamy sand, 0 to 5 percent slopes, and Shastina loam, 0 to 5 percent slopes), have low to moderate potential for erosion. Additionally, potential diesel emissions during construction are considered negligible. Therefore, there would be a less than significant impact.

d) **Would the project result in other emissions, such as those leading to odors adversely affecting a substantial number of people?** *Less Than Significant Impact*. Offensive odors rarely cause any physical harm; however, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Odor impacts on residential areas and other sensitive receptors, such as daycare centers and schools, are of particular concern. Major sources of odor-related complaints by the general public commonly include wastewater treatment facilities, landfill disposal facilities, food processing facilities, agricultural activities, and various industrial activities (e.g., petroleum refineries, chemical and fiberglass manufacturing, painting/coating operations, feed lots/dairies, composting facilities, landfills, and transfer stations). The proposed solar PV generation facility would not generate offensive odors. Temporary, localized odors during construction may occur. Odors would be generated by tailpipe emissions from diesel-powered construction equipment. Odors would not affect a substantial number of residences or be present for an extended period of time. Accordingly, potential odor impacts are considered less than significant.

Mitigation Measures: None

4.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Setting:

The project is located within the site of the McCloud Lumber Company, established in 1901. Prior to the establishment of the mill, the rail lines were built to access the area between the present mill site and Ash Creek below the east slopes of Mount Shasta. Milling operations ceased in 2002 but the site has had nearly continuous commercial operations at some level to date.

The property is contiguous to the town of McCloud bordering residential neighborhoods and industrial property. The vegetated areas have been impacted by mill and related operations continuously since the establishment of milling operations.

Consultation was undertaken with California Department of Fish and Wildlife (CDFW). In an email dated October 18, 2019, the CDFW responded to a request made for concurrence of potential impacts to special status species and/or biological resources

resulting from the McCloud Mill Conversion Project (Project). On August 15, 2019, the California Department of Fish and Wildlife (CDFW) received Amendment #3 to Timber Harvesting Plan (THP) 2-14-110-SIS "McCloud Mill" through the THP review process where the Department of Forestry and Fire Prevention (CalFire) is lead. CDFW provided comments pertaining to the botanical survey map and recent changes to the status of the Fisher (Pekania pennanti). The CDFW has stated that these comments were fully addressed. Additionally, CDFW was contacted prior to submission of Amendment #3 to consult for special status species including fish, wildlife, and plants. Based on the results of the consultation and review of the amendment, CDFW provided the following determinations for Section 4.4 (Biological Resources) of this Initial Study and the potential for adverse impacts to a) candidate, sensitive, or special-status species; b) riparian habitat or other sensitive natural community; c) wetlands; d) Interfere with native trout movement; e) Local Policies or ordnances protecting biological resources; and f) Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Discussion of Impacts:

a) **Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?** *No Impact*. All candidate, sensitive, or special-status species that have to potential to occur in the area have been included in the scoping efforts and no known observations have been documented. Adequate protection measures have been incorporated into the Project in the event any special status species are observed.

b) **Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?** *No Impact*. The Project is located far from any potential riparian habitat and is not expected to substantially alter any bed, bank, or channel of any watercourse. No sensitive natural communities have been discovered as a result of surveys.

c) **Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?** *No Impact*. The project area is not located within or directly adjacent to a wetland. There would be no impact.

d) **Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?** *No Impact*. The project is located far enough from any watercourse

and is not expected to substantially alter any bed, bank, or channel of any watercourse. Therefore, there would be no impact.

e) **Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?** *No Impact*. No known ordinance exists in the area.

f) **Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?** *No Impact*. There are no adopted or proposed habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans that affect the proposed project. There would be no impact.

Mitigation Measures: None

4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Regulatory Setting:

This section outlines the applicable federal, state, and local laws, regulations, and policies relative to cultural resources.

Federal

Cultural resources are protected by several federal regulations, none of which are relevant to this project because it would not be located on lands administered by a federal agency and the project applicant is not requesting federal funding.

State

This section outlines the applicable state laws, regulations, and policies relative to cultural resources.

The California Environmental Quality Act

CEQA requires the assessment of a proposed project's effects on cultural resources. Pursuant to CEQA, a "historical resource" is a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR). Section 5024.1 of the Public Resource Code defines eligibility requirements for the CRHR and states that a resource may be eligible for inclusion in the register if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Is associated with the lives of persons important in our past
- Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values
- Has yielded, or may be likely to yield, information important in prehistory or history

In addition, resources included in a local register of historic resources or identified as significant in a local survey conducted in accordance with state guidelines are also considered historic resources under CEQA, unless a preponderance of the facts demonstrates otherwise. CEQA applies to archaeological resources when 1) the archaeological resource satisfies the definition of a historic resource, or 2) the archaeological resource satisfies the definition of a "unique archaeological resource." A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

- The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- The archaeological resource has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

Health and Safety Code Section 7050.5

This code section requires that further excavation or disturbance of land, upon discovery of human remains outside of a dedicated cemetery, cease until a county coroner makes a report. It requires a county coroner to contact the Native American Heritage Commission (NAHC) within 48 hours if the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the remains to be those of a Native American.

Health and Safety Code (Section 7052)
Section 7052 of the Health and Safety Code establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code (Section 622.5)
Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historical or archaeological interest located on public or private lands, but specifically excludes the landowner.

Public Resources Code Section 5097.98
If a county coroner notifies the NAHC that human remains are Native American and outside the coroner's jurisdiction per Health and Safety Code Section 7050.5, the NAHC must determine and notify a Most Likely Descendent (MLD). The MLD shall complete the inspection of the site and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Environmental Setting:

During a previous entitlement process at the project site, "An Archaeological Survey Report for the McCloud Mill Timber Harvesting Plan, Siskiyou County, California", was prepared by Kevin D. Dalton of the Department of Anthropology at California State University, Chico, dated October 15, 2014. The archaeological records searches for the THP project were conducted at the Northeast Information Center (NEIC) at California State University, Chico on August 18, 2014. The records search focused on an area ½-mile in radius from the THP project area. The records search showed that no previously identified prehistoric or historic cultural resources were present within the THP project area. However, 11 previously completed archaeological surveys and reports, and 7 previously recorded cultural resources were within ½-mile of the THP project area.

Intensive pedestrian surveys were conducted for the THP project on 8/31/2014, 9/1/2014, and 9/22/2014. The survey coverage intensity consisted of 20 meter transect spacing. During the pedestrian survey, much of the ground surface was blanketed by forest duff and the average ground visibility was between 10-15 percent. Four sites were found during the surveys and those four sites are not within the 20 acre area of the property site identified to be utilized for development of the proposed solar PV generation facility as part of UP-19-01.

The Archaeological Survey Report for the THP states that a major portion of the archaeological remains associated with the McCloud River Lumber Company were determined eligible for inclusion to the National Register of Historic Places (NRHP) in 1988 as the McCloud River Lumber Company National Register District. The District was considered to be a Discontinuous District, and only individual sites were eligible. The Archaeological Survey Report for the THP also states that a second historic district, the McCloud River Railroad Historic District was established in 2002. However, while the property surveyed for the timber harvest, the McCloud Mill property, was the center of operations for the McCloud River Lumber Company during its established period of significance (1896-1930), it is not included within the formal boundaries of either of the established historic districts.

The Archaeological Survey Report for the THP recommended that all four sites be identified as protected areas and be flagged for avoidance during timber harvest activities. A meeting between the archaeologist, Registered Professional Forester and the Licensed Timber Operator should occur prior to any timber harvest activities. Additionally, workers should be advised not to collect artifacts or disturb any features.

Discussion of Impacts:

a) **Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?** *Less Than Significant with Mitigation Incorporated*. As described above, historical resources have not been

identified within 20 acre area proposed to be utilized for the proposed solar PV generation facility. However, ground disturbance associated with development of the 20 acre portion of the property has the potential to impact subsurface historic resources should any be present. Therefore, mitigation measure MM 5.1 is provided to address the potential for the discovery of any unrecorded or previously unknown resources.

b) **Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?** *Less Than Significant with Mitigation Incorporated*. While no evidence of archaeological resources has been identified within the project site, ground disturbance has the potential to impact subsurface archaeological resources should any be present. Therefore, mitigation measure MM 5.1 is included to address the potential for the discovery of any unrecorded or previously unknown resources.

c) **Would the project disturb any human remains, including those interred outside of formal cemeteries?** *Less Than Significant With Mitigation Incorporated*. There is no record of Native American or early European burial sites within or adjacent to the project site. Regardless, there is a possibility of the unanticipated and accidental discovery of human remains during ground-disturbing project-related activities. Therefore, mitigation measure MM 5.2 is provided below to address the potential discovery of any unrecorded or previously unknown resources.

Mitigation Measures:

MM 5.1 If, during the course of site development, cultural resources (i.e., prehistoric sites, historic features, isolated artifacts, and features such as concentrations of shell or glass) are discovered, all work shall cease in the area of the find, the Planning Division of the Siskiyou County Community Development Department shall be immediately notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to determine the significance of the discovery. The County shall consider mitigation recommendations presented by a professional archaeologist and implement a measure or measures that the County deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.

Timing/Implementation: During ground disturbance activities associated with development of the site.

Enforcement/Monitoring: Planning Division of the Siskiyou County Community Development Department

MM 5.2 If, during the course of site development, human remains are discovered, all work shall cease in the area of the find, the Planning Division of the Siskiyou County Community Development Department shall be immediately notified, and the County Coroner must be notified, according to Section 5097.98 of the California Public Resources Code and Section 7050.5 of the California Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in California Code of Regulations Section 15064.5(d) and (e) shall be followed.

Timing/Implementation: During ground disturbance activities associated with development of the site.

Enforcement/Monitoring: Planning Division of the Siskiyou County Community Development Department

4.6 Energy

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Setting:

There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use project. Pacific Power, a subsidiary of PacifCorp, provides electrical services to the Project Area through state-regulated public utility contracts. Propane is available through a number of companies in Siskiyou County. Pacific Power's ability to provide its services concurrently for each project is evaluated during the development review process. The utility company is bound by contract to update its systems to meet any additional demand. PacifiCorp, a regulated utility based in Portland, Oregon, serves 1.9 million customers across 141,000 square miles in six western states. The company comprises two business units that generate and deliver electricity to its customers. Pacific Power serves customers in Oregon, Washington and California. Rocky Mountain Power serves customers in Utah, Wyoming and Idaho.

a) **Would the project result in potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?** *No Impact*. The proposed solar PV generation facility would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Instead, the proposed solar PV generation facility would produce geen energy. While the closure of a traditional fossil fuel electrical generation facility is not part of the scope of the proposed project, the electricity generated at the solar PV generation facility will offset energy generated at a traditional facility because of Senate Bill 350, which requires 50 percent of the State's energy to be generated by a renewable resource (e.g., solar) by 2030. The electricity generated at the solar PV generation facility will aid the State in meeting electrical demand without constructing additional fossil fueled plants and lowering the demand from current fossil fueled plants; electricity generated by the solar PV generation facility would be used instead.

b) **Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?** *No Impact*. The County of Siskiyou does not have a

plan for renewable energy or energy efficiency. As discussed above in the substantiation for 4.6(a), the proposed solar PV generation facility would produce geen energy. The electricity generated at the solar PV generation facility will aid the State in meeting electrical demand without constructing additional fossil fueled plants and lowering the demand from current fossil fueled plants; electricity generated by the solar PV generation facility would be used instead.

Mitigation Measures: None

4.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature:	☐	☐	☒	☐

Setting:

As indicated on the 2010 Fault Activity Map of California (DOC, 2010), there are a number of faults located in the region. The closest of these include the Mount Shasta fault located approximately 11 miles to the north/northwest. However, none of these faults have shown evidence of displacement within the last 700,000 years. The nearest potentially active faults (i.e., faults along which displacement has occurred within the past 200 years) are located in the Cedar Mountain Fault Zone approximately 18 miles northeast of the project site. The largest earthquake originating along this fault zone in recent times had a magnitude of 4.6 and occurred on August 1, 1978 (USGS).

Additional information about this earthquake is available on Page 22 of a report prepared by Carl A. Stover and Carl A. von Hake of the U.S. Geological Survey titled United States Earthquakes, 1978.

The Seismic Safety and Safety Element of the Siskiyou County General Plan states that over a 120-year period, nine or ten earthquakes capable of "considerable damage" have occurred in the region. No deaths have been reported from these quakes and building damage was considered minor or unreported. No known damage has resulted from an earthquake in the McCloud area. Regardless, Siskiyou County, like much of California, is located in an area with potential for major damage from earthquakes corresponding to intensity VII on the Modified Mercalli Scale.

Although much of the area around Mount Shasta was impacted by a massive debris flow during the collapse of ancestral Mount Shasta (i.e., a volcano that was located on the site of contemporary Mount Shasta until roughly 160,000 to 360,000 years ago), landslides are not prominent in the area. The project site is relatively level, generally with slopes of less than 5 percent. Further, standard construction practices limit the amount of potential erosion, and the California Building Code addresses necessary construction techniques to accommodate soils with expansive characteristics.

Discussion of Impacts:

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i. **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?** *Less Than Significant Impact*. There are no known active or potentially active faults within or adjacent to the project site. The closest mapped faults to the project area lie approximately 18 miles to the northeast. The California Geologic Survey does not identify the project site as being in an area affected by this fault or any other Alquist-Priolo Earthquake Fault Zone.

   ii. **Strong seismic ground shaking?** *Less Than Significant Impact*. See the substantiation for 4.6(a)(i) above. The project site is located in a potentially seismically active area and, as a result, any structures resulting from the proposed solar PV generation facility would likely to be subject to future seismic activity. Improperly designed and/or constructed structures could be subject to damage from seismic activity with resulting injury or death for the occupants. However, development of the solar PV generation facility would be required to be designed to meet all California Building Code seismic design standards.

iii. **Seismic-related ground failure, including liquefaction?** *Less Than Significant Impact*. Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:

- Loss of bearing strength – soils liquefy and lose the ability to support structures
- Lateral spreading – soils slide down gentle slopes or toward stream banks
- Flow failures – soils move down steep slopes with large displacement
- Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking
- Flotation – floating of light buried structures to the surface
- Settlement – settling of ground surface as soils reconsolidate
- Subsidence – compaction of soil and sediment

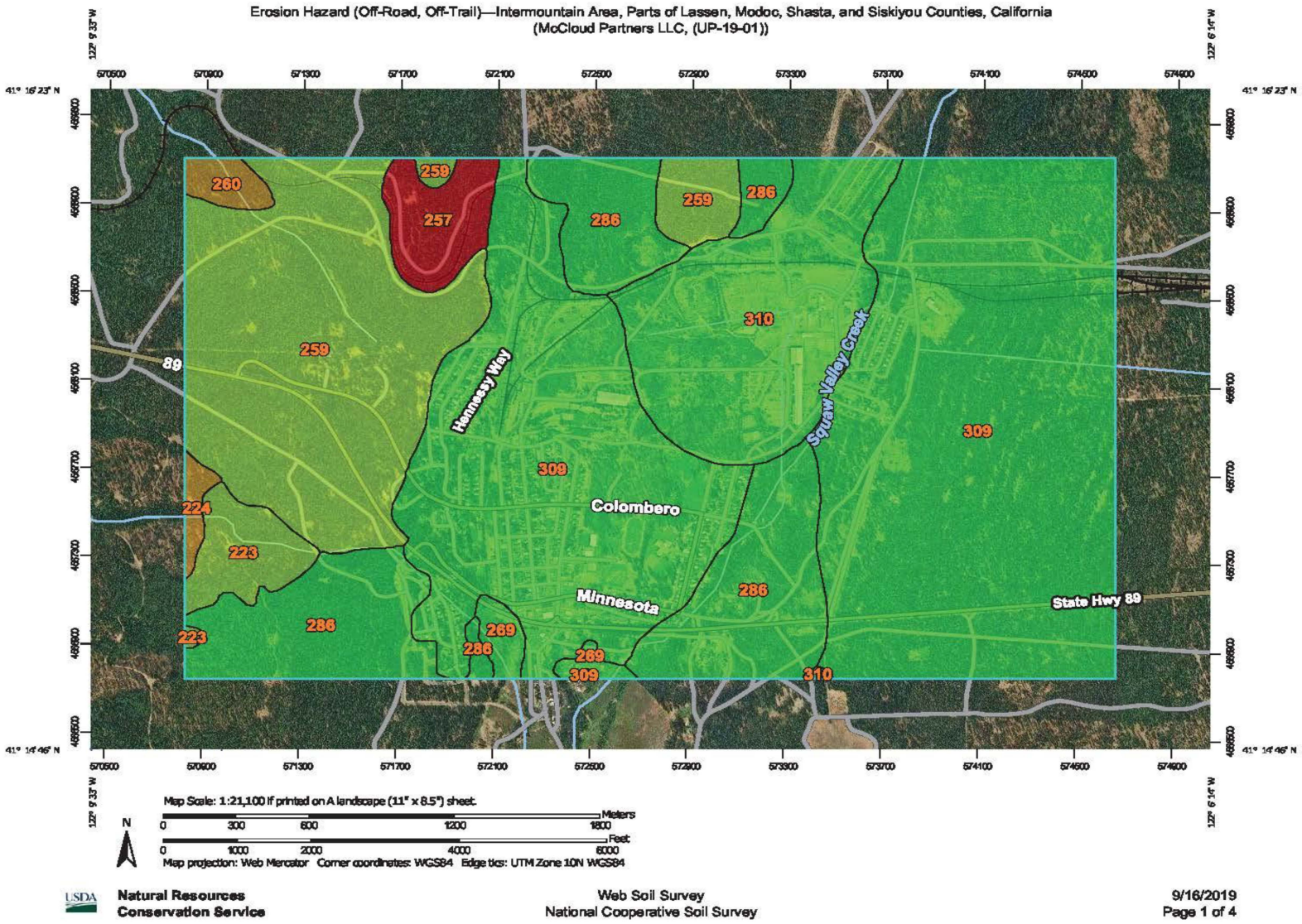
Three factors are required for liquefaction to occur: (1) loose, granular sediment; (2) saturation of the sediment by groundwater; and (3) strong shaking. Impacts associated with liquefaction are unlikely given the well-drained soils on the project site and low incidence of seismic activity in the region.

iv. **Landslides?** *Less Than Significant Impact*. Because the project site is relatively flat and the nearest hillsides do not show a history of instability, the potential for landslides is considered low.

b) **Would the project result in substantial soil erosion or the loss of topsoil?** *Less Than Significant with Mitigation Incorporated*. The project site is located in an area designated by the Land Use and Circulation Element of the Siskiyou County General Plan as Soil Erosion Hazard (High). Erosion is the process by which soil material is detached and transported from one location to another by wind or water. Erosion occurs naturally in most systems but is often accelerated by human activities that disturb soil and vegetation. The rate at which natural and accelerated erosion occur is largely a function of climate, soil cover, slope conditions, and inherent soil properties. However, according to the USDA Natural Resources Conservation Service (NRCS), which classifies soils throughout the United States, the project area soils are classified as #309 – Shasta loamy sand, 0 to 5 percent slope, and #310 - Shastina loam, 0 to 5 percent slopes. The soils at the project site have slight potential for erosion according to a NRCS Web Soil Survey prepared on September 16, 2019 (See pages 4.0-18 to 4.0-20). A rating of “slight” indicates that erosion is unlikely under ordinary climatic conditions. The Shasta series consists of very deep, somewhat excessively drained soils that formed in glacial outwash derived from extrusive igneous rock. These soils have very rapid permeability, very slow or slow

runoff, and low water erosion potential. The Shastina Series consists of a very deep, well drained soils on glacial outwash plains. They formed in glacial outwash from extrusive igneous rock. Slopes range from 0 to 5 percent.

A Storm Water Pollution Prevention Plan (SWPPP) would be required for the construction phase of the project because more than one acre would be disturbed. The SWPPP would contain several Best Management Practices (BMPs) designed to minimize the risk of soil erosion and topsoil loss. Implementation of the BMPs in **MM 7.1** would minimize the potential for substantial soil erosion or the loss of topsoil. Considering the topography of the project site, the slight risk of erosion, and the implementation of BMPs in accordance with the SWPPP, any risk of adverse effects related to soil erosion or topsoil loss from the project would be reduced to less than significant by implementing **MM 7.1**.


Erosion Hazard (Off-Road, Off-Trail)—Intermountain Area, Parts of Lassen, Modoc, Shasta, and Siskiyou Counties, California
(McCloud Partners LLC, (UP-19-01))
122° 9' 33" W
122° 6' 14" W
41° 16' 23" N
41° 14' 46" N
570500
570900
571300
571700
572100
572500
572900
573300
573700
574100
574500
574900
4568900
4568500
4568100
4567700
4567300
4566900
4566500
260
259
257
286
259
286
310
259
89
Hennessy Way
Squaw Valley Creek
309
309
224
Colombero
223
Minnesota
286
State Hwy 89
223
286
269
286
269
309
310
Map Scale: 1:21,100 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0
300
600
1200
1800
Feet
0
1000
2000
4000
6000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
USDA
Natural Resources
Conservation Service
Web Soil Survey
National Cooperative Soil Survey
9/16/2019
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Intermountain Area, Parts of Lassen, Modoc, Shasta, and Siskiyou Counties, California
Survey Area Data: Version 12, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2016—Oct 5, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Erosion Hazard (Off-Road, Off-Trail)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
223	Kindig-Neuns complex, 15 to 30 percent slopes	Moderate	Kindig (50%)	Slope/erodibility (0.50)	47.6	2.1%
			Neuns (30%)	Slope/erodibility (0.50)		
224	Kindig-Neuns complex, 30 to 50 percent slopes	Severe	Kindig (45%)	Slope/erodibility (0.75)	10.3	0.5%
			Neuns (35%)	Slope/erodibility (0.75)		
257	Neer gravelly sandy loam, 50 to 75 percent slopes	Very severe	Neer (75%)	Slope/erodibility (0.95)	51.7	2.3%
259	Neer-Ponto complex, 2 to 30 percent slopes	Moderate	Neer (40%)	Slope/erodibility (0.50)	416.4	18.5%
			Ponto (40%)	Slope/erodibility (0.50)		
260	Neer-Ponto complex, 30 to 50 percent slopes	Severe	Neer (45%)	Slope/erodibility (0.75)	16.7	0.7%
			Ponto (35%)	Slope/erodibility (0.75)		
269	Odas loam, 0 to 2 percent slopes	Slight	Odas (90%)		20.5	0.9%
286	Ponto sandy loam, 2 to 15 percent slopes	Slight	Ponto (90%)		325.9	14.5%
309	Shasta loamy sand, 0 to 5 percent slopes	Slight	Shasta (85%)		1,111.4	49.5%
310	Shastina loam, 0 to 5 percent slopes	Slight	Shastina (85%)		246.5	11.0%
Totals for Area of Interest					**2,246.9**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Slight	1,704.2	75.8%
Moderate	464.0	20.7%
Very severe	51.7	2.3%
Severe	27.0	1.2%
Totals for Area of Interest	**2,246.9**	**100.0%**

Description

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope and soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

c) **Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?** *Less Than Significant Impact*. The potential for landslides on the project site was addressed above in the substantiation for 4.6(a)(iv) and was determined to be less than significant. The potential for lateral spreading, liquefaction, subsidence, and other types of ground failure or collapse was addressed above in the substantiation for 4.6(a)(iii) and was also determined to be less than significant.

d) **Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?** *Less Than Significant Impact*. Expansive or shrink-swell soils are soils that swell when subjected to moisture and shrink when dry. Expansive soils typically contain clay minerals that attract and absorb water, greatly increasing the volume of the soil. This increase in volume can cause damage to foundations, structures, and roadways. The soils at the project site are considered to have low shrink-swell potential. In addition, standard procedures as required by the California Building Code would reduce any potential impact associated with shrink-swell soils to a level that is considered less than significant.

e) **Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?** *Less Than Significant Impact*. The project site is located in an area designated by the Land Use and Circulation Element of the Siskiyou County General Plan as Severe Septic Tank Limitations (Moderate). However, there are eight (8) certified septic fields that exist on the project site. For this reason, this impact is considered less than significant.

f) **Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?** *Less Than Significant with Mitigation Incorporated*. There are no records of paleontological resources being discovered within or immediately adjacent to the project site. Nevertheless, unanticipated and accidental discoveries of paleontological resources are possible as future development of the project site occurs. Therefore, in order to ensure that potential impacts to paleontological resources remain less than significant, mitigation measure MM 7.2 is provided below.

Mitigation Measures:

MM 7.1 As part of the SWPPP, the applicant would be required to implement the following BMPs to minimize the risk of soil erosion and loss of topsoil:

- SOIL 1 – Grading and Preservation of Existing Vegetation: Existing vegetation will be preserved to the maximum extent practicable. Clearing and grubbing will only be performed in the 20 acre area where

the proposed solar PV generation facility will be located, which will include the solar arrays, new foundations, utilities, or internal access driveways.

- SOIL 2 – Soil Compaction: All soil compaction and subgrade preparation specifications will be per the site-specific recommendations of a California-licensed Geotechnical Engineer, and will be based on his field exploration prior to construction. Typically, trench backfill and subgrade compaction consists of either hand-held vibratory, rolled-drum equipment, or tracked equipment. Compaction would be 90 percent of maximum density as calculated by ASTM D1557 Modified Proctor.
- SOIL 3 – Durable Dustless Surface or Hydro-seeding: Disturbed areas will either have a durable dustless surface consisting of 3 to 4 inches of baserock over weed-cloth within the 20 acre area of the property where the proposed solar PV generation facility is proposed, or be seeded upon completion of construction in order to protect exposed soils from erosion by wind and water. If seeding us utilized, then upon completion of an earth disturbance activity, disturbed areas will be covered with a minimum uniform 70 percent perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation.
- SOIL 4 – Straw Mulch: Straw mulch will be used to temporarily stabilize disturbed areas until either a durable dustless surface is installed or soil can be prepared for revegetation. Straw mulch will be anchored immediately after application to prevent being windblown. Straw or hay will be “crimped” into the soils by running tracked machinery across the surface.
- SOIL 5 – Non-Vegetative Stabilization: A non-combustible surface will surround the project site to function as a fire break as well as provide a stabilized surface for post-construction access, which will need to comply with the requirements of Cal Fire. Non-vegetative stabilization methods, such as gravel mulch, will be used to provide a stabilized 20-foot wide access corridor.
- SOIL 6 – Stabilized Construction Entrance/Exit: A stabilized construction entrance/exit will be maintained at the construction site entrance/exit to reduce tracking of sediment by construction traffic. The entrance/exit will be constructed per the detail included with the Erosion and Sediment Control Drawings (ESCDs).
- SOIL 7 – Dust Control: During windy conditions (forecast or actual wind conditions of approximately 25 mph or greater), dust control will

be applied to disturbed areas, including construction access driveways, to adequately control wind erosion. Water will be applied to disturbed soil areas of the project site using water trucks as required by weather conditions to control dust. Water application rates will be minimized as necessary to prevent runoff and ponding.

MM 7.2 If, during the course of site development, paleontological resources (e.g., fossils) are discovered, all work shall cease in the area of the find, the Siskiyou County Community Development Department – Planning Division shall be immediately notified, and a qualified paleontologist shall be retained to determine the significance of the discovery. The County shall consider the mitigation recommendations presented by a professional paleontologist and implement a measure or measures that the County deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.

Timing/Implementation: During ground disturbance activities associated with development of the site.

Enforcement/Monitoring: Planning Division of the Siskiyou County Community Development Department

4.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	☐	☒

Setting:

No air district or other regulatory agency in northern California has identified a significance threshold for greenhouse gas (GHG) emissions generated by a proposed project, or a methodology for analyzing impacts related to GHG emissions or global climate change. By the adoption of Assembly Bill (AB) 32 and Senate Bill (SB) 97; however, the State of California established GHG reduction targets and has determined that GHG emissions as they relate to global climate change are a source of adverse environmental impacts in California. AB 32, the California Climate Solutions Act of 2006 (see Statutes 2006, Chapter 488, enacting Health and Safety Code, Sections 18500–38599), establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions.

The impact that GHG emissions have on global climate change does not depend on whether the emissions were generated by stationary, mobile, or area sources, or whether they were generated in one region or another. Thus, consistency with the state's requirements for GHG emissions reductions is the best metric for determining whether the proposed project would contribute to global warming. In the case of the proposed project, if the project substantially impairs the state's ability to conform to the mandate to reduce GHG emissions to 1990 levels by the year 2020, then the impact of the project would be considered significant.

Discussion of Impacts:

a) **Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?** *Less Than Significant Impact*. The proposed project is a solar PV generation facility that would have a beneficial impact in relation to greenhouse gas emissions due to the project's generation of green energy. See the substantiation for 4.6(a) above. Development of the solar PV generation facility would result in minor greenhouse gas emissions associated with the use of fossil fuel powered equipment during construction. Nevertheless, these emissions would be of a limited scope and duration and would have a less than significant impact on the environment.

b) **Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?** *No Impact*. There are no local plans, policies or regulations contained in the Siskiyou County General Plan, the Siskiyou County Zoning Ordinance, or other local guidelines or regulations that directly address greenhouse gas emissions. Therefore, the determination of significance under this criterion is whether the project would hinder or delay implementation of the statewide GHG reduction targets set forth in AB 32.

The Climate Change Scoping Plan adopted by the CARB outlines the strategies for achieving the AB 32 emissions reduction targets. One of the key strategies is the Renewables Portfolio Standard (RPS), which requires all electric utilities in California to include a minimum of 33 percent renewable generation sources in their overall energy mix by 2020. As a solar photovoltaic generating facility, the project would help increase the proportion of renewables in the statewide energy portfolio, thereby furthering the implementation of RPS by the target year instead of hindering or delaying its implementation. The addition of the project's solar generation to the state's electrical supply would help facilitate the retirement of existing older fossil-fueled generation plants, thereby avoiding or offsetting those sources of GHG emissions. Therefore, the project would have no impact in terms of conflicting with a plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Mitigation Measures: None

4.9 Hazards and Hazardous Materials

Would the project:		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e)	For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g)	Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h)	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Setting:

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the California Code of Regulations (CCR), Title 22, Section 662601.10, as follows:

> A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or

environment when improperly treated, stored, transported or disposed of or otherwise managed.

Most hazardous material regulation and enforcement in Siskiyou County is managed by the Siskiyou Community Development Department - Environmental Health Division, which refers large cases of hazardous materials contamination or violations to the Central Valley Regional Water Quality Control Board (RWQCB) and the California Department of Toxic Substances Control (DTSC). When issues of hazardous materials arise, it is not at all uncommon for other agencies to become involved, such as the Air Pollution Control District and both the federal and state Occupational Safety and Health Administrations (OSHA).

Under Government Code Section 65962.5, the California Department of Toxic Substances Control is required to maintain a list of sites known to have hazardous substances present in the environment. DTSC maintains up-to-date lists on their website. A search of the DTSC's Cortese List for previous development proposals within the project site did not identify any hazardous waste violations in the vicinity of the project site.

Discussion of Impacts:

a) **Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?** *Less Than Significant with Mitigation Incorporated*. The construction and operation of the project would require the transport and use of small quantities of hazardous materials in the form of petroleum hydrocarbons and their derivatives (for example, gasoline, oil, lubricants, and solvents). The project would not include the long-term transport, storage, treatment, or disposal of significant quantities of hazardous materials. The relatively small quantities that would be used would be below the reporting requirements for a Hazardous Materials Business Plan.

   The hazardous materials anticipated to be used would be required to operate the equipment used for construction, operation, and decommissioning of the project. These materials would generally be used in excavation equipment, generators, and other equipment and would be contained within tanks engineered for safe storage. The period of greatest use of these materials would be during construction. Due to the rate of installation, storage of significant quantities of these materials at the project site is not anticipated. Fuel would be provided to the construction equipment on a daily basis and would be mobilized from an off-site location. During the operation phase of the project, use of hazardous materials would be limited to fuel, oil, and similar fluids in pickup trucks and similar vehicles used for inspection and maintenance.

A SWPPP would be required for the both construction and decommissioning phases of the project because more than one acre would be disturbed. The SWPPP would contain several BMPs for the control of hazardous materials, equipment fueling and maintenance practices, and waste management and disposal. Additional details on the SWPPP and related BMPs are provided in **Section 4.7 and MM 7.1**. Implementation of **MM 7.1** in **Section 4.7** would reduce the potential hazards to less than significant levels.

Hazardous waste is defined as any waste that has the potential to threaten public health or the environment, and it typically exhibits one or more of the following traits: ignitability, reactivity, corrosivity, or toxicity. According to current California regulations, discarded photovoltaic solar panels are classified as hazardous waste due to the potential levels of heavy metals included in certain electrical components. Solar panels often contain heavy metals, such as cadmium, copper, lead, selenium, and silver. As such, when PV modules are discarded as waste, they may exhibit the hazardous waste characteristic of toxicity and, therefore, be classified as hazardous waste under the Resource Conservation and Recovery Act (RCRA) and/or California's more stringent Hazardous Waste Control Law.

According to the California Department of Toxic Substances Control (DTSC), analytic testing data suggests that many PV modules would fail the federal and/or state hazardous waste criteria for toxicity. However, conducting the analytic testing required under federal and state law can be technically challenging and costly. Recently passed legislation authorizes DTSC to adopt regulations to designate used/spent solar panels that are hazardous wastes as universal waste. Therefore, DTSC has proposed regulations that would allow people generating waste PV modules to avoid conducting hazardous waste testing protocols for toxicity and chose instead to handle waste PV modules in California as universal wastes, which impose lesser requirements than those imposed on hazardous wastes.[3] Until the new regulations are adopted, solar panels that exhibit characteristics of hazardous waste must be managed as hazardous wastes and not as universal wastes.

In order to mitigate this impact to less than significant after decommissioning, site reclamation and financial assurance will be necessary. A reclamation plan shall be prepared that discusses the steps required for restoring the site to pre-project conditions, to the extent feasible, and shall include an engineer's estimate for reclamation costs. By requiring that the project site be restored to its pre-project baseline conditions following decommissioning of the project, pursuant to the Reclamation Plan specified in **MM 9.1**, as ensured with the accompanying Financial

3 Beveridge & Diamond. California Department of Toxic Substances Control Proposes Regulation Classifying Discarded Solar Panels as Universal Waste. May 20, 2019. https://www.bdlaw.com/publications/california-department-of-toxic-substances-control-proposes-regulation-classifying-discarded-solar-panels-as-universal-waste/

Assurance stipulated in **MM 9.2**, the impact from hazardous waste during decommissioning would be reduced to a less than significant level.

b) **Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?** *Less Than Significant with Mitigation Incorporated*. There is the potential for small leaks or spills caused by accidents or refueling of construction, operation, and decommissioning equipment. The SWPPP would contain several BMPs for the control of hazardous materials, equipment fueling and maintenance practices, and waste management and disposal. Additional details on the SWPPP are provided in Section 4.7 and MM 7.1. Implementation of the BMPs in the SWPPP would reduce the hazard of spills and accidents to a less than significant level.

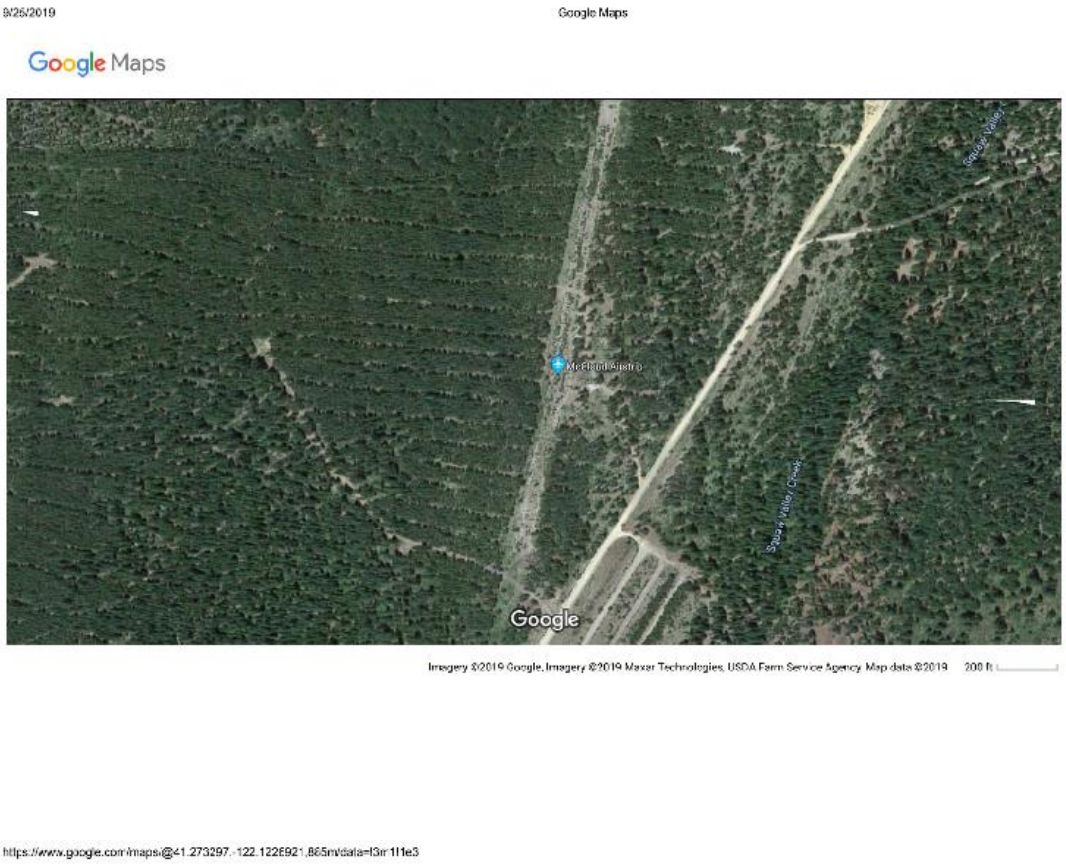
c) **Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?** *No Impact*. The nearest school, McCloud Elementary School, is approximately 2,840 feet south of the project site within the community of McCloud. The project would not cause hazardous emissions, involve substantial amounts of hazardous materials, or create a hazard to this or any other school in any way; therefore, there would be no impact.

d) **Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?** *No Impact*. A search of the DTSC's Cortese List for previous development proposals within the project site did not identify any hazardous waste violations in the vicinity of the project site. The project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on the Cortese List compiled by the Department of Toxic Substances Control; therefore, there would be no impact.

e) **Would the project for a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?** *No Impact*. The project site is not located within an area covered by an airport land use plan. The nearest Public Use Airport, the Dunsmuir Muni-Mott Airport (Caltrans 2019), is located approximately 7 miles west of the project site in the City of Dunsmuir. The proposed project would not result in a safety hazard for people working on the project site; therefore, there would be no impact.

f) **Would the project for a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?** *No Impact*. The nearest private air strip (the McCloud Airstrip) is

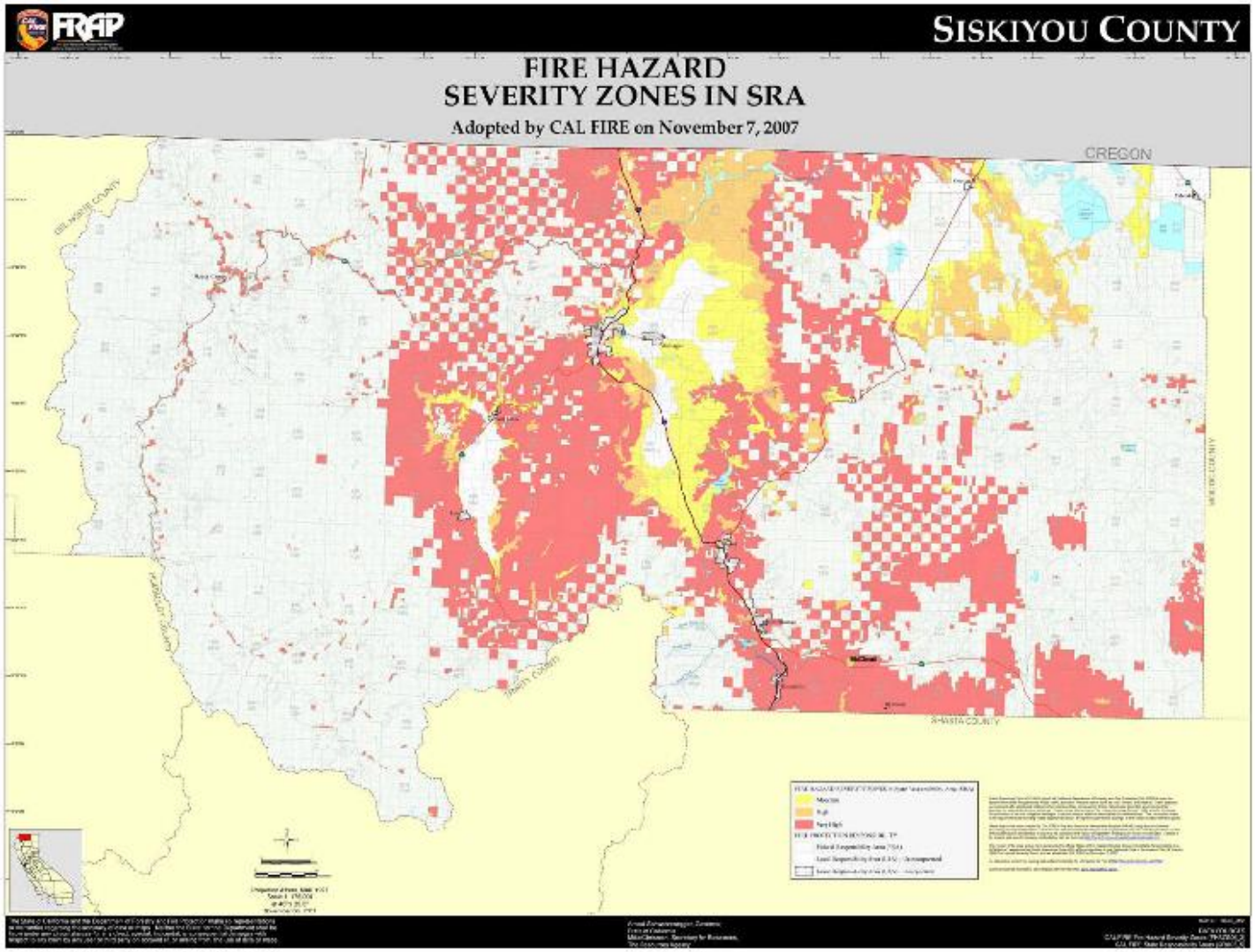
located approximately 350 feet north of the project site. However, a 2019 aerial image of the McCloud Airstrip from Google Maps shows that the airstrip is not operational due to lack of maintenance and the widespread growth of vegetative material within the airstrip. The proposed project would not result in a safety hazard for people working on the project site; therefore, there would be no impact.



g) **Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?** *No Impact*. The project would not cross any public roads or access routes and would not interfere with implementation of an emergency response or evacuation plan; therefore, there would be no impact.

h) **Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?** *Less Than Significant Impact*. According to the Siskiyou County General Plan, the project site is located in an area mapped as Wildfire Hazard (High). There is the potential for wildland fires in the region given the relatively dry summer climate, with hot days and wind, and the project site location in a wildland-urban interface. The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel

moisture contents), and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. The project site is relatively flat, with slopes of 0 to 5 percent. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

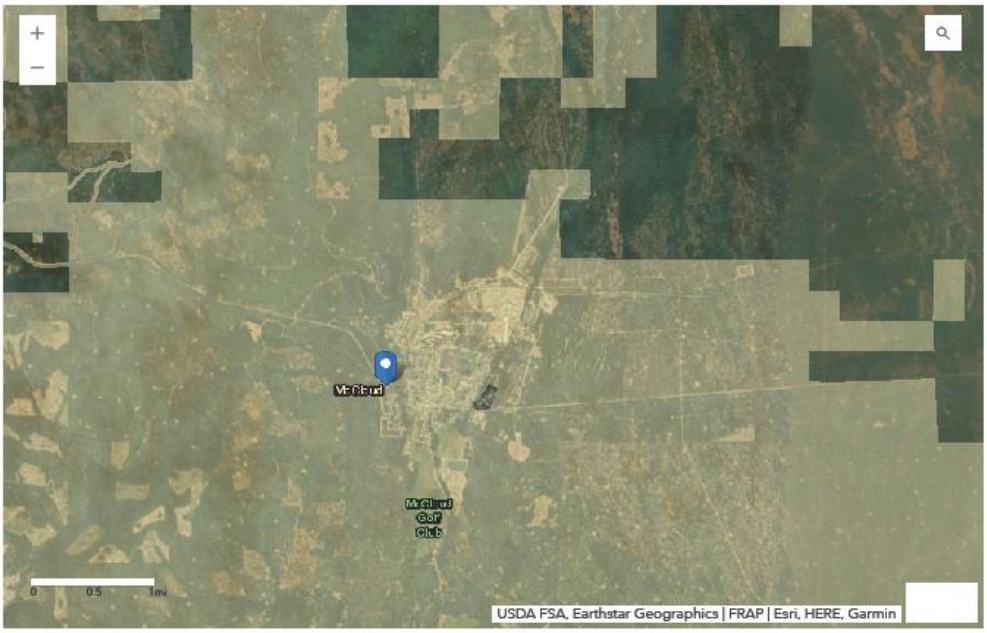


https://osfm.fire.ca.gov/media/6533/fhszs_map47.jpg

1/1

State Responsibility Area Viewer

State Responsibility Areas (SRA) are recognized by the Board of Forestry and Fire Protection as areas where Cal Fire is the primary emergency response agency responsible for fire suppression and prevention. The State Responsibility Area Viewer allows users to view SRA spatial distribution at different scales and in different areas of the state. It can also be used to search a specific address to help determine if a property is within SRA boundaries.



DISCLAIMER

This data viewer is provided as a service to assist landowners in determining if their property may fall within an SRA area. SRA boundaries were adopted by the Board of Forestry and Fire Protection in January, 2011, and updated on July 1, 2016.

By accessing this data, you agree to the following terms and conditions: The data and map provided show an estimated location by physical address. The State of California, the California Department of Forestry and Fire Protection, nor any of their employees, contractors, or subcontractors, make no claims, promises, guarantees, representations or warranties, express or implied, nor assume any legal liability or responsibility for the accuracy, completeness, adequacy, or usefulness of any information, apparatus, product, or process disclosed, nor represent that its use would not infringe on privately owned rights. This data viewer is provided as a service to assist landowners in determining if their property may fall within State Responsibility Area (SRA).

Due to the nature of this map, some users may experience accessibility issues. If you experience any issues, please contact the board at (916) 653-8007 for direct assistance.

Instructions: Enter your complete address including zipcode in the search box at the top right corner of the map... Example: 2700 Muir Wy, Sacramento CA 95818
Use your mouse to move the location of the map. You can use the + and – or your mouse wheel to zoom in and out.

Legend: Lands shadowed by a yellow overlay are with State Responsibility Area.

For comments and questions regarding SRA, please contact:

Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244
Public.Comments@fire.ca.gov

The project is reviewed by CAL FIRE and the Building Division of the Siskiyou County Community Development Department and would be required to be constructed with fire suppression infrastructure, if the existing 72 functioning fire hydrants located on the McCloud Partners, LLC owned property do not satisfy the requirements of CAL FIRE, and clear space areas as required by CAL FIRE and the California Building Code (CBC). The project would be required to comply with Fire Safe Regulations enacted pursuant to Public Resources Code Section 4290. The Applicant has stated that the Fire Safe Council is looking forward to the establishment of the solar PV generation facility because of the fire break that the project would result in on the north side of McCloud. Therefore, the potential wildfire impacts are determined to be less than significant.

Mitigation Measures: Implement MM 7.1 and MM 7.2 in Section 4.7

MM 9.1 Prior to the issuance of a building permit the applicant shall submit, for review and approval by the Planning Division of the Siskiyou County Community Development Department (CDD), a Reclamation Plan (Plan) for (1) the routine disposal of solar panels throughout the useful life of the project, (2) the removal of the solar PV generation facility at the end of its useful life, and (3) the restoration of the site at the end of the project's useful life. The Plan shall contain an analysis of general preconstruction conditions of the project site, and the site shall be photographically documented by the applicant prior to the start of construction. The Plan shall contain specific measures to restore the soil to approximate its pre-project condition, including (1) removal of all above-ground and below-ground project fixtures, equipment, and driveways, (2) revegetation using a Siskiyou County-approved grasses and forbs seed mixture designed to maximize revegetation with noninvasive species broadcast or drilled across the project site, and (3) application of weed-free mulch spread, as needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions shall be assessed by CDD staff. Additional seeding and application of weed free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (i.e., restored to pre-project conditions), until the entire project area has been restored to conditions equivalent to pre-project conditions. All waste shall be recycled or disposed of in compliance with applicable law. The applicant shall verify the completion of reclamation within 12 months after decommissioning the solar PV generation facility with CDD staff.

MM 9.2 Prior to the issuance of a building permit, the applicant shall post a performance or cash bond, submit a Certificate of Deposit, submit a letter of credit, or provide such other financial assurances acceptable to the County, in an amount provided in an Engineer's Cost Estimate, approved by the CDD, to ensure completion of the activities under the Reclamation Plan. Every five years from the date of completion of construction of the project, the applicant shall submit an updated Engineer's Cost Estimate for financial assurances for the Plan,

which will be reviewed every five years by the Siskiyou County CDD. If the cost of reclamation increases, then the financial assurance shall be increased to reflect the increased cost of reclamation.

4.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on or off site?	☐	☒	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	☐	☒	☐	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
iv) Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

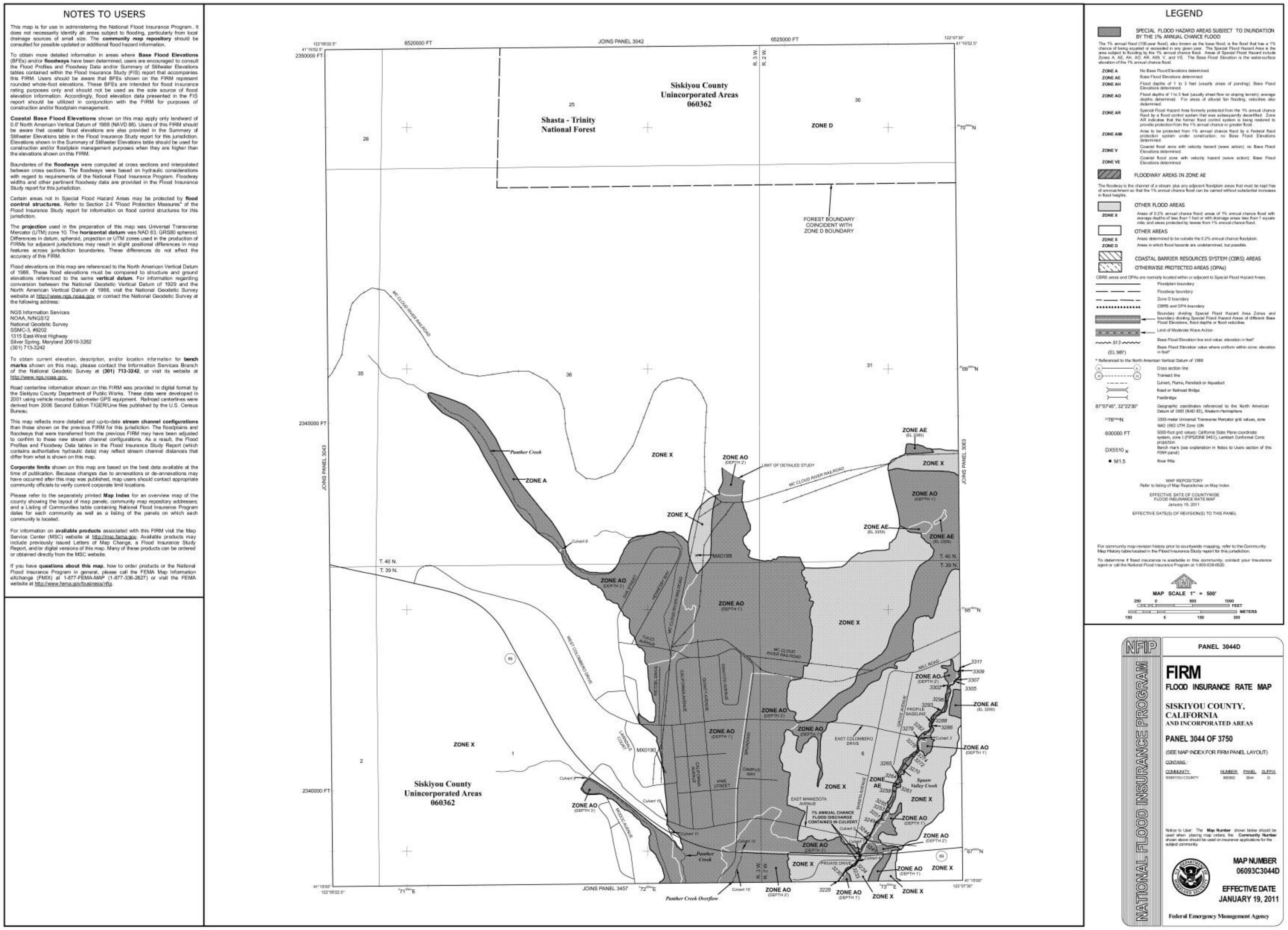
Setting:

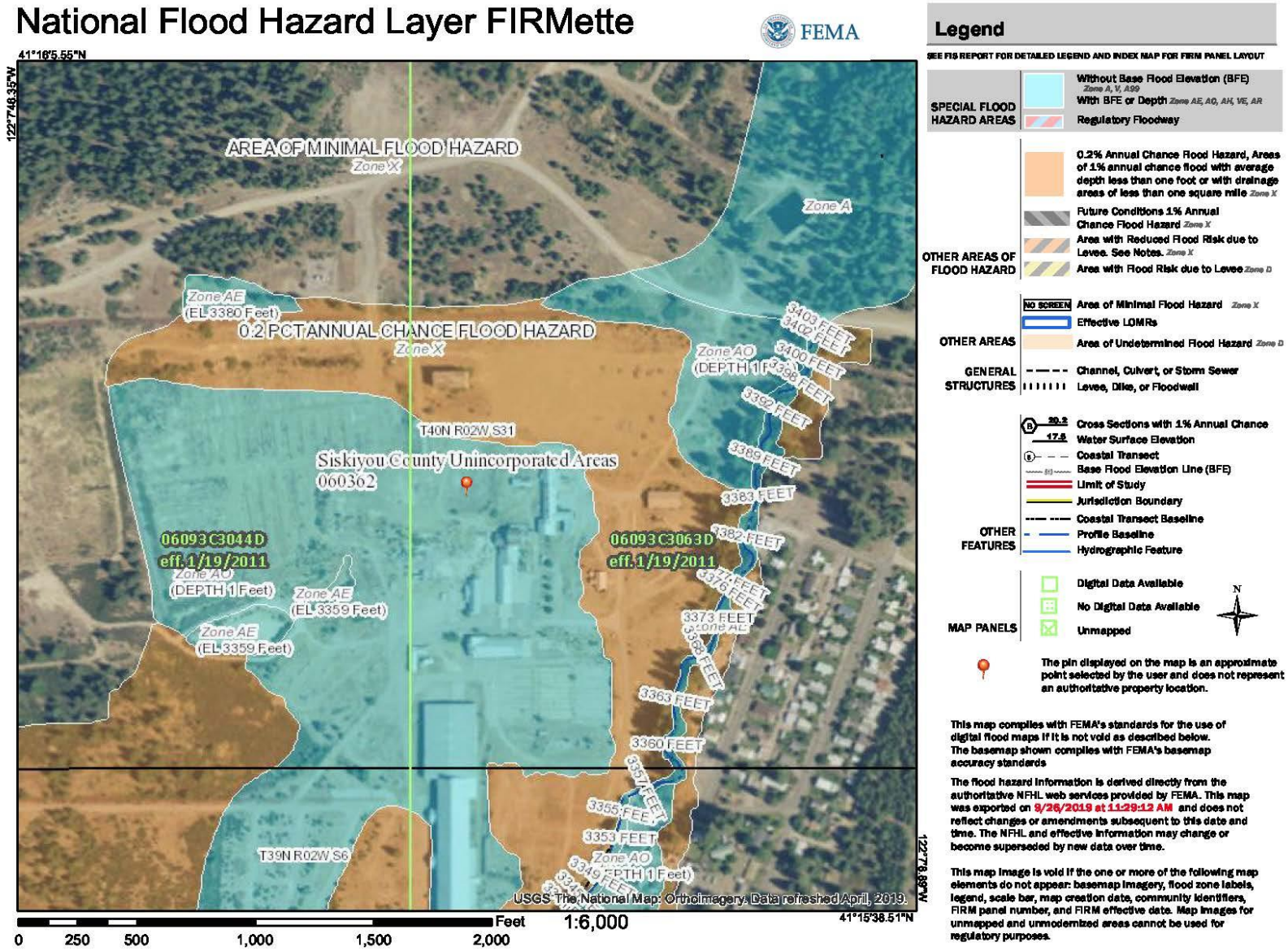
The most significant hydrologic feature in the project vicinity is Squaw Valley Creek, located approximately 980 feet east of the nearest proposed solar array (See the 10 acre solar array in Figure 3.0-4). No other significant surface water features exist in the project vicinity. No groundwater wells would be installed on the property as a result of the proposed solar PV generation facility

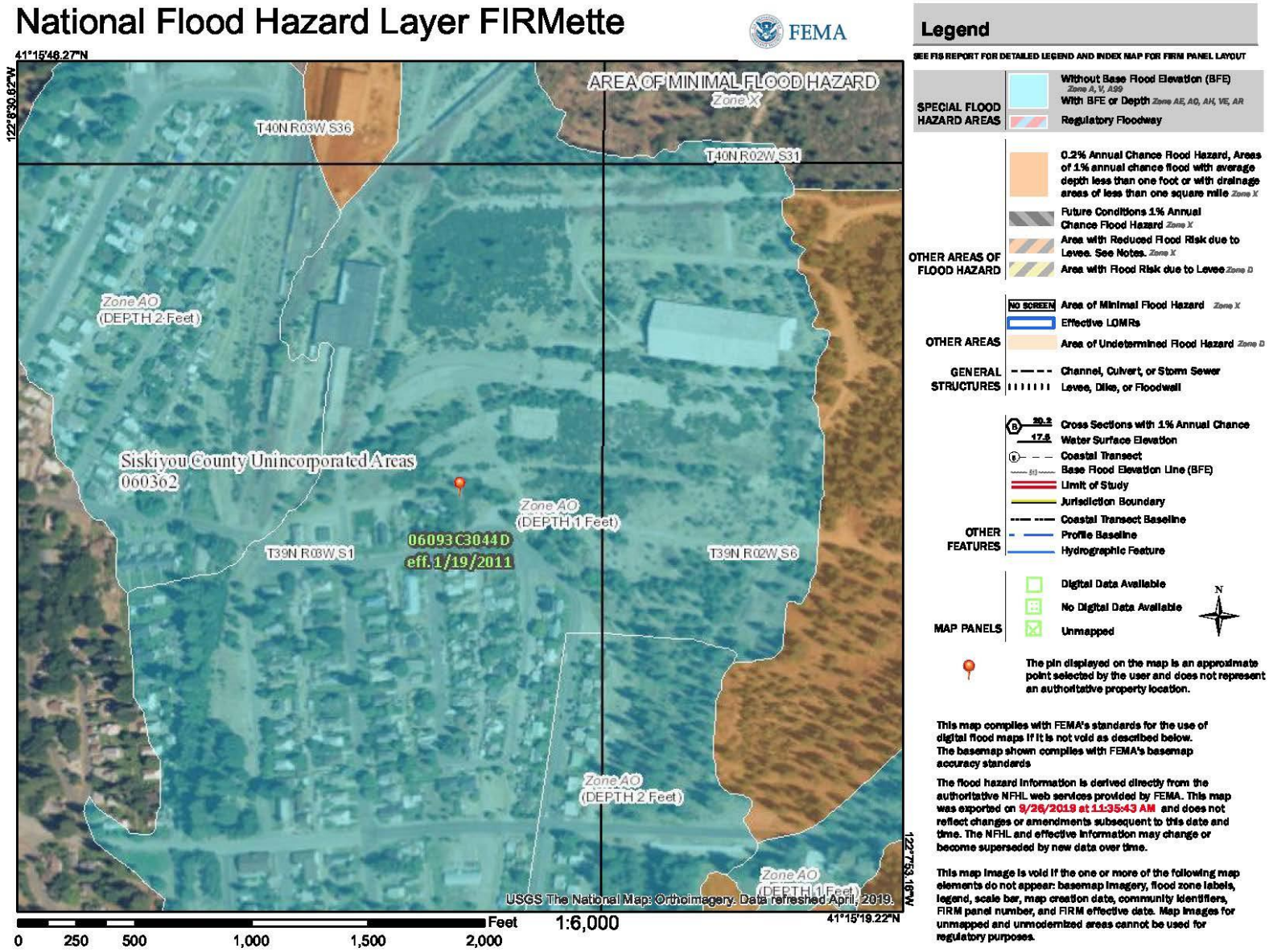
An approximately 10 acre portion (See 2. Solar Parcel – 2.6 acres and 3. Solar Parcel – 7.2 acres shown on Figure 3.0-4) of the proposed 20 acre solar PV generation project is located within Other Areas Zone X as shown on the National Flood Insurance Program, Flood Insurance Rate Map (FIRM), Map Number 06093C3044D, dated January 19, 2011. Other Areas Zone X are areas determined to be outside the 0.2% annual chance floodplain.

An approximately 10 acre portion (See 1. Solar Parcel – 10 acres shown on Figure 3.0-4) of the proposed 20 acre solar PV generation project is located within Zone AO as

shown on the National Flood Insurance Program, Flood Insurance Rate Map (FIRM), Map Number 06093C3044D, dated January 19, 2011. Zone AO is a Special Flood Hazard Area Subject to Inundation by the 1 percent Annual Chance Flood, with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined. FIRM Map Number 06093C3044D lists a flood depth of 1 foot for this portion of the project site.


NOTES TO USERS
LEGEND
JOINS PANEL 3042
Siskiyou County
Unincorporated Areas
060362
Shasta - Trinity
National Forest
ZONE D
FOREST BOUNDARY
COINCIDENT WITH
ZONE D BOUNDARY
Panther Creek
ZONE A
ZONE X
ZONE AO
ZONE AE
JOINS PANEL 3043
JOINS PANEL 3063
JOINS PANEL 3457
Siskiyou County
Unincorporated Areas
060362
Square Valley Creek
Panther Creek Overflow
NATIONAL FLOOD INSURANCE PROGRAM
PANEL 3044D
FIRM
FLOOD INSURANCE RATE MAP
SISKIYOU COUNTY,
CALIFORNIA
AND INCORPORATED AREAS
PANEL 3044 OF 3750
MAP NUMBER
06093C3044D
EFFECTIVE DATE
JANUARY 19, 2011
Federal Emergency Management Agency


National Flood Hazard Layer FIRMette
FEMA
41°16'5.55"N
122°7'48.35"W
AREA OF MINIMAL FLOOD HAZARD
Zone X
Zone A
Zone AE
(EL 3380 Feet)
0.2 PCT ANNUAL CHANCE FLOOD HAZARD
Zone X
Zone AO
(DEPTH 1 F
3403 FEET
3402 FEET
3400 FEET
3396 FEET
3392 FEET
3389 FEET
3383 FEET
3382 FEET
3376 FEET
3373 FEET
3363 FEET
3360 FEET
3355 FEET
3353 FEET
3349 FEET
T40N R02W S31
Siskiyou County Unincorporated Areas
060362
06093C3044D
eff. 1/19/2011
Zone AO
(DEPTH 1 Feet)
Zone AE
(EL 3359 Feet)
Zone AE
(EL 3359 Feet)
06093C3063D
eff. 1/19/2011
T39N R02W S6
USGS The National Map: Orthoimagery. Data refreshed April, 2019.
122°7'8.85"W
41°15'38.51"N
Feet
0
250
500
1,000
1,500
2,000
1:6,000
Legend
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE) Zone A, V, A99
With BFE or Depth Zone AE, AO, AH, VE, AR
Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD
0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
Future Conditions 1% Annual Chance Flood Hazard Zone X
Area with Reduced Flood Risk due to Levee. See Notes. Zone X
Area with Flood Risk due to Levee Zone D
OTHER AREAS
NO SCREEN Area of Minimal Flood Hazard Zone X
Effective LOMRs
Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES
Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall
OTHER FEATURES
20.2
17.5
Cross Sections with 1% Annual Chance
Water Surface Elevation
Coastal Transect
Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature
MAP PANELS
Digital Data Available
No Digital Data Available
Unmapped
N
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/26/2019 at 11:29:12 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.


National Flood Hazard Layer FIRMette
FEMA
41°15'46.27"N
122°8'30.82"W
AREA OF MINIMAL FLOOD HAZARD
Zone X
T40N R03W S36
T40N R02W S31
Zone AO
(DEPTH 2 Feet)
Siskiyou County Unincorporated Areas
060362
Zone AO
(DEPTH 1 Feet)
06093C3044D
eff. 1/19/2011
T39N R03W S1
T39N R02W S6
Zone AO
(DEPTH 2 Feet)
Zone AO
(DEPTH 1 Feet)
USGS The National Map: Orthoimagery. Data refreshed April, 2019.
122°7'53.18"W
41°15'19.22"N
0 250 500 1,000 1,500 2,000 Feet
1:6,000
Legend
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE) Zone A, V, A99
With BFE or Depth Zone AE, AO, AH, VE, AR
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Coastal Transect
Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature
MAP PANELS
Digital Data Available
No Digital Data Available
Unmapped
N
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/26/2019 at 11:35:43 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Discussion of Impacts:

a) **Would the project violate any water quality standards or waste discharge requirements?** *Less Than Significant with Mitigation Incorporated*. In accordance with National Pollutant Discharge Elimination System (NPDES) regulations, the State of California requires that any construction activity affecting one acre or more obtain a General Construction Activity Stormwater Permit (General Permit) to minimize the potential effects of construction runoff on receiving water quality. The General Permit is accompanied by a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, and a detailed construction timeline. The SWPPP must also include implementation of best management practices (BMPs) to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges. Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ.

   The proposed project would disturb more than one acre and would therefore be required to obtain a General Permit and implement a SWPPP [See the substantiation for 4.7(b) above]. Implementation of the BMPs in **MM 7.1** would minimize the potential for substantial soil erosion or the loss of topsoil. Considering the topography of the project site, the slight risk of erosion, and the implementation of BMPs in accordance with the SWPPP, any risk of adverse effects related to soil erosion or topsoil loss from the project would be reduced to less than significant by implementing **MM 7.1**.

b) **Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?** *Less Than Significant Impact*. Water would be used during both construction and operation for dust control purposes. In addition, water would also be used to wash the solar panels twice per year. 250-500 gallons of water, for each of the two times per year that panel washing occurs, would be brought to the solar PV generation facility site in a water truck with water from adjacent property that is owned by McCloud Partners, LLC, which has 9,112 acre feet (per year) of water rights (State Water Licenses 832 and 5150). The project will not utilize water from the McCloud Community Service District. There are 3.5 miles of onsite water lines, which supplies the 72 existing fire hydrants that are located on the McCloud Partners, LLC property. The existing water supply has enough capacity to provide water for both the construction and operational phases of

the project. The majority of the 20 acre project site would be covered with 3-4 inches of roadbase over weed cloth, which would be a pervious surface. Although the project would result in the creation of a small amount of impervious surfaces (foundations for the solar panels) as the 20 acre solar PV generation facility is constructed, these surfaces would be relatively limited and would not interfere with groundwater recharge. Therefore, this impact would be less than significant.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. **result in a substantial erosion or siltation on- or off-site?** *Less Than Significant with Mitigation Incorporated*. The proposed project would disturb more than one acre and would therefore be required to obtain a General Permit and implement a SWPPP [See the substantiation for 4.7(b) and 4.10(a) above]. Implementation of the BMPs in **MM 7.1** would minimize the potential for substantial soil erosion or the loss of topsoil. Considering the topography of the project site, the slight risk of erosion, and the implementation of BMPs in accordance with the SWPPP, any risk of adverse effects related to soil erosion or topsoil loss from the project would be reduced to less than significant by implementing **MM 7.1**.

ii. **substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?** *Less Than Significant with Mitigation Incorporated*. The project site is relatively flat with slopes of 0 to 5 percent and the topography would not be substantially altered by the proposed project. As a result, the rate or amount of surface runoff would not increase, and would not result in flooding on- or offsite, as a result of the project. However, the proposed project would disturb more than one acre and would therefore be required to obtain a General Permit and implement a SWPPP [See the substantiation for 4.7(b) and 4.10(a) above]. Implementation of the BMPs in **MM 7.1** would minimize the potential for substantial soil erosion or the loss of topsoil. Considering the topography of the project site, the slight risk of erosion, and the implementation of BMPs in accordance with the SWPPP, any risk of adverse effects related to soil erosion or topsoil loss from the project would be reduced to less than significant by implementing **MM 7.1**.

iii. **create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or?** *Less Than Significant with Mitigation Incorporated*. See the substantiation for 4.10(i) and 4.10(ii) above.

iv. **impede or redirect flood flows?** *Less Than Significant*. An approximately 10-acre portion (See 2. Solar Parcel – 2.6 acres and 3. Solar Parcel – 7.2 acres shown on Figure 3.0-4) of the proposed 20 acre solar PV generation project is located within Other Areas Zone X as shown on the National Flood Insurance

Program, Flood Insurance Rate Map (FIRM), Map Number 06093C3044D, dated January 19, 2011. Other Areas Zone X are areas determined to be outside the 0.2% annual chance floodplain.

An approximately 10-acre portion (See 1. Solar Parcel – 10 acres shown on Figure 3.0-4) of the proposed 20 acre solar PV generation project is located within Zone AO as shown on the National Flood Insurance Program, Flood Insurance Rate Map (FIRM), Map Number 06093C3044D, dated January 19, 2011. Zone AO is a Special Flood Hazard Area Subject to Inundation by the 1 percent Annual Chance Flood, with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined. FIRM Map Number 06093C3044D lists a flood depth of 1 foot for this portion of the project site.

However, construction of the solar PV generation facility would not impede or redirect flood flows because the bottom of the solar panels would be approximately 3 feet above the ground surface. Instead, flood flows would flow through the solar PV facility. Therefore, this impact would be less than significant.

d) **Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?** *Less Than Significant*. The project site is not adjacent to any bodies of water capable of generating a seiche or tsunami. The project site is relatively flat with slopes of 0 to 5 percent. An approximately 10 acre portion (See 1. Solar Parcel – 10 acres shown on Figure 3.0-4) of the proposed 20 acre solar PV generation project is located within Zone AO as shown on the National Flood Insurance Program, Flood Insurance Rate Map (FIRM), Map Number 06093C3044D, dated January 19, 2011. Zone AO is a Special Flood Hazard Area Subject to Inundation by the 1 percent Annual Chance Flood, with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined. However, the bottom of the solar panels would be approximately 3 feet above the ground surface and FIRM Number 06093C3044D lists a depth of 1 foot for the AO Zone for the 10 acre portion of the project site. Therefore, the project in flood hazard risk release of pollutants due to project inundation is less than significant.

e) **Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?** *No Impact*. The Project site is located in a sparsely developed area and there is no water quality control plan or sustainable groundwater management plan pertaining to the area. Therefore, the project would have no impact.

Mitigation Measures: Implement MM 7.1 in Section 4.7

4.11 Land Use and Planning

Would the project:		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to conflict with any land use plan, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Setting:

The basis for land use planning at the project site is the County's General Plan. The Land Use Element of the General Plan provides the primary guidance on issues related to land use and land use intensity. The Land Use Element provides designations for land within the County and outlines goals and policies concerning development and use of that land.

The primary goal of the Land Use/Circulation Element of the Siskiyou County General Plan is to allow the physical environment to determine the appropriate future land use pattern that will develop in Siskiyou County. This is contrary to conventional planning practice in which one master land use map indicates future land use patterns based primarily on social, political, and economic factors. Its focus is for future development to occur in areas that are easiest to develop without entailing great public service costs, that have the least negative environmental effect, and that do not displace or endanger the county's critical natural resources.

The technique used for the development of the Land Use Element involved preparation of a series of overlay maps identifying development constraint areas. Constraints take the form of both natural, physical barriers or problems and those culturally imposed on the basis of resource protection. The combination of overlay maps provides a visual display of tones representing physical constraints in a particular geographic area in terms of the perceived effect of urban development. In identifying an absence of physical constraints, it also indicates where urban development may proceed without encountering known physical problems.

The Land Use Element of the Siskiyou County General Plan identifies the project site as being located within the following mapped areas: Erosion Hazard (High), Building Foundation Limitations Area (with Severe Pressure Limitations Soil), Severe Septic Tank Limitations (Moderate), Wildfire Hazard Area (High), and Woodland Productivity Area (Highly Suitable). The following are the applicable policies established for development within those mapped resource and natural hazard areas:

Policy 7	Specific mitigation measures will be provided that lessen soil erosion, including contour grading, channelization, revegetation of disturbed slopes and soils, and project timing (where feasible) to less[en] the effect of seasonal factors (rainfall and wind).
Policy 8	Enforce building construction standards (uniform building code) and public works requirements.
Policy 9	The minimum parcel size shall be one acre on 0-15% slope and 5 acres on 16-29% slope The permitted density will not create erosion or sedimentation problems.
Policy 10	Single family residential, heavy or light industrial, heavy or light commercial, open space, non-profit and non-organizational in nature recreational uses, commercial/recreational uses, and open public or quasi-public uses only may be permitted. The permitted density will not create erosion or sedimentation problems.
Policy 30	All development proposed within a wildfire hazard area shall be designed to provide safe ingress, egress, and have an adequate water supply for fire suppression purposes in accordance with the degree of wildfire hazard.
Policy 31	The minimum parcel size shall by one acre on zero to 15 percent slope, and five areas on 16 to 29 percent slope. The permitted density will not create erosion or sedimentation problems.
Policy 32	Single-family residential, light industrial, light commercial, open space, non-profit and non-organizational in nature recreational uses, commercial/recreational uses, and public or quasi-public uses only may be permitted. The permitted uses will not create erosion or sedimentation problems.

In addition to the policies noted above, the following Composite Overall Policies have been determined to be applicable to the proposed project:

Policy 41.3(a)	All heavy commercial and heavy industrial uses must provide or have direct access onto major thoroughfares or existing industrial/commercial streets capable of accommodating the traffic that could be generated from the proposed use.
Policy 41.3(c)	All heavy commercial and heavy industrial uses should be located away from areas clearly committed to residential use.
Policy 41.3(d)	All heavy, non-agriculturally related commercial and industrial uses should be located away from areas clearly committed to agricultural uses.
Policy 41.3(e)	All proposed uses of the land shall be clearly compatible with the surrounding and planned uses of the area.
Policy 41.3(f)	All proposed uses of the land may only be allowed if they clearly will not be disruptive or destroy the intent of protecting each mapped resource.
Policy 41.5	All development will be designed so that every proposed use and every individual parcel of land created is a buildable site, and will not create erosion, runoff, access, or fire hazard or any other resource or environmentally related problems.
Policy 41.9	Buildable, safe access must exist to all proposed uses of land. The access must also be adequate to accommodate the immediate and cumulative traffic impacts of the proposed development.
Policy 41.12	All significant historic and prehistoric places and features when identified shall be preserved and protected in accordance with accepted professional practices.
Policy 41.13	All rare and endangered plant species identified and recognized by state and federal government shall be preserved and protected in accordance with accepted professional practices.
Policy 41.18	Conformance with all policies in the Land Use Element shall be provided, documented, and demonstrated before the County may make a decision on any proposed development.
Policy 41.19	It is the intent of all the policies in the Land Use Element to accomplish the following:

a) Encourage intensive development near existing urban areas and away from the natural resources.

b) Ensure compatibility of all land uses.

c) Encourage heavy industrial and heavy commercial uses near major thoroughfares, existing urban areas, other locations most suited for the particular type of heavy commercial or heavy industrial use.

d) Recognize the need for heavy commercial and heavy industrial land uses that most logically must be located in isolated areas of the county.

In concert with the General Plan, the Siskiyou County Code (SCC) establishes zoning districts within the County, and specifies allowable uses and development standards for each district. Under state law, each jurisdiction's zoning must be consistent with its general plan. The proposed solar PV generation project is located in the Heavy Industrial (M-H) District.

Discussion of Impacts:

a) **Would the project physically divide an established community?** *No Impact*. The 20 acre project site is a portion of a 118.30 acre property that is located in a Heavy Industrial (M-H) District. The Applicant also owns an additional 157.16 additional acres, which surround the project site, that are also within the M-H District. The addition of the solar PV generation facility will not physically divide an established community. Therefore, there is no impact.

b) **Would the project cause a significant environmental impact due to a conflict with any land use plan, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?** *No Impact*. The proposed project would not conflict with the goals and policies of the Siskiyou County General Plan because it would be subject to approval through the Use Permit (UP) process. The project site is located in the Heavy Industrial (M-H) District. Section 10-6.4703(n) of the Siskiyou County Zoning Ordinance lists power generation plants, all energy sources, including biomass as conditional uses in the M-H District. Since the Applicant submitted Use Permit (UP-19-01) Application for the proposed solar PV generation facility, which is a power generation plant, it is consistent with Section 10-6.4703(n) of the Siskiyou County Zoning Ordinance. Therefore, there is no impact.

Mitigation Measures: None

4.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Setting:

The State Mining and Geology Board has the responsibility to inventory and classify mineral resources and could designate such mineral resources as having a statewide or regional significance. If this designation occurs, the local agency must adopt a management plan for such identified resources. At this time, there are no plans to assess local mineral resources for the project area or Siskiyou County.

Discussion of Impacts:

a) **Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?** *No Impact*. The project would not result in the loss of an available known mineral resource that would be of value to the region or residents of the state.

b) **Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?** *No Impact*. See Response 4.12(a) above. There are no locally important mineral resource recovery sites within the project area delineated in the City or County general plans.

Mitigation Measures: None

4.13 Noise

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Setting:

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in Leq) and the average daily noise levels/community noise equivalent level (in Ldn/ Community noise equivalent level [CNEL]).

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks, and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. A hard site exists where noise travels away from the source over a generally flat, hard surface such as water, concrete, or hard-packed soil. These are examples of reflective ground, where the ground does not provide any attenuation.

Point source noise is usually associated with a source that remains in one place for extended periods of time, such as with most construction activities. A few examples of point sources of noise are pile drivers, jackhammers, rock drills, or excavators working in one location. Line source noise is generated by moving objects along a linear corridor. Highway traffic is a good example of line source noise.

The standard attenuation rate for hard site conditions is 6 dB per doubling of distance for point source noise and 3 dB per doubling of distance from line sources. When ground cover or normal unpacked earth (i.e., a soft site) exists between the source and receptor, the ground becomes absorptive of noise energy. Absorptive ground results in

an additional 1.5 dB reduction per doubling of distance as it spreads from the source. Added to the standard reduction rate for soft site conditions, point source noise attenuates at a rate of 7.5 dB per doubling of distance, and line source noise decreases at a rate of 4.5 dB per doubling of distance. (WSDOT[4]).

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise but are less effective than solid barriers.

The following definitions are provided for specific noise-related terms used in this section.

- dB: Decibel: a relative measure of sound.
- dBA: A-weighted Decibels: a modification of the decibel scale strongly correlated to human perception of noise and a standard measure for environmental noise assessment.
- Leq: Average Noise Level: the average (or equivalent) noise level over given measurement period, often one hour.
- Lmax: Maximum Noise Level: the maximum noise level during a given measurement period.
- Ldn: Day-Night Average Level: the average noise level over a 24-hour period, with a +10 dB penalty added at night (10 pm to 7 am).
- PPV: Peak Particle Velocity: the maximum instantaneous positive or negative peak of the vibration signal.
- VdB: Vibration Decibels: a measure of vibration velocity levels.

Noise levels on the project site would be associated primarily with construction activities for the solar facility. The nearest potentially noise-sensitive receptors are residences located approximately 988 feet east of the proposed solar PV generation facility, residences located approximately 1,500 feet west of the proposed solar PV generation facility, and Hoo Hoo Park located approximately 1,855 feet south of the proposed solar PV generation facility.

4 WSDOT (Washington State Department of Transportation). Biological Assessment Preparation Manual & Templates. Chapter 7 Construction Noise Impact Assessment. Accessed 10/2/19. https://www.wsdot.wa.gov/environment/environment-technical/environment-disciplines/fish-wildlife/BA-preparation-manual

Discussion of Impacts:

a) **Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or of applicable standards of other agencies?** *Less Than Significant*. The County of Siskiyou does not regulate noise generated by construction, as construction at any given site is temporary and generally expected and tolerated by residents as a typical occurrence. However, a discussion of construction noise impacts is included for full disclosure purposes. Construction of the Proposed Project would result in a temporary short-term increase of noise levels in the Project vicinity. The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment and the prevailing wind direction. The noise levels for various types of construction equipment that could be required during construction of the Proposed Project are provided in **Table 4.13-1**.

b) Type of Equipment	Noise Level (dBA) at 50 feet	
	Without Feasible Noise Control	With Feasible Noise Control[1]
Dozer or Tractor	80	75
Excavator	88	80
Scraper	88	80
Front End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75

Source: US Environmental Protection Agency 19715

[1] Feasible noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds operating in accordance with manufacturers specifications.

The County Noise Element includes a land use compatibility table (Table 13 of the Noise Element of the Siskiyou County General) that provides the County with a tool to gauge the compatibility of new land uses relative to existing noise levels. This table identifies the ranges of acceptable noise levels for a variety of land use types.

5 USEPA (United States Environmental Protection Agency). 1971. "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, PB 206717". https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=9101NN3I.TXT

Specifically, noise levels of 65 dBA Ldn and less are identified as an acceptable noise environment for commercial-type land uses, such as proposed by the Project.

The County Noise Element identifies an acceptable noise environment of 65 dBA for light and heavy commercial land uses. Onsite operational noise sources associated with the operation of the Proposed Project include mobile and stationary (i.e., car engines, diesel engines, stereo music, and human voices) sources.

Upon completion of construction, the majority of project operational activity would be passive. Potential noise sources during operation include vehicular trips for maintenance or repair activities, including panel washing, intermittent testing and repair of various project components, weed abatement, debris and trash removal, and fence repairs. Maintenance activities would occur infrequently and would not substantially increase ambient noise levels in the area above existing levels without the project; therefore, the impact would be less than significant.

The nearest potentially sensitive receptors are residences located 988 feet east of the project site. Any noise generated by construction equipment is expected to attenuate (decrease over distance) to less than 65 dBA before reaching these residences. For example, if an excavator with feasible noise control is producing a noise level of 80 dBA at 50 feet, that specific noise would attenuate to approximately 62 dBA at a distance of 800 feet under ideal acoustic conditions. Under real-world conditions, more attenuation is likely, resulting in even lower sound levels at the residence. For reference, 20 dBA is approximately the noise level of a whisper, or rustling leaves. Considering all of the potential intervening barriers and competing noise sources (both natural and man-made), it is extremely unlikely any noise produced by construction equipment would be heard at the nearest residence to the project site. Since project construction would not increase noise levels in sensitive areas, it would comply with the noise standards in the Siskiyou County General Plan.

Operation of the project would not generate any noise on a regular basis. Occasional, intermittent noise would be generated during maintenance of the project by pickup trucks and other small equipment conducting various activities such as panel washing and vegetation management. The Sunny Central 2750-EV-US inverter (stationary source) has noise emissions of 64.3 dBA at a distance of 10 meters (32.80 feet), that specific noise would attenuate to approximately 40.3 dBA at a distance of 524.8 feet under ideal acoustic conditions. This noise level would not exceed the noise standard of 65 dBA in the Siskiyou County General Plan. Neither the construction nor the operation phases of the project would produce noise in excess of the noise standards in the Siskiyou County General Plan in sensitive areas; therefore, the impact would be less than significant.

b) **Would the project result in generation of excessive groundborne vibration or groundborne noise levels?** *Less Than Significant*. Vibration is the periodic oscillation of a medium or object. Vibration sources may be continuous, such as

factory machinery, or transient, such as explosions. As is the case with airborne sound, ground borne vibrations may be described by amplitude and frequency. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS vibration velocity are normally described in inches per second. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings. Levels of concern for damage to structures range from PPV of 0.5 inches per second for reinforced concrete, steel, or timber structures to 0.12 inches per second for structures that are extremely susceptible to vibration damage (FTA 2018[6]).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. As it takes some time for the human body to respond to vibration signals, it is more prudent to use vibration velocity when measuring human response. The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels, and 85 VdB is acceptable only if there are an infrequent number of events per day (FTA 2018[7]). **Table 4.13-2** lists vibration levels from typical construction equipment.

Table 4.13-2 Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 feet (inches per second)	Approximate Lv* at 25 feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87

6 FTA (Federal Transit Administration). 2018. "Transit Noise and Vibration Impact Assessment". Federal Transit Administration, Office of Planning and Environment, Washington, DC. September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

7 Ibid

Table 4.13-2 Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 feet (inches per second)	Approximate Lv* at 25 feet
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

*RMS velocity in decibels, VdB re I micro-in/sec
Source: FTA 20188

The FTA (2018) has identified screening distances for vibration assessments. These screening distances are the distance between potentially sensitive receptors and vibration-generating projects within which potential impacts may occur. The screening distances are based in both the typical attenuation of vibrations over distance and the sensitivity of particular receptors to vibration. For example, a proposed conventional commuter railroad (having a typical vibration level of 75 to 85 VdB) within 600 feet of a concert hall or television study should be assessed for potential impacts. All listed screening distances are 600 feet or less, depending on the type of project and sensitivity of the potential receptor. The nearest residences are 988 feet east of the project site. Neither these structures, nor any other sites potentially sensitive to vibrations, fall within the screening distance for vibration assessment; therefore, any impacts from vibrations would be less than significant.

c) **Would the project result in, for a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?** *No Impact*. The nearest private air strip (the McCloud Airstrip) is located approximately 350 feet north of the project site. However, a 2019 aerial image of the McCloud Airstrip from Google Maps (See Page 4.0-28 above) shows that the airstrip is not operational due to lack of maintenance and the widespread growth of vegetative material within the airstrip. The nearest Public Use Airport, the Dunsmuir Muni-Mott Airport (Caltrans 2019), is located approximately 7 miles west of the project site in the City of Dunsmuir. The proposed project would not expose people residing or working in the project area to excessive noise levels; therefore, there would be no impact.

Mitigation Measures: None

8 Ibid

4.14 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Setting:

The town of McCloud is not heavily populated. According to the California Department of Finance (DOF), which provides estimated population and housing unit demographics by year throughout the State, Siskiyou County had a population of 44,584 in 2019 (DOF 2019[9]) and the town of McCloud had a population of 1,101 in 2010 (U.S. Census 2010[10]).

Discussion of Impacts:

a) **Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?** *No Impact*. The project does not include the construction of any new homes and would not extend any roads or public infrastructure. Therefore, direct or indirect increases in population growth would not occur as a result of the proposed project.

b) **Would the project displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere?** *No Impact*. There are no residences on the project site; therefore, neither housing units nor people would be displaced, and no replacement housing would be required. Therefore, there is no impact.

Mitigation Measures: None

9 DOF (California Department of Finance). 2019. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/

10 US Census (US Census Bureau). 2010. American Fact Finder. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

4.15 Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

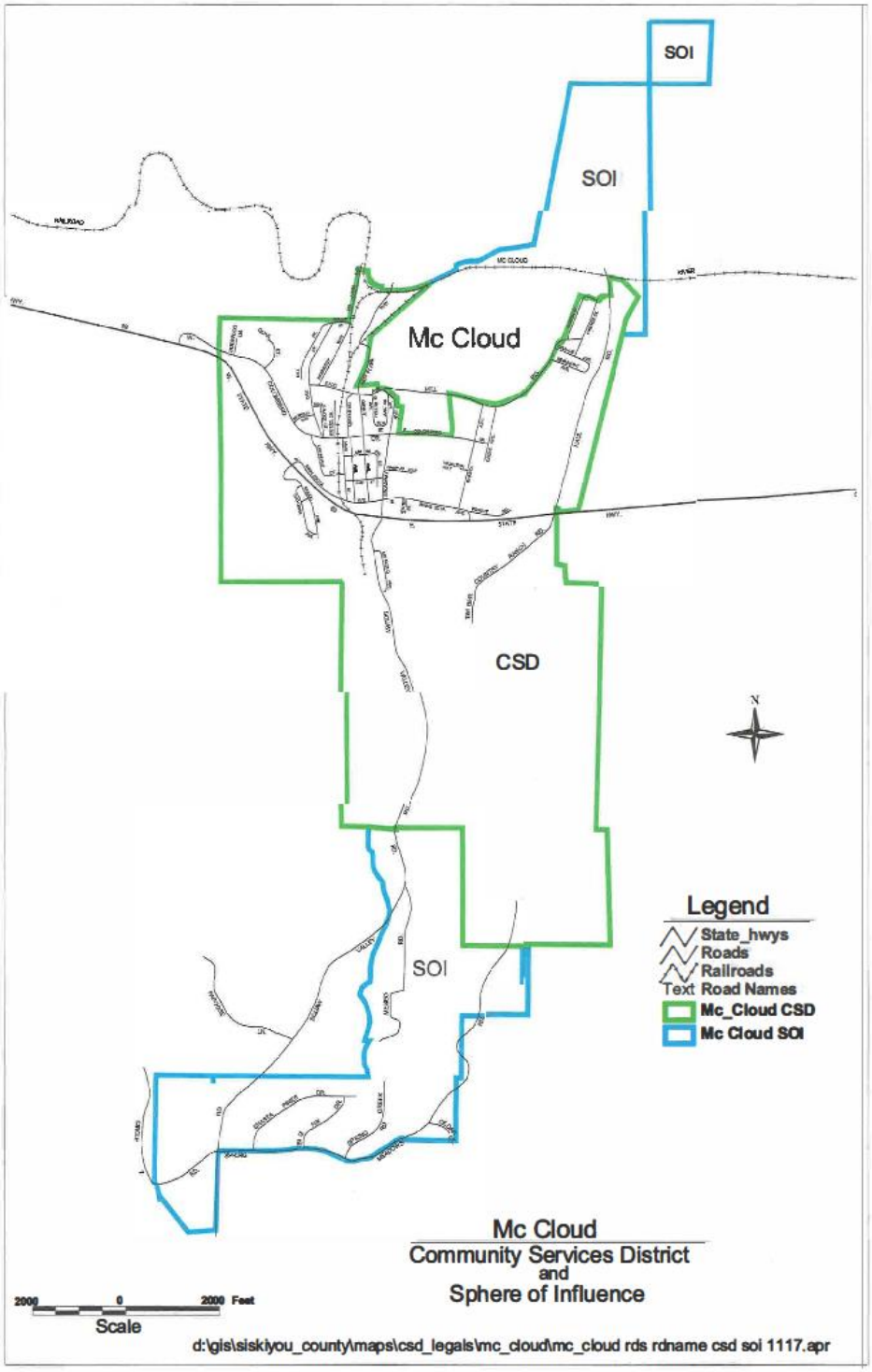
Setting:

Fire Protection

Fire protection services for the project site are provided by the California Department of Forestry and Fire Protection (CAL FIRE). The nearest CAL FIRE station is staffed year round and is located at 1509 Squaw Valley Road, approximately 2.4 driving miles from the project site. Additionally, the McCloud Fire Department, located at 319 Tucci Ave, is 0.8 driving miles from the project site.

Police Protection

Police protection services at the project site are provided by the Siskiyou County Sheriff's Department. The nearest Sheriff's Department substation is located at 241 Ski Village Drive, Mt. Shasta, located approximately 14.6 driving miles from the site. Additionally, the California Highway Patrol and Mt. Shasta Police offices are all located within 14 miles of the project site. These agencies would likely provide additional support to the Sheriff's Department in case of any emergency.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Schools
The area is served by the McCloud Elementary School District for kindergarten through 8th grade at 332 Hamilton Way. The Siskiyou Union High School District serves high school-aged children in grades 9 through 12 at McCloud High School, 133 Campus Way. Both schools currently operate well under their capacity. Both schools also impose development fees on new construction to offset any impact development would have on increased enrollment.

Recreation
Recreational opportunities for both youth and adults are varied and plentiful in the project area. Nearby McCloud River and McCloud Reservoir provide opportunities for water recreation, including boating, swimming, fishing, and other outdoor activities. The Mt. Shasta Ski Park, approximately nine miles from the project site, includes opportunities for downhill and cross country skiing as well as summer activities such as hiking and mountain biking. Horseback riding stables and trails are located less than one mile from the project site. In addition, the McCloud Community Services District (MCSD) owns and operates Hoo Hoo Park, which includes playground equipment, picnic areas, horseshoe pits, ball fields, a concessions stand, and restrooms. Hoo Hoo Park is located approximately 1,855 feet south of the project site.

Other Public Facilities
Other public facilities found in the project vicinity include the Siskiyou County Library - McCloud Branch, MCSD offices, the U.S. Postal Service McCloud post office, and public lands owned and administered by the Bureau of Land Management and the U.S. Forest Service.

Discussion of Impacts:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

Fire protection? *Less Than Significant*. The project site is not located within the MCSD. The property that is owned by McCloud Partners, LLC has 72 functioning fire hydrants. Additionally, Cal Fire PRC 4290 regulations are applicable at the site. The project would not affect the provision of fire protection services.

Police protection? *Less Than Significant*. The construction of the solar PV generating facility would not generate a significant increase in calls for police protective services or affect the provision of police services in the community.

Schools? *No Impact*. The construction of the solar PV generating facility would not result in any increase in school enrollments. The project would not generate a need for new school facilities.

Parks? *No Impact*. The construction of the solar PV generating facility would not result in any increase in use of nearby Hoo Hoo Park or any other nearby recreational sites.

Other public facilities? *No Impact*. The construction of the solar PV generating facility would not impact any other governmental services or facilities.

Mitigation Measures: None

4.16 Recreation

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☐
b)	Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☐

Setting:

The McCloud Reservoir, the McCloud River, Squaw Valley Creek, the Upper Sacramento River, and Lake Siskiyou provide opportunities for a variety of public outdoor recreation activities including boating, swimming, fishing, and other outdoor activities. The Mt. Shasta Ski Park includes opportunities for downhill and cross-country skiing as well as summer activities such as hiking and mountain biking. In addition, 1,885 feet south of the project site the McCloud Community Services District operates Hoo Hoo Park for families and children. Features at this facility include a playground, baseball diamond, picnic and barbeque facilities, horseshoe pit, and a baseball diamond. The community of McCloud also is home to several museums open to the public.

Discussion of Impacts:

a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?** *No Impact*. The need for additional parkland is primarily based on an increase in population to an area. Given that the proposed solar PV generation facility would not increase the population, the project would not burden any parks in the surrounding area beyond their capacity by generating additional park users. Therefore, the project would not increase the use of existing neighborhood and regional parks or other recreational facilities and substantial physical deterioration would not occur or be accelerated. There would be no impact.

b) **Does the project include recreational facilities, or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?** *No Impact*. The proposed project for the solar PV generation facility does not include recreational facilities and does not require the

construction or expansion of recreational facilities which might have an adverse physical effect on the environment. There would be no impact.

Mitigation Measures: None

4.17 Transportation / Traffic

Would the project	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒

Setting:

As discussed in Section 3.1, the proposed project is located at 909 Mill Road in the community of McCloud in the unincorporated area of Siskiyou County. Interstate 5 (I-5) provides regional access to the project site and links the site with other northern California communities to the north and south. Local access to the town of McCloud is provided by State Route 89 (SR 89). The project site is accessed from SR 89 at Broadway, which connects to Mill Road.

Discussion of Impacts:

a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? No Impact. The Circulation Element of the Siskiyou County General Plan and the 2016 Siskiyou County Regional Transportation Plan (RTP) provide guidance in the County for existing and future transportation facilities. The construction and operation phases of the Project would be contained within the Project site and subsequently would not interfere with the use of sidewalks, bike lanes, roadways, or public transit. The Proposed Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system in any of these documents. Therefore, the Project would have no impact.

b) Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)? Less Than Significant Impact. CEQA Guidelines Section 15064.3, subdivision (b) provides criteria for analyzing transportation impacts based on a vehicle mile traveled (VMT) methodology instead of the now superseded (as of January 1, 2019) LOS methodology. Pertinent to the Proposed Project are those criteria identified in Section 15064.3(b)(1) Land Use Projects. According to this section:

> "Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor[11] should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact."

However, Section 15064.3(b)(3) allows an agency to determine a project's transportation impact on a qualitative basis if a VMT methodology is unavailable, as is the case with the Proposed Project.

Section 15064.3(b)(3) is as follows:

> "Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate."

Additionally, Section 15064.3(c) allows an agency to use the VMT methodology immediately or defer until July 1, 2020, when the VMT methodology is required of all agencies in the State. Section 15064.3(c) is as follows:

> "The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide."

Because the County does not have an adopted VMT methodology at this time, for the Proposed Project, the County chooses to defer to the existing LOS methodology to determine the Project's impact to County roadways.

Construction of the proposed project would take approximately 3-4 months to complete. At its peak, approximately 20-30 workers would be required per day, resulting in approximately 24-26 daily vehicle trips due to ride sharing, which would be approximately 12-13 round trips per day. In addition, delivery truck trips would occur and the maximum number of truck trips per day would be 10 (i.e., 5 round trips). Thus,

11 "High-quality transit corridor" means an existing corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. An "existing stop along a high-quality transit corridor" may include a planned and funded stop that is included in an adopted regional transportation improvement program.

construction activities would result in approximately 40 total truck/vehicle trips (i.e., 20 round trips) per day during the peak construction period.

As discussed previously, Mill Road does not have any recorded traffic counts. However, based on the information provided in the General plan, an unacceptable LOS for this roadway would be below 3,500 trips (LOS C) or more than 4,900 trips (LOS D) (2016 Siskiyou County Regional Transportation Plan). Generally, access to the Project site for employees and trucks would be from I-5 via CA-89 /Volcanic Legacy Scenic Byway (offramps to SR-89). While no traffic counts are available for Broadway Avenue or Mill Road, traffic on these roadways is moderate because of the limited amount of developed commercial and residential uses in the town of McCloud accessible by Broadway Avenue and Mill Road. Broadway Avenue is the major access road for McCloud Market and McCloud High School, the two largest producers of vehicle trips aside from residential uses. The solar facility will be unmanned. Once completed, the solar facility will generate electricity during daylight hours. During the operational phase, maintenance personnel (typically 1-2) will be dispatched to the site for operations and maintenance on an as-needed basis, typically 3-4 times per month. The only traffic generated by the completed solar facility will be the trips associated with these occasional maintenance visits. With an average of 3-4 vehicle round trips per month, the solar facility is anticipated to generate a maximum of 96 trips per year (i.e., 48 round trips). An additional 4 water truck trips per year (i.e., 2 round trips) would be anticipated for panel washing purposes.

In total, up to 100 vehicle trips could be anticipated per year during project operations. This limited amount of traffic on surrounding roadways, spread out over the course of one year, would not generate significant traffic impacts. Therefore, the Proposed Project would have a less than significant impact in this area.

a) **Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?** *No Impact*. The proposed project would not result in any modifications to any roads. The project would construct a 5 MW solar PV generation facility on 20 acre portion of the 118.3 acre property, which has an existing driveway that connects to Mill Road. The only new construction would be internal access driveways that would connect the proposed solar PV generation facility to the existing driveway that connects to Mill Road. Therefore, the project would have no impact.

b) **Would the project result in inadequate emergency access?** *No Impact*. Access to the project site would be from Mill Road. The proposed solar PV generation facility will no obstruct emergency access roadways. Therefore, the project would have no impact.

Mitigation Measures: None

4.18 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Setting:

Assembly Bill (AB) 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. Siskiyou County sent notice to the Karuk Tribe, Winnemem Wintu Tribe, and the Torres Martinez Band of Desert Cahuilla Indians on April 19, 2019. None of the tribes provided comments on the proposed project.

Discussion of Impacts:

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined by Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or Less Than Significant with Mitigation Incorporated. As described above in Section 4.5, historical resources have not been identified within 20 acre area proposed to be utilized for the proposed solar PV generation facility. However, ground disturbance associated with development of the 20 acre portion of the property has the potential to impact subsurface historic resources should any be present. Therefore, mitigation measure MM 5.1 is provided to address the potential for the discovery of any unrecorded or previously unknown resources.

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. Less Than Significant Impact with Mitigation Incorporated. See the Substantiation above in 4.18(a)(i).

Mitigation Measures: Implement MM 5.1 in Section 4.5

4.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Setting:

Water Service: The project site is within the Sphere of Influence (SOI) of the McCloud Community Services District (MCSD), but is not inside its boundaries. The MCSD would not be providing water service for the project. The project would obtain water from adjacent property that is also owned by McCloud Partners, LLC, which has 9,112 acre feet (per year) of water rights (State Water Licenses 832 and 5150). There are 3.5 miles of onsite water lines, which supplies the 72 existing fire hydrants that are located on the McCloud Partners, LLC property.

Wastewater: The project site is within the Sphere of Influence (SOI) of the McCloud Community Services District (MCSD), but is not inside its boundaries. The MCSD would not be managing wastewater from the project. The proposed solar PV generation facility will not generate any wastewater and no new wastewater facilities are proposed as part of the project. There are eight (8) certified septic fields that exist on the property owned by McCloud Partners, LLC, which will continue to be utilized by other existing uses.

Storm Drainage: The project is not located in an area that is covered with asphalt and cement. There are no existing street-side gutters and no curbs and gutters will be constructed as a result of the project. All storm water will be contained on site and will percolate into the ground naturally.

Solid Waste: The Siskiyou County Integrated Solid Waste Management Regional Agency manages solid waste and green waste collection and disposal in the County. As shown in Table 4.19-1, the majority of the County's solid waste is exported to Oregon.

Table 4.19-1. Solid Waste Disposal Quarterly, Yearly, and Exported to Oregon totals for the Siskiyou County Integrated Solid Waste Management Regional Agency

Siskiyou County Integrated Solid Waste Management Regional Agency Quarterly Reports	Solid Waste Disposal (tons/year)		
	2015	2016	2017
1st Quarter	7,617.46	8,755.30	8,402.16
2nd Quarter	8,774.94	9,586.86	10,991.40
3rd Quarter	10,087.74	9,996.45	10,967.77
4th Quarter	8,727.42	8,751.73	9,903.07
Exported to Oregon	35,204.56	37,090.34	40,264.40
Yearly Total	35,320.44	37,425.70	40,569.88
Average per Resident (lbs./day)	4.3	4.6	5

Source: CalRecycle 2019a[12], 2019b[13], and 2019c[14]

Discussion of Impacts:

a) **Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?** *Less Than Significant with Mitigation Incorporated*. The project would not require or result in

12 CalRecycle (California Department of Resources Recycling and Recovery). 2019a. Multi-year Countywide Origin Summary. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Origin/CountywideSummary

13 __. 2019b. Countywide, Regionwide, and Statewide Jurisdiction Diversion / Disposal Progress Report. https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DiversionDisposal

14 __. 2019c. Export Tons By County https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Statewide/ExportByCountyToPDF

the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, natural gas, or telecommunications facilities. The proposed solar PV generation facility will not generate any wastewater and all storm water will be retained on site. The project site and the adjacent property owned by McCloud Partners, LLC have their own water supply and septic systems and therefore would not be provided either water or sewer service from the McCloud Community Services District (MCSD). The project would result in the construction of a solar PV generation facility. The construction of the project could result in effects on the environment; however, as discussed in Sections 4.5 (Cultural Resources), 4.7 (Geology and Soils), 4.9 (Hazards and Hazardous Materials), 4.10 (Hydrology and Water Quality), 4.18 (Tribal Cultural Resources), 4.19 (Utilities and Service Systems), and 4.21 (Mandatory Findings of Significance) of this Initial Study, all of the impacts generated by the proposed project would be mitigated to levels that are less that significant by implementing the mitigation measures in those sections.

b) **Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?** *Less Than Significant Impact*. See the substantiation for 4.10(b) above.

c) **Would the project result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve to serve the project's projected demand in addition to the provider's existing commitments?** *No Impact*. As discussed above in the substantiation for 4.19(a), the proposed project would not generate any waste water and would not utilize either water or sewer service from the MCSD. Therefore, there is no impact.

d) **Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?** *Less Than Significant Impact*. C&D Waste Removal provides waste removal services within their service area, which includes Dunsmuir, McCloud, and Weed. Solid waste is taken to the Black Butte Transfer Station in Mt. Shasta. Municipal waste is then transferred to another licensed waste-disposal facility. As shown in Table4.19-1, the County exports approximately 99 percent of its solid waste to Oregon. It is estimated that the project would produce approximately 10 cubic yards of solid waste for every MW; therefore, the project would produce a maximum total of 50 cubic yards of solid waste during construction. After construction of the solar PV generation facility is completed solid waste generation would stop. The amount of solid waste generated by the project would have a minimal impact and would not be in excess of state or local standards, would not be in excess of the capacity of local infrastructure, and would not otherwise impair the attainment of solid waste reduction goals. This impact is less than significant.

e) **Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?** *No Impact*. The proposed project is required to comply with all federal, state, and local management and reduction statutes and regulations related to solid waste. The project would have no impact.

Mitigation Measures: Implement MM 5.1 and MM 5.2 in Section 4.5, MM 7.1 and MM 7.2 in Section 4.7, and MM 9.1 and MM 9.2 in Section 4.9

4.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other actors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Setting:

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels, and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effect of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface-area-to-mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface-area-to-mass ratio and require more heat to reach the ignition point.

Discussion of Impacts:

a) **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?** *No Impact*. The project site is located in a state responsibility area and is classified as a high fire hazard severity zone by CalFire [See the substantiation for 4.9(h)]. Neither the project construction, nor operation, would impair or physically interfere with an

adopted emergency response plan or emergency evacuation plan. All construction activities would occur onsite and would not impede the use of surrounding roadways in an emergency evacuation. The project involves the construction of a solar PV generation facility on approximately 20 acres. There would be no impact.

b) **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?** *Less Than Significant Impact*. See the substantiation for 4.9(h) above.

c) **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?** *Less Than Significant Impact*. The project site is located in a state responsibility area and is classified as a high fire hazard severity zone by CalFire [See the substantiation for 4.9(h)]. The proposed solar PV generation facility would be developed on a property that is adjacent to an existing paved road and no new roads would be required to access the project site. Instead, only internal gravel driveways would be constructed around the perimeter of the solar PV generation facility, and in between rows of solar arrays, to provide access to heavy fire apparatus. The project would not require the installation or maintenance of infrastructure and it would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. This impact is less than significant.

d) **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?** *Less Than Significant Impact*. The project site is located in a state responsibility area and is classified as a high fire hazard severity zone by CalFire. The project is reviewed by CAL FIRE and the Building Division of the Siskiyou County Community Development Department and would be required to be constructed with fire suppression infrastructure, if the existing 72 functioning fire hydrants located on the McCloud Partners, LLC owned property do not satisfy the requirements of CAL FIRE, and clear space areas as required by CAL FIRE and the California Building Code (CBC). In addition, the project would be required to comply with Fire Safe Regulations enacted pursuant to Public Resources Code Section 4290.

The project site is relatively flat with slopes of 0 to 5 percent and the topography would not be substantially altered by the proposed project. As a result, slope instability would not occur and there would be no drainage changes. The rate or

amount of surface runoff would not increase and the project would not result in flooding on- or offsite. In addition, the Applicant has stated that the Fire Safe Council is looking forward to the establishment of the solar PV generation facility because of the fire break that the project would result in on the north side of McCloud. This impact is determined to be less than significant.

Mitigation Measures: None; compliance with California Department of Forestry and Fire Protections requirements related to Public Resources Code Section 4290 would ensure potential wildfire impacts are reduced to a less than significant level.

4.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion of Impacts:

a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?** *Less Than Significant Impact with Mitigation Incorporated*. While several sections of this Initial Study have identified the potential for significant environmental impacts without mitigation, including potential impacts to cultural resources, with the implementation of the mitigation measures proposed within the relevant sections of this Initial Study, all potential impacts would be reduced to a level that is less than significant.

b) **Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)** *Less Than Significant Impact with Mitigation Incorporated*. Implementation of the proposed project, in conjunction with other approved or pending projects in the region, has the potential to result in cumulatively considerable impacts to the physical environment. However, with the implementation of the mitigation measures proposed in the relevant subsections of this Initial Study, these potential impacts would be reduced to a level that is less than significant.

c) **Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?** *Less Than Significant Impact with Mitigation Incorporated*. Direct and indirect impacts to human beings would be less than significant with the implementation of the mitigation measures proposed in the relevant subsections of this Initial Study.

5.0 References

5.0 References

5.1 Documents Referenced in Initial Study and/or Incorporated by Reference

The following documents were used or to determine the potential for impact from the proposed project. Compliance with federal, state, and local laws is assumed in all projects.

"An Archaeological Survey Report for the McCloud Mill Timber Harvesting Plan, Siskiyou County, California", Prepared by Kevin D. Dalton of the Department of Anthropology at California State University Chico, Dated October 15, 2014.

Beveridge & Diamond. 2019. "California Department of Toxic Substances Control Proposes Regulation Classifying Discarded Solar Panels as Universal Waste" https://www.bdlaw.com/publications/california-department-of-toxic-substances-control-proposes-regulation-classifying-discarded-solar-panels-as-universal-waste/

CalRecycle (California Department of Resources Recycling and Recovery). 2019a. Multi-year Countywide Origin Summary. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Origin/CountywideSummary

→ 2019b. Countywide, Regionwide, and Statewide Jurisdiction Diversion / Disposal Progress Report. https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DiversionDisposal

California Air Resources Board. 2015. "Top 4 Measurements and Days Above the Standard." http://www.arb.ca.gov/adam Website accessed October 15, 2019.

→ 2016. "Ambient Air Quality Standards." https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf Website accessed October 15, 2019.

CCR (California Code of Regulations) Section 70200 of Title 17. https://govt.westlaw.com/calregs/Document/I020618D0D60811DE88AEDDE29ED1DC0A?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)

DOC (California Department of Conservation). 2010a. Division of Land Resource Protection, Farmland Mapping and Monitoring Program. "Siskiyou County Important Farmland 2010." ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/sis10.pdf

→ 2010. California Geological Survey. “2010 Fault Activity Map of California.” http://maps.conservation.ca.gov/cgs/fam/

DOF (California Department of Finance). 2019. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/

DTSC (California Department of Toxic Substances Control). EnviroStor. Cortese List. https://www.envirostor.dtsc.ca.gov/public/search.asp?PAGE=7&CMD=search&ocieerp=&business_name=&main_street_number=&main_street_name=&city=&zip=&county=&branch=&status=ACT%2CBKLG%2CCOM&site_type=CSITES%2CFUDS&cleanup_type=&npl=&funding=&reporttype=CORTESE&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29&federal_superfund=&state_response=&voluntary_cleanup=&school_cleanup=&operating=&post_closure=&non_operating=&corrective_action=&tiered_permit=&evaluation=&spec_prog=&national_priority_list=&senate=&congress=&assembly=&critical_pol=&business_type=&case_type=&display_results=&school_district=&pub=&hwmp=False&permitted=&pc_permitted=&inspections=&complaints=&censustract=&cesdecile=&ORDERBY=county&next=Next+50 Website accessed on September 29, 2019.

→ EnviroStor. Cortese List. Map for 909 Mill Road, McCloud, CA https://www.envirostor.dtsc.ca.gov/public/ Website accessed on September 29, 2019.

Caltrans (California Department of Transportation) Division of Aeronautics. 2019. “California Public Use Airports and Federal Airfields”. https://dot.ca.gov/-/media/dot-media/programs/aeronautics/documents/publicuseairports-militaryairfieldsmap-a11y.pdf

FTA (Federal Transit Administration). 2018. “Transit Noise and Vibration Impact Assessment”. Federal Transit Administration, Office of Planning and Environment, Washington, DC. September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

HSC (Health and Safety Code Section 7050.5. 1987. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=7050.5

→ Section 7052. Effective January 1, 2018. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=7052.&lawCode=HSC

PC (Penal Code) Section 622.5. 1939.
https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PEN&sectionNum=622%C2%BD

PRC (Public Resources Code) Section 5024.1. Effective January 1, 1993.
https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=5024.1

→ Section 5097.98. Effective January 1, 2010
https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=5097.98

→ Section 12220(g). Effective January 1, 2008
https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=12220

RTP (Regional Transportation Plan). 2016. "2016 Regional Transportation Plan for Siskiyou County"
https://www.co.siskiyou.ca.us/sites/default/files/fileattachments/transportation_commission/page/1121/ltc-20181207_rtp_2016_finalreport_withammendment1.pdf

SB (Senate Bill) 350. "Clean Energy and Pollution Reduction Act"
https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/clean-energy-and-pollution-reduction-act-sb-350

Siskiyou County. 1987. Siskiyou County General Plan, Circulation Element
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_circulationelementupdate.pdf

→ 1980. Siskiyou County General Plan, Land Use and Circulation Element.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_landuse-circulationelement.pdf

→ 1979. Siskiyou County General Plan, Noise Element.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_noiseelement.pdf

→ 1975. Siskiyou County General Plan, Scenic Highways Element
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_scenichighwayselement.pdf

→ 1975. Siskiyou County General Plan, Seismic Safety and Safety Element.
https://www.co.siskiyou.ca.us/sites/default/files/pln_gp_seismicsafety-safetyelement.pdf

Siskiyou County. 1986. Siskiyou County Zoning Ordinance Section 10-6.5602.
https://library.municode.com/ca/siskiyou_county/codes/code_of_ordinances?nodeId=TIT10PLZO_CH6ZO_ART56IMST_S10-6.5602LIGLHE

→ 1994. Siskiyou County Zoning Ordinance Section 10-6.4703(n). https://library.municode.com/ca/siskiyou_county/codes/code_of_ordinances?nodeId=TIT10PLZO_CH6ZO_ART47HEINDI_S10-6.4703COUSPE

→ 1986. Siskiyou County Zoning Ordinance Section 10-6.4702. https://library.municode.com/ca/siskiyou_county/codes/code_of_ordinances?nodeId=TIT10PLZO_CH6ZO_ART47HEINDI_S10-6.4702USPE

Timber Harvesting Plan (THP) No. 2-14-110-SIS (McCloud Mill THP), approved by the California Department of Forestry and Fire Protection (CAL FIRE) on February 10, 2015, expires February 9, 2020. US Census (US Census Bureau). 2010. American Fact Finder. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

USEPA (US Environmental Protection Agency). Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, PB 206717". https://nepis.epa.gov/Exe/ZyNET.exe/9101NN3I.TXT?ZyActionD=ZyDocument&Client=EPA&Index=Prior+to+1976&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C70thru75%5CTxt%5C00000024%5C9101NN3I.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL

USGS (US Geological Society). 1978. Cedar Mountain fault system, Stephens Pass section (Class A) No. 2d https://earthquake.usgs.gov/cfusion/qfault/show_report_AB_archive.cfm?fault_id=2&section_id=d

1984. "United States Earthquakes, 1978" http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.922.8683&rep=rep1&type=pdf

WSDOT (Washington State Department of Transportation). Biological Assessment Preparation Manual & Templates. Chapter 7 Construction Noise Impact Assessment. Accessed 10/2/19. https://www.wsdot.wa.gov/environment/environment-technical/environment-disciplines/fish-wildlife/BA-preparation-manual

Appendices

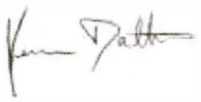
APPENDIX A

An Archaeological Survey Report for the McCloud Mill Timber Harvesting Plan Siskiyou County, California

by:

Kevin D. Dalton, M.A., RPA
Department of Anthropology
California State University, Chico
400 West First Street
Chico, CA 95929-0400
Office: 530.898.4360

October 15, 20 I4



Signature of RPF or Archaeological Surveyor

Part 1: Project Information

THP number: Unknown

Name, address and telephone number of the RPF:
Timothy D. Cain RPF # 91
P.O. Box 687 McCloud, CA 96057
(530) 964-9756

Project Size: Approximately 91 acres

Name of 7.5' USGS Quad Map:
McCloud USGS 7'5 2012 and Elk Spring USGS 7'5 1998

Name of Landowner: McCloud Partners LLC

Legal Location: Section 6 T39N R02W, Section I T39N R03W, Section 31 T40N R02W and Section 36 T40N R03W MDBM

Project Description: Timber Harvest Plan (THP)

Part 2: Archaeological Records Check Information

Date of Records Check Conducted by Information Center: 08/18/2014

Information Center File Number: W 14-114

Summary of Records Check Results:

The archaeological records searches for this project were conducted at the Northeast Information Center (NEIC) at California State University, Chico on August 18, 2014. The NEIC Access Agreement is attached. The records search focused on an area Yi-mile in radius from the project area. The record search showed that no previously identified prehistoric or historic cultural resources were present within the proposed project area. However, 11 previously completed archaeological surveys and reports, and 7 previously recorded cultural resource within Yi-mileof the project area. Previously completed archaeological reports are presented in Table 1 and cultural resources are summarized in Table 2.

(X) Records Check Request, Map, and written reply from the Information Center are attached.

() Records Check Not Attached
Justification: Access Agreement# W 14-114 is included as Attachment A. The archaeological records search for this project was completed by qualified Archaeological Research Program personnel at the NEIC. As a result, no records check request, maps, or written information center reply were generated.

Table I. Previously Completed Archaeological Reports within Yi-mile Radius of Project Area.

NEIC Report #	Report Type	Author	Legal Location	Number of Cultural Resources Identified
1810	CDF Project Review - Tree Planting	Brad Dorken	Sec 10-14, 23-25 T40N, R04W & 27-28, 30-36 T40N R03WMDBM	0
3276	Archaeological Inventory	Trudy Vaughn	Sec 6 T39N, R02W & 31 T40N R02W, MDBM	0
4125	Timber Harvest	Arthur Tenneson	Sec 23, 26-28, 34-36 T39N, R03WM0BM	0
4146	Timber Harvest	Cliff Kennedy	Sec I, 12-13 T39N R03W, MDBM	0
5353	Timber Harvest	James Wolter	Sec 3-6 T39N R02W, 14, 16-17, 20; 29-35 T40N, R02W & 36 T40N R03W MDBM	0
6589	Timber Harvest'	Ronald Berryman	Sec 6 T39N R02W	0
6801	Timber Harvest	Cliff Kennedy	Sec 7 T39N R02W & 12-13 T39N R03W MDBM	7
7179	Archaeological Inventory	Jensen & Associates	Sec 6, 31 T39N R02W; I, 12 T39N R03W; 31 T40N R02W & 36 T40N R02W MDBM	1
8794	Archaeological Inventory	Trudy Vaughan	Multiple	18
8987	Archaeological Inventory	Trudy Vaughan	Sec 6 T39N R02W MDBM	0
9648	Archaeological Inventory	Brian Hatoff	I Sec 31 T40N R02W MDBM	10

Table 2. Previously Documented Cultural Resources within Yi-mile Radius of Project Area.

Site Number	Location	Site Type	Description
CA-SIS-748H	Multiple	Historic	Strawberry Valley - Fall River Wagon Road
CA-SIS- I524H	Sec 32 T40N R02W MDBM	Historic	CCC Camp
CA-SIS- I759H	Sec 18, 29 T40N R02W MDBM	Historic	Intake Spring Pipeline
CA-SIS-1819	Sec 32 T39N R03W MDBM	Prehistoric	Lithic Scatter
CA-SIS-2325H	Multiple	Historic	McCloud River Lumber Company Railroad System
CA-SIS-2408H	Sec 31 T40N R03W MDBM Sec 1,2 T39N R03W MDBM	Historic	Strawberry Valley - Fall River Wagon Road
CA-SIS-5207H	Sec 2 T39N R03WMDBM	Historic	Traction Engine Road

Part 3: Native American Consultation Information

On August 27, 2014 ARP personnel contacted the Native American Heritage Commission (NAHC) requesting a search of the Sacred Lands File and a Native American contacts list. At that time a letter and map were submitted to the NAHC describing the nature and location of the proposed project. As of September 25, 2014 a response from the NAHC had not been received.

(X) Example of a notification letter(s) (including maps) is attached.

List of Native American individuals or groups that were provided written notification:

Dolores Raglin, Tribal Chairperson
Pit River Tribe Environmental Office
36970 Park Avenue
Burney, CA 96013-4072

Marissa Fierro
Environmental Coordinator
Pit River Tribe Environmental Office
36970 Park Avenue
Burney, CA 96013-4072

Morning Star Gali,
Tribal Historic Preservation Officer
Pit River Tribe Environmental Office
36970 Park Avenue
Burney, CA 96013-4072

Howard Wynant
P.O. Box 34
Macdoel, CA 96058

Mary Carpelan
Shasta Nation
Contact for Cultural and Archaeological Resources
P.O. Box 1054
Yreka, CA 96097

Date of the CAL FIRE Native American Contact List that was used: July I, 2014

Date first notification was sent: September 18, 2014

Results of Information Request:
(X) No reply received as of (date): October 15, 2014
( ) Written reply received (copy attached)
( ) Verbal reply received (summarize reply below):
( ) Native American archaeological or cultural sites were not identified within the plan
( ) Native American archaeological or cultural sites have been identified within the plan

Results of Notification to Native Americans:
(X) No reply received as of (date): October 15, 2014
( ) Written reply received (copy attached)
( ) Verbal reply received (summarize reply below):

Part 4: Pre-Field Research

Literature Reviewed:

Cassidy, Julie Krieger
1988 Determination of Eligibility for the Historic Archaeological Sites of the McCloud River Lumber Company, McCloud Ranger District, Shasta-Trinity National Forest.

Jensen & Associates
2000 Archaeological Inventory Survey. Proposed McCloud Sewer Improvement Project, c. I0.2 Miles of Linear Corridor, City of McCloud, Siskiyou County, California

Tordoff. Judy D., and George Petershagen
2002 Historic Resource Evaluation Report for the State Route 89 Widening Project (02-Sha-89 P.M. Sha 29.30/43.34, Sis 0.0/0.12, 02-310400), Shasta and Siskiyou Counties, California. California Department of Transportation.

Vaughan, Trudy
2007 Archaeological Reconnaissance for the Proposed Abandonment and Discontinuance of Service by McCloud Railway Company of 77 Miles of Railroad (McCloud to Bartle, Bartle to Hambone, and Bartle to Burney), Siskiyou and Shasta Counties, California.

Persons Contacted: McCloud Museum, Dennis Berryman (life-long McCloud resident and local historian) and C. Dennis Dalton (life-long McCloud resident and former mill employee).

Summary of Results of Pre-Field Research: Based on the results from the pre-field research, both prehistoric and historic archaeological resources may occur in the project area. However, it far may likely the historic resources associated with the McCloud River Lumber Company and subsequent lumber mill activities on the propetty. Historic resources are expected to consist of foundations and infrastructure associated with the historic mill. Additionally, it is likely that railroad grades and historic refuse areas exist within the project area.

Part 5: Training and Experience of Archaeological Surveyors

Name of current Archaeological Surveyor(s):
(X) Archaeological Survey conducted by Professional Archaeologist
( ) Archaeological Survey conducted by person with current CAL FIRE Archaeological Training
CAL FIRE Archaeological Training Course#
Date Training Course was completed:
( ) Archaeological Survey for previous project within site survey area previously conducted by (provide name):

Part 6: Survey Methods and Procedures

Depending on the scope of a particular project, archaeologists may employ a variety of survey strategies. The four main levels of survey coverage are cursory, intuitive, general, and intensive. Often the difference between these levels of survey intensity is based upon the width of transect spacing of the survey crew members. Crew members walk transects, or regularly space parallel intervals, spanning between ten and 75 meters, depending upon the intensity level of the survey strategy. Each member of the survey crew will walk within his or her transect, often traversing in a zigzag pattern or focusing on those landscape features that are most likely to reveal cultural resources. Close transects provide a more complete investigation of a particular project area; whereas more widely spaced transects provide a less thorough survey coverage.

Survey strategy: Intensive pedestrian
Time spent conducting archaeological field survey: 24 person hours
Date or Dates the survey was conducted: 8/31, 9/0 L 9/22
Survey coverage intensity: 20 meter transect spacing
Ground visibility/other limitations: During the pedestrian survey, much of the ground surface was blanketed by forest duff: average ground visibility was between 10-15%. In areas of heavy

ground cover, exposed soils resulting from rodent burrows and exposed root wads were given extra attention. In some areas, boot scrapes were employed to remove forest duff in an effort to expose mineral soil.

Part 7: Survey Results

List and description of all sites found:

ARP-8-31-14-01

This resource consists of three historic foundations. These foundations are associated with the McCloud River Lumber Company and subsequent timber milling operations. The foundations are located in area of cottonwood trees. Foundation# 1 **(shown** in photograph on primary record) is a concrete slab, measuring approximately 30' by 18'. Three pier blocks are evenly spaced along the no11h-south axis of the foundation. Exposed water pipes appear to have provided water to the structure that was located here. Foundation 2 is formed entirely from pier blocks. Seven pier blocks span its 44' north-south extent while three piers span the 17' east-west extent. Piers for this foundation measure about 22" by 22". There is substantial evidence of burning at this location. Artifacts noted near Foundation 2 include: a pull top can, ribbed sanitary cans, and wire nails. Foundation 3 is not as formally constructed as foundations I &2. This concrete slab foundation measures 43'5" by 16'8" and has three square postholes / beam supports in its southern end, which measure 10.5" by 10.5". Artifacts noted near Foundation 3 include: a number of motor oil lids and a paint spray can.

A review of a 1925 Sanborn map indicated that two buildings were present at this location in 1925. A "utility shop", also referred to on the Sanborn map as "wood works," and a small lumber shed

ARP-9-1-14-01

This historic resource consists of thirteen historic post indicator valves. A post indicator valve (PIV) is a valve assembly used to open or close the water supply to fire protection systems in large buildings. These PIVs protrudes above ground level and are located on the historic fire system water main for the historic McCloud Mill. The valves contain a visual indicator of the valve status *("OPEN"* or "SHUT"), which is housed at the top of the post.

ARP-9-1-14-02

This resource consists of a historic foundation and a number of concrete supports associated with an above ground 8" water pipe. The eastern end of the foundation is bracketed by two large pipes that extrude about five feet from the current ground surface. The concrete foundation is formed by two east-west trending footings (approximately 1' wide by 85' in length) and a large triangular shaped board formed concrete footing (approximately 4'8" high by 5' wide). Six water pipe supports were noted. These form a linear feature that appears to have connected in the northeast corner of the now extant building.

A review of a 1925 Sanborn map indicated that "Lumber Shed No. 3" was present at this location. The Sanborn map also indicates the an 8" water pipe connected into the northeast corner of this building.

CA-S1S-2325H

This record is considered an update/addendum to the CA-SIS-2325 archaeological record. This update provides GPS location information for six previously undocumented railroad grade segments associated with the resource McCloud River Lumber Company (MRLC). Two types of grade construction techniques are represented by these six segments. The first type is characterized by excavation along the centerline of a designed railroad grade location to obtain the desired grade slope. This technique creates earthen berms on one or both sides of the railroad grade. The second type is characterized by a filling of the centerline, which creates a berm along the centerline. Unlike the vast majority of MRCL railroad grades that are directly associated with the harvesting of timber, the railroad grades documented here can be tied to the daily and logistical operations of the mill complex.

Part 8: Evaluation of Significance

A major portion of the of the archaeological remains associated with the McCloud River Lumber Company were determined eligible for inclusion to the NRHP in 1988 as The McCloud River Lumber Company National Register District (Cassidy 1988). The District was considered to be a Discontinuous District, and thus only individual sites were eligible. SHPO concurred that 32 sites were significant at the local level under Criterion D for its representative properties containing information to supplement the historic record regarding the McCloud River Lumber Company. Additionally, a second historic district, the McCloud River Railroad Historic District, was established in 2002 (Tordoff and Petershagen 2002). This district was determined eligible to the NRHP under Criterion A at the local level of significance for the property's association with the role ofrailroad technology in the development of the Pine Belt lumber industry in northern California during the late nineteenth through mid-twentieth century.

While the property surveyed for this timber harvest, the McCloud Mill property, was the center of operations for the McCloud River Lumber Company during its established period of significance (1896-1930), it is not included within the formal boundaries of either of the established historic districts. The sprawling nature of the MRLC railroad logging system (i.e., railroad grades, donkey mounds, work camps, refuse areas) and its prevalence on land managed by the United States Forest Service (USFS) have necessitated a large amount ofNHPA compliance work associated with timber harvests, road creation and maintenance, and various other federal level projects. Therefore, both historic districts were established as a result of federal level projects and do not include the actual mill site, which has been held privately since its inception in 1896.

The McCloud Mill property and the proposed APE for this project are not contained within the boundary of either the McCloud River Lumber Company Historic District or the McCloud River Railroad Historic District. An additional study could explore the relation between the McCloud Mill property and the previously established historic districts. It is our recommendation that any formal evaluation of the cultural resources documented as a result the McCloud Mill Timber Harvest or future projects on the McCloud Mill property consider the effect on cultural resources in light of the resource's association with the McCloud River Lumber Company and its established period of significance.

Preliminary determination of significance of listed sites (if required):

Part 9: Protection Measures

Specific enforceable protection measures: It is recommended that all four sites be identified as protected areas and be flagged for avoidance during timber harvest activities. A meeting between the archaeologist, Registered Professional Forester and the Licensed Timber Operator should occur prior to any timber harvest activities. Additionally, workers should be advised not to collect artifacts or disturb any features.

Part 10: Meeting with the Licensed Timber Operator (LTO)

Meeting with LTO:

( ) Since there are no archaeological or historical sites requiring protection, no meeting is required.

(X) Meeting between RPF or supervised designee familiar with on-site conditions and LTO will be conducted prior to start of timber operations.

( ) Meeting between RPF or supervised designee familiar with on-site conditions and LTO has been conducted (provide details):

( ) This RPF or supervised designee will not be meeting with the LTO. Provide information demonstrating compliance with 14 CCR Section 929.2 [949.2, 969.2] (c):

Part 11: Site Recording

( ) No sites found within the site survey area.

(X) The following sites have been recorded and completed records are attached:
ARP-8-31-14-0 L ARP-9-1-14-01, ARP-9-1-14-02, CA-SIS-2325H

( ) The following sites were previously recorded, updates not prepared (attach copy(ies)):

( ) The following sites were previously recorded, updates prepared (attach copy(ies)):

( ) The following sites will not be recorded,justification provided below:

Part 12: Other Applicable Information

Additional Information:

Part 13: List of Attachments

( ) Archaeological Records Check Request

( ) Archaeological Records Check Request Map

( ) Information Center Reply

(X) Example ofNotice(s) to Native Americans:

( ) USFS or other Agency Correspondence:

(X) Other: NEIC Access Agreement# W14-1 14

(X) Archaeological Coverage Map (1: I scale ofUSGS 7.5' quad)

( ) Additional Archaeological coverage map(s)

(X) Project Vicinity Map

( ) Written Reply from Native Americans

(X) Site Records

( ) Photographs

Northeast Center of the
California Historical Resources
Infonnation Syste1n

OUTI E
GLENN
LASSEN
MODOC
PLUMAS
SHASTA

SIERRA
SISKIYOU
SUTTER
TEHAMA
TRINITY

123 \Vrst (>th Street, Suitt> 100
Chim CA 95928
l'hone (530) 898-6256
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ACCESS AGREEMENT

I.C. File#: VJJ4--/!lf

I, the undersigned, have been granted access to historical resources information on file at the Northeast Infonnation Center of the C◆J.ifomia Historical Resources Infonnation System.

2L.... I understand that any CHRIS Confidential Infonnation I receive shall not be disclosed to individuals who do not qualify for access to such infonnation, as specified in Section III (A-E) of the CHRIS Information Center Rules of Operation Manual. q.i-in publicly distributed documents without written consent of the Infonnation Center Coordinator.

◆ agree to submit historical Resource Records and Reports based in part on the CHRIS information released under this Access Agreement to the Infonnation Center within sixty (60) calendar days of completion.

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Staff Charges:	__ hours @ $40.00/hour	$
Photocopy Charges:	1f,iD copies @ $0.15/page	$27.90
Other:		$___ _
TOTAL:		$177.90

... THIS IS NOT AN INVOICE ...

Department of Anthropology, Archaeological Research Program
CALIFORNIA STATE UNIVERSITY, CHICO

August 27, 2014

Ms. Katy Sanchez
State of California
Native American Heritage Commission
925 Capitol Avenue, Room 364
Sacramento, CA 95814

Subject: McCloud Mill Timber Harvest, Siskiyou County, CA

Dear Ms. Sanchez,

McCloud Partners, LLC is preparing to complete a timber harvest project on a private land parcel in Siskiyou County within the town of McCloud. The construction poliion of this project likely entails some grading and excavation, as well as potential ground disturbing activities associated with logging.

In order to comply with Government Code §65352.3, which requires local governments to consult with Native American tribes, McCloud Paliners has contracted with the California State University, Chico (CSUC) Archaeological Research Program (ARP) to complete a cultural resource survey and inventory of the project area. As paii of this process we are requesting a search of the Sacred Lands File and a list of Native American contracts for the proposed project area.

If you have any questions regarding this project or proposal feel free to contact myself or Dr. Frank Bayham at tbayham@csuchico.edu. Please email your response to kddalton@csuchico.edu or fax to (530) 898-6143.

Sincerely,

Kevin D. Dalton, M.A., RPA
Project Manager
Office: (530) 898-4360
Email: kddalton@csuchico.edu
Fax: (530) 898-6143

Attachments:

Sacred Lands File & Native American Contacts List Request Form
Project Location Map

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION

915 Capitol Mall, RM 364
Sacramento, CA 95814
(916) 653-4082
(916) 657-5390 - Fax
nahc@pacbel I net

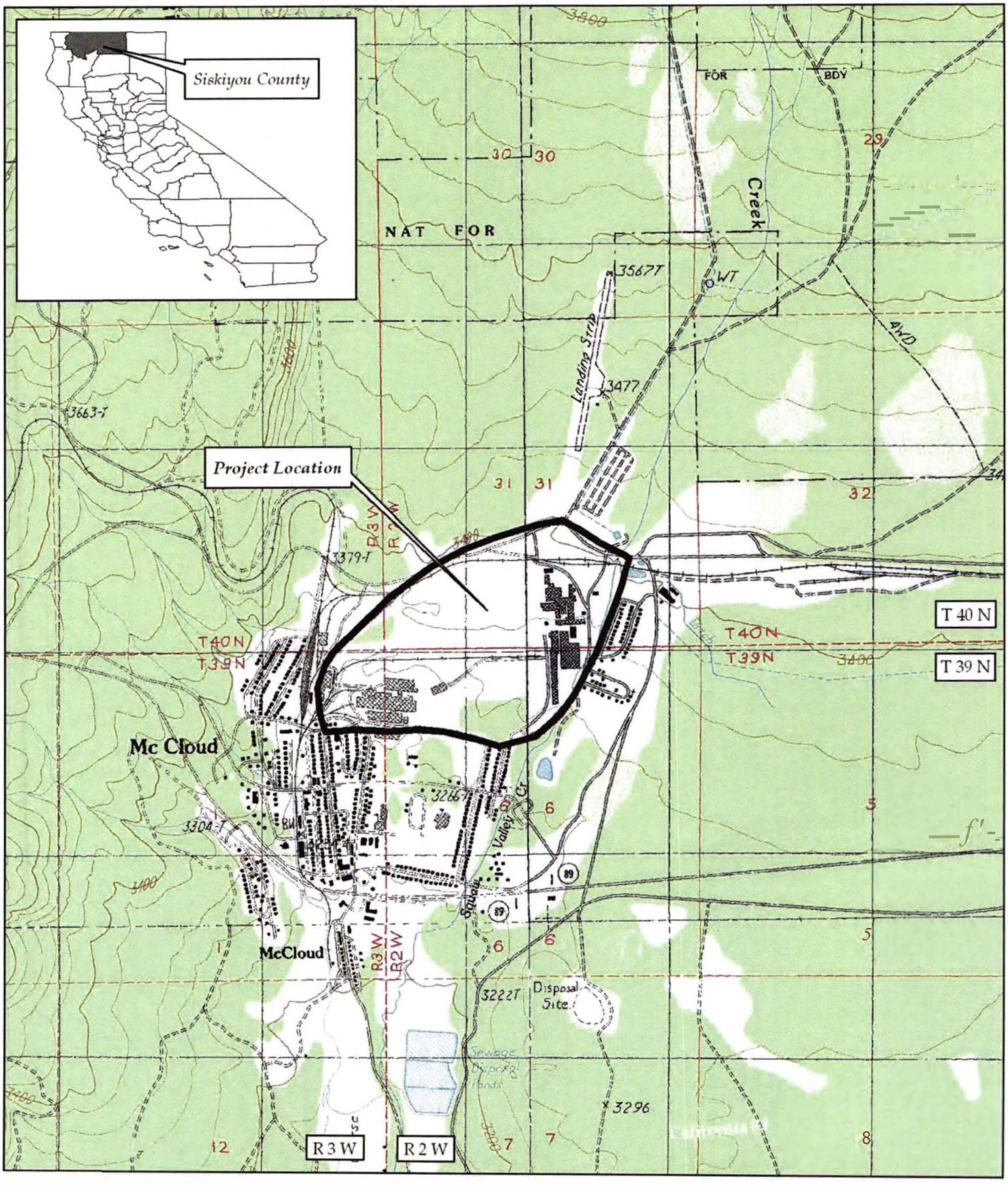
Information Below is Requiredfor a Sacred Lands File Search

Project: McCloud Mill Timber Harvest
County: Siskiyou

USGS Quadrangles
Name McCloud & Elk Spring
Township: 39N Range: 2W Section(s): §
Township: 40N Range: 2W Section(s): 31
Township: 39N Range: 3W Section(s): l
Township: 40N Range: 3W Section(s): 36

Company/Firm/Agency: CSU Chico, Archaeological Research Program
Contact Person: Kevin Dalton
Street Address: 400 West First Street
City: Chico Zip: 95929-0400
Phone: (530) 898-4360
Fax: (530) 898-6143
Email: kddalton@csuchico.edu

Project Description: The proposed project entails the completion of a timber harvest project on a private land parcel in Siskiyou County within the town ofMcCloud. The construction portion of this project likely entails some grading and excavation, as well as potential ground disturbing activities associated with logging.



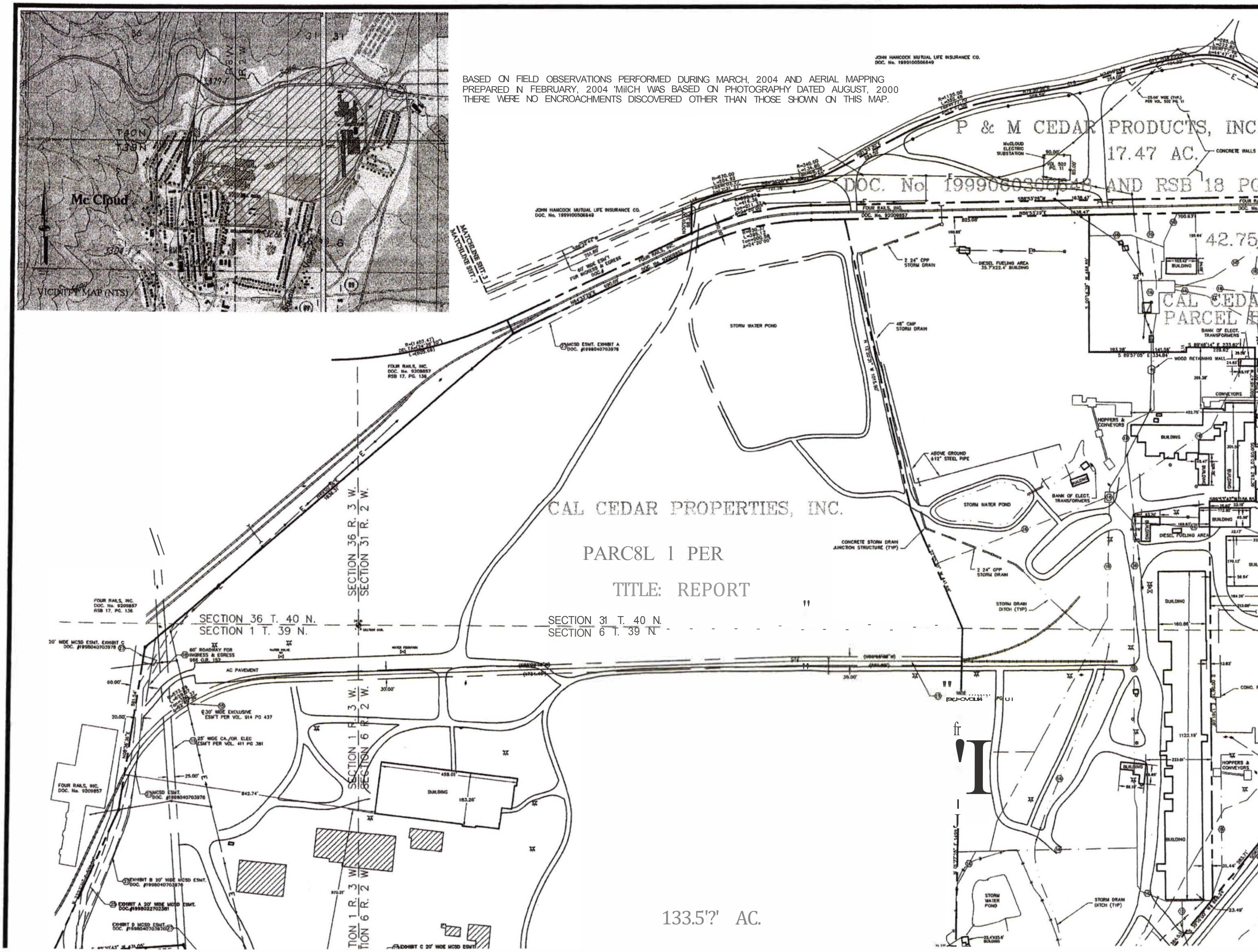
Project Location Map
McCloud Mill Property Timber Harvest Plan
MCLOUD & ELK SPRING QUADRANGLE
MCCLOUD,CA
USGS 75 MINUTE QUAD 1986

0 0.2 0.4 0.8 Kilometers
0 0.25 0.5 1 Miles

N

Legend
Project Location

Prepared by: CSTI ARP


BASED ON FIELD OBSERVATIONS PERFORMED DURING MARCH, 2004 AND AERIAL MAPPING PREPARED IN FEBRUARY, 2004 WHICH WAS BASED ON PHOTOGRAPHY DATED AUGUST, 2000 THERE WERE NO ENCROACHMENTS DISCOVERED OTHER THAN THOSE SHOWN ON THIS MAP.
VICINITY MAP (NTS)
Mc Cloud
JOHN HANCOCK MUTUAL LIFE INSURANCE CO. DOC. No. 1999100506649
P & M CEDAR PRODUCTS, INC.
17.47 AC.
DOC. No 1999060306648 AND RSB 18 PG
McCLOUD ELECTRIC SUBSTATION
CONCRETE WALLS
FOUR RAILS, INC. DOC. No. 9209857
42.75
CAL CEDAR PARCEL
DIESEL FUELING AREA
STORM WATER POND
48" CMP STORM DRAIN
MATCHLINE SHT. 3
MATCHLINE SHT. 1
CAL CEDAR PROPERTIES, INC.
PARCEL 1 PER
TITLE REPORT
133.5? AC.
SECTION 36 R. 3 W.
SECTION 31 R. 2 W.
SECTION 36 T. 40 N.
SECTION 1 T. 39 N.
SECTION 31 T. 40 N.
SECTION 6 T. 39 N.
SECTION 1 R. 3 W.
SECTION 6 R. 2 W.
60' ROADWAY FOR INGRESS & EGRESS
AC PAVEMENT
30' WIDE EXCLUSIVE ESM'T PER VOL. 914 PG 437
25' WIDE CA./OR. ELEC ESM'T PER VOL. 411 PG 381
MCSD ESMT. EXHIBIT A DOC. #1998040703976
20' WIDE MCSD ESMT. EXHIBIT C
ABOVE GROUND 12" STEEL PIPE
BANK OF ELECT. TRANSFORMERS
CONCRETE STORM DRAIN JUNCTION STRUCTURE (TYP)
2 24" CPP STORM DRAIN
STORM DRAIN DITCH (TYP)
HOPPERS & CONVEYORS
WOOD RETAINING WALL
CONVEYORS
BUILDING
STORM WATER POND

September 18, 2014

Honorable Dolores Raglin, Tribal Chairperson
Pit River Tribe Environmental Office
36970 Park Avenue
Burney, CA 96013-4072

Re: McClound Mill Property Timber Harvest Plan

Dear Ms. Raglin,

McCloud Partners, LLC has contracted with the California State University, Chico (CSUC) Archaeological Research Program (ARP) to complete a cultural resource study for a proposed timber harvest plan (THP), in Siskiyou County. The project is located at the historic mill property in the town of McCioud, and can be found on the McCloud and Elk Spring 7'5 minute USGS Quadrangle map (Attachment A). Legal locations for the property are: section 6 T39N R02W, section I T39N R03W, section 3l T40N R02W and section 36 T40N R03WMDBM.

The ARP is organized as a nonprofit arm of the CSU Chico Research Foundation, with an educational mission, providing an interdisciplinary approach to archaeological training and problem-oriented research for Anthropology Department graduate and upper division undergraduate student interns. ARP is staffed by seasoned cultural resource professionals with extensive experience handling cultural resource management under both federal and state guidelines.

Prefield research indicated that no cultural resource investigations have been completed within the project area. Subsequently, no cultural resources have been previously identified within the boundaries of the proposed THP. An intensive archaeological survey of the project area was completed by ARP staff on September I, 2014. This effort resulted in the documentation of four historic era cultual resourses.

At this stage of planning, we are seeking input on how the proposed THP might affect areas that are culturally significant to your tribe, such as traditional plant use areas, traditional mineral use areas, shrines or important geological formations, archaeological sites, or any other areas. We recognize that site information is confidential and sensitive and will treat any information that you may provide accordingly. We are also interested in whether you feel there are any additional tribal members or traditional practitioners we should notify about the THP. We will be compiling this information in the coming weeks and can be rearched through the Anthropology Department at CSUC, contact infromation is provided below.

Sincerely,

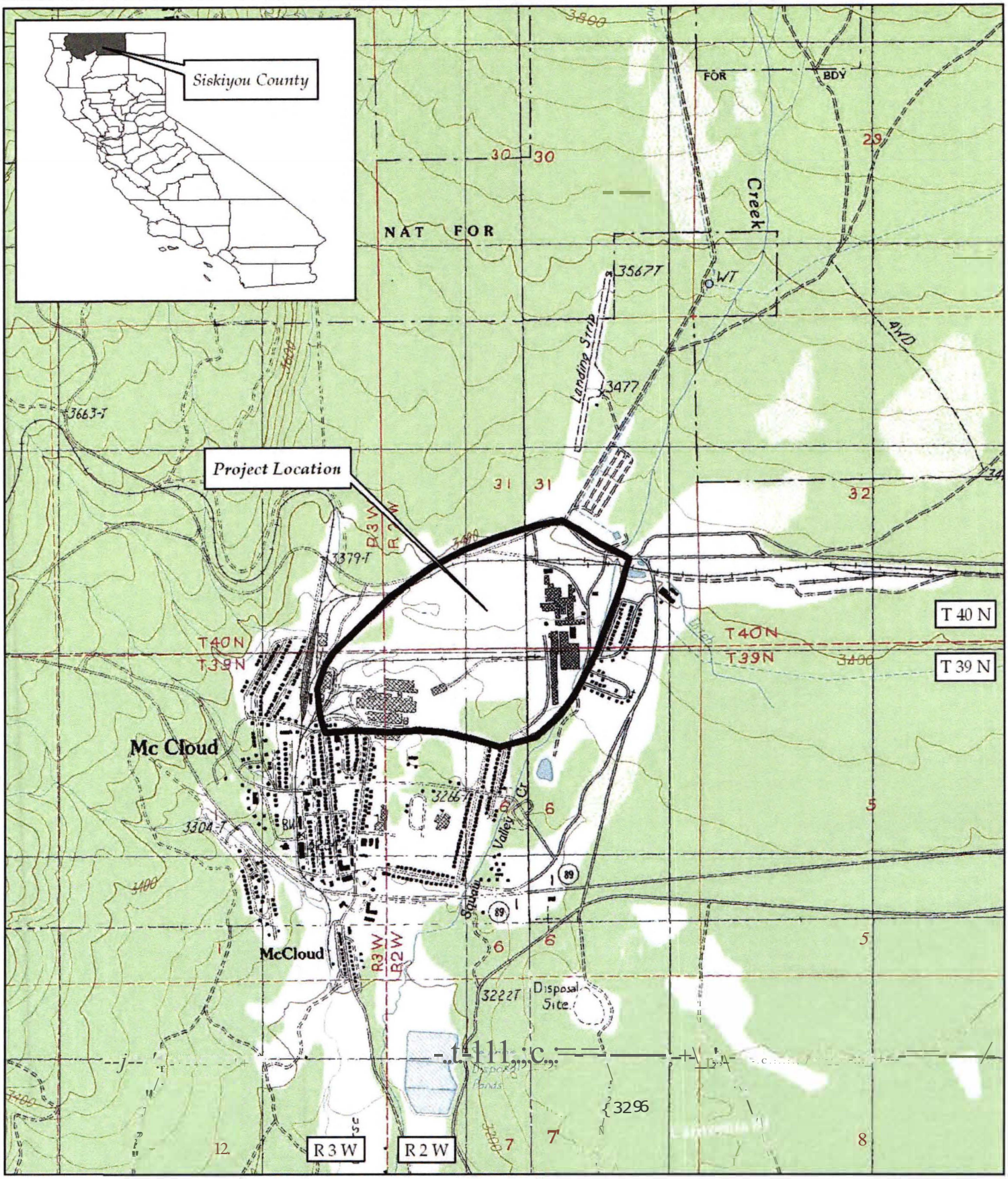
,

Kevin Dalton, M.A., RPA
Department of Anthropology
Archaeological Research Program
400 West First Street Chico, CA
95929-0400
(530) 898-4360

Attachments:
Project Location Map
Proposed Timber Harvest Areas

Cc: Marissa Fierro, Environmental Coordinator

Cc: Morning Star Gali, Tribal Historic Preservation Officer



Project Location Map
McCloud Mill Property Timber Harvest Plan
MCLOUD & ELK SPRING QUADRANGLE
MCCLOUD, CA.
USGS 75 MINUTE QUAD 1986

0 02 04 0.8 Kilometers

0 0.25 0.5 1 Miles

N

Legend

CJ Project Location

Pre/1ll'ed lly: CSU ARP

Project APE Map
McCloud Mill Property Timber Harvest Plan
Siskiyou County, CA
Approximately 250 acre parcel

0 0.125 0.25 0.5 Kilometers

0 0.125 0.25 0.5 Miles

N

A

Legend

CJ Project Area

Prepnred l•i,: CSU *A R P*

September 18, 2014

Ms. Mary Carpelan
Shasta Nation
Contact for Cultural and Archaeological Resources
P.O. Box 1054
Yreka, CA 96097

Re: McClound Mill Property Timber Harvest Plan

Dear Ms. Carpelan,

McCloud Partners, LLC has contracted with the California State University, Chico (CSUC) Archaeological Research Program (ARP) to complete a cultural resource study for a proposed timber harvest plan (THP), in Siskiyou County. The project is located at the historic mill property in the town ofMcCloud, and can be found on the McCloud and Elk Spring 7'5 minute USGS Quadrangle map (Attachment A). Legal locations for the property are: section 6 T39N R02W, section I T39N R03W, section 3l T40N R02W and section 36 T40N R03WMDBM.

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Prefield research indicated that no cultural resource investigations have been completed within the project area. Subsequently, no cultural resources have been previously identified within the boundaries of the proposed THP. An intensive archaeological survey of the project area was completed by ARP staff on September I, 2014. This effort resulted in the documentation of four historic era cultual resourses.

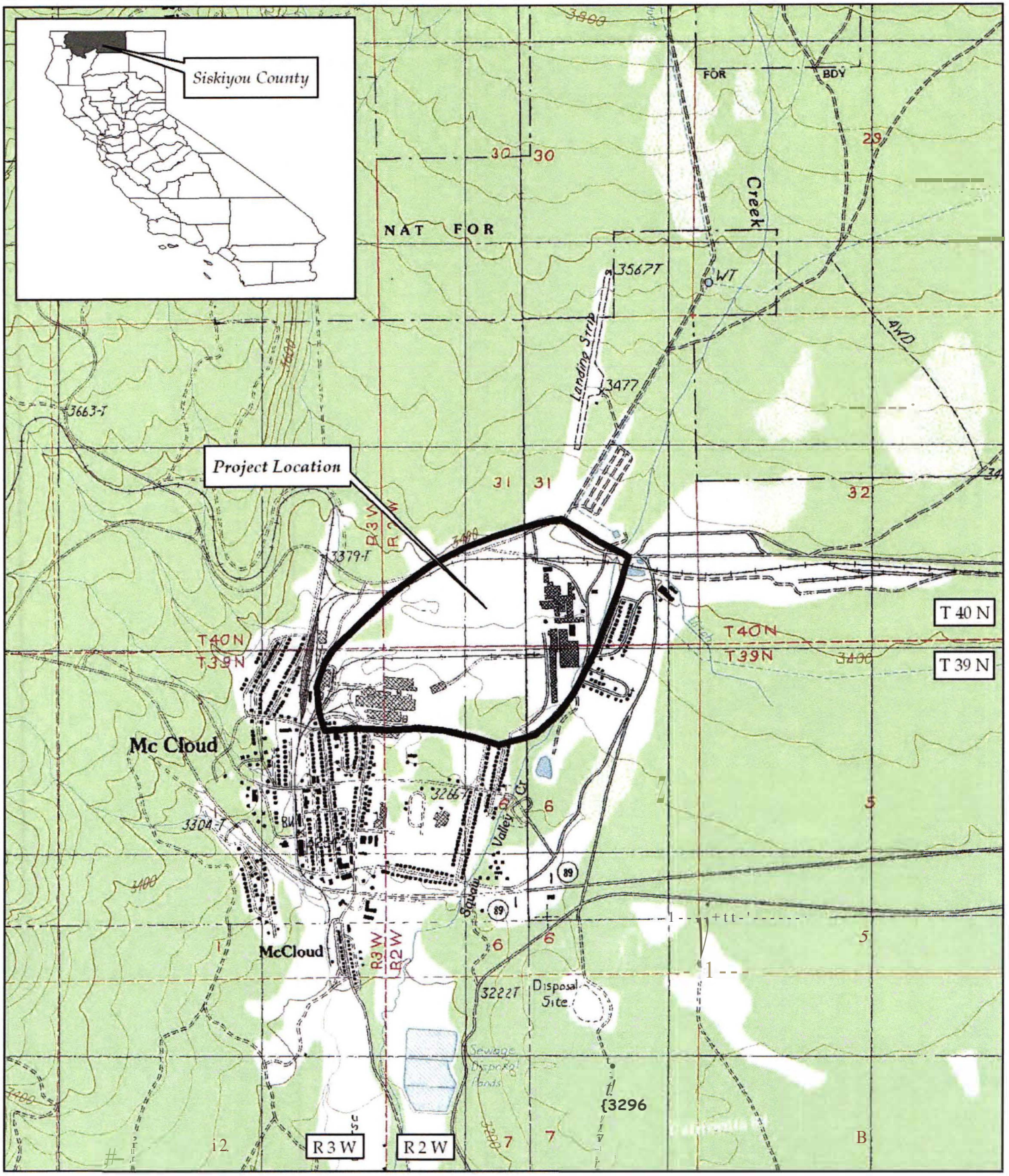
At this stage of planning, we are seeking input on how the proposed THP might affect areas that are culturally significant to your tribe, such as traditional plant use areas, traditional mineral use areas, shrines or important geological formations, archaeological sites, or any other areas. We recognize that site information is confidential and sensitive and will treat any information that you may provide accordingly. We are also interested in whether you feel there are any additional tribal members or traditional practitioners we should notify about the THP. We will be compiling this information in the coming weeks and can be rearched through the Anthropology Department at CSUC, contact infromation is provided below.

Sincerely,

,

Kevin Dalton, M.A., RPA
Department of Anthropology
Archaeological Research Program
400 West First Street Chico, CA
95929-0400
(530) 898-4360

Attachments:
Project Location Map
Proposed Timber Harvest Areas



Project Location Map
McCloud Mill Property Timber Harvest Plan
MCLOUD & ELK SPRING QUADRANGLE
MCCLOUD,CA
USGS 7.5 MINUTE QUAD 1986

0 0.2 0.4 0.8 Kilometers
0 0.25 0.5 1 Miles

N

Legend
C) Project Location

Prepared by: CSUARP

Project APE Map
McCloud Mill Property Timber Harvest Plan
Siskiyou County, CA
Approximately 250 acre parcel

N

0 0.125 0.25 0.5 Kilometers

0 0.125 0.25 0.5 Miles

Legend

CJ Project Area

Prepnred 11; CSU A R P

September 18, 2014

Mr. Howard Wynant
P.O. Box 34
Macdoel, CA 96058

Re: McClound Mill Property Timber Harvest Plan

Dear Mr. Wynant,

McCloud Partners, LLC has contracted with the California State University, Chico (CSUC) Archaeological Research Program (ARP) to complete a cultural resource study for a proposed timber harvest plan (THP), in Siskiyou County. The project is located at the historic mill property in the town ofMcCloud, and can be found on the McCloud and Elk Spring 7'5 minute USGS Quadrangle map (Attachment A). Legal locations for the property are: section 6 T39N R02W, section 1 T39N R03W, section 3l T40N R02W and section 36 T40N R03WMDBM.

The ARP is organized as a nonprofit arm of the CSU Chico Research Foundation, with an educational mission, providing an interdisciplinary approach to archaeological training and problem-oriented research for Anthropology Department graduate and upper division undergraduate student interns. ARP is staffed by seasoned cultural resource professionals with extensive experience handling cultural resource management under both federal and state guidelines.

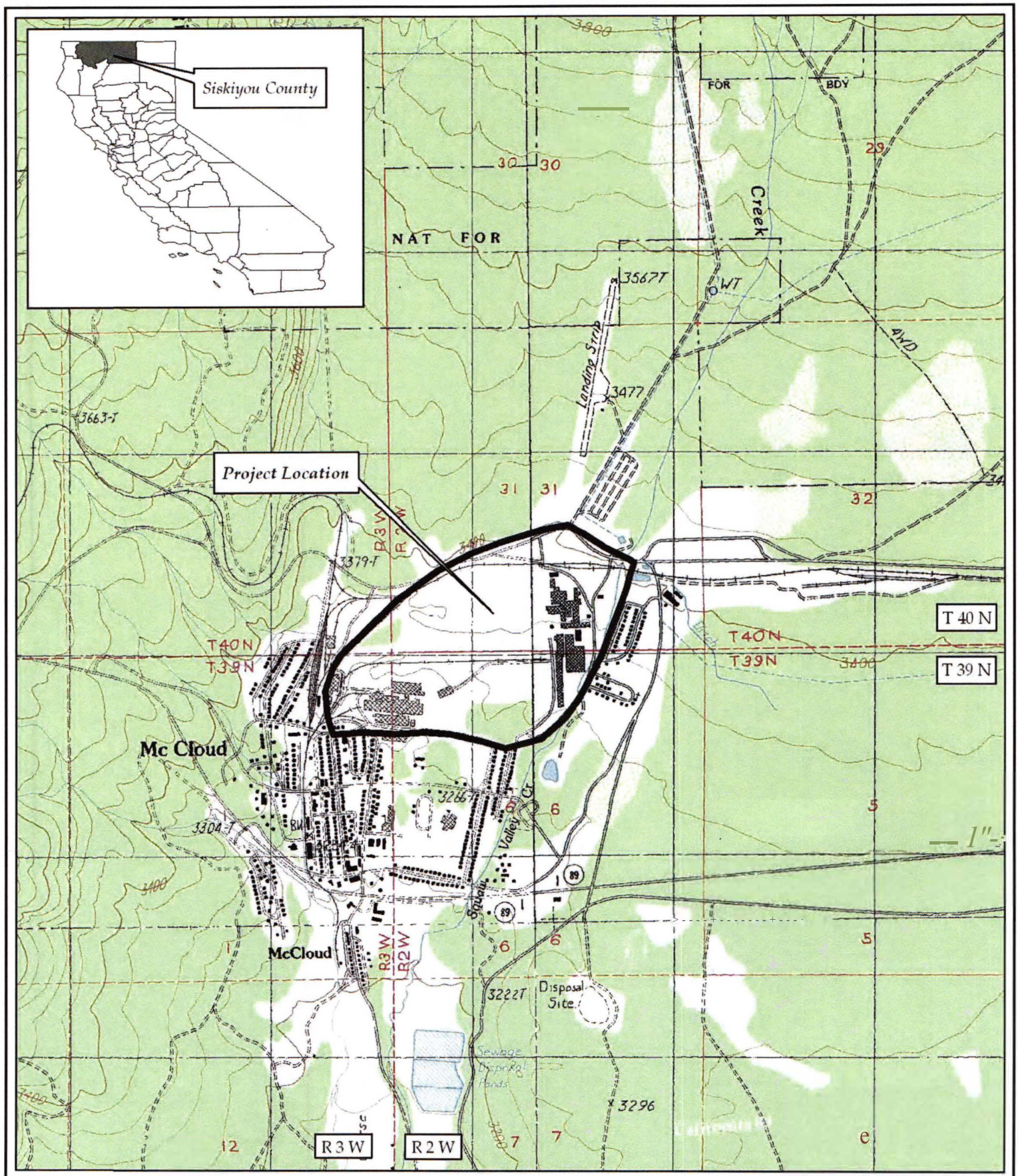
Prefield research indicated that no cultural resource investigations have been completed within the project area. Subsequently, no cultural resources have been previously identified within the boundaries of the proposed THP. An intensive archaeological survey of the project area was completed by ARP staff on September 1, 2014. This effort resulted in the documentation of four historic era cultual resourses.

At this stage of planning, we are seeking input on how the proposed THP might affect areas that are culturally significant to your tribe, such as traditional plant use areas, traditional mineral use areas, shrines or important geological formations, archaeological sites, or any other areas. We recognize that site information is confidential and sensitive and will treat any information that you may provide accordingly. We are also interested in whether you feel there are any additional tribal members or traditional practitioners we should notify about the THP. We will be compiling this information in the coming weeks and can be rearched through the Anthropology Department at CSUC, contact infromation is provided below.

Sincerely,

Kevin Dalton, M.A., RPA
Department of Anthropology
Archaeological Research Program
400 West First Street Chico, CA
95929-0400
(530) 898-4360

Attachments:
Project Location Map
Proposed Timber Harvest Areas



Project Location Map
McCloud Mill Property Timber Han'est Plan
MCLOUD & ELK SPRING QUADRANGLE
MCCLOUD,CA
USGS 75 MINUTE QUAD 1986

0 0.2 0.4 0.8 Kilometers
0 0.25 0.5 1 Miles

N

Legend
CJ Project Location

Pre1•nred lJy: CSUARP

Project APE Map
McCloud Mill Property Timber Harvest Plan
Siskiyou County, CA
Approximately 250 acre parcel

N

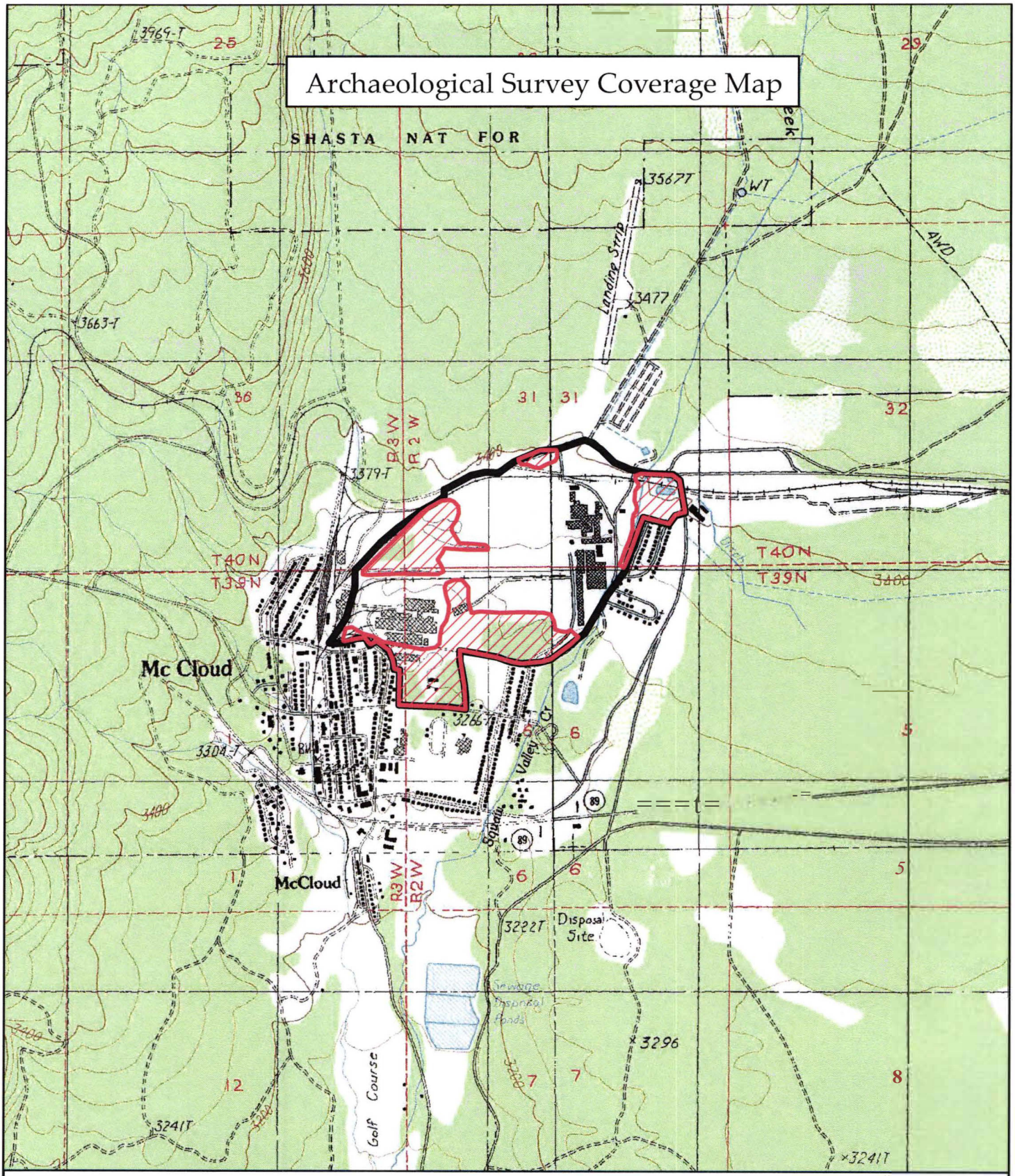
0 0.125 0.25 0.5 Kilometers

0 0.125 0.25 0.5 Miles

Legend

CJ Project Area

Prepared by: CSUARP



Archaeological Survey Coverage
McCloud Mill Property Timber Harvest Plan
Siskiyou County, CA

Prepared by: CSU ARP

N

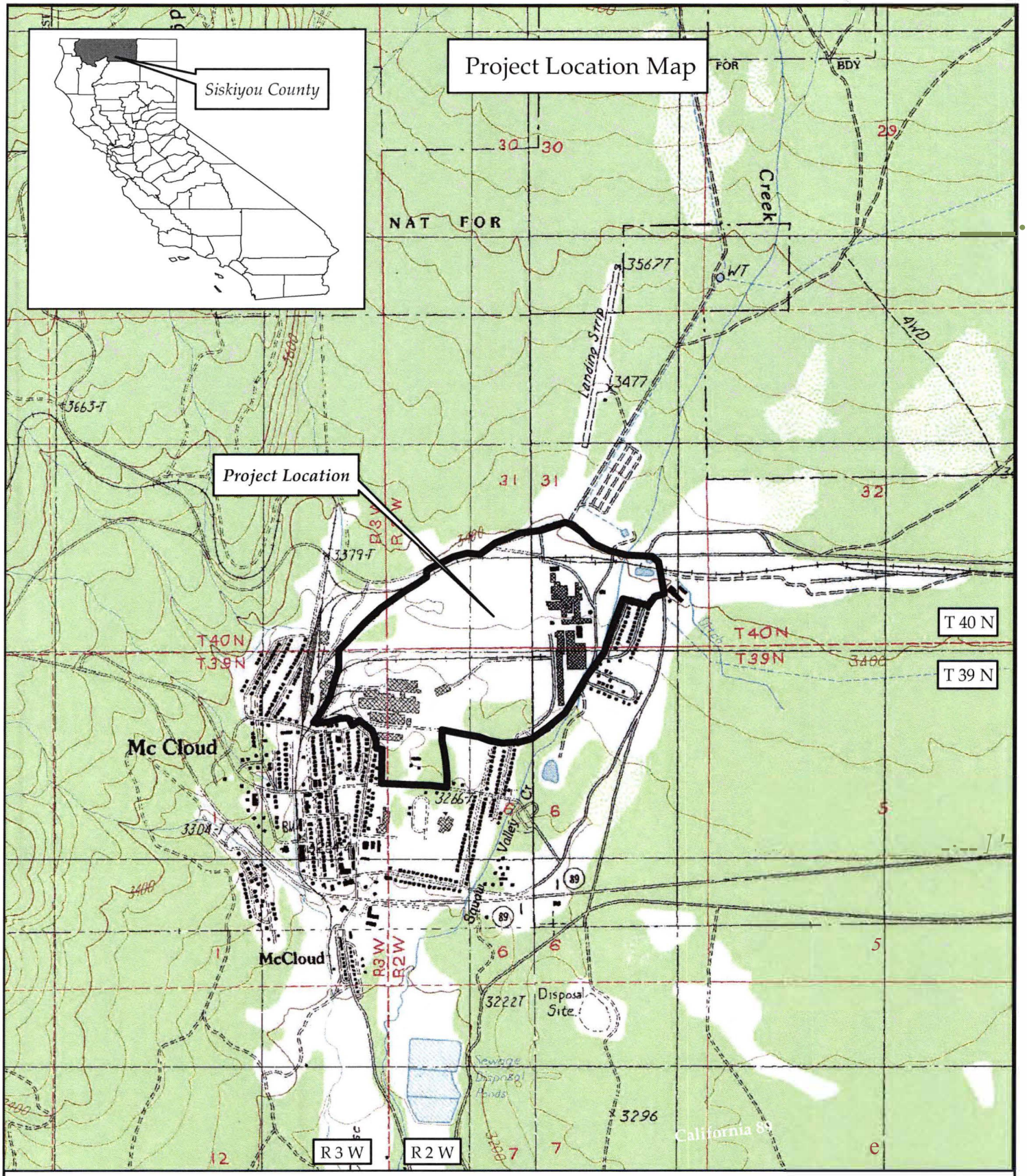
0 0.25 0.5 1 Kilometers

0 0.125 0.25 0.5 Miles

Legend

C3 Project Area

tf!J- Intensive Survey Coverage



Project Location Map
McCloud Mill Property Timber Harvest Plan
MCLOUD & ELK SPRING QUADRANGLE
MCCLOUD,CA
USGS 7.5 MINUTE QUAD 1986

Prepared by: CSU ARP

State of California - The Resources Agency Primary#
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code 7

Other Listings
Review Code Reviewer Date

 *Resource Name or#: ARP-08-31-14-0 I

PI. Other Identifier:
*P2. Location: • Not for Publication D Unrestricted *a. County: Siskiyou
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad: McCloud Calif. Date: 1986 T 39N; R 2W; NW Y. of SW Y. of NW Y. of Sec 6; M.D.B.M.
c. Address: City: McCloud Zip: 96057
d. UTM NAD83 CONUS: Zone 10. Foundation I: 1572,614 mE / 4,567,696 mE (G.P.S.)
Foundation 2: 1572,618 mE / 4,567,649 mE (G.P.S.)
Foundation 2: 1572,629 mE / 4,567,648 mE (G.P.S.)
e. Other Locational Data: (e.g., parcel#, directions to resource, elevation, etc., as appropriate) Elevation:
In the town of McCloud and from the intersection of East Colombero Dr. and Shasta Ave proceed east on East Colombero Dr. for just over .20 miles. Park on north side of road. From here, walk due north for 300ft. Site is surrounded by cottonwood trees.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This resource consists of three historic foundations. These foundations are associated with the McCloud River Lumber Company and subsequent timber milling operations. The foundations are located in area of cottonwood trees. Foundation# I (shown in photograph on primary record) is a concrete slab, measuring approximately 30' by 18'. Three pier blocks are evenly spaced along the north-south axis of the foundation. Exposed water pipes appear to have provided water to the structure that was located here. Foundation 2 is formed entirely from pier blocks. Seven pier blocks span its 44' north-south extent, while three piers span the 17' east-west extent. Piers for this foundation measure about 22" by 22". There is substantial evidence of burning at this location. Artifacts noted near Foundation 2 include: a pull top can, ribbed sanitary cans, and wire nails. Foundation 3 is not as formally constructed as foundations I &2. This concrete slab foundation measures 43 'S" by 16'8" and has three square postholes / beam supports in its southern end, which measure 10.5" by 10.5". Artifacts noted near Foundation 3 include: a number of motor oil lids and a paint spray can.

A review of a 1925 Sanborn map indicated that two buildings were present at this location in 1925. A "utility shop", also referred to on the Sanborn map as "wood works," and a small lumber shed.

*P3b. Resource Attributes: (List attributes and codes) AH2
*P4. Resources Present: DBuilding DStructure DObject •Site DDistrict DElement of District DOther (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) Overview of Foundation I. Pier and exposed piping in lower right-center frame.

*P6. Date Constructed/Age and Sources:
•Historic
D Prehistoric DBoth

*P7. Owner and Address:
McCloud Partners, LCC
29 Shell Road
Mill Valley, CA 94941

*PS. Recorded by:
Kevin Dalton
California State University, Chico
Arcfhaeological Research Program
400 West First Street Chico, CA 95929

*P9. Date Recorded: 08/31/2014
*PIO. Survey Type: Intensive Pedestrian (20 meter transects)

*Pl I. Report Citation: (Cite survey report and other sources, or enter "none.") Kevin Dalton 2014. An Archaeological Survey Report for the McCloud Mill Timber Harvesting Plan Siskiyou County, California.

*Attachments: DNONE •Location Map DSketch Map •Continuation Sheet DBuilding, Structure, and Object Record DArchaeological Record DDistrict Record DLinear Feature Record DMilling Station Record DRock Art Record DArtifact Record DPhotograph Record D Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

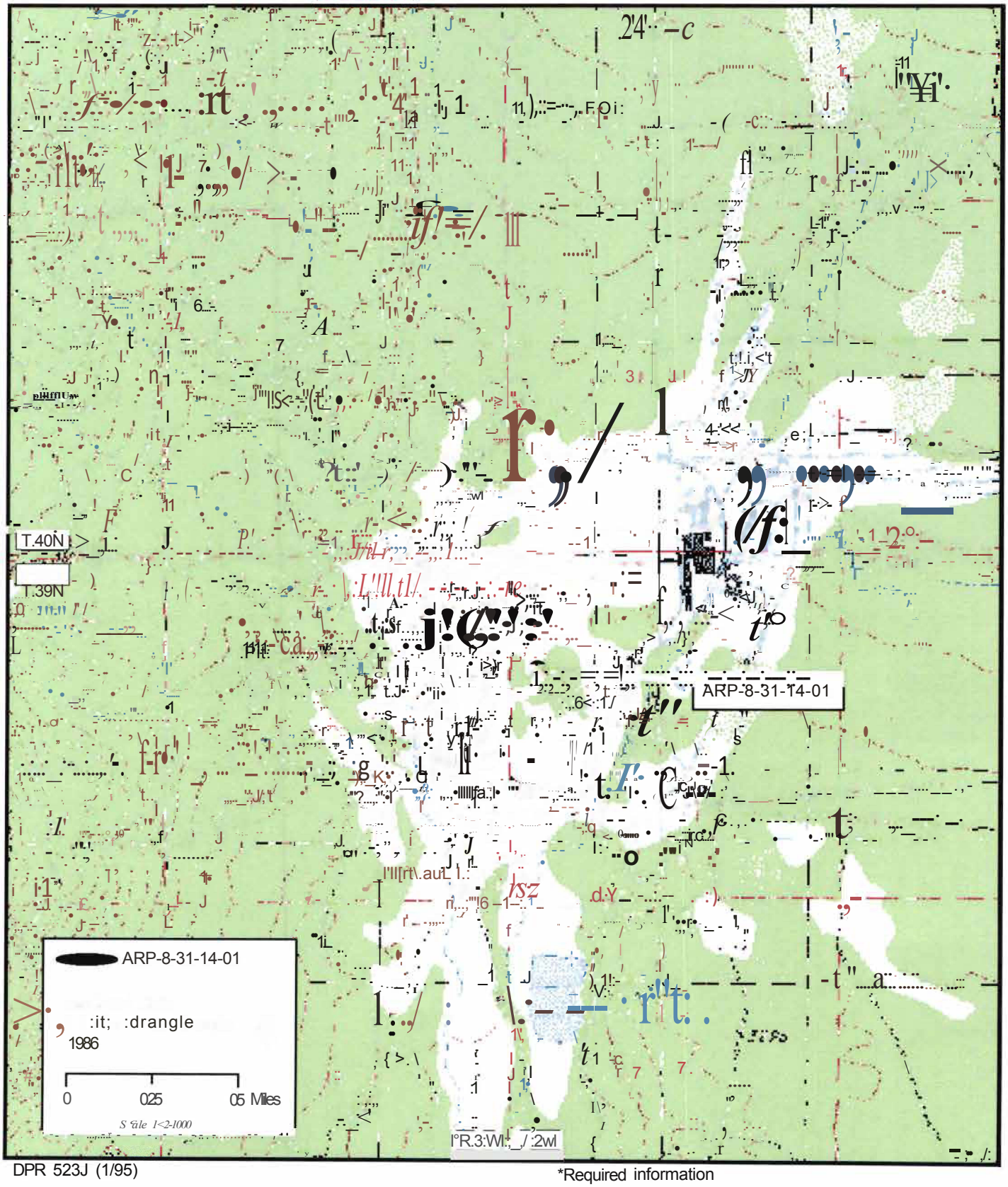
Primary#
HRI#
Trinomial

*Resource Name or#: ARP-8-31-14-01

*Map Name: McCloud Calif. 7.5 Minute Quadrangle

*Scale: 1:24000

*Date of Map: 1986



DPR 523J (1/95)

*Required information

Photo 1: Overview of Foundation 2. View is southwest. Piers in lower right and middle left frame. Scale bar in background is 6'7".

Photo 2: Overview of Foundation 3. View is southwest.

Photo 3: Southern end of Foundation 3, showing center posthole.

State of California - The Resources Agency Primary#
DEPARTMENT OF PARKS AND RECREATION HRI#

PRIMARY RECORD

Trinomial
NRHP Status Code 7

Other Listings Review Code	Reviewer	Date

 *Resource Name or#: ARP-9-1-14-01

P1. Other Identifier: 13 Fire System Indictor Valves

*P2. Location: • Not for Publication O Unrestricted *a. County: Siskiyou

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: McCloud Calif. Date: 1986 T 39N; R 2W; NW Y. of NW Y. of Sec 6; M.D. B.M.
T 39N; R 3W; NEY. of NE Y. of Sec 1; M.D. B.M.

c. Address: City: McCloud Zip: 96057

d. UTM NAD 83 CONUS: Zone: IO;

572,370.252 mE / 4,567,909.152 mN (G.P.S.) - Valve# 66	572,622.559 mE / 4,567,811044 mN (G.P.S.)
572,443.171 mE / 4,567,829.565 mN (G.P.S.) - Valve# 41	572,611.976 mE / 4,567,811.256 mN (G.P.S.)
572,560.647 mE / 4,567,816.336 mN (G.P.S.)	572,683.414 mE / 4,567,804.690 mN (G.P.S.)- Two Valves
572,573.347 mE / 4,567,814.748 mN (G.P.S.)	572,692.409 mE / 4,567,879.307 mN (G.P.S.)- Two Valves
572,612.505 mE / 4,567,810.727 mN (G.P.S.)	572,879.32 I mE / 4,567,960.534 mN (G.P.S.)-Two Valves

e. Other Locational Data: (e.g., parcel#, directions to resource, elevation, etc., as appropriate) Elevation: 3380 ft AMSL
In the town of McCloud and from the intersection of East Colombero Dr. and Shasta Ave proceed north on Shasta Ave for .15 miles. Make a left turn al the point where the road curves sharply to the right (Mill Road). Proceed through first gate and continue another 775 feel lo a second gate. Park here and walk in an easterly direction for 275 feet. The western most post indicator valves are located about 80 feet south of the road. Use UTMs to navigate to other valves.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This historic resource consists of thirteen historic post indicator values. A post indicator valve (PIV) is a valve assembly used to open or close the water supply to fire protection systems in large buildings. These PIVs protrudes above ground level and are located on the historic fire system water main for the historic McCloud Mill. The valves contain a visual indicator of the valve status ("OPEN" or "SHUT"), which is housed at the top of the post.

*P3b. Resource Attributes: (List attTibutes and codes) AH 16

*P4. Resources Present: OBuilding OStructure DObject •Site 0 District O Element of District DOther (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) Photograph showing western most indicator valves. View is 170° E ofN. September 1, 2104.

*P6. Date Constructed/Age and Sources: •Historic
OPrehistoric OBoth

*P7. Owner and Address:
McCloud Partners, LCC
29 Shell Road
Mill Valley, CA 94941

*PS. Recorded by:
Kevin Dalton
California State University, Chico
Arcfuaeological Research Program
400 West First Street
Chico, CA 95929-0400

*P9. Date Recorded: 9/1/2014

*PIO. Survey Type: intensive
Pedestrian (20 meter transects)

*PI I. Report Citation: (Cite survey report and other sources, or enter "none.") Kevin Dalton 2014. An Archaeological Survey Report for the McCloud Mill Timber Harvesting Plan Siskiyou County, California.

*Attachments: ONONE •Location Map •Sketch Map •Continuation Sheet OBuilding, Structure, and Object Record DArchaeological Record ODistrict Record DLinear Feature Record OMilling Station Record ORock Art Record DArtifact Record OPhotograph Record O Other (List):

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

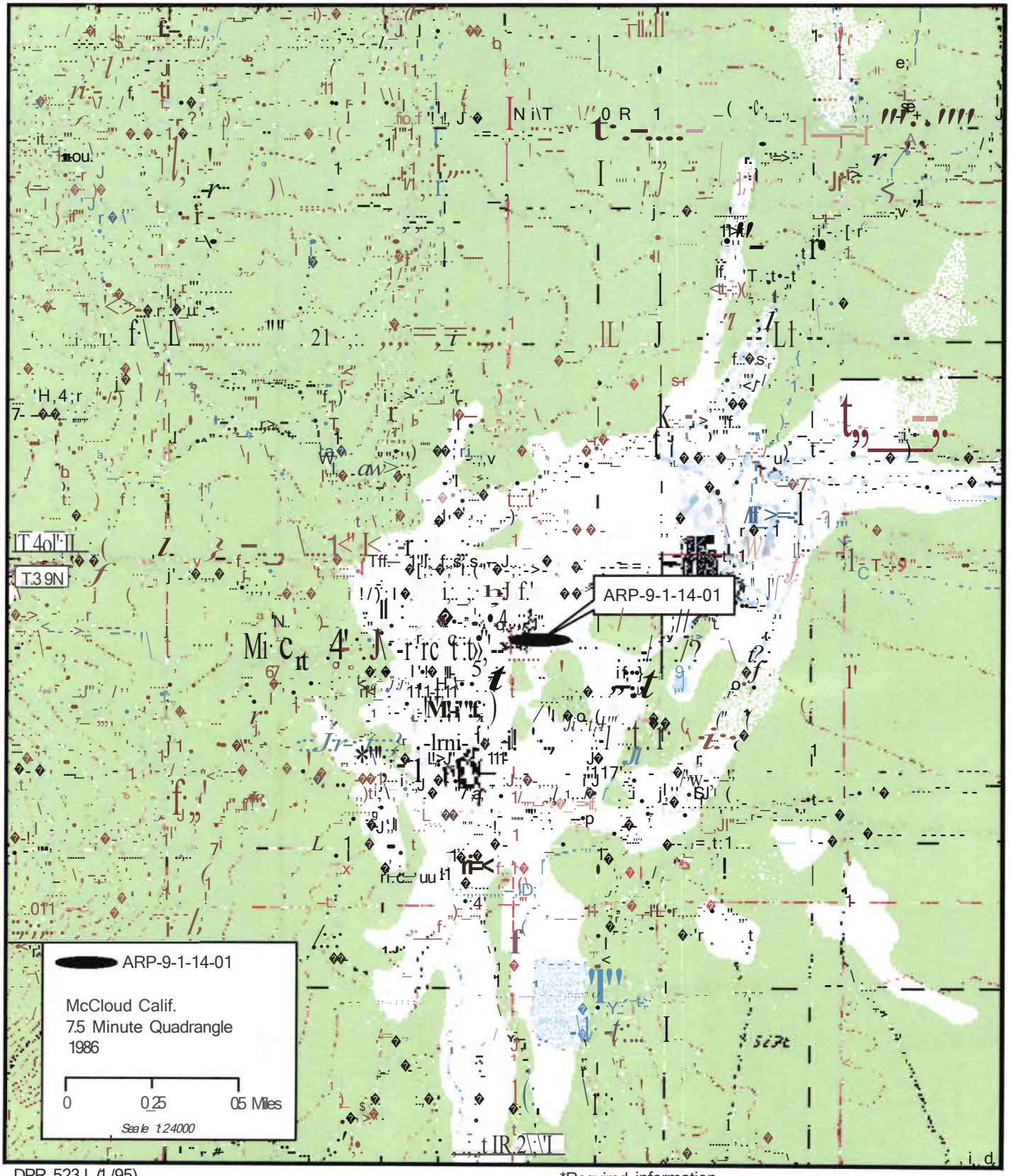
Primary#
HRI#
Trinomial

*Resource Name or#: ARP-9-1-14-01

*Map Name: McCloud Calif. 7.5 Minute Quadrangle

*Scale: 1:24000

*Date of Map: 1986



*Required information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary#
HRI#
Trinomial

*Resource Name or# (Assigned by recorder) ARP-9-1-14-01

*Drawn By: Kevin Dalton

*Date: September 15, 2014

*Required information

Primary#
HRI#
Trinomial

*Resource Name or # (Assigned by recorder) ARP-9-1-14

*Recorded by: Kevin Dalton *Date: September 15, 2014 • Continuation D Update

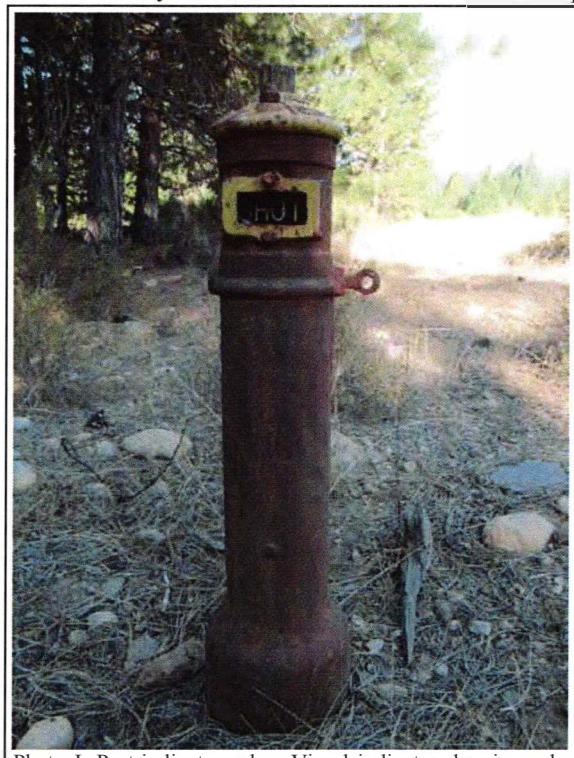


Photo I. Post indicator valve. Visual indicator showing valve is shut.

Photo 2. Scale showing height of post indicator valve (87cm / 2' IO")

Photo 3. Top of post indicator valve.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary#
HRI #
Trinomial
NRHP Status Code 7

Other Listings
Review Code | Reviewer | Date

*Resource Name or#: ARP-9-1-14-02

P1. Other Identifier: Lumber Shed No. 3

**P2. Location: • Not for Publication D Unrestricted

*a. County: Siskiyou

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: McCloud Calif. Date: 1986 T 39N; R 2W; NE 'I, of SW 'I, of NE '!. of Sec 6; M.D.B.M.
T 39N; R 2W; SW'!. of NE'!. of NW 'I, of Sec 6; M.D.B.M.

c. Address: City: McCloud Zip: 96057

d. UTM NAD83: Zone: 10
Foundation: 572735 mE / 4567746 mN (G.P.S.)
Waterpipe Supports: 573080 mE / 4567955 mN through 572895 mE / 4567848 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel#, directions to resource, elevation, etc., as appropriate) Elevation: 3380 ft AMSL
In the town of McCloud and from the intersection of East Colombero Dr. and Shasta Ave proceed north on Shasta Ave for .15 miles. Make a left turn at the point where the road curves sharply to the right (Mill Road). Proceed through first gate and continue another 775 feet to a second gate and park. From this location, the triangular board form concrete footing is just to the south.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This resource consists of a historic foundation and a number of concrete supports associated with an above ground 8" water pipe. The eastern end of the foundation is bracketed by two large pipes that extrude about five feet from the current ground surface. The concrete foundation is formed by two east-west trending footings (approximately I' wide by 85' in length) and a large triangular shaped board form1ed concrete footing (approximately 4'8" high by 5' wide). Six water pipe supports were noted. These form a linear feature that appears to have connected in the northeast corner of the now extant building.

A review of a 1925 Sanborn map indicated that "Lumber Shed No. 3" was present at this location. The Sanborn map also indicates the an 8" water pipe connected into the northeast corner of this building.

*P3b. Resource Attributes: (List attributes and codes) AH2, AH6

*P4. Resources Present: DBuilding DStructure DObject •Site DDistrict DElement of District DOther (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession#) Photograph showing concrete footing (middle right frame) and upright piping at eastern edge of foundation (middle left frame). View is 105° E of N. September I, 2104.

*P6. Date Constructed/Age and Sources: •Historic
DPrehistoric DBoth

*P7. Owner and Address:
McCioud Partners, LCC
29 Shell Road
Mill Valley, CA 94941

*P8. Recorded by:
Kevin Dalton
California State University, Chico
Arcthaeological Research Program
400 West First Street
Chico, CA 95929-0400

*P9. Date Recorded: 9/1/2014

*PIO. Survey Type: Intensive Pedestrian (20 meter transects)

*PI l. Report Citation: (Cite survey report and other sources, or enter "none.") Kevin Dalton 2014. An Archaeological Survey Report for the McCloud Mill Timber Harvesting Plan Siskiyou County, California.

*Attachments: DNONE •Location Map DSketch Map •Continuation Sheet DBuilding, Structure, and Object Record DArchaeological Record DDistrict Record DLinear Feature Record DMilling Station Record DRock Art Record DArtifact Record DPhotograph Record D Other (List):

*Required information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

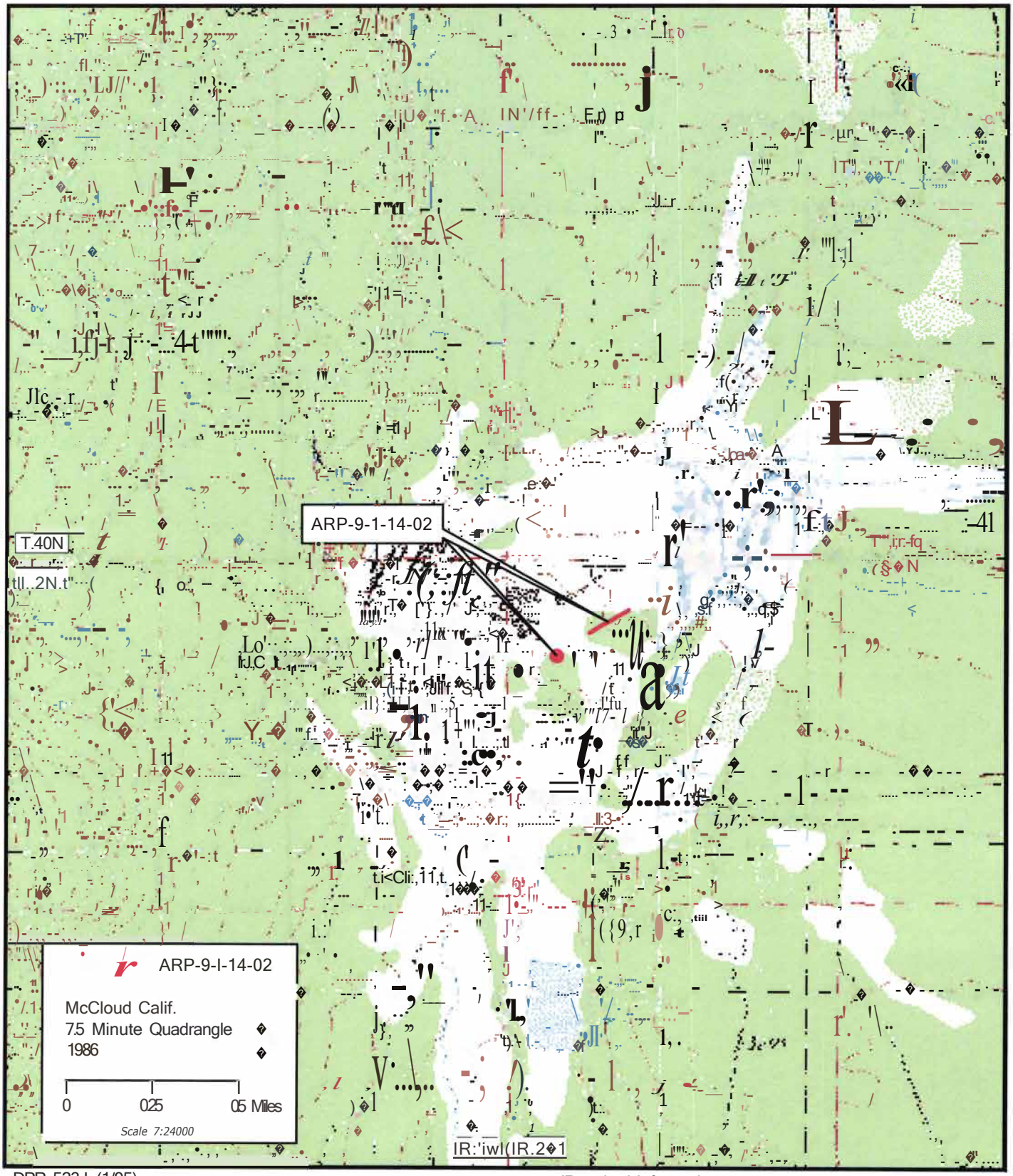
Primary#
HRI#
Trinomial

·Resource Name or#: ARP-9-1-14-02

·Map Name: McCloud Calif. 7.5 Minute Quadrangle

•scale: 1:24000

·Date of Map: 1986



'Required information

*Recorded by: Kevin Dalton *Date: 09/01/2014 • Continuation DUpdate

Photo I: Pipes at Eastern Egde of Foundation.

Photo 2: Support Footings S• Waterpipe leading to foundation.

Photo 3: Triangular Board Forml Footing.

Photo 4: Concrete Footings from Foundation.

State of California - The Resources Agency Primary#
DEPARTMENT OF PARKS AND RECREATION HRJ #

PRIMARY RECORD

Trinomial CA-SIS-2325H
NRHP Status Code 2

Other Listings
Review Code Reviewer Date

 *Resource Name or#: McCloud River Lumber Company Railroad System

P1. Other Identifier:

*P2. Location: • Not for Publication O Unrestricted *a. County: Siskiyou

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: McCloud Calif. Date: 1986 T 40N, R 3W; SEY,. of SEY,. of SEY,. of Sec 36; M.D.B.M.
T 40N, R 2W; S Yi of SW Y, of SW Y, of Sec 31; M.D.B.M.
T 39N, R 3W; WY, of SW Y, of NW Y, of Sec 6; M.D.B.M.
T 39N, R 3W; SW V. of NE Y, of NW Y, of Sec 6; M.D.B.M.

d. UTM NAD83 CONUS: Zone 10:

Segment A. 572324 mE / 4568187 mN to 572630 mE / 456830 I mN (G.P.S.)
Segment B: 572697 mE / 4568306 mN to 572787 mE / 4568306 mN (G.P.S.)
Segment C: 572508 mE / 4567583 mN to 572525 mE / 4567620 mN (G.P.S.)
Segment D: 572528 mE / 4567648 mN to 572534 mE / 4567719 mN (G.P.S.)
Segment E: 572967 mE / 4567790 mN to 573100 mE / 4567819 mN (G.P.S.)
Segment F: 573038 mE / 4567828 mN to 573095 mE / 4567861 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel#, directions to resource, elevation, etc., as appropriate) In the town of McCloud and from the intersection of East Colombero Dr. and Shasta Ave proceed east on East Colombero Dr. for just over .20 miles. Park on north side of road. From here, walk northeast (300°) for 450ft to railroad segment D. Use UTMs to Navigate to additional segments.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This record is considered an update/addendum to the CA-SIS-2325 archaeological record. This update provides GPS location information for six previously undocumented railroad grade segments associated with the resource McCloud River Lumber Company (MRLC). Two types of grade construction techniques are represented by these six segments. The first type is characterized by excavation along the centerline of a designed railroad grade location to obtain the desired grade slope. This technique creates earthen berms on one or both sides of the railroad grade. The second type is characterized by a filling of the centerline, which creates a berm along the centerline. Unlike the vast majority of MRCL railroad grades that are directly associated with the harvesting of timber, the railroad grades documented here can be tied to the daily and logistical operations of the mill complex.

A major portion of the of the archaeological remains (including railroad grades) associated with logging by the McCloud River Lumber Company was determined eligible for inclusion to the National Register of Historic Places ()in 1988 as The McCloud River Lumber Company National Register District (Cassidy 1988). In 2002, the McCloud River Railroad Historic District was established and determined eligible to the NRHP under Criterion A t the local level of significance "for the property's association with the role of railroad technology in the development of the Pine Belt lumber industry in northern California during the late nineteenth through mid-twentieth century (Tordoff and Petershagen 2002).

*PJb. Resource Attributes: (List attributes and codes) AH7

*P4. Resources Present: DBuilding DStructure DObject DSite DDistrict •Element of District DOther (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession#) Overview of railroad segment A. View is northeast.

*P6. Date Constructed/Age and Sources:
•Historic
DPrehistoric DBoth

*P7. Owner and Address:
McCloud Partners, LCC
29 Shell Road
Mill Valley, CA 94941

*PS. Recorded by:
Kevin Dalton
California State University, Chico
Arcfhaeological Research Program
400 West First Street Chico, CA 95929

*P9. Date Recorded: 08/31/2014
*PIO. Survey Type: Intensive Pedestrian (20 meter transects)

*Pl I. Report Citation: (Cite survey report and other sources, or enter "none.")

Kevin Dalton 2014. An Archaeological Survey Report for the McCloud Mill Timber Harvesting Plan Siskiyou County, California.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary# _____
HRI # _____
Trinomial _____

Page _ L of _..1_ **Resource Name or#:** (Assigned by recorder}_ CA-SIS-2325H _____

*Attachments: DNONE •Location Map DSketch Map •Continuation Sheet DBuilding, Structure, and Object Record DArchaeological Record DDistrict Record DLinear Feature Record DMilling Station Record DRock Art Record DArtifact Record DPhotograph Record D Other (List):

DPR 523A (l/95) ***Required information**

***Required information**

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

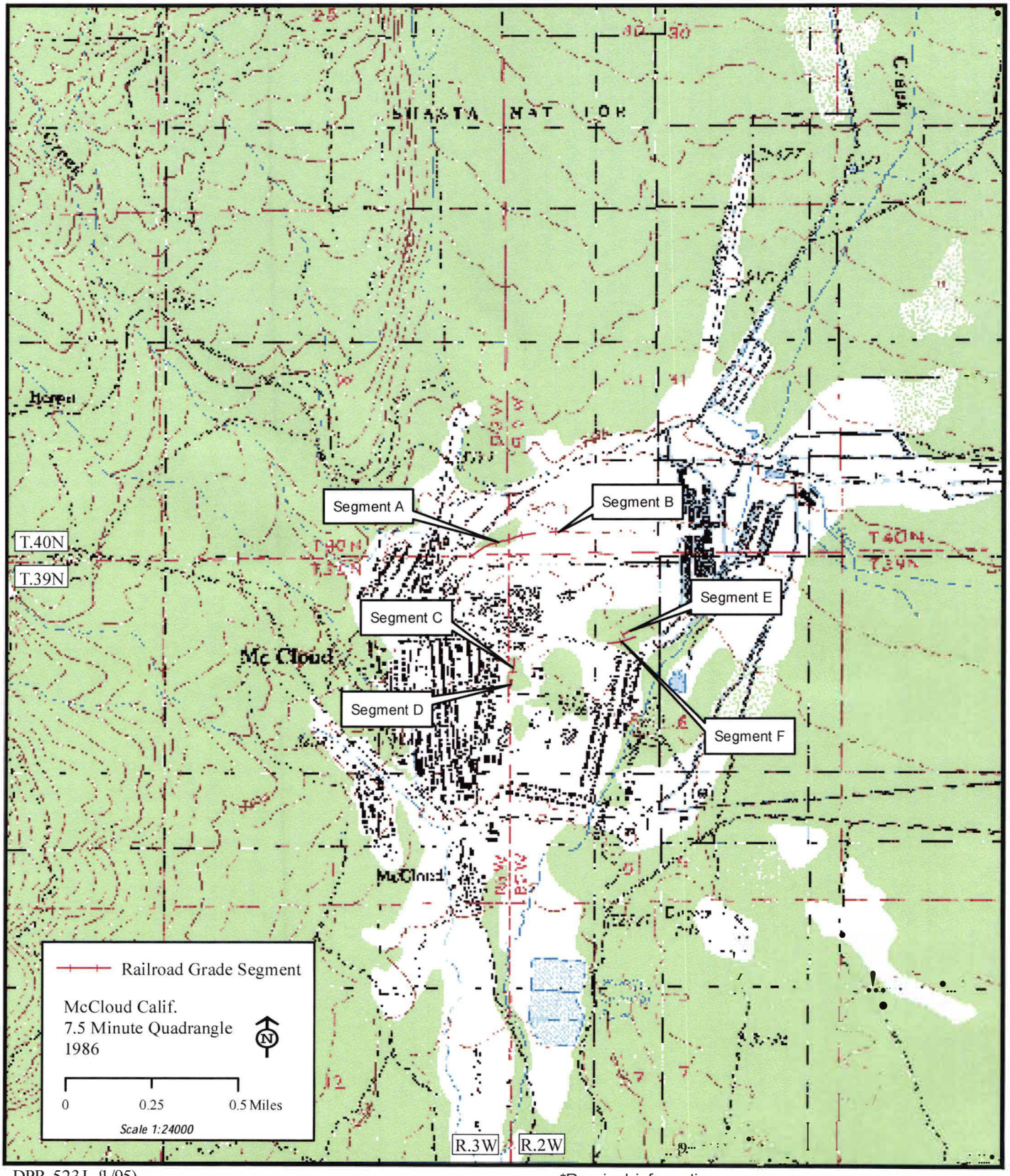
Primary#
HRI#
Trinomial

*Resource Name or#: CA-S1S-2535H

*Map Name: McCloud Calif. 7.5 Minute Quadrangle

*Scale: I:24000

*Date of Map: 1986



*Required information

CONTINUATION SHEET

*Recorded by: Kevin Dalton *Date: 08/31/2014 0 Continuation • Update

Photo I: Railraod gage found adjacent to railroad segment B.

APPENDIX B

FOR ADMIN. USE ONLY
Amendments-date & S or M

1. SKU 7. CGS
2. FG1 8. RT
3. WQS 9. Wildl
4. SHF 10. NSO
5. CP-SIS 11.
6. RW-SIS 12.

TIMBER HARVESTING PLAN

STATE OF CALIFORNIA

DEPARTMENT OF FORESTRY AND

FIRE PROTECTION, RM - 63 (01-00)

THP NAME: McCloud Mill

FOR ADMIN. USE ONLY

THP No 2-14-110SIS
Dates Rec'd DEC 15 2014
Date Filed DEC 24 2014
Date Approved FEB 10 2015
Date Expires FEB 09 2020
Extensions 1) ☐ 2) ☐

Note to THP reviewer: This Timber Harvesting Plan (THP) form, when properly completed, is designed to comply with the Forest Practice Act (FPA) and Board of Forestry and Fire Protection Rules (1/1/2004). See separate instructions for information on completing this form. The THP is divided into six sections. This THP form was modified to facilitate THP implementation and compliance tracking. CDF THP Section I and II form information or questions are stated in underlined Arial font. RPF information is in **bold** Arial font, as in tables.

SECTION I - GENERAL INFORMATION

This THP conforms to my/our plan and upon approval, I/we agree to conduct harvesting in accordance therewith. Consent is hereby given to the Director of Forestry and Fire Protection, and his or her agents and employees, to enter the premises to inspect timber operations for compliance with the Forest Practice Act and Forest Practice Rules.

1. TIMBER OWNER(S) OF RECORD: **McCloud Partners LLC**

Address: P.O. Box 1810

City: McCloud State: CA Zip: 96057 Phone: 530 335 7600

Signature: Dave Lundgrun Date: 14 DEC 2014

NOTE: The timber owner is responsible for payment of a yield tax. Timber Yield Tax information may be obtained at the Timber Tax Section, MIC: 60, State Board of Equalization, P.O. Box 942879, Sacramento, California 94279-0060, phone 1-800-400-7115. Visit their website at WWW.boe.ca.gov.

2. TIMBERLAND OWNER(S) OF RECORD: **Same as Item 1 above.**

Address:

City: State: Zip: Phone:

Signature: Dave Lundgrun Date: 14 DEC 2014

3 LICENSED TIMBER OPERATOR(S): Unknown Lic No.

(If unknown, so state. You must notify CDF of LTO prior to start of operations)

Address:

City: State: Zip: Phone:

Signature: Date:

RECEIVED
DEC 15 2014
RESOURCES
FOREST PRACTICE

State of California
Department of Forestry and Fire Protection

(Administrative Use Only-Area_____)
(Plan No._____)
(Date Received_____)
(Amendment Number_____)

LICENSED TIMBER OPERATOR RESPONSIBILITY ACKNOWLEDGEMENT

(As per 14 CCR §§ 1035.3(a)(1)-(2), 1092.14(a)(1)-(2).)

Harvesting Plan Number: _____

Licensed Timber Operator Information

Name: **Unknown at this time**

Street Address/PO Box: _____ City: _____ Zip Code: _____

Telephone Number: _____ LTO Number: _____

I hereby agree to abide by the terms and specifications of the plan. I have read and understand my responsibility as LTO, as described under 14 CCR §§ 1022.4, 1090.12 and 1092.14. I agree to fulfill my responsibilities as an LTO as they pertain to this plan.

LTO Signature: _____ Title: _____

Responsible On-Site Contact (if different)

Name: _____

Printed Name: _____ Date: _____

Street Address/PO Box: _____ City: _____ Zip:_____

Telephone Number: _____

REGISTERED PROFESSIONAL FORESTER (RPF) RESPONSIBILITY ACKNOWLEDGEMENT

(As per 14 CCR § 1035.1)

RPF Certified to Provide Professional Advice:

Name: **Timothy D. Cain**

Street Address/PO Box: **PO BOX 687** City: **McCloud** Zip Code: **96057**

Telephone Number: **(530) 964-9756** RPF Number: **#91**

I have read and understand my responsibility as RPF, as described under 14 CCR § 1035.1(a)-(g). I agree to fulfill my responsibilities as an RPF as they pertain to this plan.

[X] Yes [ ] No I have been retained as the RPF available to provide professional advice to the licensed timber operator and timberland owner upon request throughout the active timber operations regarding: (1) the plan, (2) the forest practice rules, (3) and other associated regulations pertaining to timber operations.

RPF Signature: Timothy Cain

PLAN SUBMITTER RESPONSIBILITY ACKNOWLEDGEMENT

(As per 14 CCR § 1035)

Plan Submitter

Name: **McCloud Partners LLC.**

Street Address/PO Box: P.O. Box 1810 City: McCLOUD Zip Code: 96057

Telephone Number: 530 355 7600

I have read and understand my responsibilities as Plan Submitter as described under 14 CCR § 1035. I certify that I have fulfilled my legal obligation as stated in the forest practice rules and agree to fulfill my responsibility as the plan submitter as it pertains to this plan.

[ ] Yes [ ] No I have retained the services of an RPF to provide professional advice to the LTO and timberland owner upon request throughout active timber operations regarding: (1) the plan, (2) the forest practice rules, (3) and other associated regulations pertaining to timber operations.

[ ] Yes [ ] No I have authorized the timberland owner to perform the services of a professional forester, understanding that the services will be provided personally on lands owned by the timberland owner.

Plan Submitter Signature: Dave Lundgren

TIMBERLAND OWNER RESPONSIBILITY ACKNOWLEDGEMENT

(As 14 CCR § 1035(d)(2)(B))

Timberland Owner

Name: **McCloud Partners LLC.**

Street Address/PO Box: P.O. Box 1810 City: McCLOUD Zip Code: 96057

Telephone Number 530 355 7600

I have read and understand my responsibilities as timberland owner as described under 14 CCR § 1035(d)(2)(A)–(C). I certify that I have fulfilled my legal obligation as stated in the forest practice rules, and agree to fulfill my responsibilities as the timberland owner as it pertains to this plan.

I understand that I have been authorized by the plan submitter to perform the services of a professional forester pursuant to the Landowner exception in PRC § 757, and such services will be personally performed only on those lands that I own.

Timberland Owner's Signature: Dave Lundgren

4 PLAN SUBMITTER(S): **Same as Item 1 above**

Address: P.O. BOX 1010

City: McCLOUD State: CA Zip: 96057 Phone: 530 355 7600

(Submitter must be from 1, 2, or 3 above. He/she must sign below. Reference Title 14 CCR 1032.7(a))

Signature: Dave Lundgrun Date: 14-DEC-2014

5. a. List person to contact on-site who is responsible for the conduct of the operation. If unknown, so state and name must be provided for inclusion in the THP prior to start of timber operations.

Name: **Ron Mort**
Address: **558 S. L. Street**
City: **Livermore** State: **CA** Zip: **94550** Phone: **(925) 250-2417**

b. ☒ Yes ☐ No Will the timber operator be employed for the construction and maintenance of roads and landings during conduct of timber operations? If no, who is responsible?

c. Who is responsible for erosion control maintenance after timber operations have ceased and until certification of the Work Completion Report? If not LTO, then written agreement must be provided per 14 CCR 1050(c).

The LTO shall be responsible for erosion control maintenance until the date the completion report is approved by Cal Fire. The landowner shall be responsible from the date the completion report is approved until the expiration of the required maintenance period.

6. a. Expected date of commencement of timber operations:
☒ Date of THP conformance, or ☐ _____(date)

b. Expected date of completion of timber operations:
☒ 5 years from date of THP conformance, or ☐ _____(date)

7. The timber operation will occur within the:

[ ] COAST FOREST DISTRICT [ ] The Tahoe Regional Planning Authority Jurisdiction
[ ] Southern Subdistrict of the Coast F. D. [ ] A County with Special Regulations, identify:

[ ] SOUTHERN FOREST DISTRICT
[ ] High use subdistrict of the Southern F. D. [ ] Coastal Zone, no Special Treatment Area
[X] Special Treatment Area(s), type and identify: Hoo Hoo Park is adjacent to the plan area
[X] NORTHERN FOREST DISTRICT [ ] Other _____

8. Location of the timber operation by legal description:
Base and Meridian: [X] Mount Diablo [ ] Humboldt [ ] San Bernardino

Section	Township	Range	Acreage	County
6	39N	R02W	59	Siskiyou
1	39N	R03W	5	Siskiyou
31	40N	R02W	20	Siskiyou
36	40N	R03W	4	Siskiyou
TOTAL ACREAGE (Logging Area Only):			88	

CALWATER Version 2.2.1 Planning Watershed(s):

Name	Identification #	Hydrologic Unit(s)	USGS Quad(s) & Date
McCloud	**5505.220103**	**Upper McCloud River**	**McCloud, USGS 7'5 2012, Elk Spring USGS 7'5 1998**

9. ☐ Yes ☒ No Has a Timberland Conversion been submitted? If Yes, list expected approval date or permit number and expiration date if already approved.

10. ☐ Yes ☒ No Is there an approved Sustained Yield Plan for this property?_____ Date approved: _____.

11. ☐ Yes ☒ No Is there a THP or NTMP on file with CDF for any portion of the plan area for which a report of satisfactory stocking has not been issued by CDF?

☐ Yes ☒ No Is there a contiguous even aged unit with regeneration less than five years old or less than five feet tall? If Yes, explain. Ref. Title 14 CCR 913.1(a)(4).

12. ☒ Yes ☐ No Is a Notice of Intent necessary for this THP?

☒ Yes ☐ No If Yes, was the Notice of Intent posted as required by 14 CCR 1032.7(g)?

13. RPF preparing the THP: **Timothy D. Cain** RPF No.: **91**

Address: **P.O. Box 687**

City: **McCloud** State: **CA** Zip: **96057** Phone: **(530) 964-9756**

a. ☒ Yes ☐ No I have notified the plan submitter(s), in writing, of their responsibilities pursuant to Title 14 CCR 1035 of the Forest Practice Rules.

☒ Yes ☐ No I have notified the timber owner and the timberland owner of their responsibilities for compliance with the Forest Practice Act and rules, specifically the stocking requirements of the rules and the maintenance of erosion control structures of the rules.

b. ☐ Yes ☒ No I will provide the timber operator with a copy of the portions of the approved THP as listed in 14 CCR 1035(f). If No, who will provide the LTO a copy of the approved THP?

An RPF or their supervised designee representing the plan submitter McCloud Partners LLC will provide the LTO with a copy of the THP and advise the LTO of sensitive conditions and provisions of the plan pursuant to Title 14 CCR 1035.2.

Interaction between RPF and LTO (14 CCR 1035.2):
After the start of the plan preparation process but before commencement of operations, the plan preparation RPF or their supervised designee familiar with on-site conditions shall meet with either the LTO, the plan supervising RPF, or that RPF's supervised designee who will be on the ground and directly responsible for the harvesting operation. The meeting shall be onsite if requested by either the RPF or LTO. An on-site meeting is required between the RPF or supervised designee familiar with on-site conditions and LTO to discuss protection of any archaeological or historical sites requiring protection if any such sites exist within the site survey area pursuant to Section 929.2[949.2, 969.2](b). If any amendment is incorporated into the plan by a RPF after the first meeting, that RPF or supervised designee familiar with on-site conditions shall comply with the intent of this section by explaining relevant changes to the LTO; if requested by either the RPF or LTO, another on-site meeting shall take place. The intent of any such meeting is to assure that the LTO:

a) Is advised of any sensitive on-site conditions requiring special care during operations.
b) Is advised regarding the intent and applicable provisions of the approved plan including amendments.

Licensed Timber Operator Responsibilities (14 CCR 1035.3):

Each affected Licensed Timber Operator shall:

a) Sign the plan and major amendments to the plan, or sign and file with the Director a facsimile of such plan or amendments, agreeing to abide by the terms and specifications of the plan. This shall be accomplished prior to implementation of the following, which the affected LTO has, responsibility for implementing:

   1) Those operations listed under the plan and
   2) Those operations listed under any amendments proposing substantial deviations from the plan.

b) Inform the responsible RPF or plan submitter, whether in writing or orally, of any site conditions, which in the LTO's opinion prevent implementation of the approved plan including amendments.

c) Keep a copy of the applicable approved plan and amendments available for reference at the site of active timber operations.

d) Comply with all provisions of the Act, Board rules and regulations, the applicable approved plan, and any approved amendments to the plan.

e) In the event that the LTO executing the plan was not available to attend the on-site meeting to discuss archaeological site protection with the RPF or supervised designee familiar with on-site conditions pursuant to Section 949.2(b), it shall be the responsibility of the LTO executing the plan to inquire with the plan submitter, timberland owner, or their authorized agent, RPF who wrote the plan, or the supervised designee familiar with on-site conditions, in order to determine if any mitigation measures or specific operating instructions are contained in the Confidential Archaeological Addendum or any other confidential addendum to the plan.

f) Provide the RPF responsible for professional advice throughout the timber operations an on-site contact employee authorized by the LTO to receive RPF advice.

g) Keep the RPF responsible for professional advice throughout the timber operations advised of the status of timber operation activity.

   1) Within five days before, and not later than the day of the start-up of a timber operation, the LTO shall notify the RPF of the start of timber operations.

   2) Within five days before, and not later than the day of the shutdown of a timber operation, the LTO shall notify the RPF of the shutdown of timber operations.

      A) The notification of the shutdown of timber operations is not required if the period of the shutdown does not extend beyond a weekend, including a nationally designated legal holiday.

h) Upon receipt of written notice of an RPF's decision to withdraw professional services from the plan, the LTO or on-site contact employee shall cease timber operations, except for emergencies and operations needed to protect water quality, until the LTO has received written notice from the plan submitter that another RPF has visited the plan site and accepts responsibility for providing advice regarding the plan as the RPF of record.

c. I have the following authority and responsibilities for preparation and administration of the THP and timber operation (Include both work completed and work remaining to be done):

1) THP preparation including unit layout, marking of timber and flagging, pre-harvest inspection attendance, and PHI response.

2) The plan preparing RPF will provide professional advice to the LTO and/or Plan Submitter throughout the active operations regarding: The Plan, the Forest Practice Rules, and other associated regulations pertaining to timber operations.

3) If a preharvest inspection is to be held, the LTO who will operate under the plan, if known, may be invited to participate.

d. Additional required work requiring an RPF, which I do not have the authority or responsibility to perform:

None

e. After considering the rules of the Board of Forestry and the mitigation measures incorporated in this THP, I have determined that the timber operation:

☐ Will have a significant adverse impact on the environment (Statement of reasons for overriding considerations contained in THP Section III).

☒ Will not have a significant adverse impact on the environment.

Registered Professional Forester: I certify that I, or my supervised designee, personally inspected the THP area, and this plan complies with the Forest Practice Act, the Forest Practice Rules and the Professional Foresters Law. If this is a Modified THP, I also, certify that: 1) the conditions or facts stated in 14 CCR 1051 (a) (1) - (16) exist on the THP area at the time of submission, preparation, mitigation, and analysis of the THP and no identified potential significant effects remain undisclosed; and 2) I, or my supervised designee will meet with the LTO at the THP site, before timber operations commence, to review and discuss the contents and implementation of the Modified THP.

Signature Dennis Cain Date: 12/15/14

SECTION II – PLAN of TIMBER OPERATIONS

NOTE: If a provision of this THP is proposed that is different than the standard rule, the explanation and justification should normally be included in Section III unless it is clearer and better understood as part of Section II.

14. a. Check the Silvicultural methods or treatments allowed by the rules that are to be applied under this THP. Specify the option chosen to demonstrate Maximum Sustained Production (MSP) according to 14 CCR 913 (933, 953) .11. If more than one method or treatment will be used show boundaries on map and list approximate acreage for each.

[ ] Clearcutting _____ ac. [ ] Shelterwood Prep. Step _____ ac. [ ] Seed Tree Seed Step _____ ac.
[ ] Shelterwood Seed Step _____ac. [ ] Seed Tree Removal Step _____ ac.
[X] Shelterwood Removal Step 7 ac.

[X] Selection 34 ac. [ ] Group Selection _____ ac. [ ] Transition _____ ac.

[X] Commercial Thinning 24 ac. [ ] Road Right of Way_____ ac. [ ] Sanitation Salvage _____ ac,

[ ] Special Treatment Area_____ac. [ ] Rehab. of Understocked Area _____ ac. [ ] Fuelbreak _____ ac.

[ ] Alternative Prescription _____ac. [ ] Conversion _____ ac. [X] Non-Timberland Area 23 ac.

Total acreage 88 ac. MSP option chosen: (a) [ ] (b) [ ] (c) [X]

Note: All units are GPS with Garmin 400T or 450T.

b.If Selection, Group Selection, Commercial Thinning, Sanitation Salvage, or Alternative methods are selected, the post harvest stocking levels (differentiated by site if applicable) must be stated. Note mapping requirements of 14 CCR 1034(x)(12).

Commercial Thinning: Where the preharvest dominant and codominant canopy is made up of trees 14" DBH or less, the stand shall retain a minimum of 100 trees per acre greater than 4" DBH for Site III. These stocking standards shall be met immediately after completion of operations.

Shelterwood Removal: This prescription currently contains a minimum of 300-point count as described in 14 CCR 932.7 (b)(1). The trees to be harvested are dominant overstory trees with an understory of primarily young ponderosa pine and minor amounts of cedar, white fir and California black oak varying in age from approximately 2-30 years old. Regeneration shall not be harvested unless it is dead, dying, diseased or substantially damaged by timber operations. Upon completion of harvest operations the shelterwood removal will contain a minimum of 300-point count as defined in 14 CCR 932.7 (b)(1) for Site Class III. The shelterwood removal step shall only be used once in the life of the stand unless otherwise agreed to by the Director.

Selection: At least 75 sq. ft. of basal area shall be retained. The residual stand shall contain at least 15 sq. ft. of basal area of seed trees per acre which are 18 inches dbh or greater.

Non-Timberland (No Harvest Area): the No Harvest Area includes plantations and areas where no timber harvesting will occur. This area is identified as No Harvest Area (NH) on the silviculture Maps located in section II. Existing Landings, roads, and skid trails may be used within these areas.

c. ☐ Yes ☒ No Will even-age regeneration step units be larger than those specified in the rules (20 acre tractor, 30 acre cable)? If Yes, provide substantial evidence that the THP contains measures to accomplish any of subsections (A) - (E) of 14 CCR 913.1(a)(2) in Section III of the THP. List below any instructions to the LTO necessary to meet (A) - (E) not found elsewhere in the THP. These units must be designated on map and listed by size.

d. Trees to be harvested or retained must be marked by, or marked under, the supervision of the RPF. Specify how the trees will be marked and whether harvested or retained.

Shelterwood Removal Step, Commercial thinning, and Selection units- *In all units trees to be removed shall be marked with Blue paint at DBH with a stump mark.*

PART OF PLAN

Trees marked with a "W" or "WL" shall not be cut (unless essential for operational safety). These are "Wildlife Trees".

Shelterwood Removal Step and Selection units shall be clearly delineated with blue & red flagging prior to operations by the RPF or supervised designee.

Commercial thinning units shall be clearly delineated with blue & yellow flagging prior to operations by the RPF or supervised designee.

☐ Yes ☒ No Is a waiver of marking by the RPF requirement requested? If Yes, how will LTO determine which trees will be harvested or retained? If Yes, and more than one silvicultural method, or Group Selection is to be used, how will LTO determine boundaries of different methods or groups?

e. Forest Products to be harvested: **Saw and veneer logs, poles, chips, fuel wood, firewood and split products.**

f. ☐ Yes ☒ No Are Group B species proposed for management?
☐ Yes ☒ No Are Group B or non-indigenous Group A species to be used to meet stocking standards?
☐ Yes ☒ No Will Group B species need to be reduced to maintain relative site occupancy of Group A species? If any answer is Yes, list the species, describe treatment, and provide the LTO with necessary felling guidance.

g. Other instructions to LTO concerning felling operations.

1. To the fullest extent possible and with due consideration given topography, lean of trees, local obstructions, utility lines and safety factors, trees to be harvested shall be felled to lead in a direction away from existing plantations and desirable regeneration, unmarked snag(s), and trees needed for stocking requirements to be met immediately upon completion of operations.

2. Trees to be harvested will be felled to the lead dictated by the yarding method. This will minimize damage to leave-tree and reduce felling breakage.

3. Use existing skid trails and landings where practical.

h. ☐ Yes ☒ No Will artificial regeneration be required to meet stocking standards?

i. ☐ Yes ☒ No Will site preparation be used to meet stocking standards? If Yes, provide the information required for a site preparation addendum.

15. PESTS

a. ☐ Yes ☒ No Is this THP within an area that the Board of Forestry has declared a zone of infestation or infection pursuant to PRC 4712-4718? If Yes, identify feasible measures being taken to mitigate adverse infestation or infection impacts from the timber operation. See 14 CCR 937.9(a).

b. ☐ Yes ☒ No If outside a declared zone, are there any insect, disease or pest problems of significance in the THP area? If Yes, describe the proposed measures to improve the health, vigor and productivity of the stand(s).

There are scattered pockets of western pine bark beetle, western gall rust, mistletoe, cytospora and fomes root diseases throughout the plan area. Maintenance of or conversion to favorable species composition, stand density and structure through stocking control should help to keep adverse insect populations and infection levels endemic.

16. HARVESTING PRACTICES

Indicate type of yarding system and equipment to be used:

GROUND BASED*	CABLE	SPECIAL
a. [X] Tractor, including end/long lining	d. [ ] Cable, ground lead	g. [ ] Animal
b. [X] Rubber tired skidder, Forwarder	e. [ ] Cable, high lead	h. [ ] Helicopter
c. [X] Feller buncher	f. [ ] Cable, Skyline	I. [ ] Other

*NOTE: Tractor operations restrictions apply to ground based equipment.

PART OF PLAN

17. **EROSION HAZARD RATING**

Indicate Erosion Hazard Rating present on THP. (Must match EHR worksheets).

See Erosion Hazard Rating Map. See EHR worksheets located in THP Section V.

Low ☒ Moderate ☐ High ☐ Extreme ☐

If more than one rating is checked, areas must be delineated on map down to 20 acres in size.

18. **SOIL STABILIZATION**

In addition to the standard waterbreak requirements, describe soil stabilization measures or additional erosion control measures to be implemented, and the location of their application. See requirements of 14 CCR 936.7.

The RPF or RPFs designee evaluated the harvest area for any significant existing and potential erosion sites and determined that due to the location in the McCloud flats with low erosion hazard ratings and the past history of the area operating as a sawmill, there are no significant existing or potential erosion sites.

Erosion Control for Logging Roads and Landings (14 CCR 943.5)

The following erosion control standards shall apply to logging roads and landings:

a) **All logging road and landing surfaces shall be adequately drained through the use of logging road and landing surface shaping in combination with the installation of drainage structures or facilities and shall be hydrologically disconnected from watercourses and lakes to the extent feasible.**

c) **Ditch drains, associated necessary protective structures, and other features associated with the ditch drain shall:**
   - **(1) Be adequately sized to convey runoff.**
   - **(2) Minimize erosion of logging road and landing surfaces.**
   - **(3) Avoid discharge onto unprotected fill.**
   - **(4) Discharge to erosion resistant material.**
   - **(5) Minimize potential adverse impacts to slope stability.**

d) **Waterbreaks and rolling dips installed across logging roads and landings shall be of sufficient size and number and be located to avoid collecting and discharging concentrated runoff onto fills, erodible soils, unstable areas, and connected headwall swales.**

e) **Where logging roads or landings do not have permanent and adequate drainage, and where waterbreaks are to be used to control surface runoff, the waterbreaks shall be cut diagonally a minimum of six inches into the firm roadbed and shall have a continuous firm embankment of at least six inches in height immediately adjacent to the lower edge of the waterbreak cut. On logging roads that have firmly compacted surfaces, waterbreaks may be installed by hand methods and need not provide the additional six-inch embankment provide the waterbreak ditch is constructed so that it is at least six inches deep and six inches wide on the bottom and provided there is ample evidence based on slope, material, amount of rainfall, and period of use that the waterbreaks so constructed will be effective in diverting water flow from the logging road surface without the embankment.**

f) **Distance between waterbreaks shall not exceed the following standards and consider erosion hazard rating and road gradient:**

TABLE 1: MAXIMUM DISTANCE BETWEEN WATERBREAKS (14 CCR 943.5(f))

Erosion Hazard Rating	Logging Road Gradient in Percent		
	10% or less	11-25%	> 25%
Low	300	200	150

h) **Drainage facilities and structures shall discharge into vegetation, woody debris, or rock wherever possible. Where erosion-resistant material is not present, slash, rock, or other energy dissipating material shall be installed below the drainage facility or drainage structure outlet as necessary to minimize soil erosion and sediment transport and to prevent significant sediment discharge.**

i) **Where logging road and landing surfaces, road approaches, inside ditches and drainages structures cannot be hydrologically disconnected, and where there is existing or the potential for significant sediment discharge, necessary and feasible treatments to prevent the discharge shall be described in the plan.**

j) **All logging roads and landings used for timber operations shall have adequate drainage upon completion of used for the year or by October 15, whichever is earlier. An exception is that drainage facilities and drainage structures do not need to be constructed on logging roads and landings in use during the extended wet weather period provided that all such drainage facilities and drainage structures are installed prior to the start of rain that generates overland flow.**

l) **Bare soil on logging road or landing cuts, fills, transported spoils, or sidecast that is created or exposed by timber operations shall be stabilized to the extent necessary to minimize soil erosion and sediment transport and to prevent significant sediment discharge. Sites to be stabilized include, but are not limited to:**
   - **(1) Sidecast or fill exceeding 20 feet in slope distance from the outside edge of a logging road or a landing that has access to a watercourse or lake.**
   - **(2) Cut and fills associated with approaches to logging road watercourse crossings of Class I or II waters or Class III waters where an ELZ, EEZ, or a WLPZ is required.**
   - **(3) Bare areas exceeding 800 continuous square feet within a WLPZ.**

m) Soil stabilization measures shall be described in the plan pursuant to 14 CCR 923.5(l)[943.5(l), 963.5(l)], and may include, but are not limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer's specifications, or chemical stabilizers.

o) Soil stabilization treatments shall be in place upon completion of operations for the year of use or prior to the extended wet weather period, whichever comes first. An exception is that bare areas created during the extended wet weather period shall be treated prior to the start of rain that generates overland flow, or within 10 days of the creation of the bare area(s), whichever is sooner, or as agreed to by the Director.

Waterbreaks [All districts] (14 CCR 934.6)

(a)(1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year of timber operations.

(a)(2) Installation of drainage facilities and structures is required from October 15 to November 15 and from April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

(b) Waterbreaks shall be constructed concurrently with the construction of firebreaks and immediately upon conclusion of use of tractor roads, roads, and landings which do not have permanent and adequate drainage facilities, or drainage structures.

(c) Table 2: MAXIMUM DISTANCE WATERBREAK REQUIREMENTS (14 CCR 934.6(c))

Estimated Erosion Hazard Rating	Road or Trail Gradient (%)			
	10% or less	11-25%	26-50 %	> 50%
Low	300	200	150	100

(e) Waterbreaks shall be installed at all natural watercourses on tractor roads and firebreaks regardless of the maximum distances specified in this section, except where permanent drainage facilities are provided.

(f) Waterbreaks shall be located to allow water to be discharged into some form of vegetative cover, duff, slash, rocks, or less erodible material wherever possible, and shall be constructed to provide for unrestricted discharge at the lower end of the waterbreak so that water will be discharged and spread in such a manner that erosion shall be minimized. Where waterbreaks cannot effectively disperse surface runoff, including where waterbreaks on roads and skid trail cause surface run-off to be concentrated on downslopes, roads or skid trails, other erosion controls shall be installed as needed to comply with Title 14 CCR 914 [934, 954

(h) Waterbreaks or any other erosion controls on skid trails, cable roads, abandoned roads, and site preparation areas shall be maintained during the prescribed maintenance period and during timber operations as defined in PRC Sections 4527 and 4551.5 so that they continue to function in a manner which minimizes soil erosion and slope instability and which prevents degradation of the quality and beneficial uses of water. The method and timing of waterbreak repair and other erosion control maintenance shall be selected with due consideration given to the protection of residual trees and reproduction and the intent of 14 CCR 914 [934, 954].

During the winter period erosion control structures shall be installed prior to the end of the day if the U.S. Weather Service forecast is a "chance" (30% or more) of rain before the next day, and prior to weekend or other shutdown periods.

19. LAYOUTS

☐ Yes ☒ No Are tractor or skidder constructed layouts to be used? If Yes, specify the location and extent of use:

20. ☐ Yes ☒ No Will ground based equipment be used within the area(s) designated for cable [or helicopter] yarding? If Yes, specify the location and for what purpose the equipment will be used?

21. Within the THP area will ground based equipment be used on:

a. ☐ Yes ☒ No Unstable soils or slide areas? Only allowed if unavoidable.

b. ☐ Yes ☒ No Slopes over 65%?

c. ☐ Yes ☒ No Slopes over 50% with high or extreme EHR?

d. ☐ Yes ☒ No Slopes between 50% and 65% with moderate EHR where heavy equipment use will not be restricted to the limits described in 14 CCR 934.2(f)(2)(i) or (ii)?

PART OF PLAN

e. ☐ Yes ☒ No Slopes over 50%, which lead without flattening to sufficiently dissipate water, flow and trap sediment before it reaches a watercourse or lake?

If a. is Yes, provide site specific measures to minimize effect of operations on slope stability and provide explanation and justification as required per 14 CCR 934.2(d). CDF requests the RPF consider flagging tractor road locations if a. is Yes. If b, c, d, or e is Yes: 1) the location of tractor roads must be flagged on the ground prior to the PHI or start of operations if a PHI is not required, and 2) you must clearly explain the proposed exception and justify why the standard rule is not feasible or would not comply with 934. The location of heavy equipment operation on unstable areas or any use beyond the limitations of the standard rules must be shown on the map. List specific instructions to the LTO below.

22. ☐ Yes ☒ No Are any alternative practices to the standard harvesting or erosion control rules proposed for this plan? If Yes, provide all the information as required by 14 CCR 934.9 in Section III. List specific instructions to the LTO below:

23. **WINTER OPERATIONS**

a. ☒ Yes ☐ No Will timber operations occur during the winter period? If Yes, complete c. or d. State in space provided if exempt because yarding method will be cable, helicopter, or balloon.

b. ☐ Yes ☒ No Will mechanical site preparation be conducted during the winter period? If Yes, complete d.

c. ☐ Yes ☒ No I choose the in-lieu option as allowed in 14 CCR 934 .7(c). Specify below the procedures listed in subsections (1) and (2), and list the site specific measures for operations in the WLPZ and unstable areas as required by subsection (3), if there will be no winter operations in these areas, so state.

d. ☒ Yes ☐ No I choose to prepare a winter operating plan per 14 CCR 934.7(b).

NOTE: As defined in 14 CCR 895.1, "**Winter Period** means the period between November 15 and April 1, except as noted under special County Rules at Title 14, Article 13 925.1, 926.18, 927.1, 965.5." Except as otherwise provided in the rules: (1) All waterbreaks shall be installed no later than the beginning of the winter period of the current year of timber operations. (2) Installation of drainage facilities and structures is required from October 15 to November 15 and April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

Winter Operating Plan

1. Erosion Hazard Rating for this THP is Low (See Erosion Hazard Rating maps for locations).

2. Yarding systems: Tractor yarding may occur only during periods when locally saturated soil conditions do not exist, and may produce sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters receiving Class I, II, III or IV waters; that violate Water Quality Requirements; or when it cannot operate under its own power due to wet conditions.

3. Operating Period: This Winter Operating Plan shall be effective from November 15th through April 1st.

a) Hand timber falling may be conducted throughout the winter period.

b) Ground based equipment yarding may be conducted during the winter period when soils are not "saturated". Saturated soil conditions (14 CCR 895.1) are defined as: "that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during timber operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.
Soils or road and landing surfaces that are hard frozen are excluded from this definition.

4. Erosion Control Facilities Timing

Erosion control facilities shall be installed on all constructed skid trails and tractor roads prior to the end of the day if the local National Weather Service forecast is a "chance" (30% or more) of rain before the next day, and prior to weekend or other shutdown periods.

5. Consideration of Form of Precipitation - Rain or Snow

PART OF PLAN

Plan elevations range from approximately 3,240 feet to 3,400 feet. A significant portion of the precipitation falls in the form of snow. Snowfall in this area generally occurs after November first. Snow is retained, depending upon slope aspect, generally through May. No hauling or ground based operations shall occur when saturated soil conditions are locally present. If hauling occurs during snow pack conditions, drainage facilities shall be kept in effective condition. Note: 'locally' refers to the immediate and operationally affected area.

6. Ground Conditions (Soil Moisture Condition, Frozen)

Logging and mechanical site preparation operations shall be limited to periods when soils are not saturated such as (1) dry, rainless periods and/or (2) hard frozen conditions. Hard Frozen Conditions means those frozen soil conditions where loaded or unloaded vehicles can travel without sinking into the road surfaces to a depth of more than six inches over a distance of more 25 feet.

Hauling activities shall not occur when saturated soil conditions exist on roads and/or landings that may produce sediment in quantities sufficient to cause a visible increase in turbidity of downstream waters receiving Class I, II, III or IV waters; that violate Water Quality Requirements. Where necessary, isolated wet spots on roads and/or landings shall be spot rocked with competent angular rock if they are used during the winter period.

7. Silvicultural Systems

All silviculture will be allowed without regard to ground cover, due to the previously noted soil and precipitation characteristics

8. Operations within the WLPZ

No ground based equipment shall operate within a WLPZ

9. Equipment Use Limitations

Ground based timber operations and mechanical site preparation shall be limited to periods when soils are not saturated, such as frozen periods or dry, rainless periods.

Hauling activities shall not occur when saturated soil conditions exist on roads and/or landings.

10. Known Unstable Areas

There are no known unstable areas in this THP.

11. Logging roads and Landings

Logging roads to be used for log hauling or heavy equipment uses during the winter period shall occur on a stable operating surface and, where necessary, be surfaced with rock to a depth and quantity sufficient to maintain such a surface. Use is prohibited on roads that are not hydrologically disconnected and exhibit saturated soil conditions. (14 CCR 943.6(g)).

24. ROADS AND LANDINGS

Will any roads be constructed? ☐ Yes ☒ No; or reconstructed? ☐ Yes ☒ No.
If Yes, check items a. through g.

Will any landings be constructed? ☐ Yes ☒ No; or reconstructed? ☐ Yes ☒ No.
If Yes, check items h. through k.

a. ☐ Yes ☒ No Will new or reconstructed roads be wider than single lane with turnouts?

b. ☐ Yes ☒ No Are logging roads proposed to be constructed or reconstructed in areas of unstable soils or known slide-prone areas?

c. ☐ Yes ☒ No Will new roads exceed a grade of 15% or have pitches of up to 20% for distances greater than 500 feet? Map must identify any new or reconstructed road segments that exceed an average 15% grade for over 200 feet.

d. ☐ Yes ☒ No Are roads to be constructed or reconstructed, other than crossings, within the WLPZ of a watercourse? If yes, completion of THP Item 27(a) will satisfy required documentation.

e. ☐ Yes ☒ No Will roads be located across more than 100 feet of lineal distance on slopes over 65%, or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?

f. ☐ Yes ☒ No Will any roads or watercourse crossings be abandoned?

g. ☐ Yes ☒ No Are exceptions proposed for flagging or otherwise identifying the location or roads to be constructed?

h. ☐ Yes ☒ No Will any landings exceed one half acre in size? If any landing exceeds one-quarter acre in size or requires substantial excavation the location must be shown on the map.

i. ☐ Yes ☒ No Are any landings proposed in areas of unstable soils or known slide prone areas?

j. ☐ Yes ☒ No Will any landings be located on slopes over 65% or on slopes over 50% which are within 100 feet of the boundary of a WLPZ?

k. ☐ Yes ☒ No Will any landings be abandoned?

Note: The harvest area is located in what was the McCloud saw mill, a heavy industrial zoned area. There is an existing road network throughout the plan area as well as large areas with minimal vegetative cover and gravel surfaces that use to be log decks when the mill was operating. These large areas with minimal vegetative cover will be used for landings. Please see the Silviculture and Operations map in section II.

25. If any section in Item 24 is answered Yes, specify site-specific measures to reduce adverse impacts and list any additional or special information needed by the LTO concerning the construction, maintenance and/or abandonment of roads or landings as required by 14 CCR Article 12. Include required explanation and justification in THP Section III.

26. **WATERCOURSE AND LAKE PROTECTION ZONE (WLPZ) AND DOMESTIC WATER SUPPLY PROTECTION MEASURES**

a. ☒ Yes ☐ No Are there any watercourse or lakes which contain Class I through IV waters on or adjacent to the plan area? If Yes, list the class, WLPZ or ELZ width, and protective measures determined from 14 CCR 936.4 of the WLPZ rules (revised 11/13/2000: CDF Findings \ 99 COHO Considerations\ Final Rule Language (3)) and/or Table I in 14 CCR 936.5 for each watercourse. Specify if Class III or IV watercourses have WLPZ, ELZ or both.

The RPF or supervised designee has conducted field examinations as per 14 CCR 936.4. Squaw Valley Creek is a class I watercourse that is adjacent to the plan area. The closest point of the harvest area to Squaw Valley Creek is approximately 372 feet. The timber harvest plan area is located on the McCloud Mill property that has a water drainage system that was designed to maintain water runoff from reaching the domestic water supply of the town of McCloud when the mill was actively operating. The Mill is no longer active however this water drainage system is still functional. There are two class IV ponds outside the harvest area that have a chain link fence around the perimeter of the ponds, no harvesting will take place within the fenced area. There are two unclassified swales located within the harvest area, no protection measures are being proposed. There is one class IV watercourses within the harvest area that is a drainage channel that originally was designed to carry water to an old bark pond on the south side of Squaw Valley Creek. Both channels are within the harvest area. After examination and analysis of existing conditions and available data, it has been determined that implementation of the plan as proposed, will address and mitigate the concerns of these rules. Please see the Silviculture and Operations Map at the end of section II.

Table 2 : Watercourse and Lake Protection Measures

Watercourse Classification	Slope %	Zone Type	Width (feet)	Protection	Zone Designation
Class IV watercourse	< 30%	ELZ	15 ft.	C,F,I	Centerline flagged with blue/white-stripe

KEY TO PROTECTION MEASURES FROM TABLE 2:

CLASS IV PROTECTIONS:

"C" The ELZ shall be clearly identified on the ground with paint, flagging, or other suitable means, prior to the start of timber operations

"F" Tree marking within the ELZ shall be consistent with the adjacent unit. Trees shall be marked prior to the start of timber operations

"I" To protect water temperature, filter strip properties, upslope stability, and fish and wildlife values, at least 50% of the total canopy covering the ground shall be left in a well distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations.

Trees to be felled within the ELZ will be hand felled and no heavy equipment will be operating within the 15ft ELZ.

☐ Yes ☒ No Are there any Class I watercourses (or Class II watercourses that can be feasibly restored to Class I) identified within or immediately adjacent to your plan area that present opportunity for habitat restoration? If "Yes," refer to Section II, Item 38.

b. ☒ Yes ☐ No Are there any watercourse crossings that require mapping per 14 CCR 1034 (x)(7)?

All watercourse crossings are existing crossings with a minimum diameter of 18" culverts.

Crossing Maintenance

Culverts shall be inspected and cleared by the LTO during operations.

Road Crossings				
ID	Class	Type of Pipe Dia. (in.)	Armor/ Buttress	Comments/ work needed
C1	None	CMP 24"	Concrete Box inlet, concrete outlet	No work needed. Appurtenant road crossing
C2	None	CMP 24"	Concrete inlet, Native outlet	Outlet is ¼ blocked, hand clean pipe. Appurtenant road crossing
C3	Class IV	CMP 48"	Concrete inlet, Native outlet	No work needed.
C4	Class IV	CMP 30"	Native inlet. Concrete Box outlet	Concrete box outlet is gated and can be closed; water gets diverted and stays on Mill site. No work needed. Appurtenant road crossing.
C5	Unclassified	CMP 18"	Native inlet and outlet	Outlet is ½ blocked. Hand clean pipe.
C6	Unclassified	CMP 18"	Native inlet and outlet	Outlet is ¼ blocked. Hand clean pipe.

*ID = Crossing Identification number *CMP = Corrugated metal pipe

c. ☐ Yes ☒ No Will tractor road watercourse crossings involve the use of a culvert? If Yes, state minimum diameter for each culvert (may be shown on map).

d. ☐ Yes ☒ No Is this THP Review Process to be used to meet Department of Fish and Game CEQA review requirements? If Yes, attach the 1603 Addendum below. List instructions for LTO below for the installation, protection measures, and mitigation measures as per THP for Instructions or CDF Mass Mailing, 07/02/1999, "Fish and Game Code 1606 Agreements and THP Documentation".

Intent for Logging Roads, Landings, and Logging Road Watercourse Crossings (14 CCR 923 [943, 963])

(a) All logging roads, landings, and logging road watercourse crossings in the logging area shall be planned, constructed, reconstructed, used, maintained, removed, abandoned, and deactivated in a manner that:
- **(1) Is consistent with long-term enhancement and maintenance of the forest resource.**
- **(2) Accommodates appropriate yarding systems.**
- **(3) Is economically feasible.**

(b) Such planning, construction, reconstruction, use, maintenance, removal, abandonment, and deactivation shall occur in a manner that considers safety and avoids or substantially lessens significant adverse impacts to, among other things:
- **(1) Fish and wildlife habitat and listed species of fish and wildlife.**
- **(2) Water quality and the beneficial uses of water.**
- **(3) Soil resources.**
- **(4) Significant archaeological and historical sites.**
- **(5) Air quality.**
- **(6) Visual resources.**
- **(7) Fire hazard.**

(c) The RPF may propose exceptions to the rules of this article if explained and justified in the plan and found by the Director not to result in a significant adverse impact on the environment.

(d) Exceptions may also be provided through application of Fish and Game Code Section 1600 et seq. and shall be made an enforceable part of the plan in accordance with 14 CCR 1039, 1040, 1090.14, 1092.26, or 1092.27, as appropriate.

27. **"IN LIEU" WLPZ PRACTICE(S)**

Are site specific practices proposed in-lieu of the following standard WLPZ practices?

a. ☐ Yes ☒ No Prohibition of the construction or reconstruction of roads, construction or use of tractor roads or landings in Class I, II, III, or IV watercourses, WLPZs, marshes, wet meadows, and other wet areas except as follows:

1.) **At prepared tractor road crossings**
2.) **Crossings of Class III watercourses which are dry at time of timber operations**
3.) **At existing road crossings**
4.) **At new tractor and road crossings approved by the Department of Fish and Game.**

b. ☐ Yes ☒ No Retention of non-commercial vegetation bordering and covering meadows and wet areas?
c. ☐ Yes ☒ No Directional felling of trees within the WLPZ away from the watercourse or lake?
d. ☐ Yes ☒ No Increase or decrease of width(s) of the WLPZ(s)?
e. ☐ Yes ☒ No Protection of watercourses which conduct class IV waters?
f. ☐ Yes ☒ No Exclusion of heavy equipment from the WLPZ except as follows:

g. ☐ Yes ☒ No Establishment of ELZ for Class III watercourses unless sideslopes are < 30% and EHR is low?
h. ☐ Yes ☒ No Retention of 50% of the overstory canopy in the WLPZ?
i. ☐ Yes ☒ No Retention of 50% of the understory in the WLPZ?
j. ☐ Yes ☒ No Are any additional in-lieu or any alternative practices proposed for watercourse or lake protection?

NOTE: A Yes answer to any of items a. through j. constitutes an in-lieu practice. If any item is answered yes, refer to 14 CCR 936.1 and address the following for each item checked yes: 1. The RPF shall state the standard rule; 2. Explain and describe each proposed practice; 3. Explain how the proposed practice differs from the standard practice; 4. The specific location where it shall be applied, see map requirements of 14 CCR 1034(x)(15) and (16); 5. Provide in THP Section III an explanation and justification as to how the protection provided is equal to the standard rule and provides for the protection of the beneficial uses of water per 14 CCR 936.1(a). Reference the in-lieu and location to the specific watercourse to which it will be applied.

28. a. ☒ Yes ☐ No Are there any landowners within 1000 feet downstream of the THP boundary whose ownership adjoins or includes a class I, II, or IV watercourse(s) which receives surface drainage from the proposed timber operations? If Yes, the requirements of 14 CCR 1032.10 apply. Proof of notice by letter and newspaper should be included in THP Section V. If No, 28 b. need not be answered.

On November 26, 2014, publication was given to the Mt. Shasta Herald News of the proposed timber harvest. On November 17, 2014, "request for downstream domestic water use" letters were sent to adjacent landowners within 1,000 feet downstream of logging activities. See Section 5 of the THP for certificate of publication and copy of "request for downstream domestic water use" letters.

b. ☐ Yes ☒ No Is an exemption requested of the notification requirements of 1032.10? If Yes, explanation and justification for the exemption must appear in THP Section III. Specify if requesting an exemption from the letter, the newspaper notice or both.

c. ☐ Yes ☒ No Was any information received on domestic water supplies that required additional mitigation beyond that required by standard Watercourse and Lake Protection rules? If Yes, list site specific measures to be implemented by the LTO.

29. ☐ Yes ☒ No Is any part of the THP area within a Sensitive Watershed as designated by the Board of Forestry? If Yes, identify the watershed and list any special rules, operating procedures or mitigation that will be used to protect the resources identified at risk?

30. **HAZARD REDUCTION**

a. ☒ Yes ☐ No Are there roads or improvements which require slash treatment adjacent to them? If Yes, specify the type of improvement, treatment distance, and treatment method.

The following standards shall apply to the treatment of slash created by timber operations within the plan area and on roads adjacent to the plan area, but excluding appurtenant roads.

Roads and landingds within the plan area are not within a FPZ and are not open to the general public, however the additional protection measures shall be implemented: Slash loading in the harvest areas shall be reduced by whole tree skidding, limbing shall take place on the log landings and that all residual timber harvest slash remaining on landings shall be disposed of through burning, chipping or removal.

A 100 foot FPZ adjacent to Public Roads and the Special Treatment Zone surrounding the Municipal Hoo Hoo Park shall be applied. Within this FPZ all woody debris created by timber operations greater than one inch but less than eight inches in diameter shall be disposed of through burning, chipping or removal.

b. ☐ Yes ☒ No Are any alternatives to the rules for slash treatment along roads and within 200 feet of structures requested? If yes, RPF must explain and justify how alternative provides equal fire protection. Include a description of the alternative and where it will be utilized below.

31. ☒ Yes ☐ No Will piling and burning be used for hazard reduction? See 14 CCR 937.1-11 for specific requirements. Note: LTO is responsible for slash disposal. This responsibility cannot be transferred.

Treatment of Slash to Reduce Fire Hazard (14 CCR 937.2(a))
Slash to be treated by piling and burning shall be treated as follows:

1. **Piles created prior to September 1 shall be treated not later than April 1 of the year following its creation, or within 30 days following climatic access after April of the year following its creation.**
2. **Piles created on or after September 1 shall be treated not later than April 1 of the second year following its creation, or within 30 days following climatic access after April 1 of the second year following its creation.**
3. **Alternatives to (1) and/or (2) shall be justified in the plan by the RPF and may be approved by the Director.**

The local representative of the Director shall be notified in advance of the time and place of any broadcast burning of logging slash. Any burning shall be done in the manner provided by law.

32. BIOLOGICAL AND CULTURAL RESOURCES

a. ☒ Yes ☐ No Are any plant or animal species, including their habitat, which are listed as rare, threatened or endangered under federal or State law, or a sensitive species by the Board, associated with the THP area? If Yes, identify the species and the provisions to be taken for the protection of the species.

NORTHERN SPOTTED OWL(*Strix occidentalis caurina*):

The Northern Spotted Owl is listed as threatened under federal Endangered Species Act and is candidate under California Endangered Species Act (CESA). This proposed THP lies within the physio-geographic range of the Northern Spotted Owl and its associated Evaluation Area as per 14 CCR § 939.9 and also lies in the Southern Cascades province north of Highway 89. Accordingly, measures described in this THP ensure that "take" of an individual NSO will not result from forest management activities proposed in the THP. Based on the CNDDB search the known Spotted Owl observations are more than 1.5 miles away from the proposed harvest area. Specifically, the proposed THP ensures that "take" will not occur based on discussions with the U.S. Fish and Wildlife Service (USFWS), CAL FIRE Senior Environmental Scientist – Forest Practice Biologist Stacy Stanish and Spotted Owl Expert Brian Shaw as described in 14 CCR § 939.9(e). Based on these consultations and a previous determination by USFWS for survey exemption in this area and overall lack of suitable habitat for NSO, this THP is exempted from surveying for the NSO (see section V of the THP).

FISHER (*Pekania pennanti*): **Federal Endangered Species Act (ESA) candidate species**

There are no known detections of fisher within the THP area but there are known occurrences within the Biological Assessment Area. There is potential suitable foraging habitat for the species that exists within and adjacent to the THP area. Fisher is currently a Federal Endangered Species Act (ESA) candidate species. In 2010, the DFG recommended the species is not warranted for listing under the State ESA, however, at this time, the species is considered a candidate species. The critical period for fisher is March 1st through July 31st, where reproduction and

caring of young occurs and the highest potential for disturbance exists. The following are operational measures for fisher:

(1) During timber operations, between March 1st to May 15th, if a fisher natal den or a female with young is observed, operations shall cease within 0.25 miles and the LTO shall notify the RPF and CAL FIRE and DFW shall be notified immediately so that additional measures, if needed, shall be amended into the THP. During operations between May 16th to July 31st, if a confirmed maternal den site is found, no operations shall occur within 375 feet of the den site.

(2) Any green culls, large snags, hardwoods, and large down wood will be retained where they exist to the degree that allows for operational safety under Section II, Item 33.

(3) If a larger decayed or cull conifer (> 22 inches dbh) or hardwood tree (> 15 inches dbh) with a large cavity is found within the THP, that may be suitable as a resting or denning location, the tree shall not be disturbed or harvested during the critical period of March 1st through July 31st. Also, all trees shall be directionally felled away from any potentially suitable resting or denning trees during the critical period of March 1st through July 31st. If the California Fish and Game Commission determine the species is not a candidate under state ESA, or is not listed, measures described above under item (3) shall not be required.

(4) Further, during site preparation, the LTO will make an effort not to incorporate large down LWD, conifer > 22 inches dbh and hardwoods > 15 Inches into burn piles,

(5) The THP area will be treated using both even-aged and uneven-aged silviculture method to provide foraging habitat for this species.

(6) Retention of oaks, where they exist, will be prioritized within the THP area.

(7) Up to 10 percent of burn piles may be left unburned to provide wildlife habitat.

TOWNSEND BIG EARED BAT (*Corynorhinus townsendii*)- California candidate species CESA

Townsend's big-eared bat is found throughout California, but the details of its distribution are not well known. This species is found in all but subalpine and alpine habitats, and may be found at any season throughout its range. It is most abundant in mesic habitats and requires caves, mines, tunnels, buildings, or other human-made structures for roosting. There are no large basal hollows of trees within the plan area. This species may use separate sites for night, day, hibernation, or maternity roosts. Hibernation sites are cold, but not below freezing. The Townsend Big Eared Bats are not territorial. Males are solitary in spring and summer. Females form maternity colonies. Hibernates singly or in small clusters, usually several dozen or fewer. After consultation with CDFW Andrew Yarusso, potential suitable habitat for the bat does occur within the Biological Assessment Area but, not within the plan area. There are old Mill buildings within the biological Assessment Area, however, the buildings are not vacant and they are being utilized, therefore no disturbance buffer zones are being proposed. This plan is unlikely to affect this species. If the bat, roosting site or potential habitat such as caves, mines, tunnels or other structures is observed within the plan area boundary during the breeding season (May – June), operations within 300 feet of any nest/roosting site and potential habitat will cease, Cal Fire shall be notified and the RPF will consult with Cal Fire and the Department of Fish and Wildlife to establish protection measures. Established protection measures shall be treat as a minor deviation and amended to the plan.

SIERRA NEVADA RED FOX (*Vulpes vulpes necator*): State Threatened

Suitable habitat for the Sierra Nevada red fox occurs within the Biological Assessment Area and within the plan area. General Habitat is "Many High Elevations". Preferred habitat appears to be red fir and lodgepole pine forests in the subalpine zone and alpine fell-fields. The current range and distribution of the red fox is unknown. The fox may hunt in forest openings, meadows, and barren rocky areas associated with its high elevations habitats. The subspecies is known to inhabit vegetation types similar to those used by the marten and wolverine. Threats to the Sierra Nevada red fox are unknown. According to the CNDDB there is one known Sierra Nevada Red Fox location within the Biological assessment area and within approximately one half mile of the plan area. The following operational provisions in the this THP will avoid take:

a. The critical period is defined as February 1 through June 30.

b. During timber operations, if a red fox is observed within the plan area boundary, operations within 0.25 mile shall cease until after the critical breeding period or consultation with DFW.

c. If SNRF is discovered by camera station surveys, den search surveys, observations of adults or young, sign including scat, prey remains, and/or recent signs of den excavation within the THP area: 1) operations within 0.25 miles shall cease and 2) DFW shall be contacted to initiate a CESA consultation to determine appropriate protection measures.

d. The plan submitter shall provide the LTO with instructions and education on identifying red fox, sign, and denning areas (pictures, identification).

WILLOW FLYCATCHER (*Empidonax traillii*) California Endangered species

A rare to locally uncommon, summer resident in wet meadow and montane riparian habitats, at 2000-8000 feet in the Sierra Nevada and Cascade Range. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows. Dense willow thickets are required for nesting and roosting. Low exposed branches are used for singing posts and hunting perches. After consultation and field visit with CDFW Andrew Yarusso the THP area was determined to contain marginal potential habitat for the Willow Flycatcher. The majority of potential habitat is outside the harvest area. Due to the small amount of potential habitat, surveys will not be necessary. The following operational provisions in the McCloud Mill THP will maintain isolated clumps of habitat for this species:

1. During timber operations, if a willow flycatcher is observed within the plan area boundary, operations within 300 ft. shall cease during the breeding season (May 1 through August 31) and DFW shall be contacted to initiate a CESA consultation to determine appropriate protection measures.
2. Per CDFW's consultation recommendations any roads being utilized within or adjacent to potential habitat will be watered during the breeding season.
3. Per CDFW's consultation recommendations no chipping within 300ft of potential habitat will occur.

GRAY WOLF *(Canis lupus):* State Endangered

Habitat for the gray wolf occurs within the assessment area of the THP. According to the CNDDB there are no known sightings of the gray wolves having occurred in the THP area but a gray wolf has been known to have traveled within approximately one half mile of the THP area.

Provisions: If a gray wolf is sighted in the THP area, the LTO will notify the designated RPF for the THP who will immediately notify the California Department of Fish and Wildlife.

Table 3: Protection and buffer for Active Nest or Denning Sites until further consultation with DFW

Species	Critical Breeding Period	Protection Buffer Distance
Sierra Nevada Red Fox	February 1 thru June 30	0.25 miles - 1320 feet
Fisher	March 1 thru May 15	0.25 miles - 1320 feet
Townsend's big-eared bat	At any time during operations	300 feet
Willow Flycatcher	May 1 through August 31	300 feet
All other Species of Special Concern		0.25 miles - 1320 feet

RARE PLANTS:

A review of species data for the 9 USGS quadrangle maps that include the plan area and additional species resulted in one plant species that could potentially be affected by this THP. A CNDDB search was performed for the harvest area for any plant species that could potentially be affected by this THP. Aleppo avens (*Geum aleppicum*) is a perennial herb found in Great Basin scrub, lower montane coniferous forest, and meadow and seeps habitats. This THP has potential habitat for this species which is ranked as a 2B.2 species on the California Native Plant Societies (CNPS) rare and endangered plant inventory. According to CNPS the Aleppo avens is fairly endangered in California but more common elsewhere. This species is not listed under the federal ESA or the CESA. According to the CNDDB this species is known to occur within and adjacent to the plan area. The RPF or supervised designee did not observe this plant species during unit layout and timber marking. No floristic survey is planned for the harvest area as this area is zoned heavy industrial.

If any sensitive plants are identified, the plants will be flagged, mapped, and a 25 foot zone of no operations will be established around plant occurrences. In consultation with CDF&W and Cal Fire, equivalent or more effective protection measures may be developed and amended to the THP.

b. ☐ Yes ☒ No Are there any non-listed species which will be significantly impacted by the operation? If Yes, identify the species and the provisions to be taken for the protection of the species.

OREGON SNOWSHOE HARE (*Lepus americanus klamathensis*) Species of Special Concern

Occurs in mid-to upper-elevations of the Cascade Mountains from the vicinity of Mt. Hood, Oregon southward to Mt. Shasta and the Trinity Mtns. of California. In California, and Oregon snowshoe hares are generally found above the Yellow Pine Zone. In the northern Sierra Nevada, snowshoe hares are abundant in dense stands of Manzanita that develop following a major fire. Oregon snowshoe hares were apparently not historically common in California. These species are likely present within the plan area and are rarely seen because it hides during the day in forms of dense cover. There are no data to suggest that numbers of Oregon snowshoe hare have declined in California or elsewhere in its range. No individuals of this species were observed within the THP area; therefore, this THP is unlikely to affect this species.

33. SNAGS

a. ☒ Yes ☐ No Are there any snags which must be felled for fire protection or safety reasons? If Yes, describe which snags are going to be felled and why.

To meet the intent of 14 CCR 939.1, snags that would constitute a fire hazard, as determined by the Director, or safety hazard in the harvesting area will be felled. To provide protections and benefits for wildlife, other snags may be retained, as allowed for under 14 CCR 939.1. All snags that do not constitute a safety hazard to workers will be retained during timber harvest.

34. **LATE SUCCESSION FOREST STANDS**

☐ Yes ☒ No Are any Late Succession Forest Stands proposed for harvest? If Yes, describe the measures to be implemented by the LTO that avoid long-term significant adverse effects on fish, wildlife and listed species known to be primarily associated with late succession forests.

☐ Yes ☒ No Is any Late Seral Forest proposed for harvest?

35 **NON-LISTED SPECIES WILDLIFE PROTECTION**

☒ Yes ☐ No Are any other provisions for wildlife protection required by the rules? If Yes, describe.

1. **Although hardwood density is variable or non existant, up to five square feet basal area (BA) of hardwoods (primarily black oak), if it exists prior to harvest, shall be retained throughout the plan area.**

2. **Proposed harvest units have been or will be field-assessed during silvicultural prescription development and marking. Field personnel have training and experience in identification of raptor identification, nest structures, and associated evidence of stand usage. If any listed (ESA and CESA) or Board of Forestry Sensitive species occupied or active nest is found within the THP, this will prompt consultation with DFW, and notification to CDF prior to operation in the vicinity, per 14-CCR 939.2. The protection measures shall include suspension of vegetative disturbing activities within 0.25 miles of the nest, all operations within 375 feet of the nest, and notification to CDFW and CAL FIRE for a consultation to develop site specific measures. Additionally, unlisted raptors and their nests (if present) will be protected by avoidance if occupied during the nesting-fledgling periods.**

3. **As this is an industrial site clean-up, no large woody material will be retained.**

36. **ARCHAEOLOGICAL RESOURCE**

a. ☒ Yes ☐ No Has an archaeological survey been made of the THP area?

b. ☒ Yes ☐ No Has a current archaeological records check been conducted for the THP area?

c. ☒ Yes ☐ No Are there any archaeological or historical sites located in the THP area? Specific site locations and protection measures are contained in the Confidential Archaeological Addendum in Section VI of the THP, which is not available for general public review.

37. **GROWTH AND YIELD INFORMATION**

☐ Yes ☒ No Has any inventory or growth and yield information designated "trade secret" been submitted in a separate confidential envelope in Section VI of this THP?

38. **SPECIAL INSTRUCTIONS:** Describe any special instructions or constraints, which are not listed elsewhere in THP Section II.

A) The following describes the tree marking and flagging (ribbon) designations used during THP development, and other enforceable language as applicable:

Tree Marking:

- **Trees to be cut will be marked with a paint stripe at approximately breast height on at least two sides, and including a stump-mark below the cut-line. Blue paint shall be used for cut-trees, white paint shall be used for trees that are to be retained.**
- **Retain any tree (live or dead, standing or down, conifer or hardwood) within a harvest area that is marked with a painted "W" or "WL".**

Flagging (ribbon color and application(s)):

- **Harvest Area boundaries:** **Red + Blue and Yellow + Blue**
- **Botanical/Archaeological Restrictions:** **Orange/White Special Treatment Zone' (Pre-printed)+ Red/Black stripe**
- **Truck Road** **Solid Orange or Orange Truck Road (Pre-printed)**
- **Skid Trail** **Yellow or Pre-printed Skid trail**

B) **Power Lines: Power lines are located within the THP boundary. Trees shall be felled away from all utility lines. If during operations any power lines are damaged, the LTO shall immediately contact Pacific Power for emergency services at 1-877-508-5088.**

C) **Railroads: Trees shall be felled away from all existing railroad lines and equipment.**

D) **CalFire shall be notified of the commencement of timber operations at:**

Siskiyou Unit (6)
Forest Practice Program Technician II
CALFIRE
P.O. Box 128
Yreka, CA 96097
Ray Wedel, Forest Practice Inspector
530-842-3516

E) **Water Drafting – On-Site hydrates and stand pipes**

All water drafting locations will be on the McCloud Mill property from various on-site hydrants or stand pipes where the source of the water comes from a domestic water source through a paid metered system. No water will be drafted directly from a watercourse.

DIRECTOR OF FORESTRY AND FIRE PROTECTION

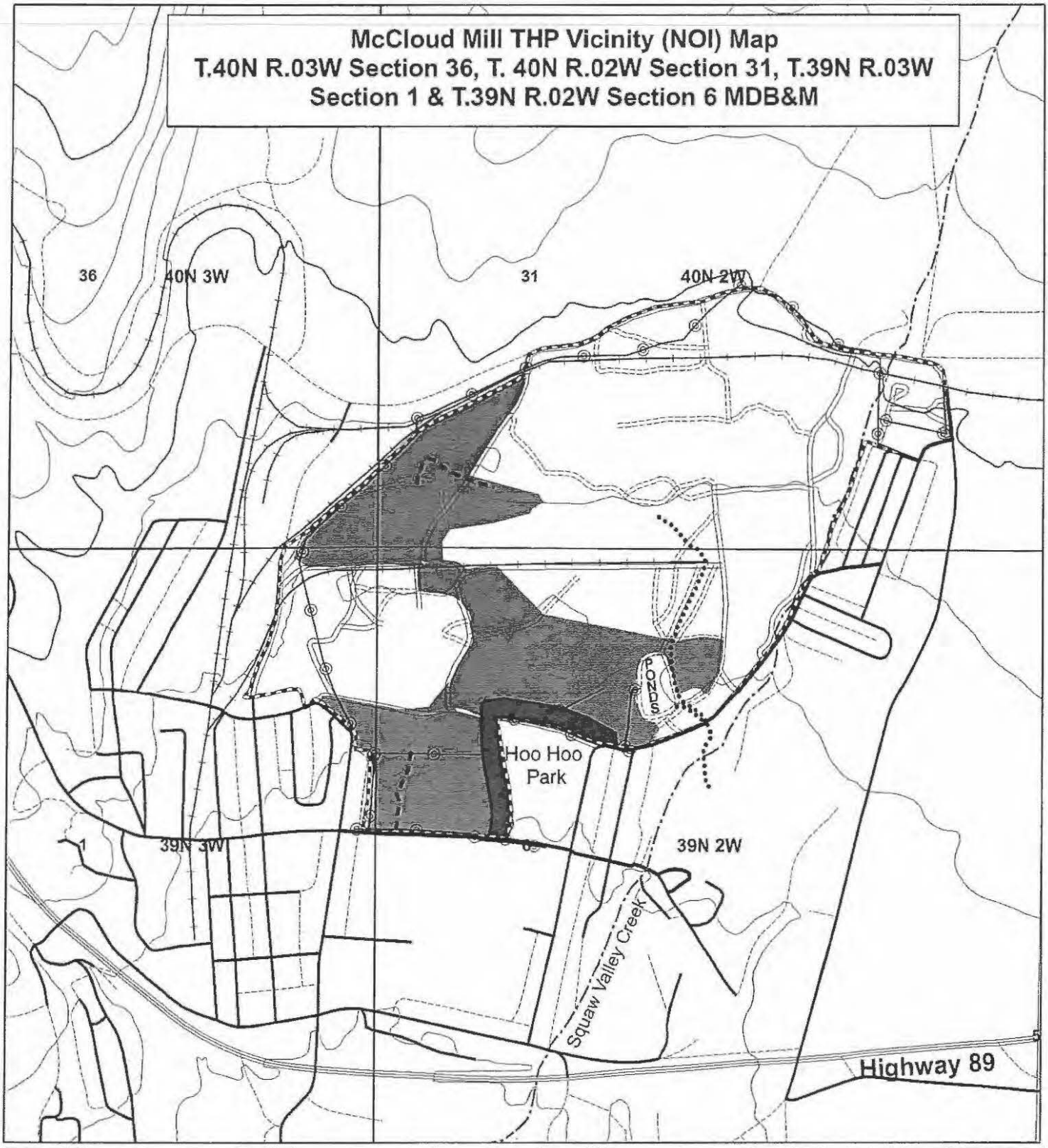
This Timber Harvesting Plan conforms to the rules and regulations of the Board of Forestry and the Forest Practice Act:

By: **RICK CARR, RPF #2801** (Printed Name) — Forester II - TRFRF Redding (Title)

By: Rick Carr (Signature) — FEB 18 2015 (Date)

SECTION II MAPS

1. THP Vicinity (NOI)
2. Site Classification and Erosion Hazard Rating Map
3. Water Drafting Location Map
4. Silviculture/ Operations Maps
5. Appurtenant Road Maps



Revised 01/26/2015 pg 23

PART OF

McCloud Mill THP Site Classification & Erosion Hazard Rating Map

- McCloud Mill Property Boundary
- Commercial Thinning
- Selection
- Shelterwood Removal
- Non Harvest
- Class I watercourse
- Class IV watercourse
- Unclassified swale
- Highway
- Permanent Private Road
- Permanant Public Road
- Seasonal Private Road
- Seasonal Public Road
- Railroad

Entire Harvest Area is Site III

0 500 1,000 1,500 2,000 Feet

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998
1:12,000

N

40ft contour intervals
Not all symbols appear on all maps

McCloud Mill THP Water Drafting Sites Map

- McCloud Mill Property Boundary
- Commercial Thinning
- Selection
- Shelterwood Removal
- Non Harvest

Watercourses

- Class I watercourse
- Class IV watercourse
- Unclassified swale

Roads

- Highway
- Permanent Private Road
- Permanant Public Road
- Seasonal Private Road
- Seasonal Public Road
- Railroad

Water Drafting Sites

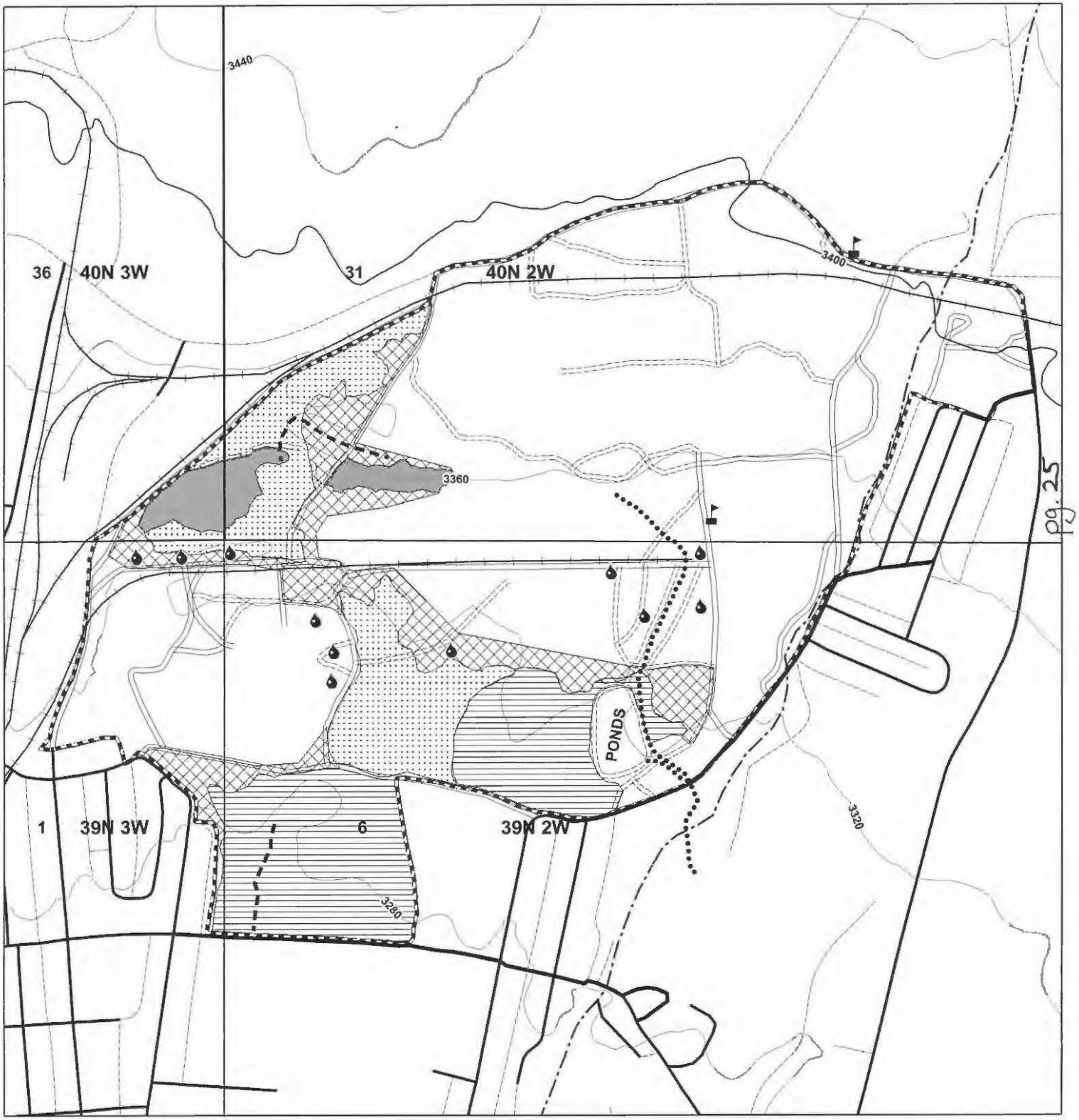
- STAND PIPE
- FIRE HYDRANT

0 500 1,000 1,500 2,000 Feet

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998
1:12,000

N

40ft contour intervals
Not all symbols appear on all maps



McCloud Mill THP Silviculture & Operations Map

- McCloud Mill Property Boundary
- Commercial Thinning
- Selection
- Shelterwood Removal
- Non Harvest
- Class I watercourse
- Class IV watercourse
- Unclassified swale
- Highway
- Permanent Private Road
- Permanant Public Road
- Seasonal Private Road
- Seasonal Public Road
- Railroad
- Utility Lines
- Culvert
- Landing

0 500 1,000 1,500 2,000 Feet

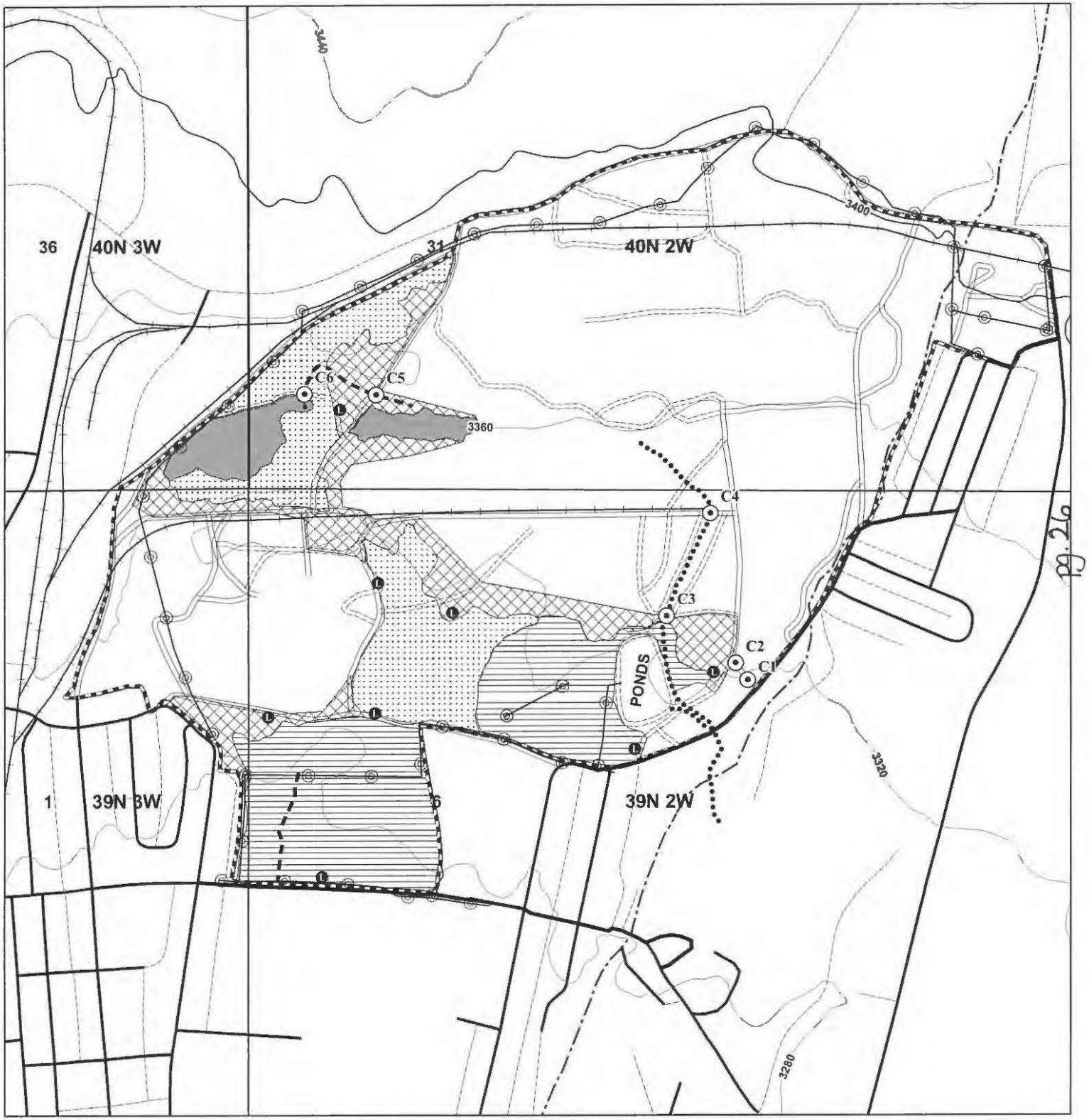
McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

1:12,000

N

40ft contour intervals

Not all symbols appear on all maps



McCloud Mill THP Appurtenant Roads Map

- McCloud Mill Property Boundary
- Commercial Thinning
- Selection
- Shelterwood Removal
- Non Harvest
- Highway
- Appurtenant Road
- Permanent Private Road
- Permanant Public Road
- Seasonal Private Road
- Seasonal Public Road
- Railroad
- Landing
- Class I watercourse
- Class IV watercourse
- Unclassified swale

0 500 1,000 1,500 2,000 Feet

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

1:12,080

N

40ft contour intervals

Not all symbols appear on all maps

SECTION III

Contents

TIMBER HARVESTING PLAN INTRODUCTION (14 CCR 1034(gg))
Section III

14 CCR 1034(gg) – A general description of physical conditions at the plan site, including general soils and topography information, vegetation and stand conditions, and watershed and stream conditions.

I. Project Location

The McCloud Mill Timber Harvest Plan (THP) is approximately 88 acres and is located in section 1, T39N, R03W, section 6, T39N, R02W, section 31, T40N, R02W and section 36, T40N, R03W MDBM. The proposed THP area is located in Siskiyou County, and on the northern most point of the town of McCloud, California. The harvest area falls within the McCloud Planning Watershed.

Portions of these watersheds are tributary to the McCloud River, which flows to Shasta Lake. Slopes within the proposed THP area are relatively flat ground throughout the plan area ranging from 0% slope to 15% slopes. Elevations within the plan area range from 3,240' to 3,400'. The McCloud River is not on the CVRWQCB 303d list for water quality impairment or a National Wild and Scenic River.

II. Vegetation and Stand Description

This stand is located in what was the McCloud Mill that was started in 1892 and continued as an industrial site until closing in 2002. Since this site is zoned for heavy industrial and was an operating sawmill, it was not designed for timber production, however it does contain areas of timber. These areas consist primarily of ponderosa pine with minor amounts of cedar, white fir, douglas fir and hardwoods. Overall, the stands are composed of approximately 97% ponderosa pine and the remaining 3% composed of white fir, douglas fir, incense cedar and hardwoods. The understory includes conifer regeneration from the parent stand along with several species of Ceanothus, antelope bitter brush, green leaf manzanita, willows, snow brush, golden chinquapin, service berry, bitter cherry, scotch broom, blackberry shrubs and a variety of herbaceous species, plus elk sedge and other grasses.

Timber site potential is generally decent, averaging Dunning Mixed Conifer Site III. (see Section II Maps)

III. Soils and Topography

The Soil Survey of Shasta-Trinity and Klamath Forest Area-California (USFS), Soil and Vegetation Survey-McCloud Area (CDF and NRCS), data on file at Black Fox Timber Management Group, Inc., and on-site evaluations were used to classify the plan area as Site III timberland with soil types of the Shastina Loam family and the Shasta loamy sand family.

All soils occurring in the THP area are of volcanic origin, generally underlain by weathered and fractured basalt or andesite or underlain by glacial till. These soils generally all have coarse surface textures, good drainage and good to moderate regeneration potential. The surface layers of these soils are generally a 13" deep sandy loam with weak medium subangular blocky structure, containing 5% gravel. Subsoil layers from 13" to 40" deep are sandy loams with moderate medium subangular blocky structure, 15-25% gravel. Below 40" the soils become quite rocky.

The THP area has an erosion hazard rating (EHR) of Low. These soil types have a generally decent suitability for timber production. The THP area is zoned Heavy Industrial.

The mean annual precipitation is approximately 50 inches. The vast majority of the precipitation is in the form of snow, primarily falling between the months of November and April. Precipitation from thundershowers is minimal from June through September. Thunderstorms during the summer months of July and August are usually dry. Long dry cold spells with several stormy periods occur from October through May.

IV. Watershed and Stream Conditions

There is a Class I watercourse located just outside the plan area with a class IV watercourse that has potential to drain into the class I watercourse only during extreme high flood events. The class IV is typically dry throughout the year and has a thick layer of leaf litter throughout the channel, but has potential to flow during a rain on snow event. The class IV was designed for drainage from the mill to get to an old bark pond, and has the ability to be blocked off to maintain

drainage on site. There are two unclassified swales within in the harvest area. The only watercourses within the Planning Watershed is the class I watercourse Squaw Valley Creek and the class IV watercourse that drains into the class I.
The watercourses within the watershed contain an overstory of mainly Ponderosa pine and mixed conifers of true firs and douglas fir with lesser amounts of sugar pine and incense cedar. Riparian zones also include conifers and more frequently brush. Generally, watercourses have a shade canopy that ranges between 60% and 90%. Sediment that is present in this watershed is the combined result of natural events, past historical and recent flooding and mudflows, and pre-Forest Practices Act human activities. The watercourse was impacted to varying degrees by the original operating sawmill and associated activities. Since Squaw Valley Creek flows through the town of McCloud there are very few timber harvesting activities that occur along the watercourse.

The streams and the watershed conditions adjacent to the plan have been assessed, and mitigations are proposed within this plan that will reduce any potential impact to a level of insignificance.

To reduce, mitigate, or avoid sediment production associated with this proposed THP, the following protection measures and management options have been selected:

- Maintenance of drainage structures on roads.
- Mulching and/or re-vegetation of potential sediment sources created by this THP.

The protection and mitigation measures included in this proposed Timber Harvesting Plan will protect the watershed from any adverse impact to the watershed and fisheries.

V. Geological Conditions

This area does not show evidence of geological instability, such as slides, slumps or unstable soils. The plan area is volcanic in origin and in the past has experienced periodic instability on a geologic timescale through volcanic eruptions.

PROJECT ALTERNATIVES ANALYSIS

Project Description as Proposed:

All of the required contents as outlined in 14 CCR 1034 (a-gg) have been included in this THP (reference Sections I, II, and III of the THP for project description information). This THP proposes to harvest 88 acres under the shelterwood removal step, selection, and commercial thinning methods within the planning watershed. Harvesting methods are ground based. The THP will utilized existing roads and does not included road or landing, construction, reconstruction or abandonment. Ground-based equipment yarding during the winter period (if described weather conditions are present) is proposed for this timber harvest plan. The RPF has assessed how the project will interact with the environment in the cumulative impacts assessment (reference Section IV of this THP).

Project Objectives:

The overall objectives of this project are to effectively manage the proposed THP area for the reduction of fire hazardous fuels using state-of-the-art forest practices, with due consideration for the conservation of biological and watershed resources. Operations on this project will ensure that watershed and biological resources will be protected. This THP is one part of an ongoing process to reduce fire fuels and enhance the utilization of this property while covering some of the cost by harvesting some of the timber.
Specifically, the objectives of this THP are:

- To maintain a balanced stand structure. The silvicultural prescriptions (even age and unevenaged methods) incorporated within the plan are designed to improve forest stocking and health, and reducing fire fuels, while implementing the operational and conservation measures in the Forest Practices Act. This will generally be accomplished through forest management beginning with timber harvesting, followed by regeneration by natural and possible artificial means (tree planting), vegetation management, sanitation salvage of unhealthy/dying trees and pre-commercial thinning, as applicable.

- To harvest timber, while mitigating potentially significant impacts on the environment. Potential impacts that could result from timber harvest operations, including but not limited to wildlife habitat and fisheries, have been addressed. The THP as proposed, with all the mitigation measures adopted in the plan, will not result in significant adverse environmental effects. The plan has included resource protection measures that greatly exceed the current standard FPRs.

Statement of Purpose (Need for the Project):

The landowners' goal for this project is to reduce the fire fuel hazard and to remove the unhealthy trees and vegetation while harvesting some of the timber to balance the cost of the fuel reduction. The timber proposed for harvest will be sold and transported to one or more sawmills located in northern California and/or southern Oregon. Logs will then be manufactured into various wood products.

It is critical that the landowner generate revenue from its timber to fund the cost of the fuel reduction along with ongoing property maintenance and property improvement projects. This project will not only help protect the structures and property on the McCloud Mill site but also the community of McCloud.

Identification of Alternatives to the Project as Proposed:

The RPF has considered six alternatives for discussion in this THP: 1) The No Project Alternative, 2) Public Purchase of the Timber/Timberland or Purchase of the Timber/Timberland as a Conservation Easement Alternative, 3) Alternative Silvicultural Methods, including, a) The Silvicultural Methods That Were Not Chosen, and, b) The Silvicultural Methods That Were Chosen, 4) Alternative Harvesting Practices: a) The Harvesting Practices That Were Not Chosen, b) The Harvesting Practices That Were Chosen, 5) Delaying the Timing of the Project, or Alternative Project Locations on the Ownership, 6) Alternative Land Uses.

1. The No Project Alternative:

Although this alternative is clearly inconsistent with the project objectives, the CEQA guidelines nevertheless require that the No Project Alternative be evaluated. The existing conditions have been considered along with conditions that might be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans (14 CCR 15126.6(e)(2)). The No Project Alternative would avoid the risk of potential environmental impacts that might occur in connection with proposed timber operations, yet may potentially result in other significant, adverse effects. For example, the No Project Alternative would not provide an opportunity for McCloud Partners LLC to correct existing environmental problems related to forest health and fire risks.

2. Public Purchase of the Timber/Timberland or Purchase of the Timber/Timberland as a Conservation Easement Alternative:

This alternative would involve limitations on management activities through public purchase of the subject property or donation or sale of conservation easements. If the property were covered by a conservation easement such that no timber harvesting could be done, any unidentified effects associated with this THP would be avoided through this alternative.

Restrictive conservation easement and/or public purchase could also mitigate or avoid potentially significant, adverse impacts of timber harvesting and, upon payment of fair market value, would allow the landowner to realize its investment objectives. However, the likelihood of this occurring for this parcel in the near or reasonably foreseeable future is remote and speculative.

The landowner is unwilling at this time to consider selling the property, finding that its highest and best utility is the use designated by the zoning. Furthermore, there are no known public or private entities that are ready, willing, and able to, acquire the property; nor can the landowner afford to donate or further constrain operations for preservation purposes. There are millions of acres in the State of California that would be at least as attractive for such a purpose.

The "rule of reason," as set forth in 14 California Code of Regulations § 15126.6(f)(3) states that project alternatives whose implementation is "remote and speculative" need not be given extensive consideration. Therefore, the landowner rejects this remote and highly speculative alternative because it would not effectively meet any of the project objectives, is inconsistent with the land use designation, and is infeasible.

3. Alternative Silvicultural Methods:

This alternative would involve carrying out the project as proposed, except that a different silvicultural method would be chosen. Silvicultural objectives shall meet the objectives of the FPA (PRC 4512 and 4513). "The RPF shall select systems and alternatives which achieve maximum sustained production (MSP) of high quality timber products" (14 CCR 933).

a) The Silvicultural Methods That Were Not Chosen:

Even-aged Silviculture:
Seed Tree Preparatory Step, Seed Tree Seed Step and Seed Tree Removal Step: These alternatives were rejected because the stands where this might be appropriate average greater than 15 trees or 50 ft^2/ac of predominant residual trees from the last harvest activity. The Forest Practice Rules restrict harvesting with this method to no more than 15 trees, or 50 ft^2/ac of basal area. The retention of those trees in excess of the limits imposed by the rules may not meet the landowner's goals and is not consistent with the landowner's long-term sustained yield (LTSY) program. Therefore, this method does not meet the landowner's objectives for this operation.

Shelterwood Preparatory Step, Shelterwood Seed Step: The shelterwood regeneration method reproduces a stand via a series of harvests (preparatory, seed, and removal). The preparatory step is utilized to improve the crown development, seed production capacity and wind firmness of designated seed trees. The seed step is utilized to promote natural reproduction from seed. These methods were rejected because much of the project area already meets the objectives of each of these steps.

Clearcutting: The clearcutting regeneration method involves the removal of a stand in one harvest. Regeneration after harvesting shall be obtained by direct seeding, planting, sprouting, or by natural seed fall. While it is possible to "restart" project area stands and eventually guide them into an unevenaged condition through this method, this is not necessary given quality of current stocking, especially given guidance through implementation of this project. The landowner is also unwilling to accept the risk and costs associated with this method, and it was accordingly rejected.

Uneven-aged Silviculture:
Transition: The transition method, while suitable for some of the plan area, is not appropriate over the entire harvest area due to past harvesting activities and variability in the existing stand structure. Uneven-aged management meets some of the landowner's objectives, such as allowing the landowner to earn some economic return by operating on this parcel, maintaining the flow of high quality timber products, and providing employment opportunities. However, this prescription does not entirely meet landowner objectives. Transition does not meet the landowner's long-term sustained yield (LTSY) program at this time and on this parcel, and therefore does not meet the landowner's objectives for this operation.

Intermediate-treatment Silviculture:
Sanitation-salvage: This method was not selected because this method precludes thinning to achieve stocking and composition control. Accordingly, this method was rejected.

b) The Silvicultural Methods That Were Chosen:

Even-aged Silviculture:

Shelterwood removal step: This method was selected for one stand within the plan area. This stand is heavy with large overstory ponderosa pine with a thick understory of natural regenerated ponderosa pine and is now a two storied stand with a healthy understory of advanced regeneration (2 – 30 years old) and an overstory of diseased and declining pine. This silviculture method will improve the overall health and vigor of this stand.

Uneven-aged Silviculture:

Selection (uneven-aged). Selection is a feasible silvicultural method for portions of the existing stand structure on the THP area and meets the FPR requirements. The majority of the area subject to this method will be selectively harvested with small openings being used to remove timber from areas where necessary for stand improvement or health.

Intermediate Treatments:

Commercial Thinning. Stands within the THP are dominated by dense stands of ponderosa pine. These stands have reached an age where they are of commercial size. Stand density ranges from 80-220 ft^2/acre of basal area. The objectives of this treatment are to reduce future mortality losses, reduce the density of fuel hazards, to reduce competition with and facilitate growth of trees in the upper-crown classes and to improve forest health.

4. Alternative Harvesting Practices:

This would involve operating the project as proposed, except a different yarding method would be chosen. There are 3 categories of yarding methods being considered:

- Ground-based (tractor, including tractor end-lining, rubber-tired skidder and feller buncher)
- Cable (including ground lead, high lead and skyline)
- Special (including animal, helicopter, and other)

a) The Harvesting Practices That Were Not Chosen:

Animal. This method was rejected because the landowner and contract loggers do not own or have access to livestock for this purpose. Animal logging cannot generate a sufficient flow of logs for shipment to the mills. For an industrial landowner, the use of animals for yarding is too slow. This method may be suitable for a small, non-industrial landowner. There is no assurance that this method would provide greater protection than the proposed methods. Therefore, it is more feasible for the landowner to utilize conventional logging equipment (i.e., tractors and cable yarding equipment).

Helicopter. This method is potentially feasible because there are no topographical, physical, or safety reasons that would preclude the use of helicopters on this project. However, the increased costs associated with helicopter yarding were weighed against many operational variables, availability of other equipment, seasonal restrictions/timing of operations, proximity to the town of McCloud and road use restrictions. Based upon economics, this method was rejected as being unnecessarily costly relative to other harvesting methods.

Cable, including cable high lead and cable skyline. None of the harvest units in this plan are on slopes that exceed 50% and most are less than 15%. While this method is feasible, the increased costs associated with cable yarding, when weighed against operational variables including availability of other equipment, seasonal restrictions/timing of operations, and road use restrictions make this method economically uncompetitive. Based upon these facts, this method was rejected as being unnecessarily costly relative to other harvesting methods.

b) The Harvesting Practices That Were Chosen:

Ground-based yarding, including tractor, end/long-lining, rubber tired skidder, and feller buncher. This method is feasible because the area has favorable slopes for ground base yarding, and the entire area was previously harvested using tractors, feller bunchers, and/or skidders. Tractor roads already exist throughout the area. Where this method is used, it has been mitigated to a level of insignificance through implementation of all measures contained in the FPRs. This method would allow the LTO the option to utilize available equipment.

5. Delaying the Timing of the Project, or Alternative Project Locations on the Ownership:

This alternative would involve carrying out the harvesting proposed in this THP at a different location and time, other than where and when it is proposed.

Effectively managing timberland requires harvesting timber when it is most effective to do so. Stands are chosen for harvest based on a variety of parameters including age, stocking levels, current growth rate, and the goals of the landowner. As most of the stands that would normally be selected for harvest using these criteria are constrained by regulations, delaying or operating elsewhere on the property is considered less feasible in comparison to this project.

Delaying the timing of the project for a number of years, say 5 to 10 years, was examined as an alternative to the project as proposed. This alternative would attain some of the landowner's objectives by allowing the landowner to manage the parcel for timber production, but postponing the operations would prevent the landowner from maximizing the productivity of these stands.

While an alternative that simply delayed harvest would avoid, at least for now, any potential or unanticipated adverse environmental effects that might be associated with the project as proposed, this alternative could potentially result in other significant, undesirable effects. Specifically, the delay in harvest could affect maximum sustained yield. Also, not making environmental improvements to the site may present some adverse effects. Improvements proposed in the THP for existing roads to reduce erosion and runoff would not be accomplished at this point in time. In addition, the landowner would be required to harvest in another location at this time to supply the local mills and meet other financial obligations. In that event, the harvest from the alternative location would be evaluated for potentially significant effects, including consideration of further alternative project locations. In brief, the harvest needs to occur somewhere, now. The proposed location presents the best mix of opportunity to meet the requirements of the applicable requirements to maximize sustained production and avoid significant impacts.

6. Alternative Land Uses:

This alternative would involve the landowner's use of the property for purposes other than for managing timber for growth and harvest which could be done due to the property being zoned for heavy industrial, however the property has been vacant and not utilized for many years and requires some clean up and improvements in order to manage and enhance what healthy timberlands exist and to reduce the fuel hazard.

The number of possible uses for any relatively sizeable parcels of land, such as in this landowner's case, is theoretically very large. One may presume that land could be marketed and sold for residential, recreational, agricultural, and/or timber harvesting activities. As with the alternative of selling the property to the public or imposing a conservation easement, such alternatives would not attain most of the basic objectives of the project.

Conclusions:

This THP as proposed is preferred over the alternatives for the following reasons:

- The No Project Alternative. To maintain and enhance the land base, the project needs to move forward. potential environmental mitigation will be foregone without this project. The landowner acquired this land being zoned for heavy industrial to enhance and manage the property for aesthetic reasons, and potential fire hazard reductions and to utilize the property that has been neglected and rundown for many years. This project is one of many needed to allow the landowner to fully utilize this land. This alternative was therefore rejected.

- Public Purchase of the Timber/Timberland or Purchase of the Timber/Timberland as a Conservation Easement Alternative. The landowner is unwilling at this time to consider selling the property, finding its highest and best use in the treatment proposed in the THP. It is doubtful that a conservation easement is consistent with heavy industrial zoning unless it provides for maximum sustained production. Pursuant to the FPRs, extensive conservation measures constraining operations but allowing management are already in place for these timberlands. The landowner has received no reasonable offers to purchase either the property or a conservation easement on the property. This alternative was rejected because it is inconsistent with the landowner's LTSY goals, the project objectives, and it appears infeasible.

- Alternative Silvicultural Methods and Harvesting Practices. Those alternative silvicultural and harvest practices that are appropriate have been proposed; the RPF has exercised professional judgment and has demonstrated proper justification for the methods chosen. The THP is consistent with MSP, LTSY goals of the landowner and protection of the resources as required by the FPRs. The THP review process and pre-harvest inspections allow the various agencies opportunities to make recommendations to change the RPF's silviculture or yarding method choices, if it is deemed necessary for protection of the resources. Therefore, alternative practices beyond those proposed were rejected.

- Delaying the Timing of the Project, or Alternative Project Locations on the Ownership. If this project is not allowed to occur, another project of similar scope would need to be proposed to balance the effect of not conducting this project, where and when it is proposed. This alternative is rejected because it is inconsistent with the project objectives and would not lessen potential impacts on the environment. Such alternatives also poses risks of creating adverse impacts by accelerating or concentrating re-entry elsewhere, or inhibiting performance of road improvement and erosion control to be done as part of the proposed project.

- Alternative Land Uses. There does not appear to be any feasible alternative land uses that the RPF can identify at this time that would be legal under the applicable zoning. Under the FPRs Timber Harvesting Plan permit, the landowner enters into an agreement designed to keep the company implementing the operational and conservation measures designed for land uses consistent with those proposed in this THP. This alternative was, therefore, rejected.

PLAN ADDENDUM TO ITEM 13(a)

SECTION III

Plan Submitter Responsibility (14 CCR 1035):
The plan submitter, or successor in interest, shall:

a) Ensure that an RPF conducts any activities that require an RPF.
b) Provide the RPF preparing the plan or amendments with complete and correct information regarding pertinent legal rights to, interests in, and responsibilities for land, timber, and access as these affect the planning and conduct of timber operations.

c) Sign the THP certifying knowledge of the plan contents and the requirements of this section.

(1) Retain an RPF who is available to provide professional advice to the LTO and timberland owner upon request throughout the active timber operations regarding:

- the plan,
- the Forest Practice Rules, and
- other associated regulations pertaining to timber operations.

(2) The plan submitter may waive the requirement to retain an RPF to provide professional advice to the LTO and timberland owner under the following conditions:

- the plan submitter provides authorization to the timberland owner to provide advice to the LTO on a continuing basis throughout the active timber operations provided that their timberland owner is a natural person who personally performs the services of a professional forester and such services are personally performed on lands owned by the timberland owner;
- the timberland owner agrees to be present on the logging area at a sufficient frequency to know the progress of operations and advise the LTO, but not less than once during the life of the plan; and
- the plan submitter agrees to provide a copy of the portions of the approved THP and any approved operational amendments to the timberland owner containing the General Information, Plan of Operations, THP Map, Yarding System Map, Erosion Hazard Rating Map and any other information deemed by the timberland owner to be necessary for providing advice to the LTO regarding timber operations.

(3) All agreements and authorizations required under 14 CCR 1035(d) (2) shall be documented and provided in writing to the Director to be included in the plan.

(4) Within five (5) working days of change in RPF responsibilities for THP implementation or substitution of another RPF, file with the Director a notice which states the RPF's name and registration number, address, and subsequent responsibilities for any RPF required field work, amendment preparation, or operation supervision. Corporations need not file notification because the RPF of record on each document is the responsible person.

(5) Provide a copy of the approved THP and any approved operational amendments to the LTO.

(6) Notify the Director prior to commencement of site preparation operations. Receipt of a burning permit is sufficient notice.

(7) Disclose to the LTO, prior to the start of operations, through an on-the-ground meeting, the location and protection measures for any archaeological or historical sites requiring protection if the RPF has submitted written notification to the plan submitter that the plan submitter needs to provide the LTO with this information.

Notification of Commencement of Operations (14 CCR 1035.4):

Each calendar year, within fifteen days before, and not later than the day of the startup of a timber operation, the Timber Harvesting Plan Submitter, unless the THP identifies another person as responsible, shall notify CDF of the start of timber operations. The notification, by telephone or by mail, shall be directed to the appropriate CDF Ranger Unit Headquarters, Forest Practice Inspector, or other designated personnel.

Minimum Stocking Standards (14 CCR 1071):

Within five years after the completion of timber operations or as otherwise specified in the rules, a report of stocking on the entire area logged under the plan and shown on a revised map shall be filed with the Director by the timber owner or

the agent thereof. If stocking is required to be met upon completion of timber operations, the stocking report shall be submitted within six months of the completion of operations.

Waterbreaks (14 CCR 934.6):

(h) Waterbreaks or any other erosion controls on skid trails, firebreaks, abandoned roads, and site preparation areas shall be maintained during the prescribed maintenance period and during timber operations as defined in PRC Sections 4527 and 4551.5 so that they continue to function in a manner which minimizes soil erosion and slope instability and which prevents degradation of the quality and beneficial uses of water. The method and timing of waterbreak repair and other erosion control maintenance shall be selected with due consideration given to the protection of residual trees and reproduction and the intent of 14 CCR 934.

(i) The prescribed maintenance period for waterbreaks and any other erosion control facilities on skid trails, cable roads, layouts, firebreaks, abandoned roads, and site preparation areas, shall be at least one year. The Director may prescribe a maintenance period extending as much as three years after filing of the work completion report in accordance with 14 CCR 1050.

Timber Operations, Winter Period (14 CCR 934.7 (c), (2)):

Erosion control structures shall be installed on all constructed skid trails and tractor roads prior to the end of the day if the U.S. Weather Service forecast is a "chance" (30% or more) of rain before the next day, and prior to weekend or other shutdown periods.

Maintenance and Monitoring of Logging Roads and Landings (14 CCR 943.7)

The following maintenance and monitoring standards shall apply to logging roads and landings:

(b) Logging roads that are used in connection with stocking activities shall be maintained throughout such use, even if this extends beyond the prescribed maintenance period.

(i) The prescribed maintenance period for erosion controls on logging roads and associated landings and drainage structures, including appurtenant, abandoned, and deactivated logging roads and landings shall be at least one year. The Director may prescribe a maintenance period extending up to three years in accordance with 14 CCR 1050.

License for Erosion Control Maintenance (14 CCR 1022.3):

A timber operator license is not required for the maintenance of erosion control structures following the completion of timber operations described in an approved work completion report for a THP.

PLAN ADDENDUM TO ITEM 14

SILVICULTURE

Subsection (b): Post harvest stocking levels

- Shelterwood Removal prescription currently contains a minimum of 300-point count as described in 14 CCR 932.7 (b)(1). The trees to be harvested are dominant overstory trees with an understory of primarily ponderosa pine and minor amounts of cedar and white fir varying in age from approximately 2-30 years old. Regeneration shall not be harvested unless it is dead, dying, diseased or substantially damaged by timber operations. Upon completion of harvest operations the shelterwood removal will contain a minimum of 300-point count as defined in 14 CCR 932.7 (b)(1) for Site Class III. The shelterwood removal step shall only be used once in the life of the stand unless otherwise agreed to by the Director.
- Selection: Stands that are proposed for the Selection method are generally composed of a variety of age and size classes. By selectively thinning the stands, this operation will promote improved growth and forest health. This proposed

plan would, on average, meet or exceed the minimum stocking standard of 75 ft^2/ac of basal area (Site III) Stocking standards for Selection are stated in the plan and will be reported within six months of harvest.

- Commercial Thinning: The unit is comprised of well to heavily stocked stands of unevenaged ponderosa pine with minor amounts of cedar and white fir. Age of the released stand is 30 to 100 years old. Site class for this stand is site III. In many cases, the predominant trees are diseased, declining in vigor, or both. This stand is at an appropriate (if not advanced) age for thinning. Stocking standards where the stand is composed of perharvest dom. and co-dom. trees less than 14 in. dbh., a minimum of 100 trees per acre greater than 4 in. dbh. stocking is required to be left. These stocking standards shall be met immediately after the completion of operations.

PLAN ADDENDUM TO ITEM 23

WINTER OPERATIONS

Explanation: A Winter Operating Plan (WOP) is needed to preserve the McCloud Partners LLC's option for conducting timber operations. Operations in hard frozen conditions that have the least potential to damage soils.

Justification: Specific measures will be taken in winter timber operations to minimize the potential of erosion and/or soil movement into watercourses, as well as soil compaction from concentrated ground-based equipment operations other than truck roads and landings.

Mitigation: Numerous mitigations detailed in the WOP, achieve CEQA and FPR compliance; no need to duplicate those provisions here.

PART

Revised 01/26/2015

SECTION IV

1. Cumulative Effects Analysis
2. Greenhouse Gas Analysis
3. Watershed and Biological Assessment Area Maps
4. Past and Present Activity Maps

Section IV--Cumulative Effects Analysis

I. Introduction

The following section, regarding cumulative effects for the McCloud THP, generally follows the outline given in Technical Rule Addendum #2 and CDF guidance. In addition, woven into this checklist format are assessments and analysis germane to specific environmental issues. Following sections will provide general information and a summary of predicted impacts to Watershed, Soil, Biological, Recreation, Visual, and Traffic resources. For ease of reading, all references to FPR checklists or CDF guidance is provided in a normal font, **while McCloud Partners LLC's response, comments, and analysis are shown in bold font.**

II. Cumulative Impacts Assessment Checklist (14 CCR 932.9):

(This checklist summarizes the results of analysis of various potential cumulative impacts related to the McCloud Mill THP and the associated assessment area. The analysis that resulted in the following determinations is described in subsequent sections of this Cumulative Effects Analysis.)

A.) Do the assessment area(s) of resources that may be affected by the proposed project contain any past, present, or reasonably foreseeable probable future projects?

YES ***XXX*** NO_____

If the answer is yes, identify the projects(s) and affected resource subject(s).

Please refer to the following assessment.

B.) Are there any continuing, significant adverse impacts from past land use activities that may add to the impacts of the proposed projects?

YES_____ NO ***XXX***

If the answer is yes, identify the activities, describing their location, impacts, and affected resource subject(s).

C.) Will the proposed project, as presented, in combination with past, present, and reasonably foreseeable probable future projects identified in items (A) and (B) above, have a reasonable potential to cause or add to significant cumulative impacts in any of the following resource subjects?

		Yes, after Mitigation (a)		No, after Mitigation (b)		No, reasonably potential significant effects (c)
1	Watershed					X
2	Soil Productivity					X
3	Biological			X		
4	Recreation					X
5	Visual			X		
6	Traffic			X		
7	Other					X

(a) "Yes, after mitigation" means that potential significant adverse impacts are left after application of the forest practice rules and mitigation or alternatives proposed by the plan submitter.

(b) "No after mitigation" means that any potential for the proposed timber operation to cause significant adverse impacts has been substantially reduced or avoided by mitigation measures or alternatives proposed in the THP and application of the forest practice rules.

(c) "No reasonably potential significant effects" means that the operations proposed under the THP do not have a reasonable potential to join with the impacts of any other project to cause cumulative impacts.

The determinations made in the above table resulted from cumulative effects analysis contained in subsequent sections of this analysis. Mitigation strategies for each resource subject are summarized on the following page.

D.) If column (a) is checked in (C) above describe why the expected impacts cannot be feasibly mitigated or avoided and what mitigation measures or alternatives were considered to reach this determination. If column (b) is checked in (C) above describe what mitigation measures have been selected which will substantially reduce or avoid reasonably potential significant impacts except for those mitigation measures or alternatives mandated by application of the rules of the Board of Forestry.

Watershed Mitigation—

- The LTO shall not park fuel trucks, trailers, etc. or dispense fuel within a WLPZ or any watercourse.

Soil Productivity Mitigation—

- No additional mitigation measures beyond those of the Forest Practice Rules.

Biological Mitigation—

- Although hardwood density is variable or non-existent, approximately five square feet basal area (BA) of hardwoods (primarily Black Oak and poplars), if it exists prior to harvest, shall be retained.

- Proposed harvest areas will be field-assessed during silvicultural prescription development and marking. Personnel will have training and experience in identification of raptors, nest structures, and associated evidence of stand usage. Any listed or Board Sensitive species nest found within the THP will prompt consultation with CDFW and CDF prior to operations in the vicinity, per CCR 959.2.

Recreational Mitigation—

- No additional mitigation measures beyond those of the Forest Practice Rules.

Visual Mitigation—

No additional mitigation measures beyond those of the Forest Practice Rules.

Traffic Mitigation—

- This proposed THP will be a small scale operation with minimal log truck traffic. This THP will generate a maximum of 5 loads per day.

Greenhouse Gas Emissions—

- No additional mitigation measures beyond those of the Forest Practice Rules.

Climate Change & Green House Gases—

- The draft THP Greenhouse Gas Emissions Calculator released by Cal Fire and dated June 11, 2010, was used to predict potential environmental impact from greenhouse gas emission related to this project. The completed form is attached to this plan. The results indicate carbon stocks will decline as a result of operations under this plan but will recoup within a period of 11 years under uneven-aged management due to growth after harvest. Planned operations in the project area over a 100-year planning horizon under uneven-aged management will result in a total Net emission of 147.61 metric tonnes of carbon dioxide equivalent and sequestration of 12,990 metric tonnes of carbon dioxide equivalent. This 88 acre project area is only a portion of the ownership acres. This property is zoned for heavy industrial and not for timber production; the likelihood of a future harvest plan is low.

III. Identification of Resource Areas

Watershed Assessment Area:

The assessment area for watershed resources is comprised of the one CalWater version 2.2.1 planning watersheds that the THP lies within (5505.220103, McCloud), (see Biological & Watershed Assessment Area Map at end of Section IV). The guidelines offered by the California State Board of Forestry and Fire Protection, Technical Rule Addendum No. 2, were used as the rationale for the establishment of the assessment area. Beneficial uses of water, watershed effects, and watercourse condition were assessed.

The area of assessment focuses primarily on the THP. Other attributes under consideration include, but are not limited to, areas historically known to be geologically unstable, industrial purposes, and domestic use. This WAA allows for a logical consideration of effects when projects combined with watershed attributes in the WAA drainage are analyzed.

This WAA was developed and assessed as per CDF guidelines set forth in 14 CCR 932.9 Board of Forestry Technical Rule Addendum No. 2 Cumulative Impacts Assessment - Appendix Technical Rule Addendum.

Soil Productivity Assessment Area:

The assessment area is the proposed operating area. This is the only area where a potential impact could occur from equipment operations.

Biological Assessment Area:

The assessment area will vary according to the mobility and size of territory of the various species of concern, e.g.:

- For plants and natural communities, the assessment area consists of the proposed logging area.
- For the Northern spotted owl, the assessment area is that area up to 1.3 miles from the plan boundary and that area within ¼ mile of appurtenant roads.
- For all other animals, the assessment area is the same as the Northern spotted owl, the assessment area is that area up to 1.3 miles from the plan boundary.

Recreation Assessment Area:

The assessment area includes all areas within 300 feet of the proposed project boundary, as per CDF guidelines. This 300' assessment area surrounding the plan was chosen because it offers adequate evaluation when considering audio and visual impacts of timber operations.

Visual Assessment Area:

The assessment area is comprised of those portions of the plan that are readily visible to a significant number of people within 3 air miles of the project area as per CDF guidelines. This assessment area surrounding the plan was chosen because it offers adequate evaluation when considering the visual impacts of timber operations.

Traffic Assessment Area:

The assessment area includes Mill street, Haul Road, E. Colombero Drive, Shasta Avenue, Broadway Avenue, Industrial way, and E Minnesota Avenue. These roads are all located in the town of McCloud and may possibly be used.

Greenhouse Gas Emissions Area:

Only the ground within the project area (Harvest area) is considered. This is the only area where a potential impact could occur from harvesting operations that can be assessed.

IV. Identification of Information Sources

a) Individuals Contacted:

Paul Chapman – Manager, Wes Solus – RPF, Paul Ederer - RPF; Campbell Timberland Management; P.O. Box 1540, McCloud, CA 96057; (530) 964-2776.

Timothy English – Forester, Jimmy Smith, Forester; Black Fox Timber Management Group, Inc.; P.O. Box 687, McCloud, CA 96057; (530) 964-9756.

Jim Wolter – Manager/RPF; Hancock Forest Management; P.O. Box 1950, McCloud, CA 96057; (530) 964-9756.

McCloud Ranger District. Shasta Trinity National Forest; P.O. Box 1620, McCloud, CA 96057; (530) 964-2184

Wheeler Birdwell III, RPF-Sierra Pacific Industries, P.O. Box 496014, Redding, CA 96049-6014 (530) 378-8136

David Marshall – Manager/RPF, Bascom Woods LLC; P.O. Box 636, McCloud, CA 96094: (530) 918-9777

Brian Shaw – Spotted Owl Expert (SOE #0029) Klamath Wildlife Resources, 1760 Kenyon Drive, Redding, CA 96001, (530)244-5652

Andrew Yarusso – California Department of Fish and Wildlife : (530) 841-2566 Phone call and field visit on October 27, 2014

b) Records/Sources Examined:

Barclay's California Code of Regulations, Title 14, Division 1.5 – Department of Forestry and Fire Protection (Forest Practice Rules – 2013 and 2014)

Timber Harvesting Plan Records; Watershed Mapper program.

Siskiyou County's Assessors Parcel Information. 311 4th Street #108, Yreka, CA 96097. 11/14/2014

Aerial Photographs; Hancock Forest Management. 2002 and 2010. And Google earth; 1993-2012

McCloud (2012) and Elk Springs (1998), 7½' USGS Quad maps; National Geographic Maps, 2001 and TOPO!.

Soil and Vegetation Survey, McCloud Area, Shasta and Siskiyou Counties; California Department of Forestry and Fire Protection and USDA Soil Conservation Service; 1992

Soil Survey of Shasta-Trinity Forest Area, California; USDA Forest Service and the University of California; 1993

CA Natural Diversity Database; September 2014.

Selected Rare Plants of Northern California; Univ. of CA Agriculture and Natural Resources Publication #3395.

Inventory of Rare and Endangered Vascular Plants of California; CA Native Plant Soc. Special Publication No. 1 (sixth edition); 2001

The Jepson Manual—Higher Plants of California; Ed. By J. C. Hickman; 1993

Pests of the Native California Conifers; D. Wood, T. Koerber, R. Scharpf, and A. Storer (Eds.); 2003

http://www.calflora.org/—Information regarding plant species of concern.

California Wildlife Habitat Relationships System, http://www.dfg.ca.gov/whdab/html — Information on various wildlife species.

http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list/r5_2008_ir_stfrpt_30jan09.pdf (303d Listings)

http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/303d/pdf/Category_4a_and_5.pdf (303d Listings)

http://www.cnps.org/

Aubry, K.B. and C.M. Raley 2006. Ecological characteristics of fishers in the Southern Oregon Cascade range. Unpublished report. USDA - Forest Service - PNW, Olympia, WA.

McCammon 2010 A status review of the fisher in California. Report to the Fish and Game Commission. California Department of Fish and Game. February 2010, p.104

Sierra Pacific Industries. 2012. Fisher natal den use on managed timberlands in California fisher data compiled from cooperative studies, study cooperators: California Department of Fish and Wildlife, Sierra Pacific Industries, U.S. Fish and Wildlife Service and North Carolina State University, 4 pages.

Zielinski, W.J. R.L. Truex, G.A. Schmidt, F.V. Schlexer, K.N. Schmidt, and R.D. Barrett. 2004. Resting habitat selection by fishers in California. Journal of Wildlife Management 68(3) 475-492.

Watershed Cumulative Effects Assessment

1) Beneficial Uses

There is one Class IV that flows through the plan area. Squaw Valley Creek, a class I watercourse is the only watercourse that flows through the McCloud watershed. The beneficial uses of water include:

- **Existing domestic water supply**
- **Existing cold freshwater habitat**
- **Existing cold spawning**
- **Existing wildlife habitat**

Squaw Valley Creek, the Class I watercourse within the assessment area north and south of highway 89 is hydrologically connected to the McCloud River. The McCloud River is above Shasta Lake. Shasta Lake is an anadromous fish barrier, but does harbor healthy populations of fish. All planning watershed above Shasta Lake are listed by the California Department of Fish and Game as non-restorable for anadromous fisheries. Therefore, the planning watershed where this project occurs is not considered a watershed with listed anadromous salmonids, and are not subject to that section of the Forest Practice Rules.

2) Watershed Resource Assessment Area Attributes:

General information regarding the McCloud Planning Watershed (PW's):

	McCloud
Size (Acres)	1,340
Primary Channel Orientation	North-South
Minimum Elevation (Feet)	3,120
Maximum Elevation (Feet)	3,360
Downstream Planning Watershed	Pig Creek
Hydrological Region	Sacramento River
Hydrological Unit	McCloud River
Hydrological Area	Wyntoon
CA 2.2 ID	5505.220103
Watersheds with listed anadromous salmonids	No
Anadromous Fish	No
303(d) Listed	No

Precipitation Attributes--Precipitation analyses for the WAA show that the area receives an average of approximately 50" of precipitation (snow) per year. Virtually the entire drainage receives a two-year, one-hour maximum precipitation intensity of 0.40 inches/hour.

3) Current Stream Channel Conditions

There is one class I watercourse that runs through the WAA: Squaw Valley Creek. Squaw Valley Creek is a class I watercourse that is adjacent to the plan area. The closest point of the harvest area to Squaw Valley Creek is approximately 372 feet. The timber harvest plan area is located on the McCloud Mill property that has a water drainage system that was designed to maintain water runoff from reaching the domestic water supply of the town of McCloud when the mill was actively operating. The Mill is no longer active however this water drainage system is still functional. There are two class IV ponds outside the harvest area that have a chain link fence around the perimeter of the ponds, no harvesting will take place within the fenced area. There is one unclassified swale located within the harvest area, no protection measures are being proposed. There is one class IV watercourses within the harvest area that is a drainage channel that originally was designed to carry water to an old bark pond on the south side of Squaw Valley Creek. This class IV watercourse is not known to carry water on a normal basis but has the potential on a rain on snow event. The protection measures for this class IV watercourse is a 15 ft. ELZ to ensure the integrity of the banks, therefore there shall not be any potential impacts to cumulative effects on beneficial uses of water.

4) Past, Present, and Future Activities

Past Forest Management and Timber Harvesting: ***The following THPs have been filed and/or operated on within the Watershed Assessment Area and/or Biological Assessment Area over the past 10-years:***

THP# / Exemption #	TRS	Silviculture Acres in Assessment Area
2-07-004-SIS*	39N03W 1	GS-159 SS-115 CT-87
2-08-004-SIS*	39N03W 1	CONV-31
2-09-065-SIS*	39N02W 7, 5	CC-9 CT-16 GS-9 SEL-7
2-09-086-SIS*	40N03W 36	GS-60
2-11-039-SIS*	39N03W 1	SS-25 GS-24 CT-50
2-13-030-SIS*	40N03W 36 40N02W 31, 32 39N02W 6, 5	CT-435 GS-483 SS-70 NH-64 SEL-26 ALTSTSS-39
2-14EX-651-SIS	39N02W 6 39N03W 1 40N02W 31 40N03W 36	Harvesting dead, dying or diseased trees of any size, fuel wood, or split products in amounts less than 10 percent of the average volume per acre.

*Note: * denotes plans that are only partially within the Assessment Areas. Abbreviations for silviculture methods are: CT-commercial thinning, CC-clear cut, SEL-selection, GS-group selection, REHAB- rehabilitation, SS-sanitation/salvage, STR-seed tree removal, SWR-shelterwood removal, ALT-alternative, SWSS- Shelterwood seed step, STSS-Seed tree seed step ROW-right of way, NH-No Harvest Area, CONV-Conversion.*

Current Forest Management and Timber Harvesting: *The following THPs have been filed and/or have current operations within the Watershed Assessment Area and/or Biological Assessment Area:*

THP # 2-13-030-SIS

*Note: * denotes plans that are only partially within the Assessment Areas. Abbreviations for silviculture methods are: CC-clear cut, TRAN-Transition, GSEL-group selection, San/Sal-sanitation/salvage, SWR-shelterwood removal.*

Reasonably Foreseeable Future Projects: *The following project(s) will occur within the Watershed Assessment Area* and/or Biological Assessment Area*:*

Lands within the McCloud Mill THP Watershed Assessment Area are comprised of primarily private lands including Hancock Forest Management, Four Rails Inc. C/O McCloud Railway Company and many small private landowners. McCloud Partners LLC., owns approximately 281 acres representing 20% of the lands in the watershed assessment area. The property owned by the McCloud Partners LLC is zoned heavy industrial and not TPZ, so the potential of future timber harvesting occurring on this property is not very likely.

Proposed Timber Harvesting and Road Construction: The proposed McCloud Mill THP does not propose any new road construction. Silvicultural treatments will cover approximately 88 acres including 7 acres of Shelterwood Removal, 34 acres of Selection, 24 acres of Commercial Thinning and 23 acres of No Harvest.

Other Activities— The use of herbicides will not be used within the THP area.

5) Current Channel Conditions Outside Assessment Area Potentially Contributing to a Reduction in Beneficial Uses

Both natural geological factors and rain-on-snow events have potentially affected streams and stream channels downstream of the assessment area.

Rain-on-snow events have typically led to the most damaging floods within the vicinity. The McCloud Mill THP lies in the zone in which these melting conditions occasionally occur at the lower elevations. Floodwaters produced by these events have a tendency to degrade stream channel stability downstream.

6) Watershed Resources—Analysis of Potential Cumulative Effects

(a) Sediment Effects: Sediment-induced CWEs occur when earth materials transported by surface or mass wasting erosion enter a stream or stream system at separate locations and are then combined at a downstream location to produce a change in water quality or channel condition. The eroded materials can originate from the same or different projects. Potentially adverse changes are most likely to occur in the following locations and situations:

- Downstream areas of reduced stream gradient where sediment from a new source may be deposited in addition to sediment derived from existing or other new sources.
- Immediately downstream from where sediment from a new source is combined with sediment from other new or existing sources and the combined amount of sediment exceeds the transport capacity of the stream.
- Any location where sediment from new sources in combination with suspended sediment from existing or other new sources significantly reduces the survival of fish or other aquatic organisms or reduces the quality of waters used for domestic, agricultural, or other beneficial uses.
- Channels with relatively steep gradients containing accumulated sediment and debris that can be mobilized by sudden new sediment inputs, such as debris flows, resulting in debris torrents and severe channel scouring.

Potential significant adverse impacts of cumulative sediment inputs may include:

- Increased treatment needs or reduced suitability for domestic, municipal, industrial, or agricultural water use.
- Direct mortality of fish and other aquatic species.
- Reduced viability of aquatic organisms or disruption of aquatic habitats and loss of stream productivity caused by filling of pools and plugging or burying streambed gravel.
- Accelerated channel filling (aggradation) resulting in loss of streamside vegetation and stream migration that can cause accelerated bank erosion.
- Accelerated filling of downstream reservoirs, navigable channels, water diversion and transport facilities, estuaries, and harbors.
- Channel scouring by debris flows and torrents.
- Nuisance to or reduction in water related recreational activities.

Situations where sediment production potential is greatest include:

- Sites with high or extreme erosion hazard ratings.
- Sites that are tractor logged on steep slopes.
- Unstable areas.

The McCloud Mill THP is predicted to not have a significant cumulative watershed effect with regard to sediment. There is a class IV watercourse and two unclassified swales within the plan area that does not flow water on a normal basis but has the potential in a rain on snow event.

Mitigation to avoid the potential for increased sediment yields involve both on the ground choices made regarding project harvest and yarding alternatives. These project area conditions and the McCloud Partners mitigation strategies, along with BMPs embedded within the Forest Practice Rules will ensure that this THP will not significantly contribute to sediment effects within the assessment area.

(b) Water Temperature Effect: Water temperature related CWEs are changes in water chemistry or biological properties caused by the combination of solar warmed water from two or more locations (in contrast to an individual effect that results from impacts along a single stream segment) where natural cover has been removed.

Cumulative changes in water temperature are most likely to occur in the following situations:

- Where stream bottom materials are dark in color
- Where water is shallow and has little underflow
- Where removal of streamside canopy results in substantial, additional solar exposure or increased contact with warm air at two or more locations along a stream.
- Where removal of streamside canopy results in substantial, additional solar exposure or increased contact with warm air at two or more streams that are tributary to a larger stream.
- Where water temperature is near a biological threshold for specific species.

Significant adverse impacts of cumulative temperature increases include:

- Increases in the metabolic rate of aquatic species.

- Direct increases in metabolic rate and/or reduction of dissolved oxygen levels, either of which can cause reduced vigor and death of sensitive fish and other sensitive aquatic organisms.
- Increased growth rates of microorganisms that deplete dissolved oxygen levels or increased disease potential for organisms.
- Stream biology shifts toward warmer water ecosystems.

The McCloud THP is predicted to not have a significant cumulative watershed effect with regards to water temperature as there is a class IV watercourse and two unclassified swales within the plan area that does not flow water on a normal basis but has the potential in a rain on snow event. This plan complies with best management practices incorporated into the Forest Practice Rules to limit the amount of canopy removal within the watercourse and lake protection zones.

(c) Organic Debris: CWEs produced by organic debris can occur when logs, limbs, and other organic material are introduced into a stream or lake at two or more locations. Decomposition of this debris, particularly the smaller sized and less woody material, removes dissolved oxygen from the water and can cause impacts similar to those resulting from increased water temperatures. Introduction of excessive small organic debris can also increase water acidity. Large organic debris is an important stabilizing agent that should be maintained in small to medium size, steep gradient channels, but the sudden introduction of large, unstable volumes of bigger debris (such as logs, chunks, and larger limbs produced during a logging operation) can obstruct and divert stream flow against erodible banks, block fish migration, and may cause debris torrents during periods of high flows.

Removing streamside vegetation can reduce the natural, annuals inputs of litter to the stream (after decomposition of logging-related litter). This can cause both a drop in food supply, and resultant productivity, and a change in types of food available for organisms that normally dominate the lower food chain of streams with an overhanging or adjacent forest canopy.

The McCloud Mill THP is predicted to not have a significant cumulative watershed effect with regards to organic debris. Proposed harvesting will neither deposit nor remove debris from stream channels. Therefore, problems stemming from the sudden removal or large inputs of wood are not expected to occur in assessment area streams as a result of this project. There is a class IV watercourse and two unclassified swales within the plan area that do not flow water on a normal basis but has the potential in a rain on snow event.

(d) Chemical Contamination: Potential sources of chemical CWEs include run-off from roads treated with oil or other dust-retarding materials, direct application or run-off from pesticide treatments, contamination by equipment fuels and oils, and the introduction of nutrients released during slash burning or wildfire from two or more locations.

The McCloud Mill THP is predicted to not have a significant cumulative watershed effect with regards to chemical contamination as no herbicides will be used as a part of or a result of this timber harvest plan. Following FPRs, as well as other state and federal laws, will greatly reduce the risk of chemical contaminants entering assessment area streams. The LTO shall not park fuel trucks, trailers, etc. or dispense fuel within a WLPZ or any watercourse.

(e) Peak Flow Effects: CWEs caused by management induced peak flow increases in streams during storm events are difficult to anticipate. Peak flow increases may result from management activities that reduce vegetative water use or produce openings where snow can accumulate (such as clear-cutting and site preparation) or that change the timing of flows by producing more efficient runoff routing (such as insloped roads). These increases, however, are likely to be small relative to natural peak flows from medium and large storms. Research to date on the effects of management activities on channel conditions indicates that channel changes during storm events are primarily the result of large sediment inputs.

The McCloud Mill THP is predicted to not have a significant cumulative watershed effect with regards to peak flows. Proposed silviculture includes an even aged treatment consisting of a shelterwood removal and Uneven-aged treatments consisting of selection and commercial thinning. The even aged treatment under a shelterwood removal consists of 7 acres, and unevenaged commercial thinning consists of 24 acres, selection consisting of 34 acres, and non-harvest area consisting of 23 acres, totally approximately 88 acres. Considering that the total size of the Watershed Assessment Area is approximately 1,340 acres, the potential effects of this shelterwood removal, commercial thinning, selection and non-harvest area (approximately 7% of the assessment area) on peak flows dynamics will not be significant.

(f) *Summary of Watershed Resource Cumulative Effects*

The beneficial uses of the assessment area were considered in light of current stream channel conditions, the effects of past projects, and expected on-site effects of this proposed project. Future projects were also considered with regards to their potential impacts. With regards to sediment, water temperature, organic debris, chemical contamination, and peak flow effects, past, present, and reasonably foreseeable future project impacts were considered to be slight so that they would not significantly contribute to downstream cumulative effects (after proposed mitigation).

Potential environmental effects have been projected to come from the following general categories: sediment, water temperature, organic debris, chemical contamination, and peak flows. Both the current project (McCloud Mill THP) and reasonably foreseeable future projects in the assessment area have the potential to impact each of these factors; however, the combined present and future activities are not likely to have a significant impact, as in the case of this THP. A summary of the logic that went into these conclusions, along with the mitigation incorporated into this THP, as follow:

Sediment—No activities are planned in the McCloud Mill THP or anticipated in other reasonably foreseeable future projects within the assessment area that would likely increase or cause surface or mass wasting erosion. Situations in which sediment production may be most problematic, sites with high or extreme soil hazard ratings; steep slopes logged with tractors; and unstable areas within the THP do not occur in this plan area. Much of the sediment that reaches watercourses is related to crossings and road construction within or adjacent to a WLPZ. . No future projects are envisioned that would be expected to result in significant increases in sediment production. Therefore, McCloud Partners LLC judges that the proposed THP will not cause or add to significant cumulative impacts to watershed resources.

Water Temperature—No activities are planned in the McCloud Mill THP or anticipated in other, future actions within the assessment area that would likely increase stream temperatures. Water temperatures can most readily be affected by either water diversions or removal of shading on streams and near-stream habitats. The McCloud Mill THP and reasonably foreseeable future projects neither plan nor anticipate a significant removal of shading from the streams. WLPZ riparian protection rules will adequately protect streams from temperature.

Organic Debris—No activities are planned in the proposed THP or anticipated in other, future actions within the assessment area that would likely introduce organic debris into streams. In addition, the WLPZs will be managed in a manner that will allow for a reasonable input of large wood into streams over time. By following the FPRs, as related to management of the WLPZs, and mitigating potential impacts to areas that could possibly activate mass failures resulting in the deposition of large amounts of wood into streams, McCloud Partners LLC., judges that the proposed project will not cause or add to significant cumulative impacts to watershed resources.

Chemical Contamination—No herbicides or any other activities are planned in the McCloud Mill THP or anticipated in other, reasonably foreseeable future projects within the assessment area that would likely introduce chemical contaminants into streams. McCloud Partners LLC. will voluntarily require that operators refrain from parking fuel trucks within WLPZs or any watercourse, and refueling will not be allowed in those areas. McCloud Partners LLC., judges that the proposed project will not cause or add to significant cumulative impacts to watershed resources.

Peak Flows—Peak flows may be affected by large-scale alteration of vegetation cover; however, the McCloud Mill THP, in conjunction with reasonably foreseeable future projects, is not expected to cause large-scale alterations of this type adjacent to or access to watercourses. McCloud Partners LLC., judges that the proposed project is not expected to cause or add to significant cumulative impacts to watershed resources.

Soil Productivity Cumulative Effects Assessment

The following procedure will be used to assess the potential for cumulative impacts on soil productivity as a result of the proposed project alone and in combination with past and future timber operations.

A. Soil Productivity Impacts Inventory

Cumulative soil productivity impacts occur when the combined impacts of a sequence of management activities produce a significant reduction in soil productivity. These impacts may occur as part of separate activities on the same project, as residual effects of past projects, and as the likely impacts of future projects.

The assessment area for cumulative soil productivity impacts is limited to the area of the proposed project.

Forest management activities are required to be conducted in a manner that assures "where feasible, the productivity of timberlands is restored, enhanced, and maintained". Therefore, productivity losses resulting from site disturbance in excess of that required by suitable silvicultural and harvesting practices, whether conducted individually or in sequence, must be considered as significant.

Impact significance must also be considered relative to the soil productivity potential of the area in question. Losses that can be considered acceptable on highly productive lands may be unacceptable, or even exceed the productive potential, of lower site lands. For example, productivity reductions from loss of growing space associated with development of roads and skid trails necessary for timber management on high site lands may be greater than the total unit-area productivity of a poor site.

The proposed THP area is comprised predominantly of well-drained, moderately deep to deep soil types of the Shastina Loam and the Shasta loamy sand families.

As per the Soil Survey of Shasta-Trinity Forest Area-California (USFS) and the Soil and Vegetation Survey-McCloud Area (CDF and SCS). These soil types are primarily suited for timber production, although they are also suited for wildlife production and watershed.

In general terms, the soils found within the proposed THP area are well suited for forest management and are associated with good site quality, moderate to good tree growth, moderate to rapid permeability, and slow runoff.

B. Soil Productivity Resources Assessment

Site factors to be assessed for cumulative soil productivity impacts include:
1. Organic matter loss,
2. Surface soil loss,
3. Soil compaction,
4. Growing space loss.

The relationship between these site factors and soil productivity is described in Section B of the appendix to Technical Rule Addendum Number 2.

The potential impact of successive management activities must be assessed for each of these factors individually and in combination, and the overall impact should be classed as significant when:

- The area disturbed by proposed timber operations will exceed that required by the silvicultural and harvest systems approved for use under the proposed THP, including unnecessary duplication of existing skid trails, roads, landings, yarding disturbance, and mechanical site preparation.
- The amount of organic matter loss and soil displacement with use of the proposed silvicultural and harvesting systems will substantially exceed that of other, feasible systems.
- The amount of compaction and puddling with use of the proposed silvicultural and harvesting systems will substantially exceed that of other, feasible systems, under the soil moisture conditions expected at the time of proposed operations.
- The combined loss of soil productivity from loss of growing space, organic matter loss, soil displacement, and soil compaction from the proposed operations will substantially exceed that of other feasible combinations of silvicultural and harvesting systems.

1. Organic Matter Loss

Displacement or loss of organic matter can result in a long term loss of soil productivity. Soil surface litter and downed woody debris are the store-house of long term soil fertility, provide for soil moisture conservation, and support soil microorganisms that are critical in the nutrient cycling and uptake process. Much of the chemical and microbial activity of the forest nutrient cycle is concentrated in the narrow zone at the soil and litter interface.

Displacement of surface organic matter occurs as a result of skidding, mechanical site preparation, and other land disturbing timber operations. Actual loss of organic matter occurs as a result of burning or erosion. The effects of organic matter loss on soil productivity may be expressed in terms of the percentage displacement or loss as a result of all project activities.

Erosion and volatilization during burning are the primary causes of organic matter loss. The standard Forest Practice Rules require the installation of waterbreaks following harvest operations, for the purpose of minimizing the potential for erosion. The proposed plan will likely not increase the amount of erosion that has occurred in the plan area, due to the generally gentle slopes with and the installation of waterbreaks following operations. The majority of the THP will utilize silviculture methods that will not require burning for site preparation primarily due to whole tree yarding. Shelterwood Removal, Commercial Thinning and Selection units may have landing piles to be burned. The possibility of loss of organic matter from this THP is not likely to be significant.

The amount of organic matter loss and soil displacement with use of the proposed silvicultural and harvesting systems is not expected to substantially exceed that of other, feasible systems.

2. Surface Soil Loss

The soil is the storehouse of current and future site fertility, and the majority of nutrients are held in the upper few inches of the soil profile. Topsoil displacement or loss can have an immediate effect on site productivity, although effects may not be obvious because of reduced brush competition and lack of side-by-side comparisons or until the new stand begins to fully occupy the available growing space.

Surface soil is primarily lost by erosion or by displacement into windrows, piles, or fills. Mass wasting is a special case of erosion with obvious extreme effects on site productivity. The impacts of surface soil loss may be evaluated by estimating the proportion of the project area affected and the depth of loss or displacement.

Surface soil loss can be avoided by keeping the organic layer intact as discussed above, and through the proper installation of waterbreaks and minimizing the number of skid trails. By keeping the organic layer intact, raindrop impact is reduced significantly. The standard WLPZ measures, combined with soil stabilization measures in the Forest Practice Rules provide a buffer between the logging area and streams. Given these considerations and the restrictions within the standard Forest Practice Rules, surface soil loss is not expected to be significant. There is a class IV watercourse and two unclassified swales within the plan area that do not flow water on a normal basis but has the potential in a rain on snow event.

3. Compaction Losses

Compaction affects site productivity through loss of large soil pores that transmit air and water in the soil and by restricting root penetration. The risk of compaction is associated with:

- Depth of surface litter.
- Soil structure.
- Soil organic matter content.
- Presence and amount of coarse fragments in the soil.
- Soil texture.
- Soil moisture status.

Compaction effects may be evaluated by considering the soil conditions, as listed above, at the time of harvesting activities and the proportion of the project area subjected to compacting forces.

Soil compaction is inevitable where ground based operations occur. By limiting the area of skid trails and by utilizing existing trails and whole tree yarding where feasible, the area of compacted soils will be limited.

The amount of compaction and pooling associated with the proposed silvicultural and harvesting systems is not expected to substantially exceed that of other, feasible systems, under the soil moisture conditions expected at the time of proposed operations.

4. Growing Area Losses

Forest growing space is lost to roads, landings, permanent skid trails, and other permanent or non-restored areas subjected to severe disturbance and compaction.

This project does not propose any construction of new roads or landings. This project does not call for the abandonment of existing seasonal roads or landings. This project also proposes to utilize the existing road, landing and trail network for the express purpose of avoiding the development of new systems that would contribute to a loss in growing space where feasible. The maintenance of existing roads will enable the transportation of forest products and facilitate forest management activities. There are no proposed new roads or landings; therefore there will not be any loss of Growing space in result of this Timber Harvest Plan. It is not expected that operations will result in a significant amount of growing space loss to this site.

C. Impacts Evaluation

Will the proposed project, as presented, alone or in combination with the impacts of past and future projects have a reasonable potential to cause or add to significant cumulative soil productivity impacts as a result of:

			Yes, after mitigation		No, after mitigation		No, reasonably potential significant impacts
1.	Organic matter loss						xxx
2.	Surface soil loss						xxx
3.	Soil compaction						xxx
4.	Growing space loss						xxx
5.	Any combination of items 1 through 4						xxx

Biological Resources Cumulative Effects Assessment

1. Known or Predicted Wildlife Resources and Assessment of Potential Impacts

A number of resources were assessed to determine if there were known or potential rare, threatened, endangered, or sensitive species within the assessment area. Sources included: CA Natural Diversity Database; RAREFIND (for quadrangle within the assessment area, McCloud (2012) and Elk Spring (1998); CNPS database; analysis of WHR habitats within the assessment area; and communications with adjacent landowners.

The following rare, threatened, endangered, or sensitive species exist within the assessment area or have the potential to exist due to the presence of habitat and operation provisions for several species that may occur in the plan area (See Section II, Item 32(a) and 32(b). A short description of each species' ecological/biological characteristics, legal status, known status within the assessment area, and mitigation (if needed) to address any potential impacts follows:

a) **Rare plants—Aleppo avens (*Geum aleppicum*) is a perennial herb found in Great Basin scrub, lower montane coniferous forest, and meadow and seeps habitats. This THP has potential habitat for this species which is ranked as a 2B.2 species on the California Native Plant Societies (CNPS) rare and endangered plant inventory. According to CNPS the Aleppo avens is fairly endangered in California but more common elsewhere. This species is not listed under the federal ESA or the CESA. According to the CNDDB this species is known to occur within and adjacent to the plan area. The RPF or supervised designee did not observe this plant species during unit layout.**

   If any sensitive plants are identified, the plants will be flagged, mapped, and a 25 foot zone of no operations will be established around plant occurrences. In consultation with CDF&W and Cal Fire, equivalent or more effective protection measures may be developed and amended to the THP

b) **Fisher: There are no known detections of fisher within or adjacent to the THP area, however, potential suitable foraging habitat for the species exists within and adjacent to the THP area. Fisher is currently a Federal Endangered Species Act (ESA) candidate species. The fisher is not currently listed under the California Endangered Species Act (CESA), but it is a federal candidate threatened species under the federal ESA. In 2010, the DFG recommended the species is not warranted for listing under the State ESA, however, at this time the species is considered a candidate species. Specific operational measures are described in Section II, Item 32 that ensures that take of fisher shall not result from the proposed THP.**

Assessment area description and rationale: The assessment area for the Pacific Fisher is a variety of conifer habitats within the planning watershed (See Section III, fisher). The use of the planning watershed assessment area allows for den site and/or habitat assessment within and/or adjacent to the plan area.

Pre-project habitat condition: Fisher denning, resting and foraging habitats may occur in portions of the planning watershed. Denning habitat is typically older, decayed conifer or hardwood trees with cavities or structures large enough to support a denning female. Resting habitat is typically forested areas with larger, older, decayed trees large enough to support a resting fisher. Foraging habitat is any habitat that supports a wide range of small mammals and is present within the THP area.

Post-project habitat condition: The retention of large hardwoods where they exist will be prioritized within the THP area. Specific habitat maintenance measures for these key components are described in Section II, Item 32(a). By using this strategy of habitat maintenance and protection of denning sites if and when they occur, no significant cumulative adverse impacts are expected to occur to this species as a result of this THP.

c) Northern spotted owl: The species was listed federal threatened in 1990. The range of the spotted owl is delineated into 12 physiographic provinces based on recognized landscape subdivisions exhibiting different physical and environmental features (Thomas et al 1993 as reported in USFWS 2008). The three provinces important to California are the California Coast, California Klamath, and the California Cascades. The McCloud Mill is within the California Klamath and California Cascades provinces. In California, the NSO is listed as candidate under the CESA. The California Forest Practice Rules ensure that a THP will not individually result in a "take" or cause a significant cumulative adverse impact on any individual of the species.

The listing criteria determined the NSO was at risk to extinction "due to loss and adverse modification of suitable habitat as a result of timber harvesting and exacerbated by catastrophic events such as fire, volcanic eruption, and wind storms". Private forested timberlands have been managed for commercial timber values since the early 1900's. Consequently, these forests are relatively young (< 100 years old) with small (< 10 acres), isolated patches of older trees. On-going timber harvest and fuels management have contributed to this diverse forest mosaic.

Forest management activities have the potential to alter forest characteristics and influence the availability and quality of habitat for NSO. The modification of forest stand conditions through timber harvest has the greatest potential to affect (both adversely and beneficially) NSO because of the immediate and long-term effects it has on habitat conditions and prey availability. Silvicultural treatments such as shelterwood removal and seed tree removal and clearcutting, may benefit NSO by accelerating the development of owl habitat and increasing prey abundance and by reducing the risk of catastrophic wildfire. Other forest management activities such as road construction and maintenance can result in undefined levels of habitat modification and disturbance.

Based on the CNDDB search the known Spotted Owl observations are more than 1.5 miles away from the proposed harvest area. Specifically, the proposed THP ensures that "take" will not occur based on discussions with the U.S. Fish and Wildlife Service (USFWS), CAL FIRE Senior Environmental Scientist – Forest Practice Biologist Stacy Stanish and Spotted Owl Expert Brian Shaw as described in 14 CCR § 939.9(e). Based on these consultations and a previous determination by USFWS for survey exemption in this area and overall lack of suitable habitat for NSO, this THP will not have a significant cumulative adverse impact on this species as a result of this plan.

d) Oregon snowshoe hare: This species is likely present within the THP or biological assessment area, and is known to occur in the scoping area. Snowshoe hares are abundant in dense stands of Manzanita that develop following a major fire. Oregon snowshoe hares were apparently not historically common in California. These species are likely present within the plan area and are rarely seen because it hides during the day in forms of dense cover. Based on information in Section II, Item 32 of the plan, no additional operational provisions are necessary to maintain suitable habitat for the species and no significant cumulative adverse impacts are expected to occur to this species as a result of this plan.

e) Sierra Nevada red fox: Suitable habitat for the Sierra Nevada red fox occurs within the Biological Assessment Area and within the plan area. General Habitat is "Many High Elevations". Preferred habitat appears to be red fir and lodgepole pine forests in the subalpine zone and alpine fell-fields. The current range and distribution of the red fox is unknown. The fox may hunt in forest openings, meadows, and barren rocky areas associated with its high elevations habitats. The subspecies is known to inhabit vegetation types similar to those used by the marten and wolverine. Threats to the Sierra Nevada red fox are unknown. According to the CNDDB there is one known Sierra Nevada Red Fox location within the Biological assessment area and within approximately one half mile of the plan area. No sign of the species presence within the THP area have been observed despite repeated site visits by the RPF and forestry and wildlife staff. If this species is discovered within the plan operational provisions for this state listed species are described in Section II, Item 32a. Accordingly, no significant cumulative adverse impacts are expected to occur to this species as a result of this plan.

f) Willow Flycatcher: A rare to locally uncommon, summer resident in wet meadow and montane riparian habitats, at 2000-8000 feet in the Sierra Nevada and Cascade Range. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows. Dense willow thickets are required for nesting and roosting. Low exposed branches are used for singing posts and hunting perches. After consultation and field visit with CDFW Andrew Yarusso the THP area was determined to contain marginal potential habitat for the Willow Flycatcher. The

majority of potential habitat is outside the harvest area. There are no known occurrences within the plan area or in the biological assessment area. If this species is discovered within the plan operational provisions for this state listed species are described in Section II, Item 32a. Accordingly, no significant cumulative adverse impacts are expected to occur to this species as a result of this plan.

g) Townsend's big-eared bat: There are no known detections of Townsend's big-eared bat within or adjacent to the THP area, however potential suitable nesting habitat for the species exists within the THP area. The species is currently a candidate for state listing. If this species is discovered within the plan operational provisions for this state listed species are described in Section II, Item 32a. Accordingly, no significant cumulative adverse impacts are expected to occur to this species as a result of this plan.

h) Gray wolf: This species is not known to occur within the THP area, but has been detected in the biological assessment area. General habitat is diverse including Tundra, Forests, Grasslands, and deserts. Primary habitat requirements are the presence of adequate ungulate prey, water, and low human contact. The species was just currently listed as Endangered by the State of California. Based on information in Section II, Item 32 of the plan, no additional operational provisions are necessary to maintain suitable habitat for the species and no significant cumulative adverse impacts are expected to occur to this species as a result of this plan.

i) Non-listed Raptors: Red-tailed hawk *(Buteo jamaicensis)*, Rough legged *(Buteo lagopus)*, Cooper's *(Accipiter cooperii)* and sharp-shinned *(Accipiter striatus)* hawks (smaller cousins of the goshawk), and a variety of owl species (Great Horned, Northern Pygmy, Flammulated, Western Screech & Northern saw-whet) have the potential of nesting within the assessment area. Both the Cooper's and sharp-shinned hawk are DFG Species of Concern. A non-systematic survey of potential habitat within the THP area was conducted by the RPF, forestry and wildlife staff. No non-listed hawks or owls were discovered. Suitable habitat for these species will be retained following forest management activities including measures described in Section II, Item 35 of this THP. If any of these species are discovered within the plan operational provisions for this unlisted species are described in Section II, Item 35 of the plan. Accordingly, no significant cumulative adverse impacts are expected to occur to this species as a result of this THP.

THP will maintain habitat for these species in a number of different ways. First, the Class I watercourse within the Biological Assessment area is not within the harvest area. Second, hardwoods will be retained with where they exist and are not a safety hazard. These features will make suitable denning structures and places where foraging may occur. Third, large down wood may be retained in harvest units to the degree possible. By following these mitigation strategies, significant cumulative impacts are not expected from this project or other, future projects.

2. Known Significant Wildlife or Fishery Resource Concerns

There are no known significant wildlife or fishery resource concerns; therefore this plan is unlikely to affect this species.

3. Aquatic and Near-Water Habitat Conditions

The section of Squaw Valley Creek within the WAA contains several houses along the watercourse that is well shaded by numerous trees and riparian vegetation. Riparian areas within the assessment area generally have moderate to high canopy closure and are dominated with Ponderosa pine, with minor amounts of white fir and Douglas fir. Hardwoods are also present, to a small extent including poplar and black oak. Adjacent to riparian areas there are few residual larger trees with some defects. The result, when coupled with the FPRs, will be that no significant impacts are expected from this or future, foreseeable projects.

5. Biological Habitat Conditions of the THP and Surrounding Areas—

a) Multi-storied Canopy—Management of stands within this THP area has not been intensive in the past since it is a heavy industrial site designed to function as a sawmill. However, with the lack of forest management activities silvicultural options are more flexible. The use of selection as a silvicultural method will help maintain that multi-stored canopy structure for wildlife habitat diversity.

Most of the stands in this project will be treated under both even aged and uneven aged silviculture systems, with a variety of tree species, heights, and diameters retained. This will result in a mix of stands throughout the assessment area. The use of shelterwood removal will bring another age class into the habitats found in this area and the commercial thinning will create a healthier more vigorous stand. Following this management strategy should ensure that no significant impacts result from this project or future, foreseeable projects.

d) Road Density – Overall, the density of roads within these watersheds is low, with some roads receiving moderate amounts of vehicular traffic from local citizens of the community. The presence of terrestrial wildlife species in the area was noted during field reconnaissance, it is unlikely that there will be an adverse impact on large mammals due to road density. The intermittent nature of access to the assessment area provides the potential for occasional disturbance to wildlife. No evidence exists to suggest that road density in this project area presents a cumulative

impact on wildlife resources and it is predicted that this project and foreseeable, future projects are not expected to result in significant impacts.

e) Hardwood Cover—the hardwoods that exist in the project area are mainly poplars with minor amounts of black oak.

No hardwood trees will be harvested commercially as part of this plan; thus, there will not be a landscape level impact associated with a reduction of mast producing trees. Based upon this retention strategy cumulative impacts are not expected to occur from either this project or foreseeable, future projects.

f) Wildlife Habitat Diversity— the assessment area is dominated by Ponderosa Pine stands and brush fields. Stand size and density vary widely within the assessment area with the seedling, sapling, and pole size classes almost all directly attributable to the lack of past management activities.

Harvest operations associated with the McCloud Mill THP will help balance some of the WHR size-class and canopy conditions, making for more well-rounded wildlife habitat. This harvest operation will move a number of stands from size class 4 into a size class 1, bringing more diversity into the plan area at a coarse stand structure level. Even-age management will promote an improved distribution of size class 1 and 2 stands within the assessment area. Retention of hardwoods will also maintain or enhance habitat diversity. Based upon the existing mix of vegetation types, sizes, and densities, and the project's predicted changes to the habitat types, no significant cumulative impacts are expected to occur.

g) Late Seral (Mature) Forest Characteristics and Habitat Continuity—There are no late seral stands or patches of late seral within the plan area that meet the State's late seral definition (i.e. multi story structure, large decadent trees, snags, and large downed logs). Technical Rule Addendum #2 has different criteria for evaluation:

Late Seral (Mature) Forest Characteristics: Determination of the presence or absence of mature and over-mature forest stands and their structural characteristics provide a basis from which to begin an assessment of the influence of management on associated wildlife. These characteristics include large trees as part of a multilayered canopy and the presence of large numbers of snags and downed logs that contribute to an increased level of stand decadence. Late seral stage forest amount may be evaluated by estimating the percentage of the land base within the project and the biological assessment area occupied by areas conforming to the following definitions:

- Previously harvested forests are in many possible stages of succession and may include remnant patches of late seral stage forest which generally conform to the definition of unharvested forests but do not meet the acreage criteria.

The late-seral characteristics of the THP area and throughout most of the assessment area were eliminated by past operations and utilization of the sawmill. The majority of the assessment area consists of mature Ponderosa pine stands with minor amounts of white fir, douglas fir and large brush fields in the understory. While the plan area does not meet the definition of late-seral forest, certain late-seral characteristics will be retained within the harvest area.

In order to create functional late-seral habitat characteristics in the future, the Board of Forestry has implemented rules to manage WLPZ's as late seral reserves. These rules require landowners to retain large, decadent, residual conifers to provide perches, nesting structures, and recruitment of large down wood. The plan as proposed will not alter the mature forest characteristics or any special habitat elements required by wildlife within the assessment area. No significant adverse impacts on the environment are likely to occur as result of this THP.

h) Special Habitat Elements—As mentioned previously poplar and black oak will be retained to varying levels in proposed harvest units where present and throughout the assessment area as a whole.

Recreational Resources Cumulative Effects Assessment

A. Recreational Resources Inventory

The recreational assessment area is generally the area that includes the logging area plus 300 feet. To assess recreational cumulative impacts, identify the recreational activities involving significant numbers of people in and within 300 feet of logging area (e.g. fishing, hunting, hiking, picnicking, camping, etc.).

The proposed THP area is private property however portions of the surrounding 300 feet adjacent to the plan area is a mixture of private residential property, industrial private property and public property where recreation does occur. There are gates restricting public access to the THP area. Other lands adjacent to the plan area are private or community property and are open to the public. These lands include a public park, residential, and timber production lands.

Identify any recreational Special Treatment Areas described in the Board of Forestry rules on the plan area or contiguous to the area. If a public use of the area is identified, continue to Part B.

Hoo Hoo Park.

B. Change in Recreational Resources

Discuss whether the timber operation will significantly alter the recreational opportunities on the logging area or within 300 feet of the logging area.

Timber operations should have no significant impact on the recreational use of lands within the logging area or on the adjacent lands within 300 feet. The lands containing this project are zoned for heavy industrial and have been used as a timber sawmill since the late 1800s up until 2002. This THP will have a similar however lesser impact to the area as previous projects over the past decade had within the assessment area.

C. Other Projects

Information on other projects in the assessment area that might interact with the effects of the proposed timber operation need to be identified and discussed. Discuss the following:

1. Any past or future projects in the recreational assessment area that are under the ownership or control of the timber/timberland owner that will impact recreational opportunities used by the public identified in Part A, above.

None known or reasonably expected in the future except for those discussed above.

2. Any known future projects planned or expected in the area for assessment of recreational impacts that are not under the control of the timber/timberland owner that will impact recreational opportunities used by the public identified in Part A, above.

None known.

D. Impacts Evaluation

Will the proposed project, as presented, in combination with the impacts of past and future projects, as identified in Parts A through C, above, have a reasonable potential to cause or add to significant cumulative impacts to recreation resources?

Yes (after mitigation).....	_____
No (after mitigation).....	_____
No (no reasonably potential significant effects).....	**XXX**

Visual Resources Cumulative Effects Assessment

A. Visual Resource Inventory

The visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation.

1. Identify any Special Treatment Areas designated as such by the Board of Forestry because of the visual values on or near the plan area?

Hoo Hoo Park.

2. Determine how far the proposed timber operation is from the nearest point that significant numbers of people can view the timber operation. At distances of greater than 3 miles from viewing points, activities are not easily discernable and will be less significant.

The timber harvest area is located adjacent to residential property, industrial property, private timberland and a community park. The harvest area is located at the north end of the town of McCloud. The property is zoned for heavy industrial and was an operating sawmill up until 2002.

3. Identify the manner in which the public identified in 1 and 2, above, will view the proposed timber operation (e.g. from a vehicle on a public road, from a stationary public viewing point, from a pedestrian pathway, etc.).

The majority of the public viewing the THP will see more of a park like setting. The silvicultural methods chosen for this plan area surrounding Hoo Hoo Park is commercial thinning and selection which will be thinning out and removing the unhealthy, poor form, dead, dying, or diseased trees creating a healthier better growing stand.

If the information in item 1 or 2, above, identifies a significant visual resource, continue with section B, below.

B. Change in Visual Resource

Discuss the probability of the timber operation changing the visual setting viewed by the public as a result of vegetation removal, creation of slash and debris, or soil exposure.

Potential visual impacts were considered in the development and selection of silvicultural methods for this THP. There will be slash and other logging debris visible to the public as a result of this operation, but those visual impacts will be short lived as the slash will be treated in pursuant to Title 14 CCR 937.2.

C. Other Projects

Information on other projects in the assessment area that might interact with the effects of the proposed timber operation needs to be identified and discussed. Discuss the following:

1. Any past and future projects in the visual assessment area that are under the ownership or control of the timber/timberland owner and that could interact to cause a significant change in any identified visual resource.

There are no projects in the past or reasonably foreseeable future that would combine with this project to create a negative cumulative visual effect.

2. Known future projects in the visual assessment area that are not under the control of the timber/timberland owner and could interact with any identified visual resources.

There are no future projects known at this time.

D. Impacts Evaluation

Will the proposed project, as presented, in combination with the impacts of past and future projects, as identified in Parts A through C, above, have a reasonable potential to cause or add to significant cumulative impacts to visual resources?

Yes (after mitigation).....	_____
No (after mitigation).....	XXX
No (no reasonably potential significant effects).....	_____

Vehicular Resources Cumulative Effects Assessment

A. Traffic Resource Inventory

The traffic assessment area involves the first roads not part of the logging area on which logging traffic must travel. To assess traffic cumulative effects:

1. Identify whether any publicly owned roads will be used for the transport of wood products. (If the answer to item 1 indicates that public roads will not be used, then no further assessment is needed.)

Publicly owned roads will be used for the transport of wood products including Mill Rd., E Colombero Dr., Broadway Ave, Haul Rd., Shasta Ave, E Minnesota Ave., Tucci Ave and State Highway 89. Other roads to be used for transportation of wood products are privately owned.

2. Identify any public roads that have not been used recently for the transport of wood products and will be used to transport wood products from the proposed timber harvest.

Tucci Ave., Shasta Ave., and E Minnesota Ave.

3. Identify any public roads proposed for the transport of wood products that have existing traffic or maintenance problems.

None known.

B. Activity Levels

Discuss how the logging vehicles used in the timber operation will change the amount of traffic on public roads, especially during heavy traffic conditions.

The proposed logging area is located within the town of McCloud. Logging vehicle traffic will slightly increase to having a maximum of five loads per day. This is a small scale logging operation that will be done in small areas at a time. Logging traffic from the proposed THP should not significantly change the amount of traffic on public roads.

C. Other Projects

Information on other projects in the assessment area that might interact with the effects of the proposed timber operation needs to be identified and discussed. Discuss the following:

1. Other past or future projects on lands under the control of the timber/timberland owner that will add significantly to traffic on public roads during the periods these roads are used by logging vehicles from the proposed timber operation.

   None Known

2. Any known future projects not under the control of the timber/timberland owner that will impact public road traffic during the period that these roads are used by logging vehicles from the proposed timber operation.

   None Known

D. Impacts Evaluation

Will the proposed project, as presented, in combination with the impacts of past and future projects, as identified in Parts A through C above, have a reasonable potential to cause or add to significant cumulative impacts to vehicular traffic on public roads?

Yes (after mitigation).....	_____
No (after mitigation).....	***XXX***
No (no reasonably potential significant effects).....	_____

McCloud Mill THP Unevenaged GHG Calculations

Project Carbon Accounting: Inventory, Growth, and Harvest

This worksheet addresses the sequestation and emissions associated with the project area's balance of harvest, inventory, and growth plus any emissions associated with site preparation. Complete the input for Steps 0- 8 on this worksheet.

Forest Type				Harvest Periods	Inventory		Growth Rates		Harvest Volume	
Multipliers to Estimate Carbon Tonnes per MBF (Sampson, 2002)				Time of Harvest (years from project approval)	Conifer Live Tree Volume (MBF/Acre) - Prior to Harvest	Hardwood Live Tree Volume (BA square feet/Acre) - Prior to Harvest	Conifer Growth Rate BF/Acre/Year	Hardwood Growth Rate BA/Acre/Year	Conifer Harvest Volume (MBF/acre)	Hardwood Harvested / Treated Basal Area (BA/Acre)
Forest Type	**Step 0:** Identify the approximate percentage of conifers by volume within the harvest plan. Must sum to 100%	Multiplier from Cubic Feet (merchantable) to Total Biomass	Pounds Carbon per Cubic Foot	**Step 1.** Enter the anticipated future harvest entries. The re-entry cycles should be supported by management plan, if available.	**Step 2.** Enter the estimated conifer inventory (mbf/acre) present in project area prior to harvest.	**Step 3.** Enter the estimated hardwood inventory (basal area per acre) present in project area prior to harvest	**Step 4.** Enter the average annual periodic growth of conifers between harvests based on estimated growth in management plan, if available. Must be entered for each harvest cycle identified in Step 1	**Step 5.** Insert average annual periodic growth of hardwoods between harvests based on estimated growth in management plan, if available	**Step 6.** Enter the estimated conifer harvested per acre at current and future entries. The estimate should be based on projections from the management plan, if available	**Step 7.** Enter estimated hardwood basal area harvested/treated per acre
Ponderosa Pine	98%	1.675	14.38	User must enter harvest cycles to 100 years and/or at least three entry cycles.	0	18	0	500	0	8	0
Redwood	0%	1.675	13.42		20	20	0	500	0	7	0
Douglas fir	1%	2.254	12.14		40	23	0	500	0	9	0
True firs	1%	2.254	11.18		60	24	0	500	0	9	0
Hardwoods		2.214	11.76		80	25	0	500	0	10	0
Conversion of Board Feet to Cubic Feet	0.165	Pounds per Metric Tonne	2,204		100	25	0	500	0	10	0
					0	0	0	0	0	0	0
Multipliers to Estimate Total Carbon Tonnes per MBF	Conifer	1.81			0	0	0	0	0	0	0
	Hardwoods	1.95			0	0	0	0	0	0	0
Multipliers to Estimate Merchantable Carbon Tonnes per MBF	Conifer	1.07			0	0	0	0	0	0	0
	Hardwoods	0.88			0	0	0	0	0	0	0

Harvest Periods	Inventory Conversion to Carbon (prior to harvest)		Inventory Conversion to Carbon Dioxide Equivalent (prior to harvest)		Site Preparation	
	Conifer Live Tree Tonnes (C/acre)	Hardwood Live Trees Tonnes (C/acre)	Conifer Live Tree Tonnes (CO_2 equivalent/acre)	Hardwood Live Tree Tonnes (CO_2 equivalent/acre)	**Step 8.** Enter the value (in bold) for each harvest cycel that best reflects the site preparation activities, as averaged across the project area:	
from above (Time of Harvest as years from project approval)	**Computed:** MBF * Conifer Multiplier from Step 0	**Computed:** BA*Volume/Basal Area Ration (to convert to MBF) * Hardwood Multiplier from Step 0	**Computed: Conversion of carbon to CO_2** (3.67 tonnes CO2 per 1 tonne Carbon)	**Computed:** Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	**Heavy** - 50% or more of the project area is covered with brush and removed as part of site preparation or stumps are removed (mobile emissions estimated at .429 metric tonnes CO2e per acre, biological emissions estimated at 2 metric tonnes CO2e per acre). **Medium** - >25% <50% of the project area is covered with brush and removed as part of site preparation (mobile emissions estimated at .202 metric tonnes CO2e per acre, biological emissions estimated at 1 metric tonne per acre). **Light** - 25% or less of the project area is covered with brush and is removed as part of site preparation (mobile emissions estimated at .09 metric tonnes CO2e per acre, biological emissions estimated at .5 metric tonnes per acre). **None** - No site preparation is conducted.	
0	33	0	119	0	None	0
20	36	0	133	0	None	0
40	42	0	152	0	None	0
60	43	0	159	0	None	0
80	45	0	166	0	None	0
100	45	0	166	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
	Difference between ending stocks and beginning stocks		46	0.00	Sum of emissions (Metric Tonne	0

57 | McCloud Mill THP

McCloud Mill THP Unevenaged GHG Calculations

Project Carbon Accounting: Harvesting Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 9- 14 on this worksheet.

Harvest Periods	Falling Operations	Production per Day	Emissions Associated with Yarders and Loaders			Emissions Associated with Tractors and Skidders			Emissions Associated with Helicopters			Landing Saws	Trucking Emissions		
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Assumption:** ((.25 gallons gasoline per MBF harvested * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* mbf per acre harvested	MBF (all species) Yarded Delivered to Landing	**Assumption:**(((36 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (((55 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (1200 gallons jet fuel per day per piece of equipment * 5 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (((.18 gallons gasoline per MBF * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* 3.67 to convert to metric tonnes CO2 equivalent)/mbf per acre harvested. Applies to all species whether harvested or not	**Assumption:** Round Trip Hours/Load average (from below, to compute the mbf/hour) /((6 gallons diesel/hour * 6.12 pounds carbon/gallon)/2205 (conversion to metric tonnes carbon))*3.67 (conversion to metric tonnes carbon dioxide equivalent)		
	Computed. Metric Tonnes CO2 equivalent per mbf harvested Applies to all species whether harvested or treated	**Step 9.** Enter the estimated volume delivered to the landing in a day	**Step 10.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Yarders and Loaders CO2 equivalent/mbf (metric tonnes)	**Computed.** Yarders and Loaders CO2 equivalent per Acre Harvested (metric tonnes)	**Step 11.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Tractor and skidder CO2 equivalent/mbf (metric tonnes)	**Computed.** Tractors and Skidders CO2 equivalent per Acre Harvested (metric tonnes)	**Step 12.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Helicopter CO2 equivalent/mbf (metric tonnes)	**Computed.** Helicopters CO2 equivalent per Acre Harvested (metric tonnes)	**Computed.** Landing Saws CO2 equivalent per Acre Harvested (metric tonnes)	Steps 13 and 14 below		**Computed.** Estimated Metric Tonnes CO2e per harvested acre for each harvesting period
0	(0.02)	62	1	-0.01	-0.05	1	-0.01	-0.07	0	0.00	0.00	-0.01	**Step 13.** Enter Estimated Load Average: MBF/Truck	4	-0.13056
20	(0.02)	72	1	0.00	-0.03	1	-0.01	-0.05	0	0.00	0.00	-0.01			-0.11424
40	(0.02)	72	1	0.00	-0.04	1	-0.01	-0.07	0	0.00	0.00	-0.01	**Step 14.** Enter Estimated Round Trip Haul in Hours	4	-0.14688
60	(0.02)	72	1	0.00	-0.04	1	-0.01	-0.07	0	0.00	0.00	-0.01			-0.14688
80	(0.02)	72	1	0.00	-0.05	1	-0.01	-0.08	0	0.00	0.00	-0.01			-0.1632
100	(0.02)	72	1	0.00	-0.05	1	-0.01	-0.08	0	0.00	0.00	-0.01			-0.1632
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
Sum Emissions	-0.12				-0.26			-0.41			0.00	-0.08			-0.86

Breakout into multiple production sites and by harvest year

McCloud Mill THP Unevenaged GHG Calculations

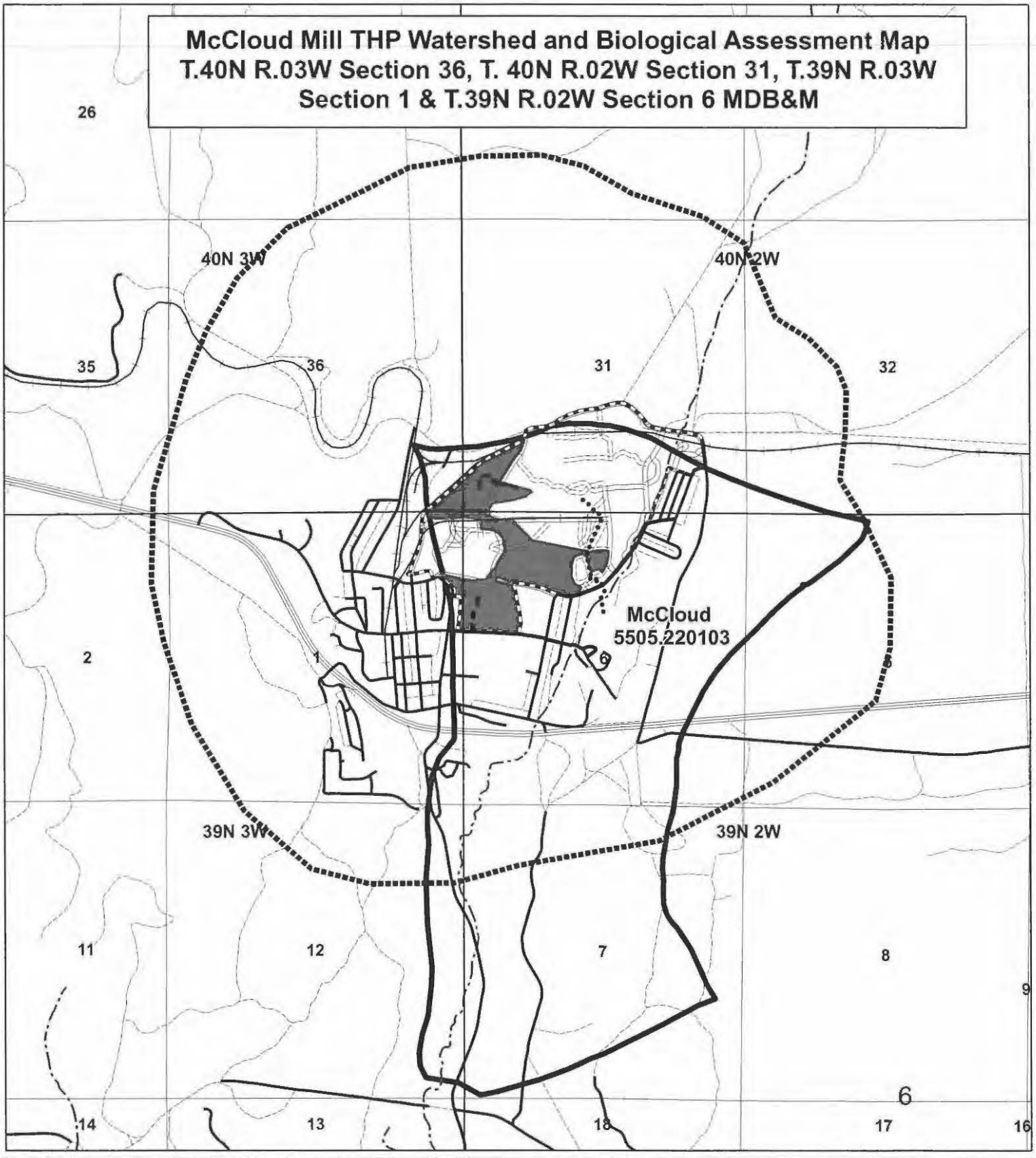
Project Carbon Accounting: Harvested Wood Products and Processing Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 15- 16 on this worksheet.

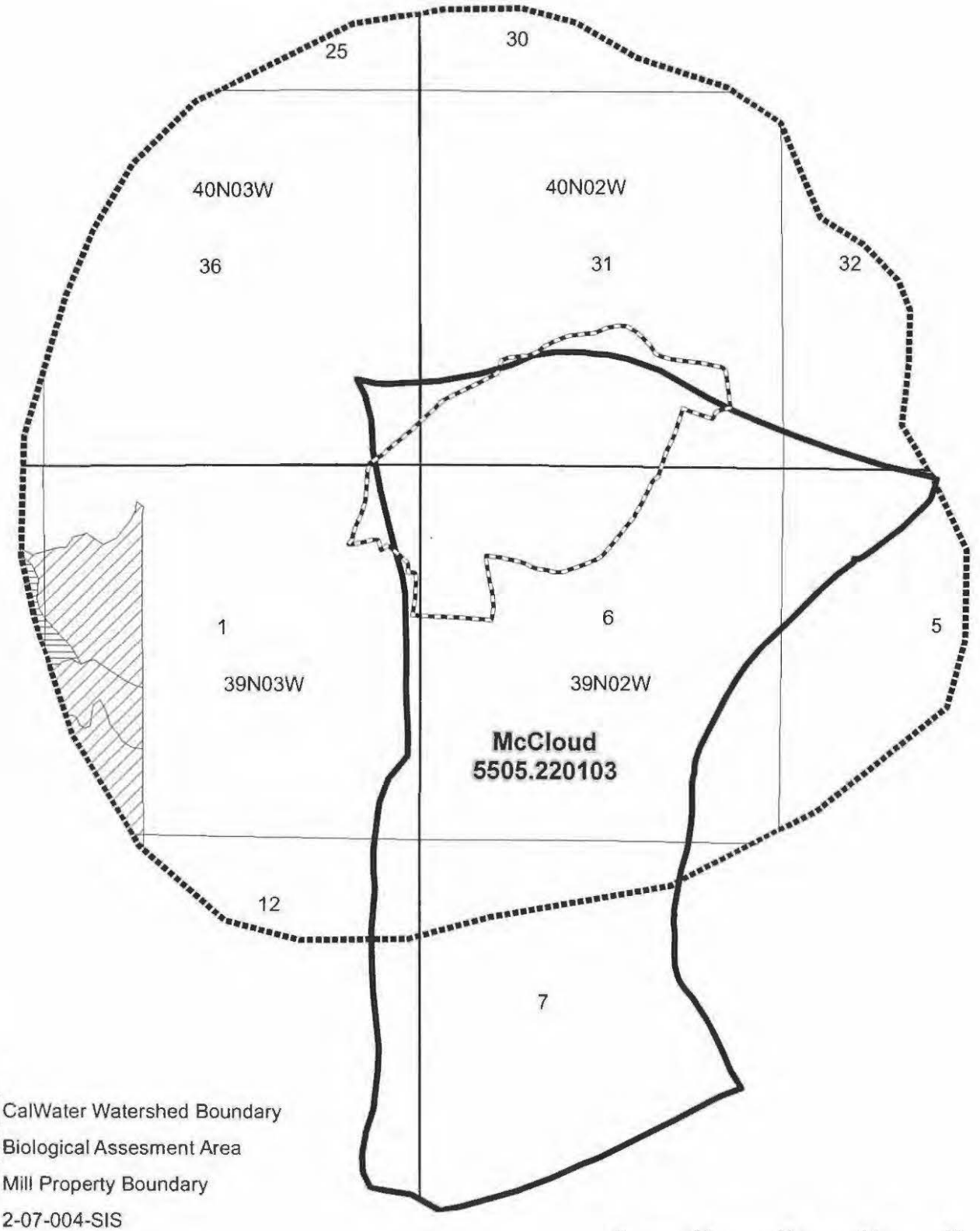
Harvest Periods	Quantity of Forest Carbon Delivered to Mills				Non-Biological Emissions Associated with Mills	Quantity of Forest Carbon Remaining Immediately After Milling (Mill Efficiency)		Long-Term Sequestration in Wood Products	
	Conifer Percentage Delivered to Mills	Hardwood Percentage Delivered to Mills	Conifer CO2e Delivered to Mills / Acre	Hardwood CO2 equivalent Delivered to Mills / Acre	**Assumption.** 20 kw/hour (mill energy use) /(40mbf lumber processed/hour) *(.05 metric tonnes/kw hour) * mbf processed	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Conifers	**Computed.** Remaining CO2 equivalent after Milling Efficiency for Hardwoods	**Computed.** CO2 Equivalent Tonnes in Conifer Wood Products in Use- 100 Year Weighted Average / Acre and Landfill	**Computed.** CO2 Equivalent Tonnes in Hardwood Wood Products in Use- 100 Year Weighted Average / Acre
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Step 15.** Insert the percentage of conifer trees harvested that are subsequently delivered to sawmills	**Step 16.** Insert the percentage of hardwoods harvested or treated that are subsequently delivered to sawmills	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Computed:** The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	**Calculated.** The CO2e associated with processing the logs at the mill	The difference between carbon delivered to mills and carbon remaining after milling is assumed to be emitted immediately		**Estimate.** The weighted average carbon remaining in use at year 100 is 46.3%	**Estimate.** The weighted average carbon remaining in use at year 100 is 23.0%
						The efficiency rating from mills in California is 0.67 (DOE 1605b) for conifers	The efficiency rating from mills in California is .5 (DOE 1605b) for hardwoods	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.	**Estimate.** The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.
0	98%	0%	30.86	0.00	-0.20	20.67	0.00	15.73	0.00
20	98%	0%	27.00	0.00	-0.17	18.09	0.00	13.77	0.00
40	98%	0%	34.72	0.00	-0.22	23.26	0.00	17.70	0.00
60	98%	0%	34.72	0.00	-0.22	23.26	0.00	17.70	0.00
80	98%	0%	38.57	0.00	-0.25	25.84	0.00	19.67	0.00
100	98%	0%	38.57	0.00	-0.25	25.84	0.00	19.67	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sum of emissions associate with processing of lumber			-1.30	Sum of CO2 equivalent in wood products		104.23	0.00

McCloud Mill THP Unevenaged GHG Calculations

Summary			Years until Carbon Stocks are Recouped from Initial Harvest (Includes Carbon in Live Trees, Harvested Wood Products, and Landfill)
	Beginning Stocks	Ending Stocks	
Emissions Source/Sink/Reservoir	Metric Tonnes CO2 Equivalent Per Acre Basis		11 Years
Live Trees (Conifers and Hardwoods)	119.34	165.75	
Wood Products		104.23	
Site Preparation Emissions		0.00	
Non-biological emissions associated with harvesting		-1.74	
Non-biological emissions associated with milling		-1.30	
Sum of Net Emissions/Sequestration over Identified Harvest Cycles (CO2 metric tonnes)		147.61	
Project Summary			
Project Acres	Step 17- Insert the acres that are part of the harvest area.	88	
Total Project Sequestration over defined Harvesting Periods (CO2 metric tonnes)		12,990	


McCloud Mill THP Watershed and Biological Assessment Map
T.40N R.03W Section 36, T. 40N R.02W Section 31, T.39N R.03W
Section 1 & T.39N R.02W Section 6 MDB&M
26
40N 3W
40N 2W
35
36
31
32
McCloud
5505.220103
2
1
6
39N 3W
39N 2W
11
12
7
8
9
6
14
13
18
17
16
McCloud Mill Property Boundary
Harvest Area
Biological Assessment Area
CalWater Watershed Boundary
Class I watercourse
Class IV watercourse
Unclassified swale
Highway
Permanent Private Road
Permanant Public Road
Seasonal Private Road
Seasonal Public Road
Railroad
0 0.25 0.5 0.75 1 Miles
McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998
1:38,000
N

McCloud Mill THP Past & Present Activities Map 1 of 7



CalWater Watershed Boundary
Biological Assesment Area
Mill Property Boundary
2-07-004-SIS
Intermediate Treatment
Unevenaged Mgt.
Evenaged Mgt.
Special Prescription & other mgt.

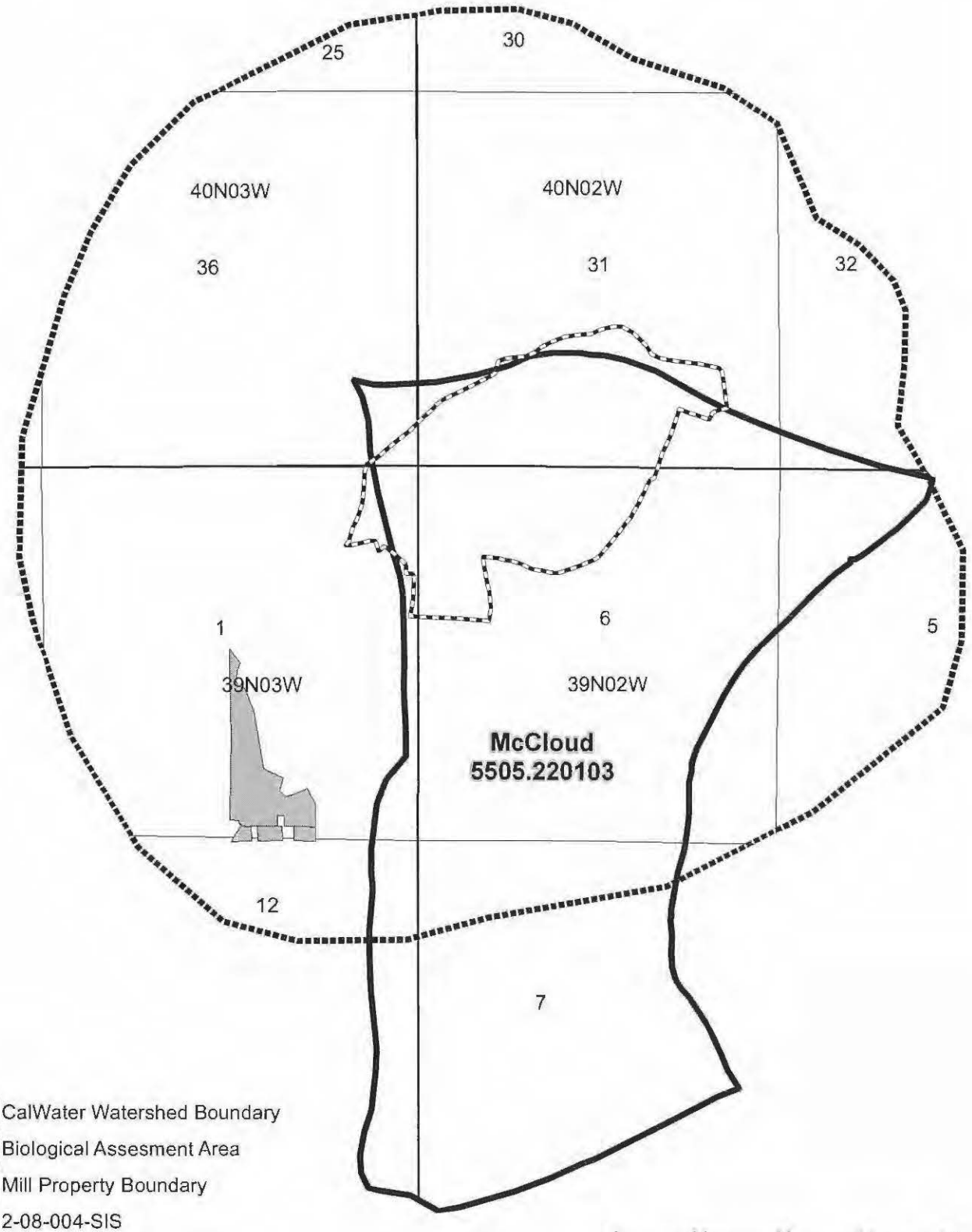
0 0.3 0.6 0.9 1.2 Miles

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

1:34,000

N

McCloud Mill THP Past & Present Activities Map 2 of 7



CalWater Watershed Boundary
Biological Assesment Area
Mill Property Boundary
2-08-004-SIS
Intermediate Treatment
Unevenaged Mgt.
Evenaged Mgt.
Special Prescription & other Mgt.

0 0.3 0.6 0.9 1.2 Miles

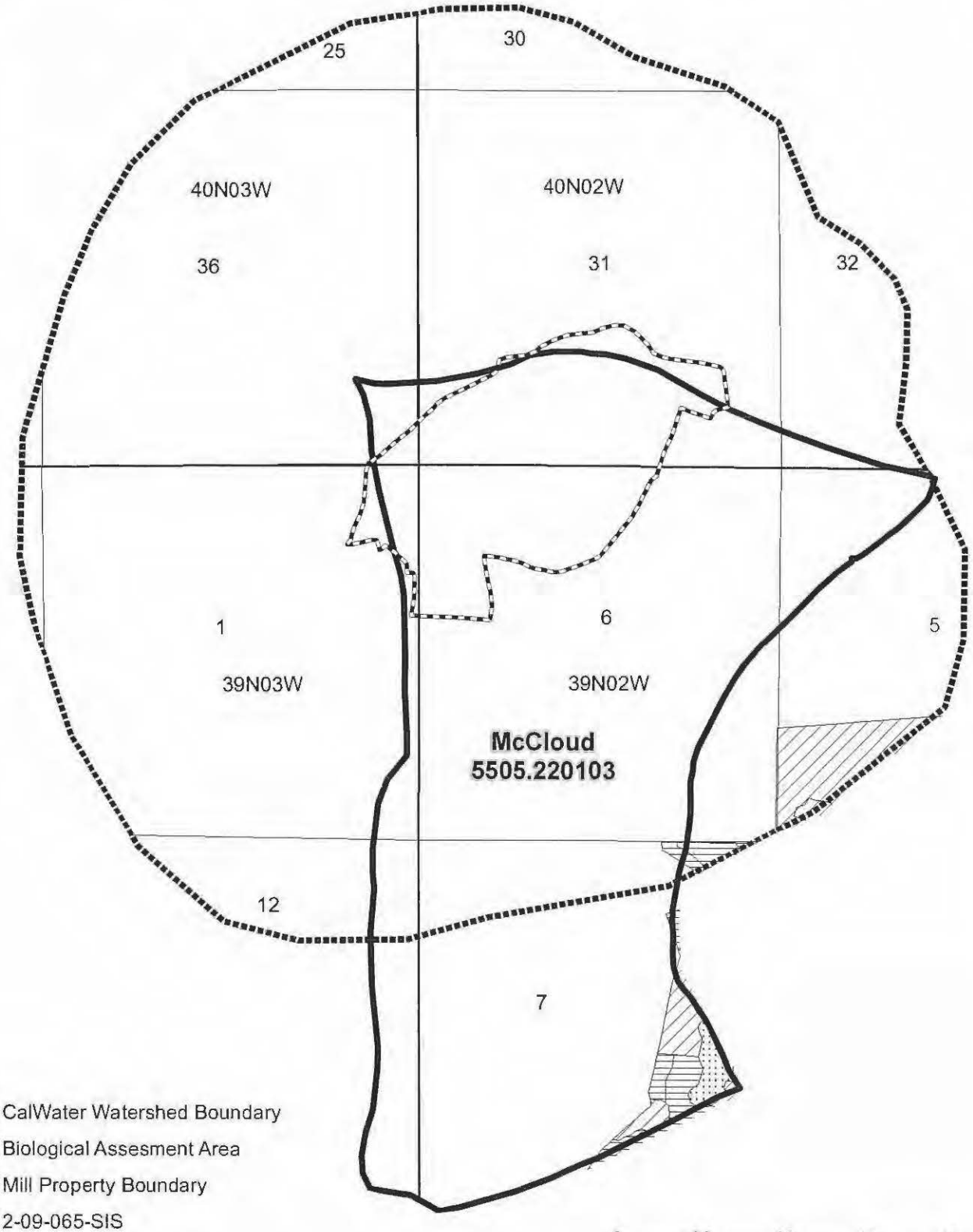
McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

1:34,000

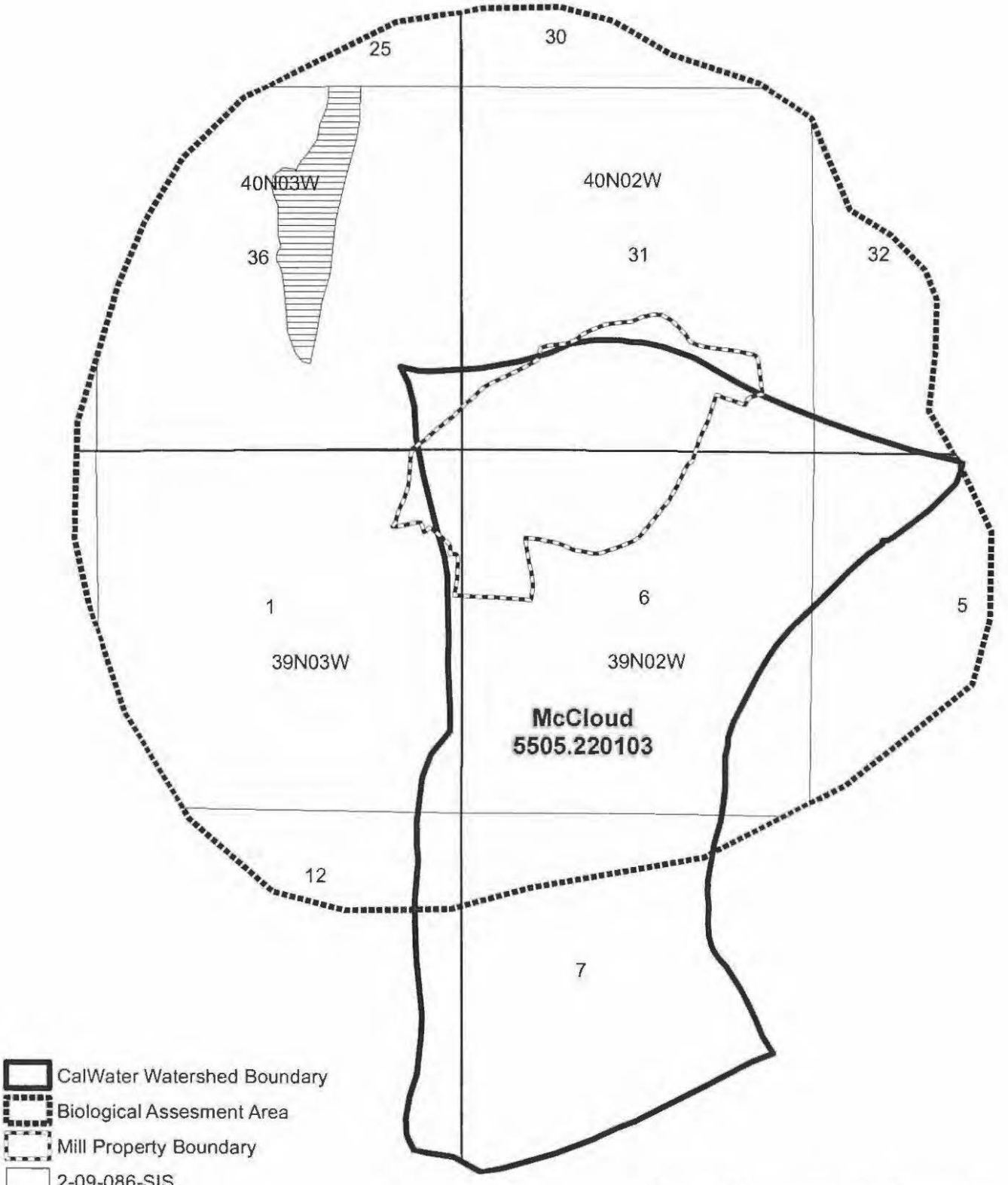
N

63 | McCloud Mill THP

McCloud Mill THP Past & Present Activities Map 3 of 7



McCloud Mill THP Past & Present Activities Map 4 of 7



McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

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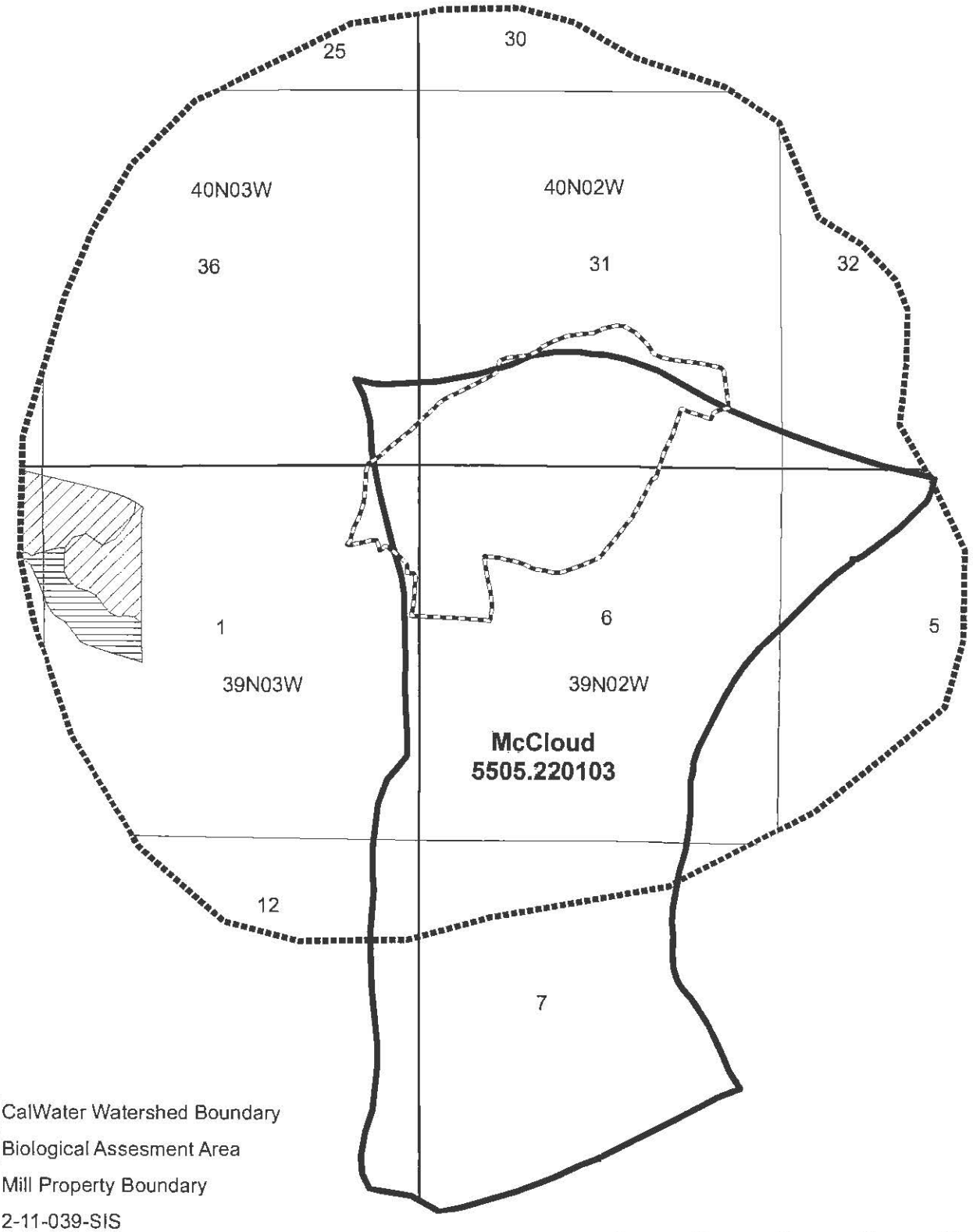
65 | McCloud Mill THP

McCloud Mill THP Past & Present Activities Map 5 of 7



CalWater Watershed Boundary
Biological Assesment Area
Mill Property Boundary
2-11-039-SIS
Intermediate Treatment
Unevenaged Mgt.
Evenaged Mgt.
Special Prescription & other mgt.

0 0.3 0.6 0.9 1.2 Miles

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

1:34,000

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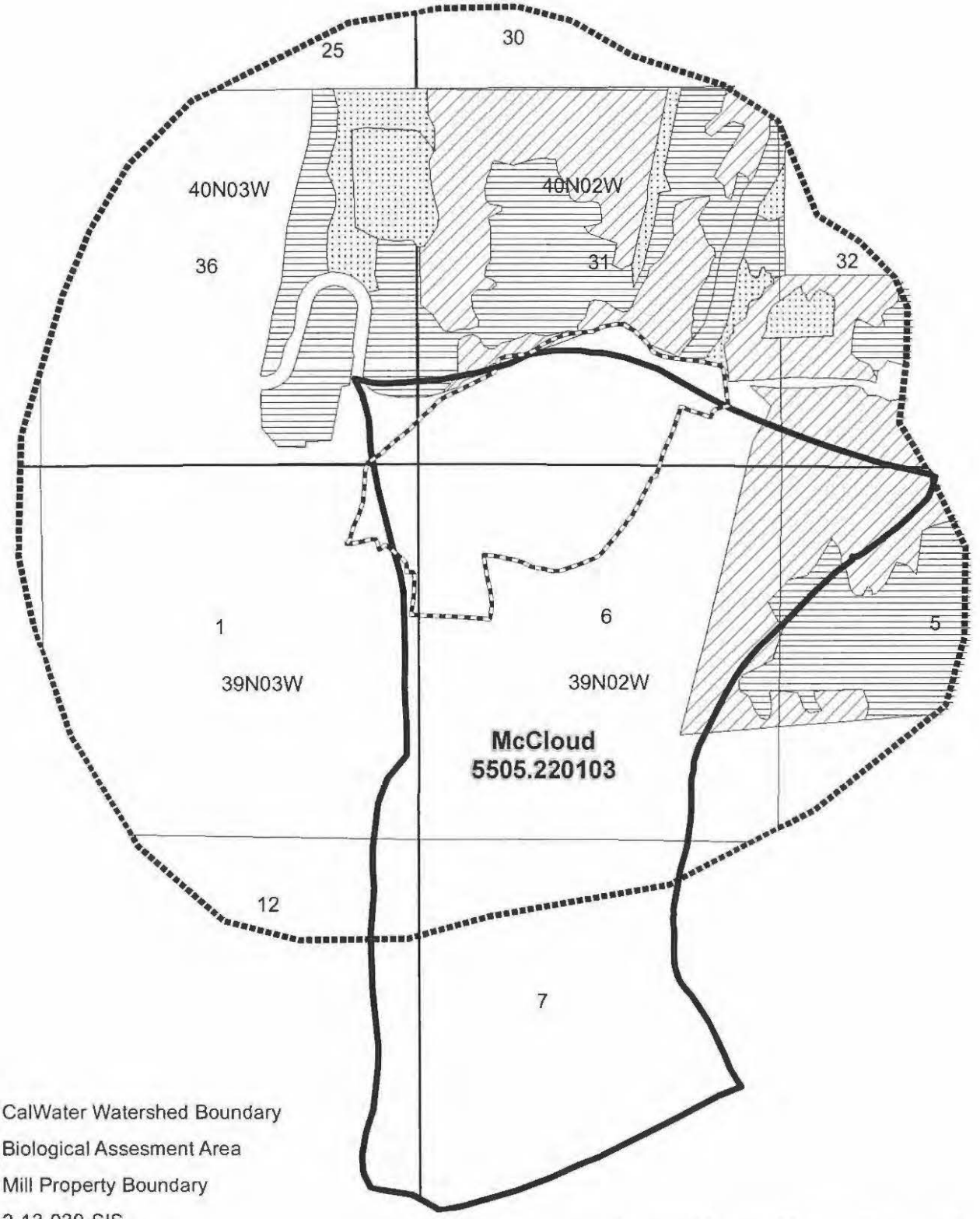
McCloud Mill THP Past & Present Activities Map 6 of 7



McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

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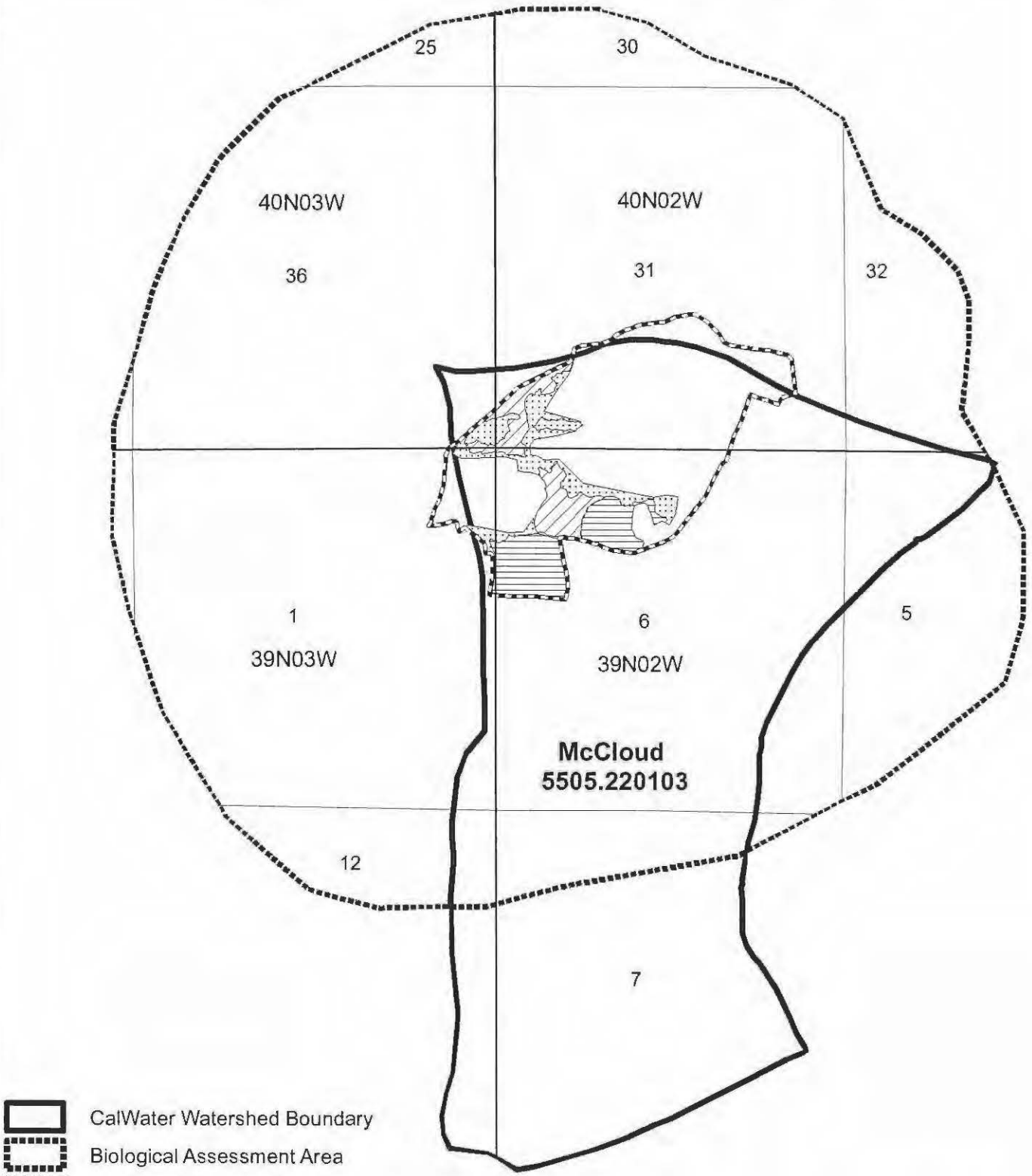
McCloud Mill THP Past & Present Activities Map 7 of 7



CalWater Watershed Boundary

Biological Assessment Area

McCloud Mill Property Boundary

Intermediate Treatment

Unevenaged Mgt.

Evenaged Mgt.

Special Prescription & other mgt.

0 0.3 0.6 0.9 1.2 Miles

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

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SECTION V

1. Erosion Hazard Rating Worksheet
2. CNDDB Map
3. Northern Spotted Owl Support Documentation
4. Domestic Waters Downstream Landowner Sample Letter
5. Adjacent Landowner List
6. Proof of Publication

McCloud Mill THP Erosion Hazard Rating Worksheet

Harvest Area	Shelterwood Removal	Commercial Thin	Selection
Soil Type	309/310	309/310	309/310
Soil Detachability	18	18	18
Soil Permeability	1	1	1
Depth to Restrictive Layer	1	1	1
% Surface Course Fragments Greater Than 2 MM	6	6	6
Sub Total	26	26	26
Slope Factor	1	1	1
Protective Vegetative Cover	3	3	3
Two Year, One-Hour Rainfall	5	5	5
Total Sum of Factors	35	35	35
Erosion Hazard Rating	L	L	L
Yarding Type	**Tractor**	**Tractor**	**Tractor**

A. Soil Texture	Fine	Moderate	Coarse
1 Detachability rating	Low	Moderate	High
	1 to 9	10 to 18	19 to 30
2. Permeability rating	Slow	Moderate	Rapid
	5 to 4	3 to 2	1
B. Depth to Restrictive Layer or Bedrock rating			
	Shallow	Moderate	Deep
	1" to 9"	20"to 39"	40" to 60"
	15 to 9	8 to 4	3 to 1
C. % Surface Coarse Fragments Greater Than 2mm in Size including Roads or Stones rating			
	Low	Moderate	High
	1 to 39%	40 to 70%	71 to 100%
	10 to 6	5 to 3	2 to 1

II. Slope Factor						
Slope rating	5 to 15%	16 to 30%	31 to 40%	41 to 50%	51 to 70%	71 to 80%
	1 to 3	4 to 6	7 to 10	11 to 15	16 to 25	26 to 35

III. Protective Vegetative Cover Remaining After Disturbance rating			
	Low	Moderate	High
	0 to 40%	41 to 80%	81 to 100%
	15 to 8	7 to 4	3 to 1

IV. Two year, one Hour Rainfall intensity (Hundredth inch) rating				
	Low	Moderate	High	Extreme
	(-)30 to 39	40 to 59	60 to 69	70 to 80(+)
	1 to 3	4 to 7	8 to 11	12 to 15

EHR Rating			
Low	Moderate	High	Extreme
<50	50 to 65	66 to 75	>75

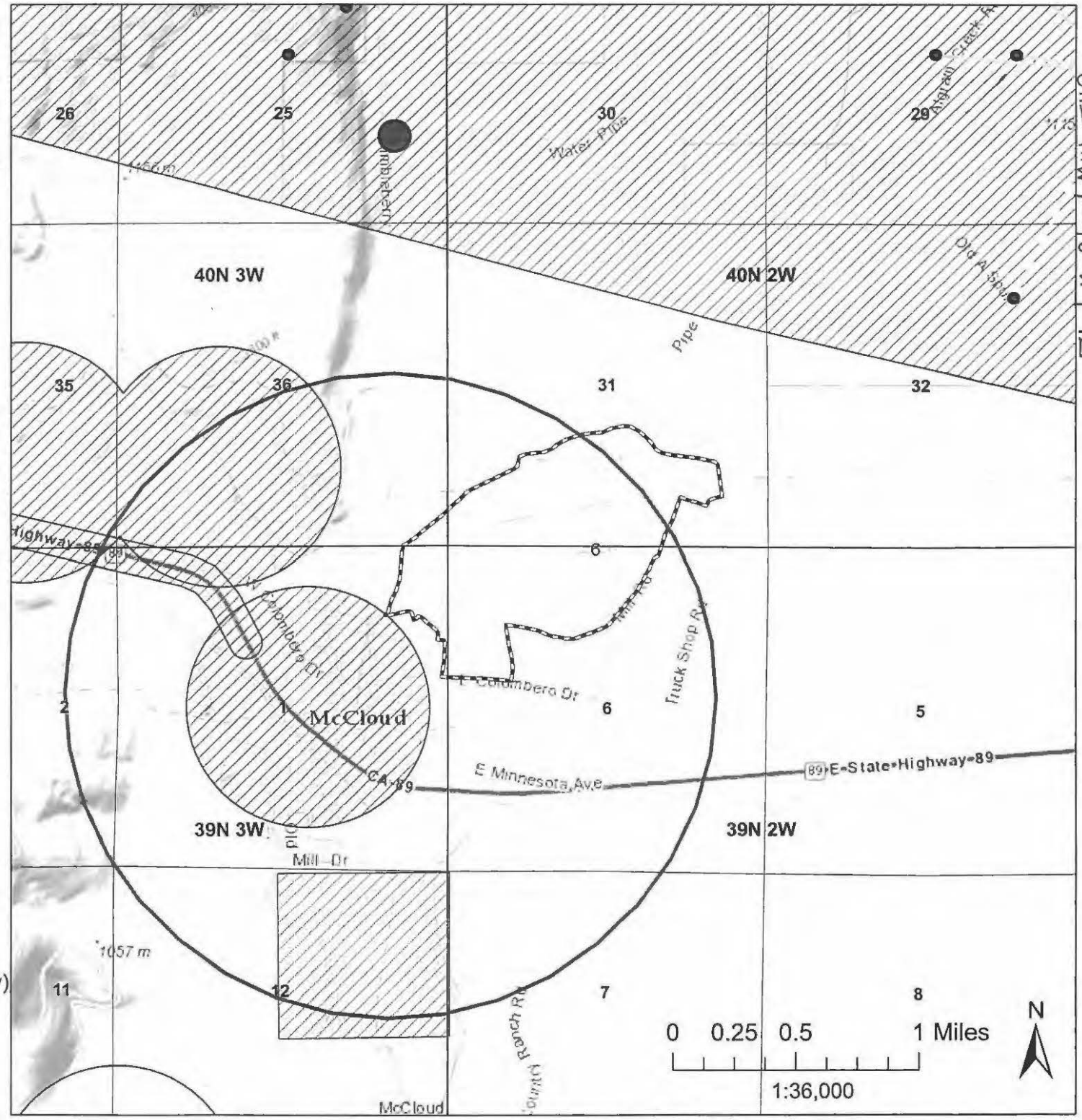
Soil Types (USDA from Soil Survey of Shasta-Trinity Forest Area, California Forest Service and soil Conservation Service)

310 Shastina Loam Family, Association 0-5% slope
309 Shasta Loamy Sand Family, Association 0-5% slope

McCloud Mill THP Area CNDDB Map

Legend

- McCloud Mill Property Boundary
- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)
- Spotted_Owl_Observations
- Spotted_Owl_Spider_Diagram



Gmail by Google

Black Fox <blackfoxtimber2@gmail.com>

FW: NSO Survey Exemption - Black Fox Timber Management

1 message

Brian Shaw <kpgco@charter.net> Tue, Sep 23, 2014 at 4:07 PM
To: Timothy English <timenglish@blackfoxtimber.com>, Katie Heman <katieheman@blackfoxtimber.com>
Cc: traviswizner@blackfoxtimber.com, jimmysmith@blackfoxtimber.com

Hi Tim,

Below is the response to our request to CALFIRE for the requirement/non-requirement for Northern Spotted Owl surveys for the McCloud Mills future THP.

Well – this went as well and as smooth as we hoped it would. They put SOE requests on the top of the pile, and it's good to see evidence of this, with their extremely quick response (3 days).

NSO surveys, as described by the CALFIRE biologist below – as per our request - will not be required for the future McCloud Mill THP. I do believe that this will make the client very happy!

Make sure to print e-mail out and submit it with the eventual THP that you submit to CALFIRE in Section V of the Plan, as Mike Bacca suggests below.

I sent the NSO CALFIRE – McCloud Mills submittal paperwork to you via e-mail to you yesterday, and have sent a hard copy to you as well in the mail.

So, very good news –

Have a good day,

Brian Shaw

Owner/Biologist

Klamath Wildlife Resources

1760 Kenyon Drive

Redding, CA 96001

530-244-5652 (Office)

72 | McCloud Mill THP

530-524-8474 (Cell)

From: Bacca, Mike@CALFIRE [mailto:Mike.Bacca@fire.ca.gov]
Sent: Tuesday, September 23, 2014 9:43 AM
To: kpgco@charter.net
Subject: FW: NSO Survey Exemption - Black Fox Timber Management

Brian,

Here is a response to your letter date Sept. 18, 2014 regarding the need for NSO surveys prior to the submission of the McCloud Mill Salvage, include this e-mail string and the information you sent CAL FIRE in section V of the plan with the other NSO information. Please let me know if you have any further questions

Michael J. Bacca, RPF #2236

Forester III, Cascade, Sierra & Southern Regions

Forest Practice Manager

CAL FIRE

California Department of

Forestry and Fire Protection

6105 Airport Road

Redding, CA. 96002

Phone (530) 224-2481

Fax (530) 224-4841

Cell (530) 941-7179

mike.bacca@fire.ca.gov

From: Stanish, Anastasia@CALFIRE
Sent: Tuesday, September 23, 2014 8:36 AM
To: Bacca, Mike@CALFIRE
Subject: NSO Survey Exemption - Black Fox Timber Management

Mike,

As you requested, I reviewed Klamath Wildlife Resources letter (dated 18 Sept 2014) request for exemption from NSO surveys for Black Fox Timber Management. Given the proposed project's location within the town of McCloud, a previous determination by USFWS for survey exemption in the same area, and overall lack of suitable habitat for NSO, the request for survey exemption is reasonable.

Let me know if you have any questions.

Stacy Stanish
Senior Environmental Scientist – Forest Practice Biologist
CAL FIRE
CA Department of Forestry and Fire Protection
6105 Airport Road

Redding, CA 96002

Anastasia.Stanish@fire.ca.gov

74 | McCloud Mill THP

Klamath Wildlife Resources

Date: 9/18/14

To: CALFIRE
6105 Airport Road
Redding, CA 96002
C/O Mike Bacca or
Spotted Owl Analyst/Wildlife Biologist

Subject: NSO Surveys Prospectively Not Needed For New THP, Siskiyou County

Hello Mr. Bacca,

As the consulting biologist and SOE (Brian Shaw) for Black Fox Timber Management out of McCloud CA, we have a new client that is planning to harvest timber right in the town of McCloud within the bounds of the Old McCloud Mill Site. Please see the following attached items to use for reference as part of this request for concurrence on our assertion that NSO surveys should not be required for this very small timber harvest planning area located within the city limits of the town of McCloud:

- USFS Location Map
- Air Photo Site Map
- Timber Harvest Boundary Map
- Spotted Owl Territory (CNDDB) Location Map
- Survey Exempt USFWS TA Letter from Hancock Forest Management

It is the finding of this SOE that due to the following reasons, that protocol NSO surveys should not be required for this small timber harvest plan on this McCloud Mill property. First of all, the area is listed as a "survey exempt" (no surveys) area for protocol NSO surveys within the September 22, 2011 USFWS Technical Assistance letter given to Hancock Forest Management Lands, which again is attached for your review. The sections that are listed within this "survey exempt" area are within the same sections that are proposed for a THP in the future for this subject property. Please see the attached maps that show that the following township/range/sections fall within these "survey exempt" sections listed within the TA letter:

T40N R3W, Section 36
T40N R2W, Section 31
T39N R2W, Section 6
T39N R3W, Section 1

As it further states in the Hancock USFWS TA letter, these sections are "exempt from survey" due to the fact that they "do not contain suitable nesting/roosting habitat or high quality foraging habitat AND are greater than .25 miles from suitable nesting/roosting habitat or high quality foraging habitat. It goes on to say that due to the poor condition of habitat contained with these sections and the very low occurrences of NSO in this portion of the NSO's range, exemptions from surveys and modification to seasonal restrictions are also possible; and that Survey results from both Hancock lands, other private lands and federal lands adjacent to these areas over the last two decades indicate that there are two historical NSO territories somewhat close to the property, but at over 1.5 miles away.

Due to these reasons that are already listed within an existing NSO USFWS TA, in addition to the fact that

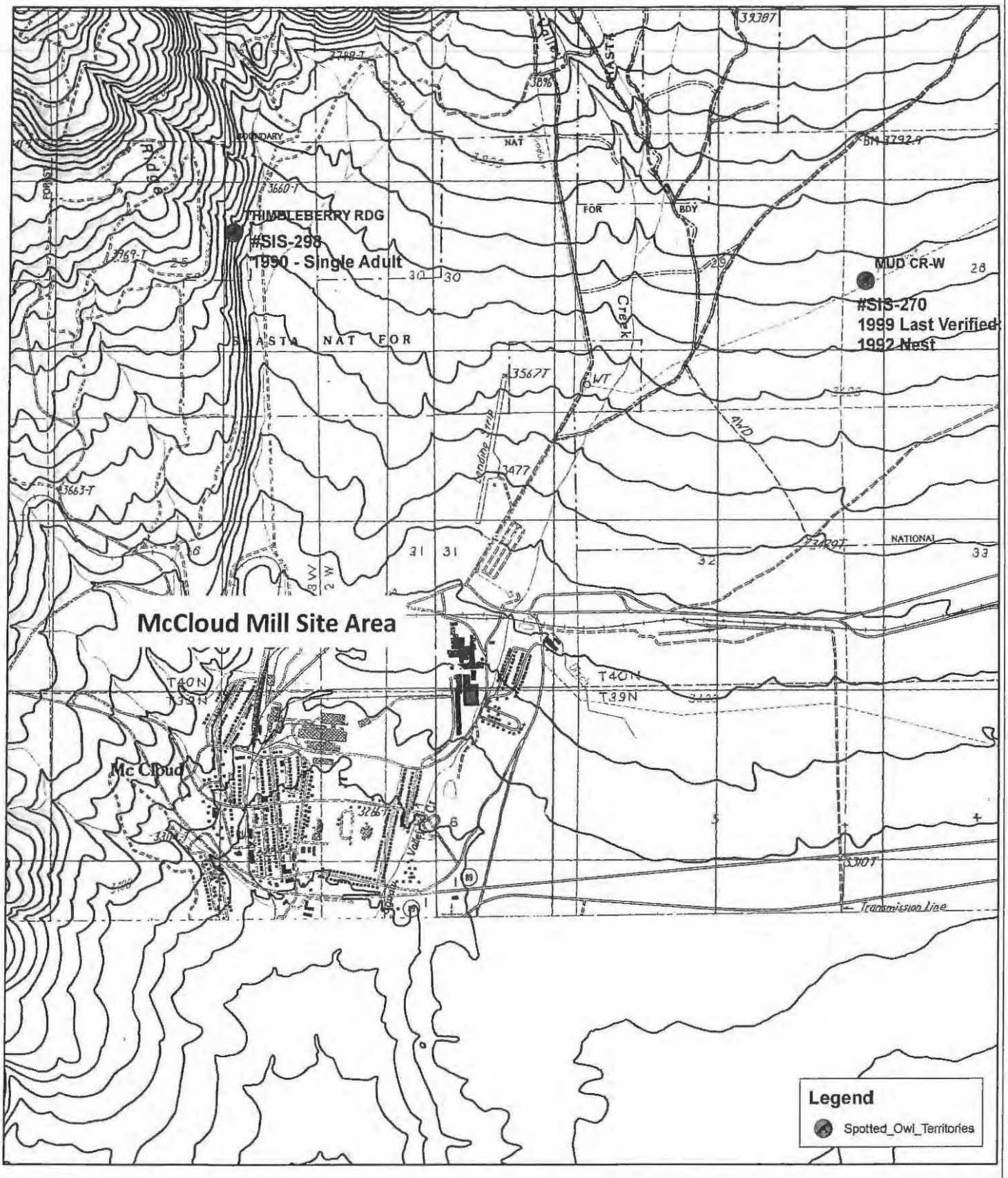
this property is far smaller than the entire Hancock timberland base, as well as the fact that it lies within the city limits of the town of McCloud (not typical habitat for NSO), it is the finding of this SOE on behalf of Black Fox Timber Management that protocol surveys for northern spotted owl should be exempted from this very small THP.

On additional important item is that this property, within the bounds of the town of McCloud is already zoned as "heavy industrial" and "non-TPZ land", as this was the former site of the McCloud Mill that thrived in McCloud for many decades.

Please contact SOE, Brian Shaw if any additional information is needed regarding this request for assistance/concurrence on this finding.

Thank you –

Brian Shaw
Spotted Owl Expert #29
Klamath Wildlife Resources

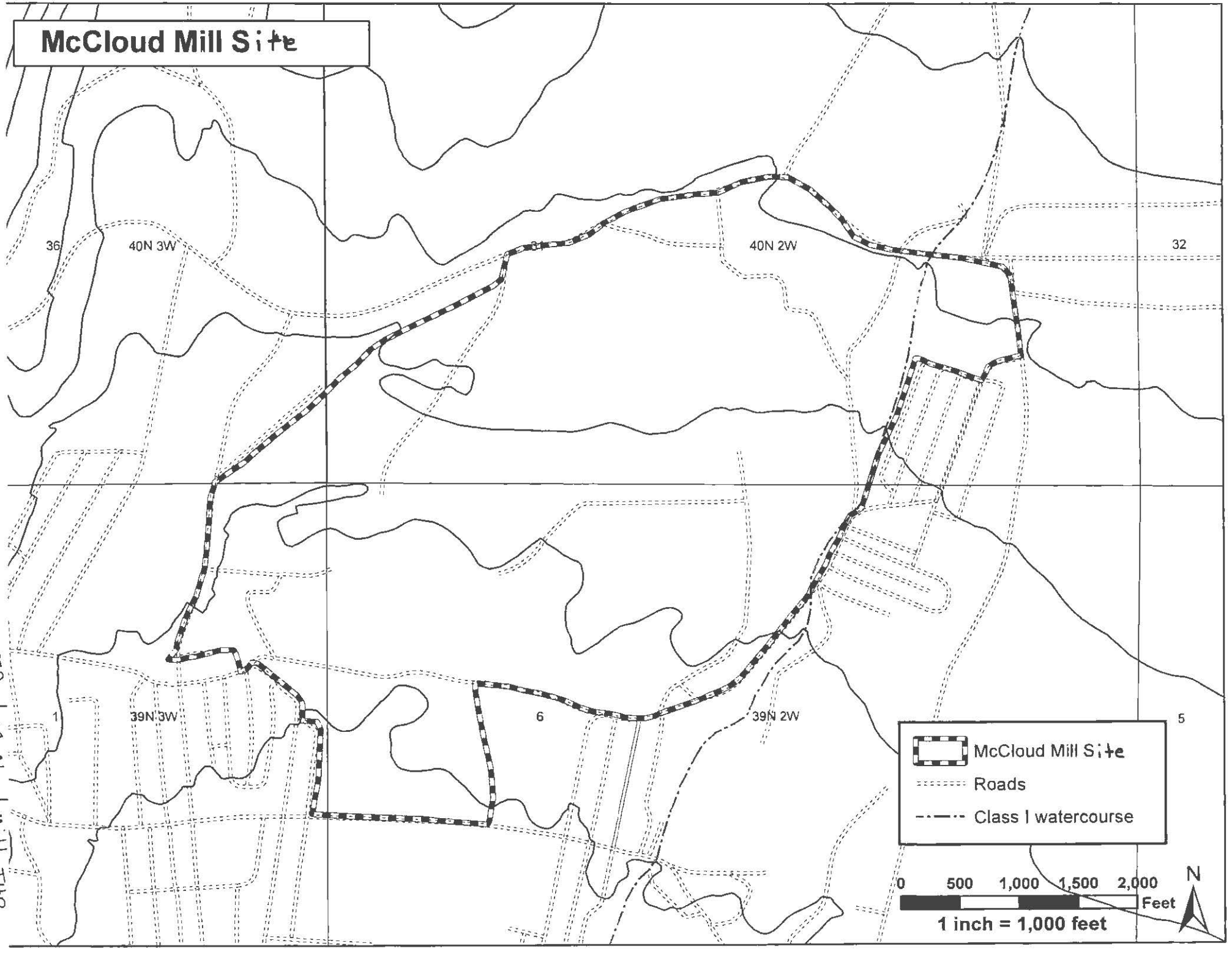


Map Prepared by: Brian Shaw
Spotted Owl Expert
Klamath Wildlife Resources
9/10/14

McCloud Mill Property Site THP Proposed Area And Nearest Historical NSO Territory Centers

0 0.3 0.6 1.2 Miles

McCloud Mill Site
40N 2W
M 96



79 | McCloud Mill THP

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Yreka Fish and Wildlife Office
1829 South Oregon Street
Yreka, California 96097
Tel: (530) 842-5763 Fax: (530) 842-4517

IN REPLY REFER TO:

81333-2011-TA-0026

September 22, 2011

Mr. Tim McBride
Hancock Forest Management
17700 SE Mill Plain Blvd., Suite 180
Vancouver, Washington 98683

Subject: 2011-2017 Modifications to Northern Spotted Owl Survey Requirements on Hancock Forest Management-Owned lands

Dear Mr. McBride:

This is in response to your request for U.S. Fish and Wildlife Service (Service) technical assistance, dated and received in this office on May 16, 2011. Supplemental information pertaining to this request was received on May 19, 2011, June 1, 2011, and September 12, 2011. A field review with Mr. Stuart Farber of W.M. Beaty & Associates and Ms. Jan Johnson, of my staff was conducted on August 30, 2011. Technical assistance for Hancock Forest Management-owned lands was previously provided on November 26, 2007 (81333-2007-TA-0013). At issue is the potential for incidental take of the federally listed northern spotted owl (*Strix occidentalis caurina*) (NSO). After reviewing the information, the Service offers the following technical assistance:

Your request proposes amending or updating the provisions described in the 2007 technical assistance letter to incorporate the following factors: Recently declared 'abandoned' activity centers, recent NSO habitat review utilizing 2008 U.S. Fish and Wildlife Service habitat guidelines, and the 2011 NSO Survey Protocol (2011 Protocol). Upon reviewing the data, air photos, GoogleEarth© imagery and field validation of habitat typing, the Service agrees that surveys and/or seasonal restrictions, as described in the 2011 Protocol on specified portions of Hancock ownership may be modified as follows (the following legal descriptions in bold below amend the 2007 technical assistance):

1. *Survey Exemption* ("Category 1"): For portions of the ownership that do not contain suitable nesting/roosting habitat or high quality foraging habitat AND are greater than 0.25 mile from suitable nesting/roosting habitat or high quality foraging habitat, surveys are not required. The portions of Hancock ownership meeting this description are located in the following sections of Siskiyou and Shasta Counties, M. D. B. & M:

80 | McCloud Mill THP

1, 2, 11, 12, and 14 of Township 39N, Range 03W;
3, 4, 5 and 6 of Township 39N, Range 02W;
27, 28, 35, and 36 of Township 40N, Range 03W;
14, 31, 32, 33, 34, 34, and 36 of Township 40N, Range 02W;
12 of Township 41N, Range 02W;
13, 14, and 17 of Township 41N, Range 01W;
32 of Township 42N, Range 01E;
4, 5, 6 and 7 of Township 41N Range 01E;
8, 18, 19, and 20 of Township 41N, Range 01E;
1 and 12 of Township 41N, Range 01W.

2. *Modified 0.25 mile Survey Areas or Modified Seasonal Restriction* ("Category 2"): This applies to portions of the ownership that do not contain suitable nesting/roosting habitat or high quality foraging habitat, BUT are less than 0.25 mile from suitable nesting/roosting habitat or high quality foraging habitat, surveys are required unless operations occur between July 10 and January 31 of any given year. If surveys are conducted, it is only necessary to survey those areas of suitable nesting/roosting habitat or high quality foraging habitat within 0.25 miles of the proposed operations. The portions of Hancock ownership meeting this description are located in the following sections of Siskiyou and Shasta Counties, M. D. B. & M:

   3, 10, 15, 22, 23, 26, 27, and 34 of Township 39N, Range 03W;
   36 of Township 39N, Range 01W;
   4 of Township 39N, Range 01E;
   14, 23, 26, 32, 33, and 34 of Township 40N, Range 03W;
   17, 20, and 29 of Township 40N, Range 02W;
   14, 15, 24, and 36 of Township 41N, Range 02W;
   1, 10-12, 15, 16, 18-24, 28, 29, and 31 of Township 41N, Range 01W;
   8, 16, 18, 19, and 28 of Township 41N, Range 01E;
   36 of Township 42N, Range 01W;
   16 and 30, of Township 42N, Range 01E.

3. *Modified 0.5 mile Survey Area* ("Category 3"): This applies to a limited portion of the ownership that does not contain suitable nesting/roosting habitat, but may contain high quality foraging habitat, AND is less than 0.25 mile from suitable nesting/roosting habitat or high quality foraging habitat. If future THPs ensure retention of high or low quality NSO foraging habitat post-harvest, a modified 0.5 mile survey area covering suitable nesting/roosting habitat or high quality foraging habitat within 0.5 mile of the proposed operations could occur. The limited portions of Hancock ownership meeting this description are located in the following sections of Siskiyou and Shasta Counties, M. D. B. & M:

   3 and 10 of Township 38N, Range 03W.

Exemptions from surveys and modification to seasonal restrictions are possible due to the poor condition of habitat contained within these sections and the very low occurrences of NSO in this portion of the NSO's range. Habitat on Hancock ownership, for the areas described, is largely unsuitable or of such a quality that NSOs are not expected to utilize it for nesting or roosting. Survey

results from Hancock and adjacent federal and non-federal landowners over the last two decades indicate that there are two historical NSO pair sites (SIS0319 and SHA0036) and one historical territorial single site (SIS0286) within 0.5 mile of Hancock exemption areas described above (California Department of Fish and Game 2011).

There are additional areas of Hancock ownership that meet the conditions described in the exemption areas above, but are not being considered under these modifications. For the portions of Hancock ownership not listed above, 2011 Protocol surveys of northern spotted owl nesting/roosting and high quality foraging habitat are required. Because of the high elevations of portions of the McCloud area, the Service understands that snow conditions on Hancock lands may preclude timing requirements described in the 2011 Protocol; we recommend Hancock clearly document access limitations on field forms when these situations occur.

The Service may request additional information or documentation at any time regarding the implementation of these modifications to the 2011 Protocol. The Service assumes all other provisions of the 2011 NSO Protocol will be met. With this understanding, the Service agrees that exemptions from surveys and modification of seasonal restrictions as described above are not likely to result in the incidental take of northern spotted owls. This concurrence is valid until December 31, 2017, or unless new information reveals effects to northern spotted owls in a manner or to an extent not considered in this analysis.

The Service appreciates the efforts taken by Hancock staff, the complete information provided for this review, and the opportunity for field review. All maps and data used to provide this technical assistance are on file at this office. If you have questions please contact Jan Johnson, Fish and Wildlife Biologist, at (530) 841-3102 or Jan_Johnson@fws.gov.

Sincerely,

for Erin

Erin Williams
Field Supervisor

cc: Mike Bacca, CAL FIRE
Jon Miller, CAL FIRE
Ray Wedel, CAL FIRE
Stuart L. Farber, W. M. Beaty & Associates

Sample

November 17, 2014

Herman & Candace Tuiolemotu,
Po Box 795
McCloud, CA 96057-0795

Dear Herman & Candace Tuiolemotu,

We are in the process of preparing the McCloud Mill Timber Harvest Plan (THP) for the landowners, McCloud Partners, LLC. The THP is in the McCloud planning watershed near Squaw Valley Creek on the northern side of the town of McCloud. The proposed plan area is in portions of Section 6 T39N, R02W, Section 1 39N R03W, section 31 T40N, R02W, and section 36 T40N, R03W(see attached map).

We are requesting that you provide any information to us as to the presence of surface domestic water use from the THP area, uses from Squaw Valley Creek or within an area 1000' downstream of the proposed THP. Domestic Water Use is defined by the Forest Practice Rules as:

> **Domestic Water Use** means the use of water in homes, resorts, motels, organization camps, developed campgrounds, including the incidental water of domestic stock for family sustenance or enjoyment and the irrigation of not more than one half acre in lawn, ornamental shrubbery, or gardens at any single establishment. The use of water at a developed campground or resort for human consumption, cooking or sanitary purposes is a domestic use.

Current state law and the Forest Practices Regulations require that we seek information from landowners within 1000' downstream of any proposed THP for the purpose of identifying surface domestic water uses that may be affected by the proposed THP. Current law also requires that we request your response within 10 days of the post-marked date of this letter.

If surface domestic water use is noted by you or other landowners, mitigation measures will be incorporated into the THP, if needed, to protect the domestic water use.

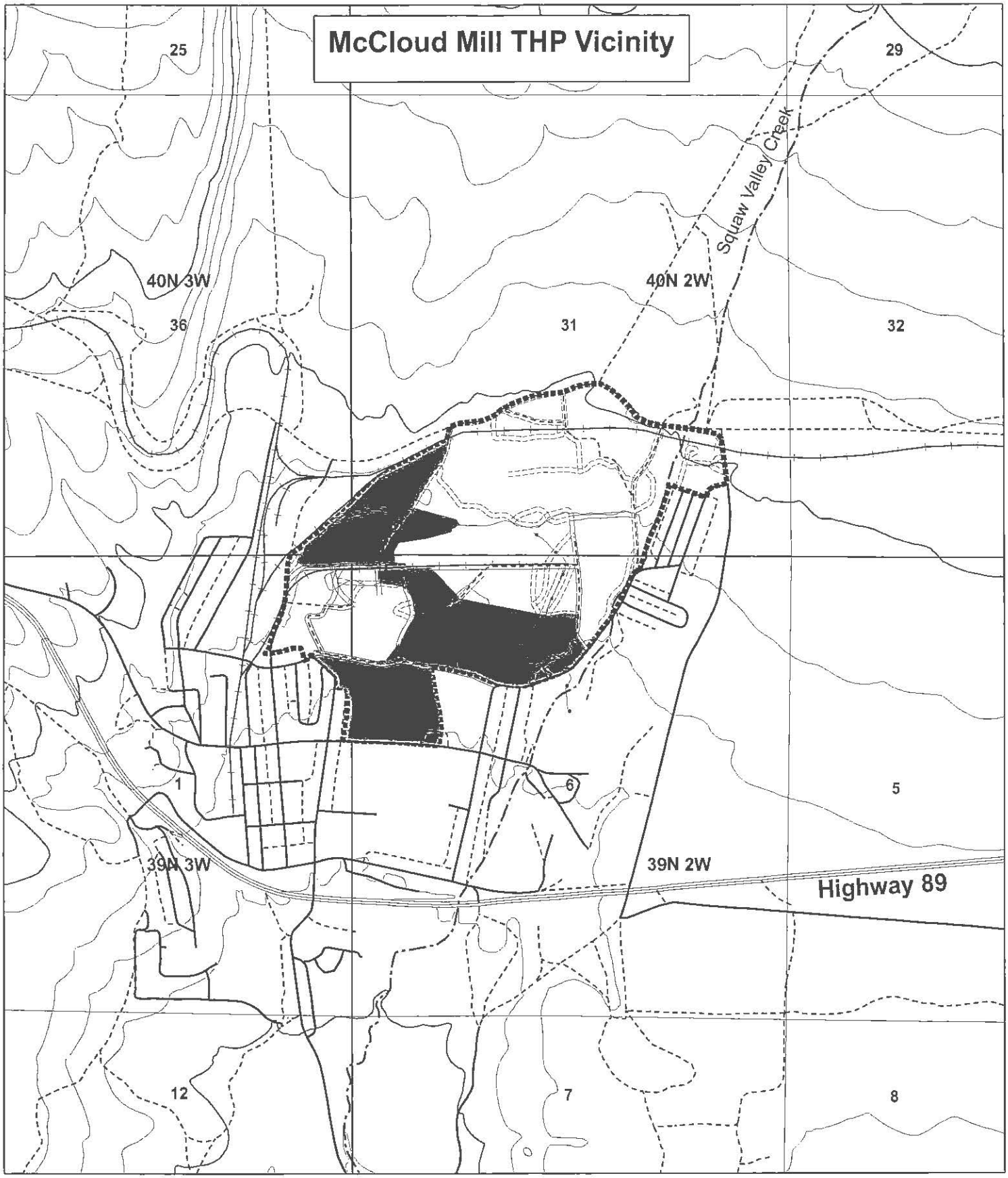
This THP is in the mid stages of preparation. There will be other opportunities for public comment on the THP after it has been submitted to CAL FIRE for their review and approval. Please contact CAL FIRE or their web site at www.fire.ca.gov for more information on the THP review process.

If you have any information or questions, please feel free to contact me at the phone number, email or address below.

Sincerely,

Katie Benson

Katie Benson
Black Fox Timber Mtg. Group
Po Box 687
McCloud, CA 96057
katieheman@blackfoxtimber.com
(530) 350-0801 Office
(530) 964-9757 Fax #


McCloud Mill THP Vicinity
25
29
Squaw Valley Creek
40N 3W
40N 2W
36
31
32
1
6
5
39N 3W
39N 2W
Highway 89
12
7
8
Mill Property Boundary
Harvest Area
Permanent Private Paved road
Permanent Private Rocked Road
Railroad, cinder, Private
Seasonal Rocked Roads
Permanent Paved Road
Highway
Class I watercourse
Class IV watercourse
0 1,000 2,000 3,000 4,000
Feet
McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998
1 inch = 2,000 feet
N
84 | McCloud Mill THP

Adjacent Landowners within 300 feet of the THP area

Harris, Carol A ETAL c/o Alice Styers
PO Box 175
McCloud, CA 96057-0175

Hancock Forest Management
PO Box 1950
McCloud, CA 96057

Harper, James H & Tammy M
975 Keegan Drive
Santa Rosa, CA 95407

McCloud Community Service District
Po Box 640
McCloud, CA 96057

Baker, Beatrice Bertha Trustee
Po Box 775
McCloud, CA 96057

McCloud High School District
624 Everitt Memorial Highway
Mt Shasta, CA 96067-2047

Smith, Dana C & April A Gray
PO Box 651
McCloud, CA 96057-0651

Peterson, Ted A & Janice L
6 Bluebell Street
American Canyon, CA 94503

Citizens Telecommunications CO CA
3 High Ridge Park
Stamford, CT 06905

McCloud Union School District
McCloud Elementary School
Po Box 700
McCloud, CA 96057

County of Siskiyou
305 Butte St.
Yreka, CA 96097

Four Rails Inc. C/O McCloud Railway Co
Po Box 1500
McCloud, CA 96057

Barbarick, Gary Lee
3775 Marcella Dr.
Auburn, CA 95602

Stone, Patricia A ETAL
Po Box 35
McCloud, CA 96057-0035

Bailey, James H & Neva C
Po Box 469
McCloud, CA 96057-0469

Berryman Dennis L & Jackie R Trust
Po Box 377
McCloud, CA 96057-0377

Taylor, Fredrick M & Mary Burr
5526 Dunsmuir Ave. #16
Dunsmuir, CA 96025

Tuiolemotu, Herman & Candace M
CP Contract #979869
Po Box 795
McCloud, CA 96057-0795

Moore, Michelle Reginal Britt c/o Herbert J Britt
Po Box 270
McCloud, CA 96057-0270

Hurley, James B
25 Norwich St.
San Francisco, CA 94110

Kerley, Charles Lindell Trust
440 Airport Rd.
Stevensville, MT 59870-6336

Fornero, Joseph & Judith L Trust
Po Box 98
McCloud, CA 96057-0098

Thompson, John M & Gertrude D
Po Box 423
McCloud, CA 96057-0423

Facey, Chester R & Marlene
1934 S. Old Stage Rd # 21
Mt Shasta, CA 96067

Huffman, Jack W & Nickie A ETAL
Po Box 441
McCloud, CA 96057-0441

Baldini, Randall
Po Box 369
McCloud, CA 96057

Roberts, David L & Elaine J
1934 S. Old Stage Road #30
Mt Shasta, CA 96067

Bergstrom, Harold & Lori
1480 Warington Road
Santa Rosa, CA 95404

Parks, Donna Rae Trust
Po Box 785
McCloud, CA 96057-0785

Farren, Richard G & Pamela J Trustee
809 Sir Francis Ave.
Capitola, CA 95010

Scouten, Dennis M & Shirley A
Po Box 182
McCloud, CA 96057-0182

Menke, Randy A & Kathleen R
5208 Badger Road
Santa Rosa, CA 95409

Bickley, Frank E & Joanne M
1550 Carmel Way
Red Bluff, CA 96080-3634

Carter, David J & Terri L Trust
23 Crest View Court
Orinda, CA 94563

Glynn, Dolores E Trust ETAL
Po Box 292
McCloud, CA 96057-0292

Gutsch, Richard T & Maureen G Trustee
2156 Contra Costa Court
Santa Rosa, CA 95405

Adjacent Landowners within 300 feet of the THP area

Wilson, Yvonne E & Donald L Trust
Po Box 901
McCloud, CA 96057-0901

Hall, Thomas L & Paula R
Po Box 537
McCloud, CA 96057-0537

Bovero, Kenneth A & Mary Michelle
28 Brown Drive
Novato, CA 94947-7404

Ferry, John Angelo Trustee
108 Creek View Ln.
Rogue River, OR 97537

Bambino, James & L E Trust
Po Box 1074
McCloud, CA 96057-1074

Napper, Gregory S & Carolyn O ETAL
1331 Quail Meadow Dr.
Mt Shasta, CA 96067

Powell, Thomas P
3964 Kiara Circle,
Fairfield, CA 94533

Hanson, Donald J & Mary Joyce
Po Box 5
McCloud, CA 96057

Purdy, Kim Elaine
710 Chesterfield Way
Rocklin, CA 95765

Morgan, Amy S.
3050 Wisconsin Street
Oakland, CA 94602

Huffman, Todd B & Marie A
5615 Cougar Way
Weed, CA 96094

Wolff, James H & Elizabeth W
Po Box 865
McCloud, CA 96057-0865

Blankenship, Clifford & Zacher Carol
3675 Seasons Ct.
Redding, CA 96001

Stewart, Sybil Elizabeth Trust
Po Box 884
McCloud, CA 96057

Adams, Thomas & Edith Ellen Trust
Po Box 601
McCloud, CA 96057

Truttman, Frank L Jr.
Po Box 144
Olema, CA 94950-0144

PROOF OF PUBLICATION
(2015.5 C.C.P.)

Mt. Shasta Area Newspapers
Mount Shasta Herald,
Weed Press, Dunsmuir News
STATE OF CALIFORNIA,
County of Siskiyou

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the Administrative Assistant of the Mt. Shasta Area Newspapers, newspapers of general circulation, published weekly in the cities of Mount Shasta, Weed, and Dunsmuir, County of Siskiyou, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Siskiyou, State of California, under the dates of: Mount Shasta Herald-July 9, 1951, Case Number 14392; Weed Press-June 22, 1953, Case Number 15231; Dunsmuir News-May 25, 1953, Case Number 15186; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspapers and not in any supplement thereof on the following dates, to-wit:

November 26,

all in the year 2014

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Mount Shasta, California,
this 26th day of November
2014.

Marella Gerace
Authorized Signature

THIS SPACE IS FOR THE COUNTY CLERKS' FILING STAMP

PROOF OF PUBLICATION OF

Domestic Water Supply Information Request

Black Fox Timber Management Group is currently preparing the McCloud Mill Harvest Plan (THP) in Siskiyou County. The THP is located on the north end of McCloud, CA. The legal description is: portions of Section 6, T39N, R02W, Section 1, T39N, R03W, Section 31, T40N, R02W, and Section 36, T40N, R03W, MDB&M. As per the California Code of Regulations Title 14 § 1032.10, information is requested regarding surface domestic water use from Squaw Valley Creek, or any other tributaries or ditches within the THP area or within 1,000 feet downstream of the THP boundary so that those supplies may be adequately protected during operations. Responses to this notice are requested within 10 days from the date of this publication. Please respond to: Katie Benson, Black Fox Timber Mtg. Group, PO

2-14-110515

ATTENTION

I. THE FOLLOWING ADDENDUM(S), AND INFORMATION IS REQUIRED BY LAW TO BE KEPT CONFIDENTIAL AND IS NOT FOR PUBLIC VIEWING:

ARCHEOLOGY:
(GOV. CODE 6254.10) & 14 CCR 929.1(a) (2))

PAGE 88 THROUGH PAGE 125

OPTION "A" TRADE SECRETS:
(GOV. CODE 6254.7(a))

PAGE_____ THROUGH PAGE _____

NTMP – TRADE SECRETS:
(GOV. CODE 6254.7(a))

PAGE_____ THROUGH PAGE _____

II. THE FOLLOWING NON-CONFIDENTIAL PAGES HAVE BEEN REMOVED FROM THIS THP/NTMP. THESE PAGES ARE AVAILABLE UPON REQUEST FROM THE DEPARTMENT OF FORESTRY & FIRE PROTECTION, 6105 AIRPORT RD., REDDING, CA 96002, OR CALL 530-224-2445.

OTHER(S)_____

PAGE_____ THROUGH PAGE _____

December 30, 2014

Deputy Chief, Forest Practice
California Department of Forestry
and Fire Protection
6105 Airport Road.
Redding, CA 96002

RE: THP 2-14-110-SIS
RPF Response to 1st Review Questions:

REVIEW TEAM QUESTIONS

RPF - Please provide the following information prior to the PHI (if a PHI is required) and have the information available in writing for the Review Team members prior to the PHI. Please also send a copy of your response to these questions to the Review Team in Redding. Failure to send a copy of these responses to the Redding office may result in delays of approval.

1. Page 4, Item #7: Per page 54 the THP is adjacent to a special treatment area. Therefore, please check "Yes" for "Special Treatment Area" and specifically address the proposed silviculture under Visual Resources in the Cumulative Impacts Analysis as it relates to Hoo Hoo Park...

RPF Response: RPF agrees with this statement. See revised pages 4 and 55. dated 12-30-2014.

2. Page 8, Item 14b provides two stocking standards for commercial thinning. Please revise the silviculture map on page 26 to identify where each stocking standard will be applied.

RPF Response: RPF agrees with this statement. The majority of the commercial thinning stands preharvest dominate and codominate crown canopy is occupied primarily by trees less than 14 in DBH. The areas where larger trees are mixed in are too small to map. Please see revised page 8. dated 12-30-2014.

3. Page 8-9, Item 14b states "*trees to be removed shall be marked with blue paint at DBH with a stump mark*". The item goes on to state that *a harvest unit shall not use both a leave tree and cut tree paint scheme unless separated*..... Please clarify how the harvest trees in each unit will be identified for harvest.

RPF Response: RPF agrees with this statement. See revised pages 8 and 9. dated 12-30-2014.

4. Page 12, Item #23: Item #23(b) states "Yes" with regards to site preparation occurring within the winter period. Additionally, the winter operations discussion addresses site preparation occurring within the winter period. This is in conflict with what is stated in Item #14(i). Please clarify this conflict and revise the appropriate THP pages.

RPF Response: RPF agrees with this statement. See revised pages 12 and 13. dated 12-30-2014

5. Page 14, Item 26. The plan proposes an ELZ for the Class IV watercourse. Please describe what heavy equipment operations are allowed in the ELZ.

RPF Response: RPF agrees with this statement. See revised page 15. dated 12-30-2014.

P.O. Box 687 - McCloud, CA 96057
Phone (530) 964-9756

6. Page 19, Item 32 Rare Plants. Is a floristic survey planned for the harvest area prior to operations? If so, please revise the plan to include amending the results of the survey into the plan prior to the start of operations.

RPF Response: No floristic survey is planned for the harvest area, this area is zoned for heavy industrial. A 9 quad search of plant species of concern that may potentially be affected by this harvest plan was completed using CNDDB and the CNPS inventories. See revised page 19. dated 12-30-2014

7. Section IV Cumulative Effects Analysis –Chemical Contamination: Please disclose if herbicides may be used as a part of or a result of this timber harvest plan. If herbicides may be used, please provide an analysis to address the following issues at minimum:
    a. Analyze the potential cumulative impacts associated with the proposed use of herbicides. Since the THP must evaluate these potential effects, please provide a discussion which evaluates cumulative impacts from herbicide use in conjunction with past, present and reasonably foreseeable future projects.
    b. The range of herbicides which may be used must be thoroughly discussed, including discussion of the methods of application, mitigation and the potential effects on the environment.
    c. Describe the application method. For example, application by aircraft is significantly different from hand application both in the materials used and the necessary mitigation measures which are to be followed. How will residual trees and watercourses be protected from herbicide drift if aerial application methods are used?
    d. Please also include information on the mitigation measures to be employed to prevent adverse impacts from occurring. For example, clarification as to the locations of spraying near waterbodies and measures included to avoid contamination.

RPF Response: No herbicides will be used as a part of or a result of this timber harvest plan, please see page 44 under "Other Activities". Also please see revised pages 46-47. dated 12-30-2014.

8. As this plan will not be approved prior to January 1, please ensure the NTMP is in conformance with the New Road Rules. The rules can be found at

    http://www.bof.fire.ca.gov/regulations/approved_regulations/2014_approved_regulations/roadrules2013.pdf

    http://www.bof.fire.ca.gov/regulations/approved_regulations/2014_approved_regulations/tra5_final.pdf

    A Q and A reference for the new road rules can be found at

    http://calfire.ca.gov/resource_mgt/downloads/RoadRules_Q&A_document(final).pdf

RPF Response: This THP will be in conformance with the New Road Rules.

9. **Comments to Landowner:** This plan may require coverage under the Central Valley Regional Water Quality Control Board's Conditional Waiver of Waste Discharge Requirements or other permit. Additional information may be found at (WQ):
    http://www.waterboards.ca.gov/centralvalley/water_issues/timber_harvest/

RPF Response: Landowners have been notified and any requirements or permits necessary will be followed and obtained.

10. Reorganize Confidential Archaeological Addendum (CAA) so that Parts 9 and 10 are collated before Parts 11 and 12.

Archaeologist Response: Archaeologist agrees with this statement.
RPF Response: RPF agrees with this statement please see revised pages 97-98. dated 12-30-2014.

11. Revise Part 9 of the CAA to include enforceable protection for the reported historic features. It is recommended that you include a flagged Equipment Exclusion Zone for each and provisions for directional felling adjacent trees away.

Archaeologist Response: Archaeologist agrees with this statement.
RPF Response: RPF agrees with this statement please see revised page 97. dated 12-30-2014.

12. Revise pagination on Location Map for site ARP-8-31-14-01 (P.110) to read Page 3 of 4.

Archaeologist Response: Archaeologist agrees with this statement.
RPF Response: RPF agrees with this statement please see revised page 110. dated 12-30-2014.

13. Revise site number on Continuation Sheet site ARP-9-1-014-01 (P.116) to include complete site number. Note that the "-01" is missing.

Archaeologist Response: Archaeologist agrees with this statement.
RPF Response: RPF agrees with this statement please see revised page 116 and also revised page 114 for pagination correction. dated 12-30-2014.

14. Revise pagination on the Location Map form in the site record for ARP-9-1-14-02 (P.119) to read Page 3 of 5.

Archaeologist Response: Archaeologist agrees with this statement.
RPF Response: RPF agrees with this statement please see revised page 119. dated 12-30-2014.

15. Revise Primary Record for CA-SIS-2325H, Resource Name line (P.122), to include the word "Update". Also revise pagination on Location Map in same record (P.124) to read Page 3 of 4.

Archaeologist Response: Archaeologist agrees with this statement.
RPF Response: RPF agrees with this statement please see revised pages 122 and 124. dated 12-30-2014.

Thank you.

Sincerely,

Timothy D. Cain
Forester, RPF #91
(530) 964-9756
info@blackfoxtimber.com

enc.

ERRATA SHEET 2-14-110-SIS

1. Replace pages 4 and 55 with revised pages 4 and 55 dated 12-30-2014.
2. Replace page 8 with revised page 8 dated 12-30-2014.
3. Replace pages 8 and 9 with revised pages 8 and 9 dated 12-30-2014.
4. Replace pages 12 and 13 with revised pages 12 and 13 dated 12-30-2014.
5. Replace page 15 with revised page 15 dated 12-30-2014.
6. Replace page 19 with revised page 19 dated 12-30-2014.
7. Replace pages 46 and 47 with revised pages 46 and 47 dated 12-30-2014.
10. Replace pages 97 and 98 with revised page 97 and 98 dated 12-30-2014.
11. Replace page 97 with revised page 97 dated 12-30-2014.
12. Replace page 110 with revised page 110 dated 12-30-2014.
13. Replace pages 114 and 116 with revised pages 114 and 116 dated 12-30-2014.
14. Replace page 119 with revised page 119 dated 12-30-2014.
15. Replace pages 122 and 124 with revised pages 122 and 124 dated 12-30-2014.

P.O. Box 687 - McCloud, CA 96057
Phone (530) 964-9756

Gouvea, Terri@CALFIRE

From: blackfoxtimber2@gmail.com on behalf of Katie Heman <katieheman@blackfoxtimber.com>
Sent: Monday, January 12, 2015 9:57 AM
To: Review Team Redding Inbox@CALFIRE
Subject: PHI Response for THP # 2-14-110-SIS
Attachments: MillPHI resopnses.pdf

Please see the attached PHI responses for the McCloud Mill THP # 2-14-110-SIS.

-- Thank you

Katie Benson

Black Fox Timber Mtg. Group
PO BOX 687
McCloud, CA 96057
katieheman@blackfoxtimber.com
530-350-0801 cell
530-964-9756 office
530-964-9757 Fax#

BLACK FOX TIMBER MANAGEMENT GROUP INC.

RECEIVED
JAN 12 2015
REDDING
FOREST PRACTICE

January 12, 2015

Deputy Chief, Forest Practice
California Department of Forestry
and Fire Protection
6105 Airport Road.
Redding, CA 96002

RE: THP 2-14-110-SIS
RPF Response to PHI Recommendations:

THP 2-14-110-SIS		
CAL FIRE PHI RECOMMENDATIONS		
☐ In conformance		
☐ Not in conformance – Denial Recommended		
☒ In conformance if recommendations are agreed upon		
PHI map attached as part of the recommendation?	Yes ☐	No ☒
Supplemental materials provided (CD's, aerial photos, etc)	Yes ☐	No ☒
RPF: Please respond to each recommendation provided below and indicate: (1) Whether or not you concur with the recommendation and (2) Provide any necessary revisions or documentation.		

The RPF shall:

1. Item 30, Hazard Reduction:

a) Add protection measures: Slash loading in the harvest areas shall be reduced by whole tree skidding, limbing shall take place on the log landings and that all residual timber harvest slash remaining on landings shall be disposed of through burning, chipping or removal.
RPF Response: **RPF agrees with this recommendation please see revised page 17 dated 01-12-2015.**

b) Add protection language for a 100 foot FPZ adjacent to the Public Roads and Special Treatment Zone surrounding the Municipal Hoo Hoo Park which requires the disposal of residual timber harvest slash greater than 1 inch in diameter through burning, chipping or removal.
RPF Response: **RPF agrees with this recommendation please see revised page 17 dated 01-12-2015.**

c) Remove the language addressing the extension of the FPZ burning requirements.
RPF Response: **RPF agrees with this recommendation please see revised pages 17, 28 and 37 dated 01-12-2015.**

d) Remove the language which states that 10% of slash piles may be left.
RPF Response: RPF agrees with this recommendation please see revised page 17 dated 01-12-2015.

P.O. Box 687 - McCloud, CA 96057
Phone (530) 964-9756

CONFIDENTIAL
PHI Recommendations – Archaeology
2-14-110-SIS McCloud Mill

1. As per 14CCR 949.1(c)(11). Specifically address the protection measures to be implemented both within the site boundaries and within 100 feet of the site boundaries and include the following protection measures: Trees harvested within the site boundaries shall be directionally felled away from the site and end-lined out of the site and trees within 100 feet of the site boundary shall be directionally felled away from the site.
   RPF Response: RPF agrees with this recommendation please see revised page 97 dated 01-12-2015.

2. Add the following protection measures to the historic railroad grade sites: Trees shall be directionally felled away and only existing skid crossings shall be used.
   RPF Response: RPF agrees with this recommendation please see revised page 97 dated 01-12-2015.

Thank you.
Sincerely,

Timothy D. Cain
Forester, RPF #91
(530) 964-9756
info@blackfoxtimber.com
enc.

ERRATA SHEET 2-14-110-SIS

1. Replace pages 17, 28 and 37 with revised pages: 17, 28 and 37 dated 01-12-2015.
2. Replace page 97 with revised page: 97 dated 01-12-2015.

P.O. Box 687 - McCloud, CA 96057
Phone (530) 964-9756

RECEIVED
JAN 2 6 2015
REDDING
FOREST PRACTICE

BLACK FOX TIMBER MANAGEMENT GROUP INC.

Reviewed by:
Dist by:
Dist. Date:
PU ___ PS
FS ___ TO
WO ___ TLO
ARCH LTO
RPF DMG
WSP. BOE
OTHER: ___
FPS
Status:

January 26, 2015

Deputy Chief, Forest Practice
California Department of Forestry
and Fire Protection
6105 Airport Road.
Redding, CA 96002

RE: THP 2-14-110-SIS
RPF Response to Second Review:

1st Review Question #1: Hoo Hoo Park is shown on map page 23. As per 14 CCR 1034(x)(14) please map the 200 foot special treatment area (STA) boundary around this park.
RPF Response: RPF agrees with this recommendation please see revised page 23 dated 01-26-2015.

1st Review Question #2: Page 37 Section III, Item 14. Please revise the stocking description for commercial thinning to be consistent with revised Item 14.b on page 8.
RPF Response: RPF agrees with this recommendation please see revised page 37 dated 01-26-2015.

Final review of the plan in anticipation of approval has revealed the following minor issues requiring clarification/revision. Please address the following:

Item 18, page 10. n) As there are no WLPZs on the THP area, please remove this statement.
RPF Response: RPF agrees with this recommendation please see revised page 11 dated 01-26-2015.

Item 23, page 13: Bullet point 11 states that exceptions may be proposed. Are exceptions proposed? If not please remove the last two sentences of this paragraph as they do not pertain to the plan.
RPF Response: RPF agrees with this recommendation, no exceptions are proposed; please see revised page 13 dated 01-26-2015

The RPF will grant an extension of the public comment period for 10 working days from the date CAL FIRE receives my response

Thank you.
Sincerely,

Timothy D. Cain
Forester, RPF #91
(530) 964-9756
info@blackfoxtimber.com
enc.

PART OF PLAN

ERRATA SHEET 2-14-110-SIS

1. Replace page 23 with revised page: 23 dated 01-26-2015.
2. Replace page 37 with revised page: 37 dated 01-26-2015.
3. Replace page 11 with revised page: 11 dated 01-26-2015.
4. Replace page 13 with revised page: 13 dated 01-26-2015.

APPENDIX C

TIMBER HARVESTING PLAN

FOR ADMIN. USE ONLY

1._____ 8._____
2._____ 9._____
3._____ 10._____
4._____ 11._____
5._____ 12._____
6._____ 13._____
7._____ 14._____

STATE OF CALIFORNIA
DEPARTMENT OF FORESTRY
AND FIRE PROTECTION
RM-63 (06-2018)

FOR ADMIN. USE ONLY

THP No. _____
Date Rec'd: _____
Date Filed _____
Date Approved _____
Date Expires _____

THP Name:

- If this is a MODIFIED THP [☐]
- Is this a MODIFIED THP for FUEL HAZARD REDUCTION [☐]
  If THP is any one of the modified types above complete appropriate modified checklists at end of general section

Extension: [ ] Am # 3

This Timber Harvesting Plan (THP) form, when properly completed, is designed to comply with the Forest Practice Act (FPA) and Board of Forestry and Fire Protection rules. All rule references are from Title 14 CCR; when cited, the form text will only make reference to the rule number itself. The THP is divided into six sections. See separate instructions for information on completing this form. **NOTE: The form must be printed legibly in ink or typewritten, an online version is available at** _____. Additional space may be inserted, as needed, to provide required information. Please distinguish answers from questions by *font change*, **bold** or underline.

SECTION I - GENERAL INFORMATION

This THP conforms to my/our plan and upon approval, I/we agree to conduct harvesting in accordance therewith. Consent is hereby given to the Director of Forestry and Fire Protection, and his or her agents and employees, to enter the premises to inspect timber operations for compliance with the Forest Practice Act and Forest Practice Rules.

1. REGISTERED PROFESSIONAL FORESTER:

RPF Signature: Robert Hutcheson Lic. No. 2302 Date July 26, 2019

RPF Printed Name: Robert Hutcheson Phone (530) 964-9756

Address 105 E. Minnesota Ave, PO Box 697 City McCloud State CA Zip 96057

Email: bobhutcheson@blackfoxtimber.com

2. LICENSED TIMBER OPERATOR(S): Name Unknown Lic. No. _____
(If unknown, so state. You must notify CAL FIRE, by amendment, of LTO prior to start of operations)

Address _____

City _____ State _____ Zip _____ Phone _____

Email: _____

Signature: _____

3. TIMBERLAND OWNER(S) OF RECORD: Name McCloud Partners LLC.

Address P.O. BOX 1810 (909 MILL ROAD)

City McCLOUD State CA Zip 96057 Phone 530 355-7600

Email: BRUCE@MCCP.IO

Signature: Bruce Berlin

4. TIMBER OWNER(S) OF RECORD: Name McCloud Partners LLC.

Address P.O. Box 1810 (909 Mill Road)

City McCloud State CA Zip 96057 Phone 530 355-7600

Email: Bruce@mccp.io

Signature: Bruce Berlinger

NOTE: The Timber Owner is responsible for payment of a yield tax. Per State of California Revenue and Taxation Code sections 38104 and 38115. Timber Yield Tax information may be obtained at: Timber Tax Section, MIC: 60, California Department of Tax and Fee Administration, P.O. Box 942879, Sacramento, California 94279-0060. Phone 1-800-400-7115 OR 1-916-274-3330. For Timber Tax information, please see our website at: www.boe.ca.gov/proptaxes/timbertax.htm.

5. PLAN SUBMITTER(S): Name Bruce Berlinger

The submitter is the person who owns, leases, contracts, or operates on timberland. If the submitter is not identified in (2), (3), or (4), above, an explanation of his/her authority to submit the plan should be provided in Section III. [1032.7(a) and 1034(e)].

Address P.O. Box 1810 (909 Mill Rd)

City McCloud State CA Zip 96057 Phone 530 355-7600

Email: Bruce@mccp.io

Signature: Bruce Berlinger

6. ON-SITE CONTACT: Name ~~Unknown~~ Bruce Berlinger

List person to contact on-site who is responsible for the conduct of the operations. If unknown, so state; name must be provided for inclusion in the THP prior to start of timber operations.

Address P.O. Box 1810 (909 Mill Rd)

City McCloud State CA Zip 96057 Phone 530 355-7600

Email: Bruce@mccp.io

Amendment

(Acknowlegements)

REGISTERED PROFESSIONAL FORESTER (RPF) RESPONSIBILITY ACKNOWLEDGEMENT

(As per 14 CCR § 1035.1)

RPF Certified to Provide Professional Advice:

Name: Robert D Hutcheson

Street Address/PO Box: 105 E. Minnesota Ave./P.O. Box 687 City: McCloud Zip Code: 96057

Telephone Number: (530) 925-9671 RPF Number: 2302

I have read and understand my responsibility as RPF, as described under 14 CCR § 1035.1(a)-(g). I agree to fulfill my responsibilities as an RPF as they pertain to this plan.

[X] Yes [ ] No I have been retained as the RPF available to provide professional advice to the licensed timber operator and timberland owner upon request throughout the active timber operations regarding: (1) the plan, (2) the forest practice rules, (3) and other associated regulations pertaining to timber operations.

RPF Signature: Robert D Hutcheson

6.(a) Expected date of commencement of timber operations: **Date of conformance of this amendment**

6.(b) Expected date of completion of timber operations: **February 9, 2020 or expiration of any extension that is granted**

8. LOCATION OF THE TIMBER OPERATION by legal description:

Base and Meridian: [X] Mount Diablo [☐] Humboldt [☐] San Bernardino

Section	Township	Range	Acreage	County	Assessor's Parcel Number (Optional)
6	**39N**	**2W**	59	Siskiyou	
1	**39N**	**3W**	4	Siskiyou	
31	**40N**	**2W**	45	Siskiyou	
36	**40N**	**3W**	4	Siskiyou	

TOTAL ACREAGE 112 (Logging Area Only)

9. ☒ Yes ☐ No Has a Timberland Conversion been submitted? If Yes, list expected approval date or permit number and expiration date if already approved. **Expected approval is September 1, 2019.**

13 e. After considering the rules of the Board of Forestry and Fire Protection and the mitigation measures incorporated in this THP, I (the Registered Professional Forester) have determined that the timber operation (**mark all that apply**):

[☐] will have a significant adverse impact on the environment. (Statement of reasons for overriding considerations should be contained in Section III).

[X] will not have a significant adverse impact on the environment.

[X] I certify that I, or my supervised designee, personally inspected the THP area, and this plan complies with the Forest Practice Act, the Forest Practice Rules and the Professional Foresters Law.

[☐] **If this is a Modified THP**, I also, certify that: 1) the conditions or facts stated in 1051 (a) (1) - (16) exist on the THP area at the time of submission, preparation, mitigation, and analysis of the THP and no identified potential significant effects remain undisclosed; and 2) I, or my supervised designee, will meet with the LTO at the THP site, before timber operations commence, to review and discuss the contents and implementation of the Modified THP.

Signature Robt D K Date Aug 5, 2019

SECTION II

14.(a)

Silvicultural Prescription	Acres
Shelterwood Removal Step	2
Commercial Thinning	16
Selection	34
Conversion	44
No Harvest	16
Total Acres	112

14.(d)
Areas to be harvested under conversion shall be flagged with blue and yellow flagging. All trees shall be harvested within these areas.

WATERCOURSE AND LAKE PROTECTION ZONE (WLPZ) AND DOMESTIC WATER SUPPLY PROTECTION MEASURES

Note: if any "item is answered "yes" provide the required information pursuant to the associated rule. Specific LTO **operational information** should be provided **in Section II. Explanation and justification** should normally be included **in Section III.**

26. a. ☒ Yes ☐ No

Are there any watercourses or lakes which contain Class I through IV waters on or adjacent to the plan area? If yes, as applicable, provide: the class, associated WLPZ or ELZ width, and protective measures; determined from 916.5 [936.5, 956.5] Table I, 916.4 (936.4, 956.4)(c), and/or 916.9 [936.9, 956.9] et seq. Specify if Class III or IV watercourses have a WLPZ or ELZ.

The discussion in the original THP said that the nearest point of the plan was within 372 feet of Squaw Valley Creek. The nearest point for the amended area is approximately 240 feet from Squaw Valley Creek. There are no watercourse within or adjacent to the amended area. One unclassified swale falls within the amended area. No protection was proposed in the original plan and none is proposed for the amended area. Other provisions discussed in Item 26.a. of the original plan are current.

28. a. ☒ Yes ☐ No

Are there any landowners within 1000 feet downstream of the THP boundary whose ownership adjoins or includes a class I, II, or IV watercourse(s) which receives surface drainage from the proposed timber operations? If Yes, the requirements of 14 CCR 1032.10 apply. Proof of notice by letter and newspaper should be included in THP Section V. If No, 28 b. need not be answered.

On February 6, 2019 publication was given to the Mt. Shasta Herald News of the amendment to the Old Mill THP. On January 25, 2019, "request for downstream domestic water use" letters were sent to adjacent landowners within 1,000 feet downstream of logging activities. See Section 5 of the THP for certificate of publication and copy of "request for downstream domestic water use" letters.

32. **NOTE:** See THP Form Instructions or the CDF Mass Mailing, 07/02/1999, section on "CDF Guidelines for Species Surveys and Mitigations" to complete these questions.

a. ☒ **Yes** ☐ **No** Are any plant or animal species, including their habitat, which are listed as rare, threatened or endangered under federal or state law, or a sensitive species by the Board, associated with the THP area? If yes, identify the species and the provisions to be taken for the protection of the species. For general protection of nest sites of sensitive species see 939.2(b)9c)(d) on page 23.

Animals

Northern Spotted Owl (*Strix occidentalis caurina*) (NSO):

Surveys for NSO for the original THP, were waived as a result of consultation with Stacy Stanish (CalFire Forest Practice Biologist). For the proposed amendment, Black Fox Wildlife Biologist Isidro Barela contacted Stacy Stanish to confirm that surveys would be waived for operations. She confirmed that no surveys would be required for operations under the amendment. See Section V (email).

Fisher (*Pekania pennanti*): CDFW Species of Special Concern, ESA Candidate

The fisher was previously listed as a Federal Endangered Species Act (ESA) candidate species from 2014 to 2016 until U.S. Fish & Wildlife withdrew the proposal. The fisher's federal status was removed and its state status remained a Species of Special Concern. In September 2018 as a result of a court ruling vacating The Service's 2016 decision to withdraw the fisher's candidacy, the proposal was reopened changing the fisher's federal status to an ESA Candidate. There are no new known occurrences within the THP area since the original THP approval according to CNDDB.

Townsend's Big-Eared Bat (*Corynorhinus townsendii*): CDFW Species of Special Concern, Federal Sensitive Species.

The Townsend's big-eared bat it is no longer a candidate under CESA. There are no new occurrences within the Biological Assessment Area for Townsend's big-eared bats since the original approved THP.

Sierra Nevada Red Fox (*Vulpes vulpes necator*): CESA Threatened, ESA Endangered

The Sierra Nevada red fox is now listed as Endangered with the Federal Endangered Species Act. No new observations of the red fox have been recorded with in the THP area according to CNDDB.

Gray Wolf (*Canis lupus*): CESA Endangered, ESA Endangered

The gray wolf was state listed under the CESA by the California Fish and Wildlife as "Endangered" on June 4th, 2014. The most recent wolf activity zone is outside of the plan area.

- **If an active den or rendezvous for this species is observed, all vegetation disturbing activities within 200 feet**

will be suspended and the RPF or representative will contact CDFW for consultations. The consultation will be amended into the plan as a minor amendment. Any incidental wolf sightings shall be reported to the California Department of Fish and Wildlife.

Northern Goshawk (*Accipiter gentilis*): CDFW Species of Special Concern

There are no known northern goshawk (NOGO) Acs within the Biological Assessment Area of the amendment. NOGO nesting habitat consists of old-growth forest with more than 60% closed canopy with breeding sites including Douglas-fir and aspen groves. During pre-harvest activities and harvest NOGOs will be watched and listened for. If a new NOGO active nest site is discovered the following protection measures will be implemented:

- CDFW will immediately be notified and a minor amendment will be filed.
- Within ¼ mile of the nest all vegetation disturbing activities will be suspended.
- Within 375-foot radius buffer all operations will be suspended.

Cascades Frog (*Rana cascadae*): Candidate Species CESA

The Cascades frog's breeding sites typically include areas of shallow still-water, lakes, ponds, and stream-associated wet meadow habitats. Oviposition typically occurs between April and July coinciding with spring snowmelt. Within the THP there is no known occurrences of the Cascades frog, but there are occurrences within the Biological Assessment Area according to CNDDB. Within the THP a class I watercourse (Squaw Valley creek) runs North to South on the East boundary of the THP area but outside of the amended and operational area. The watercourse is further than 250 feet away from the proposed THP amended area; therefore, this species is unlikely to be affected.

- If Cascades frogs are detected all operations within 100 feet of the watercourse will cease and Cal Fire shall be notified and the RPF will consult with Cal Fire and the DFW to establish protection measures.

Foothill Yellow-Legged Frog (*Rana boylii*): CESA Candidate

No known sighting of the foothill yellow-legged frog has been recorded within THP, however the Biological Assessment Area is within its distribution range according to consultation with CDFW Andrew Yarusso. Foothill yellow-legged frogs inhabit watercourse for movement, rarely traveling further than 10 feet from the watercourse, with the furthest distance recorded being 120 feet. Within the THP, a class I watercourse (Squaw Valley creek) runs North to South on the East boundary of the THP area but outside of the amended and operational area. The watercourse is further than 250 feet away from the proposed THP amended area; therefore, this species is unlikely to be affected.

- If the foothill yellow-legged frog is detected all operations within 120 feet will cease and Cal Fire shall be notified and the RPF will consult with Cal Fire and the DFW to establish protection measures.

Southern Long-Toed Salamander (*Ambystoma macrodactylum*): Federal Species of Special Concern

The southern long-toed salamander subspecies is known to occur in mixed Sierra Nevada coniferous forests and alpine communities above 6,500 Feet elevation. Long-toed salamanders utilize springs, ponds, small lakes, slow-moving steams, and marshlands for breeding and larval development. No known occurrences have been recorded for southern long-toed salamander within the THP, however a detection has been recorded within the Biological Assessment Area according to CNDDB. Within the proposed amended area, no aquatic habitat exists; therefore, this species is unlikely be affected by this amendment.

- If southern long-toed salamanders are detected within the THP all operations within 50 feet will cease and Cal Fire shall be notified and the RPF will consult with Cal Fire and the DFW to establish protection measures.

Plants

Scoping for rare plants was done in consultation with CDFW prior to submission of this amendment. This resulted in the survey list of seven plant species below. A survey was conducted by the RPF for these species on July 18, and 23, 2019. No rare or listed plant species were discovered during surveys. See description under "Scoping and Survey for Rare Plants", in amendment to Section V.

Survey Species from Scoping

Rattlesnake Fern (*Botrypus virginianus*) – State Rank S2, Rare Plant Rank 2B.2
Habitat for this species includes bogs and fens, lower montane coniferous firest (mesic), meadows and seeps, and riparian forests. It occurs at elevations ranging from 700-1200 meters. It has been found in the high Cascade range, Cascade range foothills, and the Klamath range.

Pallid Bird's-Beak (*Cordylanthus tenuis ssp. pallescens*) - State Rank S1, Rare Plant Rank 1B.2
This species is found on gravelly soil between shrubs in openings of lower montane coniferous forests and on roadsides. It occurs at elevations ranging from 1,100 to 1,600 meters. It is found near Mount Shasta and has a very limited known range.

Jepson's Dodder (*Cuscuta jepsonii*) – State Rank S1, Rare Plant Rank 1B.2
This species is a parasitic annual vine that is found on Ceanothus diversifolius, and Ceanothus prostrates. Elevational range is from 1200-2300 meters. It is possible that Jepson's dodder has been extirpated from the state. It has historically been found in the Klamath ranges, high north coast ranges, Cascade range foothills, high Cascade range, and the high Sierras.

Oregon Fireweed (*Epilobium oreganum*) – State Rank S2, Rare Plant Rank 1B.2.
This species is found in montane meadows and forest openings at elevations ranging from 1200-1850 meters. It is known to occur in the Klamath ranges and high Cascades range (Mount Shasta).

Aleppo Avens (*Geum aleppicum*) – State Rank S2, Rare Plant Rank 2B.2
This species occurs in meadows at elevations ranging from 1000-1600 meters. It is known to occur in the high Cascades range, the Modoc plateau, and the Warner mountains.

Marsh Skullcap (*Scutellaria galericulata*) - State Rank S2, Rare Plant Rank 2B.2
This species occurs in wet sites, meadows, streambanks, and conifer forests. It is known to occur in the Modoc Plateau region, the Warners, and the high Sierras at elevations ranging from 1,000 to 2,500 meters.

Siskiyou Clover (*Trifolium siskiyouense*) - State Rank SH, Rare Plant Rank 1B.1
This species occurs in wet mountain meadows in the Klamath Range. It is found at elevations from 800 to 1,400 feet.

Minimum Protection Measures (Unless Otherwise Specified): Sensitive plants are species that meet the definitions of rare, threatened, or endangered provided in the California Environmental Quality Act Guidelines (§15380, Title 14, California Code of Regulations) , which typically includes

California Rare Plant Rank 1A, 1B, 2A, 2B, and some 3 species, If a sensitive plant is discovered following approval of the amendment within the THP area , a Special Treatment Zone (STZ) consisting of a 50' buffer shall be flagged around the individual or group of plants using Special Treatment Zone flagging. No operations shall occur within the STZ unless a consultation with CDFW occurs as to specific mitigation measures. Trees bordering the STZ shall be directionally felled away from the zone. No herbicides shall be used within the STZ unless a consultation with CDFW occurs as to specific mitigation measures. No other protection measures are needed.

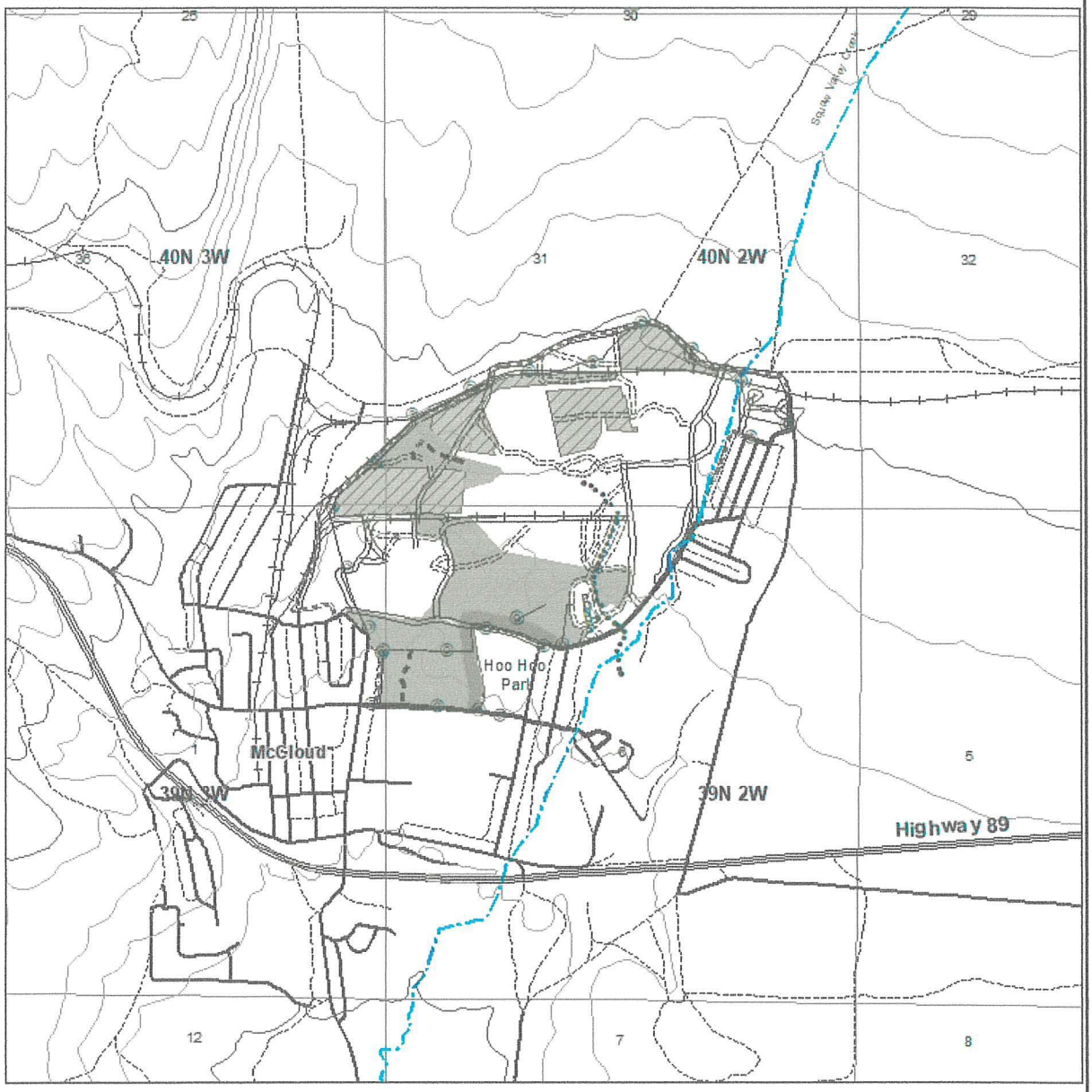
38 D) CalFire shall be notified of the commencement of timber operations at:

Siskiyou Unit (6)
Forest Practice Program Technician II
CALFIRE
P.O. Box 128
Yreka, CA 96097
Steve Wilson, Unit Forester
Forest Practice Inspector
530-598-2604

Date: 2/4/2019

McCloud Mill THP Vicinity (NOI) Map
T40N R03W Sec. 36 T40N R02W Sec.31
T39N R03W Sec. 1 & T39N R02W Sec.6 MDB&M

Created By: Katie Benson
Black Fox Timber Mgt. Group Inc.



McCloud Mill Property Boundary
THP Area
Amendment Area
Special Treatment Area
Class I watercourse
Class IV watercourse
Unclassified swale
Utility Lines
Highway
Permanent Private Road
Permanent Public Road
Seasonal Private Road
Seasonal Public Road
Railroad

0 750 1,500 2,250 3,000 Feet

1:24,000
1 inch equals 2,000 feet

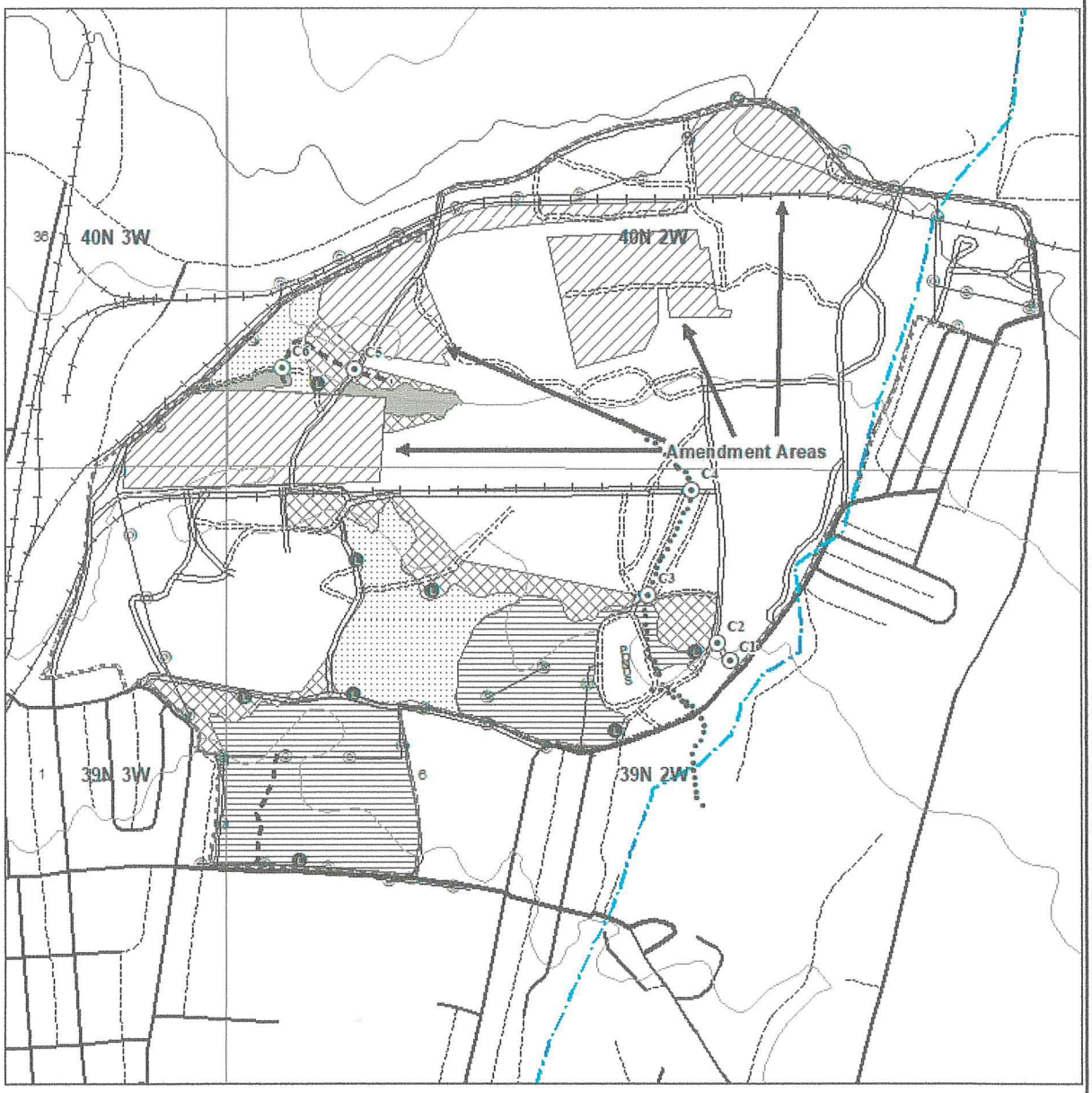
McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

N

Date: 2/4/2019

McCloud Mill THP
Silviculture & Operations Map

Created By: Katie Benson
Black Fox Timber Mgt. Group Inc.



McCloud Mill Property Boundary
Conversion Area
Commercial Thinning
Selection
Shelterwood Removal
Non Harvest

Class I watercourse
Class IV watercourse
Unclassified swale
Utility Lines
Culvert
Landing

Highway
Permanent Private Road
Permanent Public Road
Seasonal Private Road
Seasonal Public Road
Railroad

0 375 750 1,125 1,500 Feet

1:12,000
1 inch equals 1,000 feet

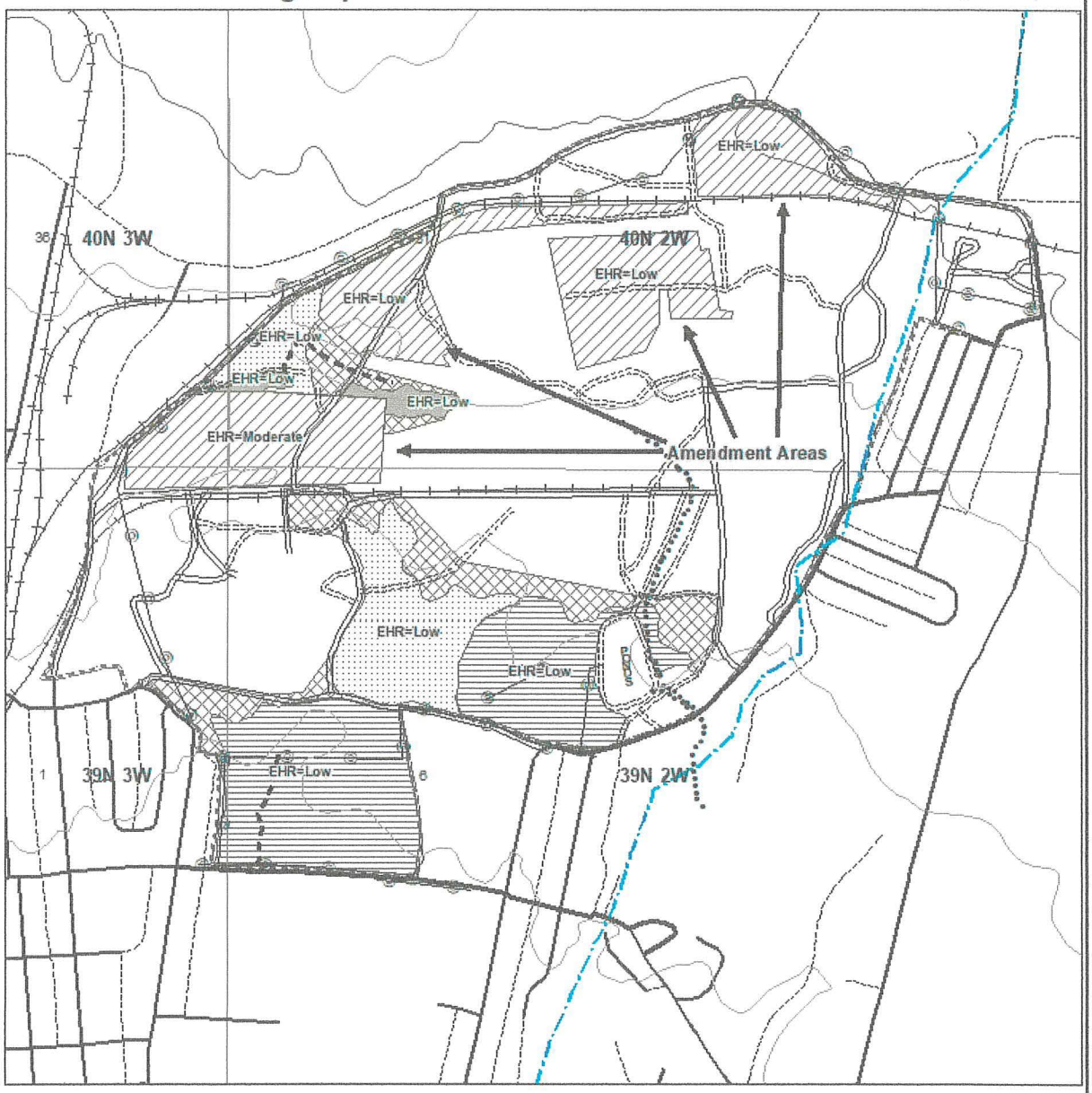
McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

N

Date: 2/4/2019

McCloud Mill THP
Site Classification & Erosion Hazard Rating Map

Created By: Katie Benson
Black Fox Timber Mgt. Group Inc.



McCloud Mill Property Boundary
Conversion Area
Commercial Thinning
Selection
Shelterwood Removal
Non Harvest

Class I watercourse
Class IV watercourse
Unclassified swale
Utility Lines

Entire Harvest Area is Site Class III

Highway
Permanent Private Road
Permanant Public Road
Seasonal Private Road
Seasonal Public Road
Railroad

0 375 750 1,125 1,500 Feet

1:12,000
1 inch equals 1,000 feet

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

N

SECTION III

TIMBER HARVESTING PLAN INTRODUCTION (14 CCR 1034(gg))
Section III

14 CCR 1034(gg) – A general description of physical conditions at the plan site, including general soils and topography information, vegetation and stand conditions, and watershed and stream conditions.

I. Project Location

The approved McCloud Mill Timber Harvest Plan (2-14-110 SIS) is approximately 88 acres. The amendment partially overlaps the approved plan but adds approximately 24 acres making a total amended area of 112 acres.

IV. Watershed and Stream Conditions

There is a Class I watercourse located just outside the plan area with a class IV watercourse that has potential to drain into the class I watercourse only during extreme high flood events. The class IV is typically dry throughout the year and has a thick layer of leaf litter throughout the channel, but has potential to flow during a rain on snow event. The class IV was designed for drainage from the mill to get to an old bark pond, and has the ability to be blocked off to maintain drainage on site. There are two unclassified swales within in the harvest area. The only watercourses within the Planning Watershed is the class I watercourse Squaw Valley Creek and the class IV watercourse that drains into the class I.

The watercourses within the watershed contain an overstory of mainly Ponderosa pine and mixed conifers of true firs and douglas fir with lesser amounts of sugar pine and incense cedar. Riparian zones also include conifers and more frequently brush. Generally, watercourses have a shade canopy that ranges between 60% and 90%. Sediment that is present in this watershed is the combined result of natural events, past historical and recent flooding and mudflows, and pre-Forest Practices Act human activities. The watercourse was impacted to varying degrees by the original operating sawmill and associated activities. Since Squaw Valley Creek flows through the town of McCloud there are very few timber harvesting activities that occur along the watercourse.

The streams and the watershed conditions adjacent to the plan have been assessed, and mitigations are proposed within this plan that will reduce any potential impact to a level of insignificance.

To reduce, mitigate, or avoid sediment production associated with this proposed THP, the following protection measures and management options have been selected:

- Maintenance of drainage structures on roads.
- Mulching and/or re-vegetation of potential sediment sources created by this THP.

The protection and mitigation measures included in this proposed Timber Harvesting Plan will protect the watershed from any adverse impact to the watershed and fisheries.

PROJECT ALTERNATIVES ANALYSIS

Project Description as Proposed - Conversion Area:

This amendment to 2-14-110 SIS is a proposal to convert 44 acres from functioning forest land to commercial use. The existing zoning for the proposed conversion area as well as the original THP is Heavy Industrial District. The amended area includes 20 acres of the original plan that has been logged under the plan. This

includes 8 acres that were logged under Commercial Thinning silviculture, 5 acres that were logged under Shelterwood Removal Step silviculture, and 7 acres that were designated "Non-Timberland Area" under the original plan.

Project Objectives:

The overall objectives of this project are to effectively manage the proposed THP area for the reduction of fire hazardous fuels using state-of-the-art forest practices, with due consideration for the conservation of biological and watershed resources. Operations on this project will ensure that watershed and biological resources will be protected. This THP is one part of an ongoing process to reduce fire fuels and enhance the utilization of this property while covering some of the cost by harvesting some of the timber.
Specifically, the objectives of this THP are:

- To maintain a balanced stand structure. The silvicultural prescriptions (even age and un-evenaged methods) incorporated within the plan are designed to improve forest stocking and health, and reducing fire fuels, while implementing the operational and conservation measures in the Forest Practices Act. This will generally be accomplished through forest management beginning with timber harvesting, followed by regeneration by natural and possible artificial means (tree planting), vegetation management, sanitation salvage of unhealthy/dying trees and pre-commercial thinning, as applicable.

- To harvest timber, while mitigating potentially significant impacts on the environment. Potential impacts that could result from timber harvest operations, including but not limited to wildlife habitat and fisheries, have been addressed. The THP as proposed, with all the mitigation measures adopted in the plan, will not result in significant adverse environmental effects. The plan has included resource protection measures that greatly exceed the current standard FPRs.

- To develop the commercial capacity of the property to include 1) a solar power generating facility, and 2) a manufacturing facility, as part of the overall ownership.

Statement of Purpose (Need for the Project):

The landowners' goal for this project is to reduce the fire fuel hazard and to remove the unhealthy trees and vegetation while harvesting some of the timber to balance the cost of the fuel reduction. The timber proposed for harvest will be sold and transported to one or more sawmills located in northern California and/or southern Oregon. Logs will then be manufactured into various wood products. The solar farm will contribute to energy independence and offset greenhouse gases. The manufacturing facility will contribute to the financial viability of the property.

It is critical that the landowner generate revenue from its timber to fund the cost of the fuel reduction along with ongoing property maintenance and property improvement projects. This project will not only help protect the structures and property on the McCloud Mill site but also the community of McCloud.

Cascades Frog (*Rana cascadae*): Candidate Species CESA

The Cascades frog's breeding sites typically include areas of shallow still-water, lakes, ponds, and stream-associated wet meadow habitats. Oviposition typically occurs between April and July coinciding with spring snowmelt. Within the THP there is no known occurrences of the Cascades frog, but there are occurrences within the Biological Assessment Area according to CNDDB. Within the THP a class I watercourse (Squaw Valley creek) runs North to South on the East boundary of the THP area but outside of the amended and operational area. The watercourse is further than 250 feet away from the proposed THP amended area; therefore, this species is unlikely to be affected.

- **If Cascades frogs are detected all operations within 100 feet of the watercourse will cease and Cal Fire shall be notified and the RPF will consult with Cal Fire and the DFW to establish protection measures.**

Fisher (*Pekania pennanti*): CDFW Species of Special Concern, ESA Candidate

The fisher was previously listed as a Federal Endangered Species Act (ESA) candidate species from 2014 to 2016 until U.S. Fish & Wildlife withdrew the proposal. The fisher's federal status was removed and its state status remained a Species of Special Concern. In September 2018 as a result of a court ruling vacating The Service's 2016 decision to withdraw the fisher's candidacy, the proposal was reopened changing the fisher's federal status to an ESA Candidate. There are no new known occurrences within the THP area since the original THP approval according to CNDDB.

SECTION IV

Page 39 II (C) Cumulative Impacts Assessment Checklist

Will the proposed project, as presented, in combination with past, present, and reasonably foreseeable probable future projects identified in items (A) and (B) above, have a reasonable potential to cause or add to significant cumulative impacts in any of the following resource subjects?

		Yes, after Mitigation (a)		No, after Mitigation (b)		No, reasonably potential significant effects (c)
1	Watershed					X
2	Soil Productivity					X
3	Biological			X		
4	Recreation					X
5	Visual			X		
6	Traffic			X		
7	Wildfire Risk and Hazard					X

(a) "Yes, after mitigation" means that potential significant adverse impacts are left after application of the forest practice rules and mitigation or alternatives proposed by the plan submitter.

(b) "No after mitigation" means that any potential for the proposed timber operation to cause significant adverse impacts has been substantially reduced or avoided by mitigation measures or alternatives proposed in the THP and application of the forest practice rules.

(c) "No reasonably potential significant effects" means that the operations proposed under the THP do not have a reasonable potential to join with the impacts of any other project to cause cumulative impacts.

The determinations made in the above table resulted from cumulative effects analysis contained in subsequent sections of this analysis. Mitigation strategies for each resource subject are summarized on the following page.

Page 40 Cumulative Impacts Assessment Checklist – Item(D) Mitigation Measures

Climate Change & Green House Gases-

The draft THP Greenhouse Gas Emissions Calculator released by Cal Fire and dated June 11, 2010, was used to predict potential environmental impact from greenhouse gas emission related to this project. The planning horizon is estimated at 1 years because no harvest will occur following conversion of the project area. The completed form follows. The results indicate carbon stocks will decline as a result of operations under this plan but will recoup within a period of 101 years. According to the model, planned operations in the project area over a 1-years will result in total Net emission/sequestration of -10.23 metric tonnes of carbon dioxide equivalent and sequestration of 409 metric tonnes of carbon dioxide equivalent. Since all trees are cut and no growth is projected, ending stocks for live trees and wood products is zero. Since this is a conversion assuming no retention following harvest and no reforestation requirement, this value must be adjusted to reflect only site prep emissions and non-biological emissions as follows:

Site Prep emssions	2.49
Non Biological emissions	0.18 (sum of harvesting and milling emissions)
Total emissions	2.67 metric tonnes per acre * 40 acres = 107 metric tonnes

Wildfire Risk and Hazard-

- Conversion areas will be cleared of vegetation in the course of completing the conversion to a solar farm.

Page 40 and 41

III. Identification of Resource Areas

Watershed Assessment Area:

The Watershed Assessment Area shall consist of CalWater version 2.2.1 planning watersheds McCloud (5505.220103) and Squaw Valley Creek (5505.220102).

Wildfire Risk and Hazard Area:

The assessment area for Wildfire Risk and Hazard shall be the same as the Watershed Assessment Area - CalWater version 2.2.1 planning watersheds McCloud (5505.220103) and Squaw Valley Creek (5505.220102), within which the THP lies.

Watershed Cumulative Effects Assessment

1) Beneficial Uses

There is one Class I that flows through the plan area. Squaw Valley Creek, a class I watercourse originates at approximately 8,500 on the south side of Mount Shasta. It is the only class I watercourse that flows through the McCloud watershed. The beneficial uses of water include:

- **Existing domestic water supply**
- **Existing cold freshwater habitat**
- **Existing cold spawning**
- **Existing wildlife habitat**

Squaw Valley Creek, the Class I watercourse within the assessment area north and south of highway 89 is hydrologically connected to the McCloud River. The McCloud River is above Shasta Lake. Shasta Lake is an anadromous fish barrier, but does harbor healthy populations of fish. All planning watershed above Shasta Lake are listed by the California Department of Fish and Game as non-restorable for anadromous fisheries. Therefore, the planning watershed where this project occurs is not considered a watershed with listed anadromous salmonids, and are not subject to that section of the Forest Practice Rules.

2) Watershed Resource Assessment Area Attributes:

General information regarding the McCloud and Squaw Valley Creek Planning Watersheds (PW's):

	McCloud	*Squaw Valley Creek*
Size (Acres)	1,340	10,985
Primary Channel Orientation	*North-South*	*North-South*
Minimum Elevation (Feet)	3,120	3,360
Maximum Elevation (Feet)	3,360	11,250
Downstream Planning Watershed	Pig Creek	McCloud
Hydrological Region	Sacramento River	Sacramento River
Hydrological Unit	McCloud River	McCloud River
Hydrological Area	Wyntoon	Wyntoon
CA 2.2 ID	5505.220103	5505.220102
Watersheds with listed anadromous salmonids	*No*	*No*
Anadromous Fish	*No*	*No*
303(d) Listed	*No*	*No*
2-Year 1-Hour Precipitation Intensity	*4" per hour*	*Range from 4" to 8" per hour at upper elevation*

Precipitation Attributes--Precipitation analyses for the WAA show that the area receives an average of approximately 50" of precipitation (snow) per year.

3) Current Stream Channel Conditions

There is one class I watercourse that runs through the WAA: Squaw Valley Creek. Squaw Valley Creek is a class I watercourse that is adjacent to the plan area. The closest point of the harvest area to Squaw Valley Creek is approximately 372 feet. The timber harvest plan area is located on the McCloud Mill property that has

a water drainage system that was designed to maintain water runoff from reaching the domestic water supply of the town of McCloud when the mill was actively operating. The Mill is no longer active however this water drainage system is still functional. There are two class IV ponds outside the harvest area that have a chain link fence around the perimeter of the ponds, no harvesting will take place within the fenced area. There is one unclassified swale located within the harvest area, no protection measures are being proposed. There is one class IV watercourses within the harvest area that is a drainage channel that originally was designed to carry water to an old bark pond on the south side of Squaw Valley Creek. This class IV watercourse is not known to carry water on a normal basis but has the potential on a rain on snow event. The protection measures for this class IV watercourse is a 15 ft. ELZ to ensure the integrity of the banks, therefore there shall not be any potential impacts to cumulative effects on beneficial uses of water.

4) Past, Present, and Future Activities

Past Forest Management and Timber Harvesting: The following THPs have been filed and/or operated on within the Watershed Assessment Area and/or Biological Assessment Area over the past 10-years:

THP# / Exemption #	TRS	Silviculture Acres in Assessment Area
2-09-086-SIS*	40N03W 14,23,24,36	ALT SS – 143 CC – 14 GS - 18
2-09-065-SIS*	39N02W 7, 5	CC-9 CT-16 GS-9 SEL-7
2-13-030-SIS*	40N03W 36 40N02W 17,20,29,31, 32 39N02W 6, 5	CT-409 GS-489 SS-70 NH-181 SEL-26 ALT STSS-39 ALT SWR - 18
2-14-001-SIS*	40N02W 17,19,30 40N03W 25	ALT CC – 183 SEL - 9
2-15-066-SIS	40N02W 7 40N03W 1,2,11,13,14	ALT CC – 214 CC – 69 ROW – 14 SEL - 9
2-15-068-SIS*	40N03W 2,11	ALT CC – 6 ROW – 0.4 SWR - 5
2-16-042-SIS*	40N03W 36	GS - 23
2-14EX-651-SIS	39N02W 6 39N03W 1 40N02W 31 40N03W 36	Harvesting dead, dying or diseased trees of any size, fuel wood, or split products in amounts less than 10 percent of the average volume per acre.
2-18EX-00904-SIS	40N02W 29,30	1038j Pilot Project (Sel) - 76

Note: * denotes plans that are only partially within the Assessment Areas. Abbreviations for silviculture methods are: CT-commercial thinning, CC-clear cut, SEL-selection, GS-group selection, REHAB- rehabilitation, SS-sanitation/salvage, STR-seed tree removal, SWR-shelterwood removal, ALT-alternative, SWSS- Shelterwood seed step, STSS-Seed tree seed step ROW-right of way, NH-No Harvest Area, CONV-Conversion.

Current Forest Management and Timber Harvesting: The following THPs have been filed and/or have current operations within the Watershed Assessment Area and/or Biological Assessment Area:

THP# / Exemption #	TRS	Silviculture Acres in Assessment Area
2-13-030-SIS*	40N03W 36 40N02W 31, 32 39N02W 6, 5	CT-435 GS-483 SS-70 NH-64 SEL-26 ALTSTSS-39
2-14-001-SIS*	40N02W 17,19,30 40N03W 25	ALT CC – 183 SEL - 9
2-15-066-SIS	40N02W 7 40N03W 1,2,11,13,14	ALT CC – 214 CC – 69 ROW – 14 SEL - 9
2-15-068-SIS*	40N03W 2,11	ALT CC – 6 ROW – 0.4 SWR - 5
2-16-042-SIS*	40N03W 36	GS - 23
2-15NTMP-003*	39N02W 6, 7, 12, 18	Asp/Mdw/Wet – 12 FB/Def Sp – 7 GS - 278
2-14EX-651-SIS	39N02W 6 39N03W 1 40N02W 31 40N03W 36	Harvesting dead, dying or diseased trees of any size, fuel wood, or split products in amounts less than 10 percent of the average volume per acre.
2-18EX-00904-SIS	40N02W 29,30	1038j Pilot Project (Sel) - 76

Note: * denotes plans that are only partially within the Assessment Areas. Abbreviations for silviculture methods are: CT-commercial thinning, CC-clear cut, SEL-selection, GS-group selection, REHAB- rehabilitation, SS-sanitation/salvage, STR-seed tree removal, SWR-shelterwood removal, ALT-alternative, SWSS- Shelterwood seed step, STSS-Seed tree seed step ROW-right of way, NH-No Harvest Area, CONV-Conversion, Asp/Mdw/Wet=Aspen/Meadow/Wet Area Restoration, FB/Def Sp = Fuelbreak/Defensible Space.

Reasonably Foreseeable Future Projects: ***The following project(s) will occur within the Watershed Assessment Area*** **and/or Biological Assessment Area:**

Hancock Forest Management plans a THP in S 14, 23, 24, & 26 of T40N R03W. No silviculture or acreage is available yet. Lands within the McCloud Mill THP Watershed Assessment Area are comprised of primarily private lands including Hancock Forest Management, Four Rails Inc. C/O McCloud Railway Company and many small private landowners. McCloud Partners LLC., owns approximately 281 acres representing 20% of the lands in the watershed assessment area. The property owned by the McCloud Partners LLC is zoned heavy industrial and not TPZ, so the potential of future timber harvesting occurring on this property is not very likely.

Other privately held timberlands within the WAA will continue to support periodic timber harvest and associated timberland management activities into the foreseeable future.

Wildfire Risk and Hazard Assessment

A. Assessment Area – The area chosen for the assessment of wildfire risk and hazard is the planning watershed (same as the Watershed Assessment). This area was chosen because of the proximity of the project and the town of McCloud which is the primary focus for the assessment of wildfire risk and hazard.

B. Background Information

- Fire Hazard Severity Zone – The project and surrounding State Responsibility areas are ranked as very high in terms of fire hazard severity according to the 2007 Fire Hazard Severity Rating map for Siskiyou County adopted by Cal Fire.
- Recent Fires – The following table summarizes recent fires in Shasta and Siskiyou affecting the general area in which the project lies. No significant fires were recorded within the assessment area.

Year-Name	Acres	Location
2006-Lakin Fire	54	26 miles NE of McCloud
2011 Ward Fire	550	4 miles S of Castella
2012 Bagley Fire	46,011	4 miles W of Big Bend
2014 Boles Fire	479	Weed
2015 Stephens Fire	200	18 miles NE of McCloud
2015 Military Fire	58	Military Pass Road
2016 Mill Fire	56	E of Weed
2017 Bradley Fire	54	Dunsmuir
2018 Carr/Hirz/Delta Fires	339,112	N Shasta County into the Sac. River Canyon
2019 Shastina Fire	127	N of Weed

- Existing Fuelbreaks and Hazard Reduction Activities –
  - There are several fuelbreak projects in the vicinity established by the local fire safe council that are in need of significant maintenance.
  - Pacific Forest Trust has done some fuel reduction activities on the Schroll timberlands including some roadside treatments south of McCloud.
  - Funding has be applied for to install fuel treatments along highway 89 west and east of McCloud.
  - USFS has ongoing prescribed burning on their lands including along highway 89 and Pilgrim Creek Road.
- Existing and probable future fuel conditions – The harvesting that was planned prior to this amendment for this THP has been completed including required fuels treatment. Surrounding areas are managed forest land containing a mosaic of timber types including uneven and even aged forest stands. Ground fuels are generally broken up by harvesting activity, although areas of continuous and semi-continuous brush exists in the assessment area. This combination of conditions is likely to persist.
- Road Access – The area is well roaded due to long history of forest management.

C. Affect of Proposed Treatments on Fire Risk and Hazard

The conversion of the proposed treatment to a non-forest use will result in fire breaks between the town and forest land to the north. Additionally, access improvements and ongoing maintenance associated with the solar farm will improve access to the area for the purpose of fire suppression and prevention activities. This results in a reduction of fire related risk to the community as well as a reduction in fire hazard. Therefore, it is the opinion of the RPF that the project as planned will not result in adverse impacts associated with wildfire risk or hazard.

This worksheet addresses the sequestation and emissions associated with the project area's balance of harvest, inventory, and growth plus any emissions associated with site preparation. Complete the input for Steps 0- 8 on this worksheet.

Forest Type				Harvest Periods	Inventory		Growth Rates		Harvest Volume	
Multipliers to Estimate Carbon Tonnes per MBF (Sampson, 2002)				Time of Harvest (years from project approval)	Conifer Live Tree Volume (MBF/Acre) - Prior to Harvest	Hardwood Live Tree Volume (BA square feet/Acre) - Prior to Harvest	Conifer Growth Rate BF/Acre/Year	Hardwood Growth Rate BA/Acre/Year	Conifer Harvest Volume (MBF/acre)	Hardwood Harvested / Treated Basal Area (BA/Acre)
Forest Type	Step 0. Identify the approximate percentage of conifers by volume within the harvest plan. Must sum to 100%	Multiplier from Cubic Feet (merchantable) to Total Biomass	Pounds Carbon per Cubic Foot	Step 1. Enter the anticipated future harvest entries. The re-entry cycles should be supported by management plan, if available.	Step 2. Enter the estimated conifer inventory (mbf/acre) present in project area prior to harvest.	Step 3. Enter the estimated hardwood inventory (basal area per acre) present in project area prior to harvest.	Step 4. Enter the average annual periodic growth of conifers between harvests based on estimated growth in management plan, if available. Must be entered for each harvest cycle identified in Step 1.	Step 5. Insert average annual periodic growth of hardwoods between harvests based on estimated growth in management plan, if available.	Step 6. Enter the estimated conifer harvested per acre at current and future entries. The estimate should be based on projections from the management plan, if available.	Step 7. Enter estimated hardwood basal area harvested/treated per acre
Douglas-fir	50%	1.675	14.38	0	1.7	0	0	0	1.7	0
Redwood	50%	1.675	13.42	0	0	0	0	0	0	0
Pines	0%	2.254	12.14	0	0	0	0	0	0	0
True firs	0%	2.254	11.18	0	0	0	0	0	0	0
Hardwoods		2.214	11.76	0	0	0	0	0	0	0
Conversion of Board Feet to Cubic Feet	0.165	Pounds per Metric Tonne	2.204	0	0	0	0	0	0	0
Multipliers to Estimate Total Carbon Tonnes per MBF	Conifer	1.74		0	0	0	0	0	0	0
	Hardwoods	1.95		0	0	0	0	0	0	0
Multipliers to Estimate Merchantable Carbon Tonnes per MBF	Conifer	1.04		0	0	0	0	0	0	0
	Hardwoods	0.88		0	0	0	0	0	0	0

User must enter harvest cycles to 100 years and/or at least three entry cycles.

Harvest Periods	Inventory Conversion to Carbon (prior to harvest)		Inventory Conversion to Carbon Dioxide Equivalent (prior to harvest)		Site Preparation	
	Conifer Live Tree Tonnes (C/acre)	Hardwood Live Trees Tonnes (C/acre)	Conifer Live Tree Tonnes (CO_2 equivalent/acre)	Hardwood Live Tree Tonnes (CO_2 equivalent/acre)	Step 8. Enter the value (in bold) for each harvest cycel that best reflects the site preparation activities, as averaged across the project area:	
from above (Time of Harvest as years from project approval)	Computed: MBF * Conifer Multiplier from Step 0.	Computed: BA *Volume/Basal Area Ration (to convert to MBF) * Hardwood Multiplier from Step 0.	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Computed: Conversion of carbon to CO_2 (3.67 tonnes CO2 per 1 tonne Carbon)	Heavy- 50% or more of the project area is covered with brush and removed as part of site preparation or stumps are removed (mobile emissions estimated at .429 metric tonnes CO2e per acre, biological emissions estimated at 2 metric tonnes CO2e per acre) Medium - >25% <50% of the project area is covered with brush and removed as part of site preparation (mobile emissions estimated at .202 metric tonnes CO2e per acre, biological emissions estimated at 1 metric tonne per acre). Light - 25% or less of the project area is covered with brush and is removed as part of site preparation (mobile emissions estimated at .09 metric tonnes CO2e per acre, biological emissions estimated at .5 metric tonnes per acre). None - No site preparation is conducted.	
0	3	0	11	0	Heavy	-2.49
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	none	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
0	0	0	0	0	None	0
	Difference between ending stocks and beginning stocks		-11	0.00	Sum of emissions (Metric Tonnes CO2e) per acre	-2.49

Project Carbon Accounting: Harvesting Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 9- 14 on this worksheet.

Harvest Periods	Falling Operations	Production per Day	Emissions Associated with Yarders and Loaders			Emissions Associated with Tractors and Skidders			Emissions Associated with Helicopters			Landing Saws	Trucking Emissions		
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	**Assumption:** ((.25 gallons gasoline per MBF harvested * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* mbf per acre harvested	MBF (all species) Yarded Delivered to Landing	**Assumption:**(((35 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (((55 gallons diesel per day per piece of equipment * 6.12 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (((200 gallons jet fuel per day per piece of equipment * 5 pounds carbon / gallon)/2205 to convert to metric tonnes carbon)* 3.67 to convert to metric tonnes CO2 equivalent)/Production per Day			**Assumption:** (((.16 gallons gasoline per MBF * 5.33 (pounds carbon per gallon))/2205(conversion to metric tonnes)* 3.67 to convert to metric tonnes CO2 equivalent)/mbf per acre harvested. Applies to all species whether harvested or not.	**Assumption:** Round Trip Hours/Load average (from below, to compute the mbf/hour) /((6 gallons diesel/hour * 6.12 pounds carbon/gallon)/2205 (conversion to metric tonnes carbon))*3.67 (conversion to metric tonnes carbon dioxide equivalent)		
	Computed. Metric Tonnes CO2 equivalent per mbf harvested Applies to all species whether harvested or treated	**Step 9.** Enter the estimated volume delivered to the landing in a day.	**Step 10.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Yarders and Loaders CO2 equivalient/mbf (metric tonnes)	**Computed.** Yarders and Loaders CO2 equivalent per Acre Harvested (metric tonnes)	**Step 11.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Tractor and skidder CO2 equivalient/mbf (metric tonnes)	**Computed.** Tractors and Skidders CO2 equivalent per Acre Harvested (metric tonnes)	**Step 12.** Enter number of pieces of equipment in use per day for each harvest entry	**Computed.** Helicopter CO2 equivalient/mbf (metric tonnes)	**Computed.** Helicopters CO2 equivalent per Acre Harvested (metric tonnes)	**Computed.** Landing Saws CO2 equivalent per Acre Harvested (metric tonnes)	**Steps 13 and 14 below**		**Computed.** Estimated Metric Tonnes CO2e per harvested acre for each harvesting period.
0	(0.00)	15	1	-0.02	-0.04	1	-0.04	-0.06	0	0.00	0.00	0.00	**Step 13.** Enter Estimated Load Average: MBF/Truck	4.2	-0.026962099
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00	**Step 14.** Enter Estimated Round Trip Haul in Hours	4	0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
0	-	0	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0.00			0
Sum Emissions	0.00				-0.04			-0.06			0.00	0.00			-0.03

Project Carbon Accounting: Harvested Wood Products and Processing Emissions

This worksheet addresses the non-biological emissions associated with the project area's harvesting activities. Complete the input for Steps 15- 16 on this worksheet.

Harvest Periods	Quantity of Forest Carbon Delivered to Mills				Non-Biological Emissions Associated with Mills	Quantity of Forest Carbon Remaining Immediately After Milling (Mill Efficiency)		Long-Term Sequestration in Wood Products	
	Conifer Percentage Delivered to Mills	Hardwood Percentage Delivered to Mills	Conifer CO2e Delivered to Mills / Acre	Hardwood CO2 equivalent Delivered to Mills / Acre	Assumption. 20 kw/hour (mill energy use) /(40mbf lumber processed/hour) *(.05 metric tonnes/kw hour) * mbf processed	Computed. Remaining CO2 equivalent after Milling Efficiency for Conifers	Computed. Remaining CO2 equivalent after Milling Efficiency for Hardwoods	Computed. CO2 Equivalent Tonnes in Conifer Wood Products in Use- 100 Year Weighted Average / Acre and Landfill	Computed. CO2 Equivalent Tonnes in Hardwood Wood Products in Use- 100 Year Weighted Average / Acre
from Inventory, Growth, and Harvest Page (Time of Harvest as years from project approval)	Step 15. Insert the percentage of conifer trees harvested that are subsequently delivered to sawmills	Step 16. Insert the percentage of hardwoods harvested or treated that are subsequently delivered to sawmills	Computed: The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	Computed: The merchantable portion determined by the conversion factors (Sampson, 2002) on the Inventory, Growth, and Harvest worksheet. This is multiplied by the percent delivered to mills to reflect the carbon delivered to mills.	Calculated. The CO2e associated with processing the logs at the mill	The difference between carbon delivered to mills and carbon remaining after milling is assumed to be emitted immediately		Estimate. The weighted average carbon remaining in use at year 100 is 46.3%	Estimate. The weighted average carbon remaining in use at year 100 is 23.0%
						The efficiency rating from mills in California is 0.67 (DOE 1605b) for conifers	The efficiency rating from mills in California is .5 (DOE 1605b) for hardwoods	Estimate. The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.	Estimate. The carbon in landfills at year 100 is 29.8% of the initial carbon produced in wood products.
0	100%	0%	6.49	0.00	-0.04	4.35	0.00	3.31	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	100%	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sum of emissions associate with processing of lumber			-0.04	Sum of CO2 equivalent in wood products		3.31	0.00

Summary			Years until Carbon Stocks are Recouped from Initial Harvest (Includes Carbon in Live Trees, Harvested Wood Products, and Landfill)
	Beginning Stocks	Ending Stocks	
Emissions Source/Sink/Reservoir	Metric Tonnes CO2 Equivalent Per Acre Basis		101 Years
Live Trees (Conifers and Hardwoods)	10.87	FALSE	
Wood Products		3.31	
Site Preparation Emissions		-2.49	
Non-biological emissions associated with harvesting		-0.14	
Non-biological emissions associated with milling		-0.04	
Sum of Net Emissions/Sequestration over Identified Harvest Cycles (CO2 metric tonnes)		-10.23	
Project Summary			
Project Acres	Step 17- Insert the acres that are part of the harvest area.	40	
Total Project Sequestration over defined Harvesting Periods (CO2 metric tonnes)		(409)	

Years	Conifer												
	Starting Inventory (MBF/Acre)	Starting Inventory (CO2-e Tonnes/Acre)	Harvest (MBF/Acre)	Annual Inventory Estimate (MBF/acre)	Estimated CO2 equivalent in Inventory (Metric Tonnes/Acre)	Estimated CO2 equivalent harvested in total tree (Metric Tonnes/Acre)	Portion of Harvest Delivered to Mill	Amount CO2 equivalent transferred to the mill (bole portion w/o bark of the tree) (Metric Tonnes/Acre)	In Use Decay Curve of Wood Products (Conifer) (%)	CO2 -e in in-use harvested wood products (Metric Tonnes/Acre)	Fraction of CO2 equivalent remaining in landfills (%)	CO2 -e in Landfills (Metric Tonnes/Acre)	Combined CO2-e in Landfills and in-use (Metric Tonnes/Acre)
Pre-harvest	2	11	2	-	-	11	100%	6	0.68	4	0.02	0.12	4.50
1			-	-	-	-		-	0.64	4	0.04	0.23	4.36
2			-	-	-	-		-	0.60	4	0.05	0.33	4.24
3			-	-	-	-		-	0.57	4	0.07	0.43	4.16
4			-	-	-	-		-	0.55	4	0.08	0.53	4.08
5			-	-	-	-		-	0.52	3	0.09	0.61	3.99
6			-	-	-	-		-	0.50	3	0.11	0.69	3.93
7			-	-	-	-		-	0.48	3	0.12	0.77	3.88
8			-	-	-	-		-	0.46	3	0.13	0.84	3.82
9			-	-	-	-		-	0.44	3	0.14	0.92	3.77
10			-	-	-	-		-	0.42	3	0.15	0.99	3.73
11			-	-	-	-		-	0.41	3	0.16	1.05	3.72
12			-	-	-	-		-	0.40	3	0.17	1.10	3.70
13			-	-	-	-		-	0.39	3	0.18	1.16	3.67
14			-	-	-	-		-	0.38	2	0.19	1.21	3.65
15			-	-	-	-		-	0.36	2	0.19	1.26	3.62
16			-	-	-	-		-	0.36	2	0.20	1.31	3.62
17			-	-	-	-		-	0.35	2	0.21	1.36	3.61
18			-	-	-	-		-	0.34	2	0.22	1.40	3.60
19			-	-	-	-		-	0.33	2	0.22	1.44	3.59
20			-	-	-	-		-	0.32	2	0.23	1.48	3.58
21			-	-	-	-		-	0.32	2	0.23	1.52	3.58
22			-	-	-	-		-	0.31	2	0.24	1.55	3.57
23			-	-	-	-		-	0.30	2	0.25	1.59	3.57
24			-	-	-	-		-	0.30	2	0.25	1.62	3.56
25			-	-	-	-		-	0.29	2	0.26	1.66	3.55
26			-	-	-	-		-	0.29	2	0.26	1.69	3.54
27			-	-	-	-		-	0.28	2	0.26	1.71	3.54
28			-	-	-	-		-	0.28	2	0.27	1.74	3.53
29			-	-	-	-		-	0.27	2	0.27	1.77	3.53
30			-	-	-	-		-	0.27	2	0.28	1.79	3.52
31			-	-	-	-		-	0.26	2	0.28	1.82	3.52
32			-	-	-	-		-	0.26	2	0.28	1.84	3.52
33			-	-	-	-		-	0.25	2	0.29	1.86	3.51
34			-	-	-	-		-	0.25	2	0.29	1.89	3.51
35			-	-	-	-		-	0.25	2	0.29	1.91	3.50
36			-	-	-	-		-	0.24	2	0.30	1.93	3.50
37			-	-	-	-		-	0.24	2	0.30	1.95	3.50
38			-	-	-	-		-	0.23	2	0.30	1.97	3.49
39			-	-	-	-		-	0.23	1	0.31	1.99	3.49
40			-	-	-	-		-	0.23	1	0.31	2.01	3.48
41			-	-	-	-		-	0.22	1	0.31	2.03	3.47
42			-	-	-	-		-	0.22	1	0.32	2.05	3.47
43			-	-	-	-		-	0.22	1	0.32	2.06	3.47
44			-	-	-	-		-	0.21	1	0.32	2.08	3.46
45			-	-	-	-		-	0.21	1	0.32	2.10	3.46
46			-	-	-	-		-	0.21	1	0.33	2.11	3.46
47			-	-	-	-		-	0.20	1	0.33	2.13	3.46
48			-	-	-	-		-	0.20	1	0.33	2.14	3.45
49			-	-	-	-		-	0.20	1	0.33	2.16	3.45
50			-	-	-	-		-	0.20	1	0.33	2.16	3.43
51			-	-	-	-		-	0.19	1	0.33	2.16	3.41
52			-	-	-	-		-	0.19	1	0.33	2.16	3.40
53			-	-	-	-		-	0.19	1	0.33	2.16	3.38
54			-	-	-	-		-	0.19	1	0.34	2.23	3.44
55			-	-	-	-		-	0.18	1	0.34	2.23	3.42
56			-	-	-	-		-	0.18	1	0.34	2.23	3.41
57			-	-	-	-		-	0.18	1	0.34	2.23	3.39
58			-	-	-	-		-	0.18	1	0.34	2.23	3.38
59			-	-	-	-		-	0.18	1	0.35	2.29	3.43
60			-	-	-	-		-	0.17	1	0.35	2.29	3.41
61			-	-	-	-		-	0.17	1	0.35	2.29	3.40
62			-	-	-	-		-	0.17	1	0.35	2.29	3.39
63			-	-	-	-		-	0.17	1	0.35	2.29	3.37
64			-	-	-	-		-	0.16	1	0.36	2.34	3.41
65			-	-	-	-		-	0.16	1	0.36	2.34	3.40
66			-	-	-	-		-	0.16	1	0.36	2.34	3.38
67			-	-	-	-		-	0.16	1	0.36	2.34	3.37
68			-	-	-	-		-	0.16	1	0.36	2.34	3.36
69			-	-	-	-		-	0.15	1	0.37	2.40	3.40
70			-	-	-	-		-	0.15	1	0.37	2.40	3.39
71			-	-	-	-		-	0.15	1	0.37	2.40	3.38
72			-	-	-	-		-	0.15	1	0.37	2.40	3.37
73			-	-	-	-		-	0.15	1	0.37	2.40	3.36
74			-	-	-	-		-	0.15	1	0.38	2.44	3.39
75			-	-	-	-		-	0.15	1	0.38	2.44	3.38
76			-	-	-	-		-	0.14	1	0.38	2.44	3.37
77			-	-	-	-		-	0.14	1	0.38	2.44	3.36
78			-	-	-	-		-	0.14	1	0.38	2.44	3.35
79			-	-	-	-		-	0.14	1	0.38	2.48	3.38
80			-	-	-	-		-	0.14	1	0.38	2.48	3.37
81			-	-	-	-		-	0.14	1	0.38	2.48	3.36
82			-	-	-	-		-	0.13	1	0.38	2.48	3.35
83			-	-	-	-		-	0.13	1	0.38	2.48	3.34
84			-	-	-	-		-	0.13	1	0.39	2.53	3.38
85			-	-	-	-		-	0.13	1	0.39	2.53	3.37
86			-	-	-	-		-	0.13	1	0.39	2.53	3.36
87			-	-	-	-		-	0.13	1	0.39	2.53	3.35
88			-	-	-	-		-	0.13	1	0.39	2.53	3.35
89			-	-	-	-		-	0.13	1	0.40	2.56	3.38
90			-	-	-	-		-	0.12	1	0.40	2.56	3.37
91			-	-	-	-		-	0.12	1	0.40	2.56	3.36
92			-	-	-	-		-	0.12	1	0.40	2.56	3.35
93			-	-	-	-		-	0.12	1	0.40	2.56	3.34
94			-	-	-	-		-	0.12	1	0.40	2.60	3.37
95			-	-	-	-		-	0.12	1	0.40	2.60	3.36
96			-	-	-	-		-	0.12	1	0.40	2.60	3.35
97			-	-	-	-		-	0.12	1	0.40	2.60	3.34
98			-	-	-	-		-	0.11	1	0.40	2.60	3.34
99			-	-	-	-		-	0.11	1	0.41	2.63	3.36
100			-	-	-	-		-	0.11	1	0.41	2.63	3.36

Hardwood

Starting Inventory (BA/Acre)	Starting Inventory CO2-e (Metric Tonnes/Acre)	Harvest (BA/Acre)	Annual Inventory (BA/acre)	Estimated CO2 equivalent in Inventory (Metric Tonnes/Acre)	Estimated CO2 equivalent harvested in total tree (Metric Tonnes/Acre)	Portion of Harvest Delivered to Mill (%)	Amount CO2 equivalent transferred to the mill (bole portion w/o bark of the tree) (Metric Tonnes/Acre)	In Use Decay Curve of Wood Products (Conifer) (Metric Tonnes/Acre)	CO2 -e in in-use harvested wood products (Metric Tonnes/Acre)	Fraction of CO2 equivalent remaining in landfills (%)	CO2 -e in Landfills (Metric Tonnes/Acre)	Combined CO2-e in Landfills and in-use (Metric tonnes/Acre)
-	-	-	-	-	-	0%	-	0.57	-	-	-	-
		-	-	-	-		-	0.53	-	0.02	-	-
		-	-	-	-		-	0.49	-	0.03	-	-
		-	-	-	-		-	0.46	-	0.05	-	-
		-	-	-	-		-	0.44	-	0.06	-	-
		-	-	-	-		-	0.41	-	0.07	-	-
		-	-	-	-		-	0.39	-	0.08	-	-
		-	-	-	-		-	0.37	-	0.09	-	-
		-	-	-	-		-	0.35	-	0.10	-	-
		-	-	-	-		-	0.33	-	0.11	-	-
		-	-	-	-		-	0.32	-	0.12	-	-
		-	-	-	-		-	0.32	-	0.12	-	-
		-	-	-	-		-	0.32	-	0.12	-	-
		-	-	-	-		-	0.32	-	0.12	-	-
		-	-	-	-		-	0.32	-	0.12	-	-
		-	-	-	-		-	0.32	-	0.12	-	-
		-	-	-	-		-	0.28	-	0.14	-	-
		-	-	-	-		-	0.28	-	0.14	-	-
		-	-	-	-		-	0.28	-	0.14	-	-
		-	-	-	-		-	0.26	-	0.14	-	-
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Total					
CO2-e in Standing Inventories (Metric Tonnes/Acre)	CO2-e in Harvested Wood Products (Metric Tonnes/Acre)	CO2-e in Inventories and in Harvested Wood Products (Metric Tonnes/Acre)	Initial CO2-e in Forest	Years in Which Project Sequestration Exceed Initial CO2-e Prior to Harvest (Metric Tonnes) (101 indicates that the emissions from harvest have not been recouped from sequestration and storage)	Number of Years for Growth and Harvested Wood Products to Achieve pre-Harvest Sequester CO2-e
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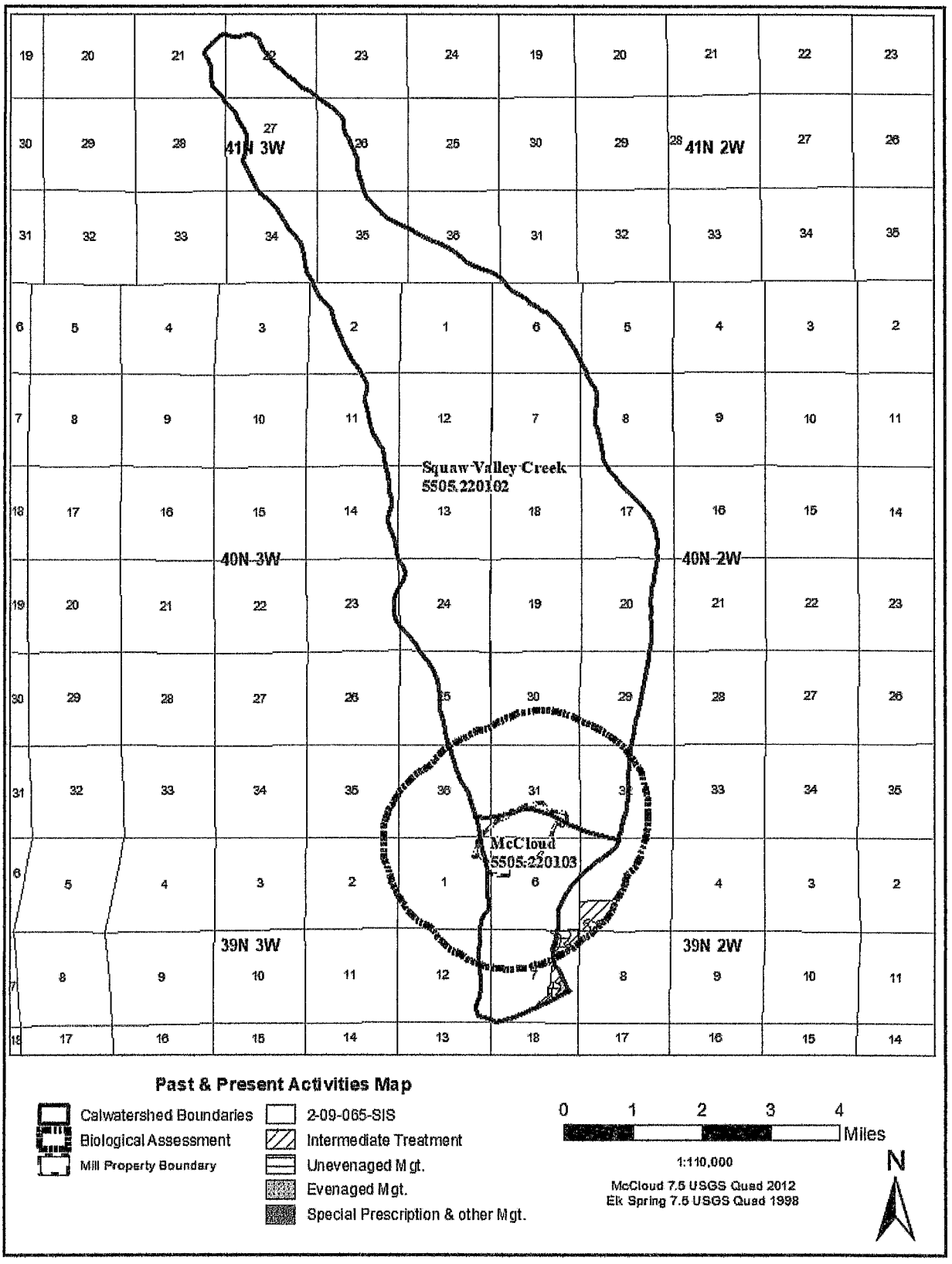
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Squaw Valley Creek
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Past & Present Activities Map
Calwatershed Boundaries
Biological Assessment
Mill Property Boundary
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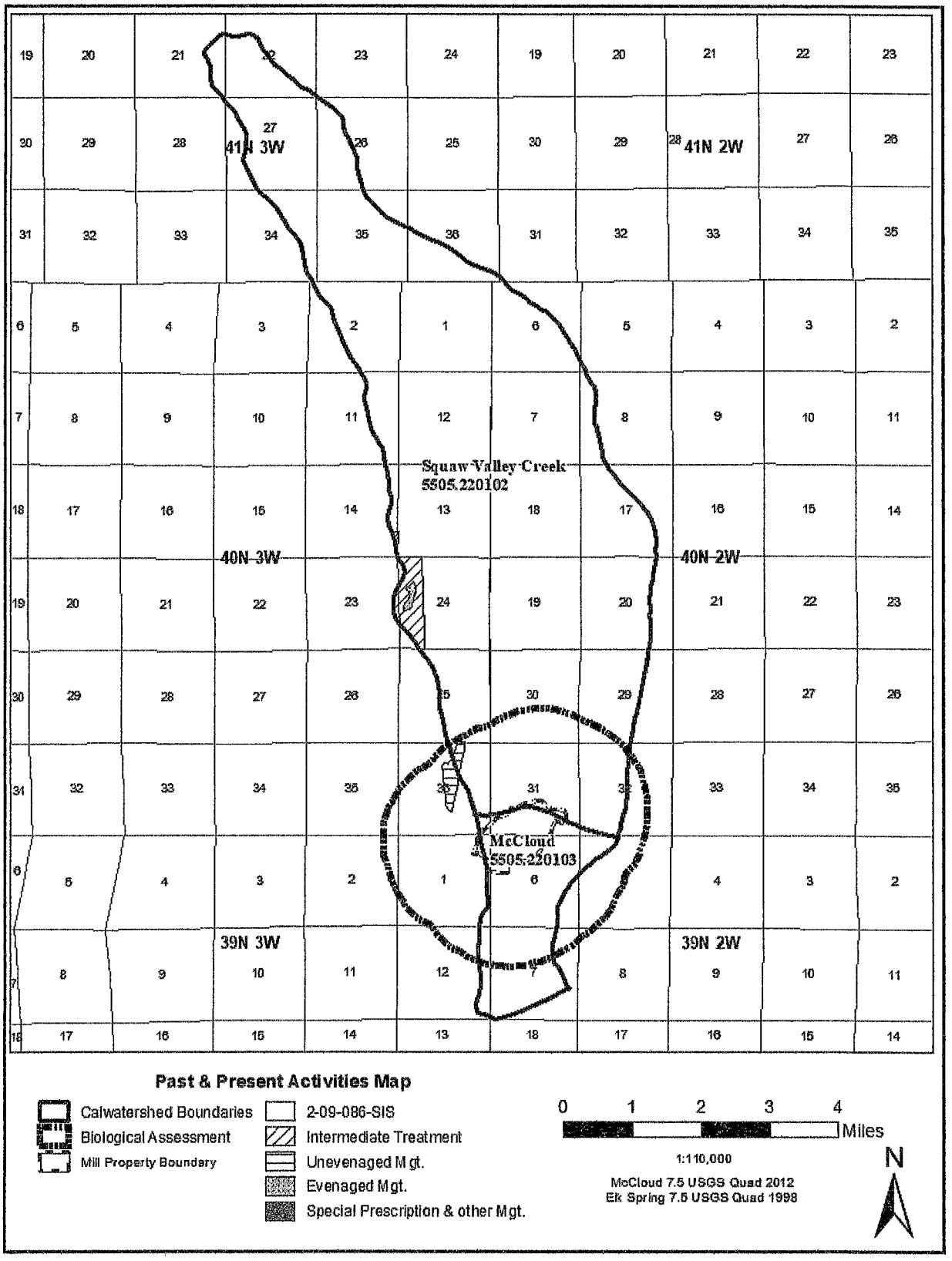
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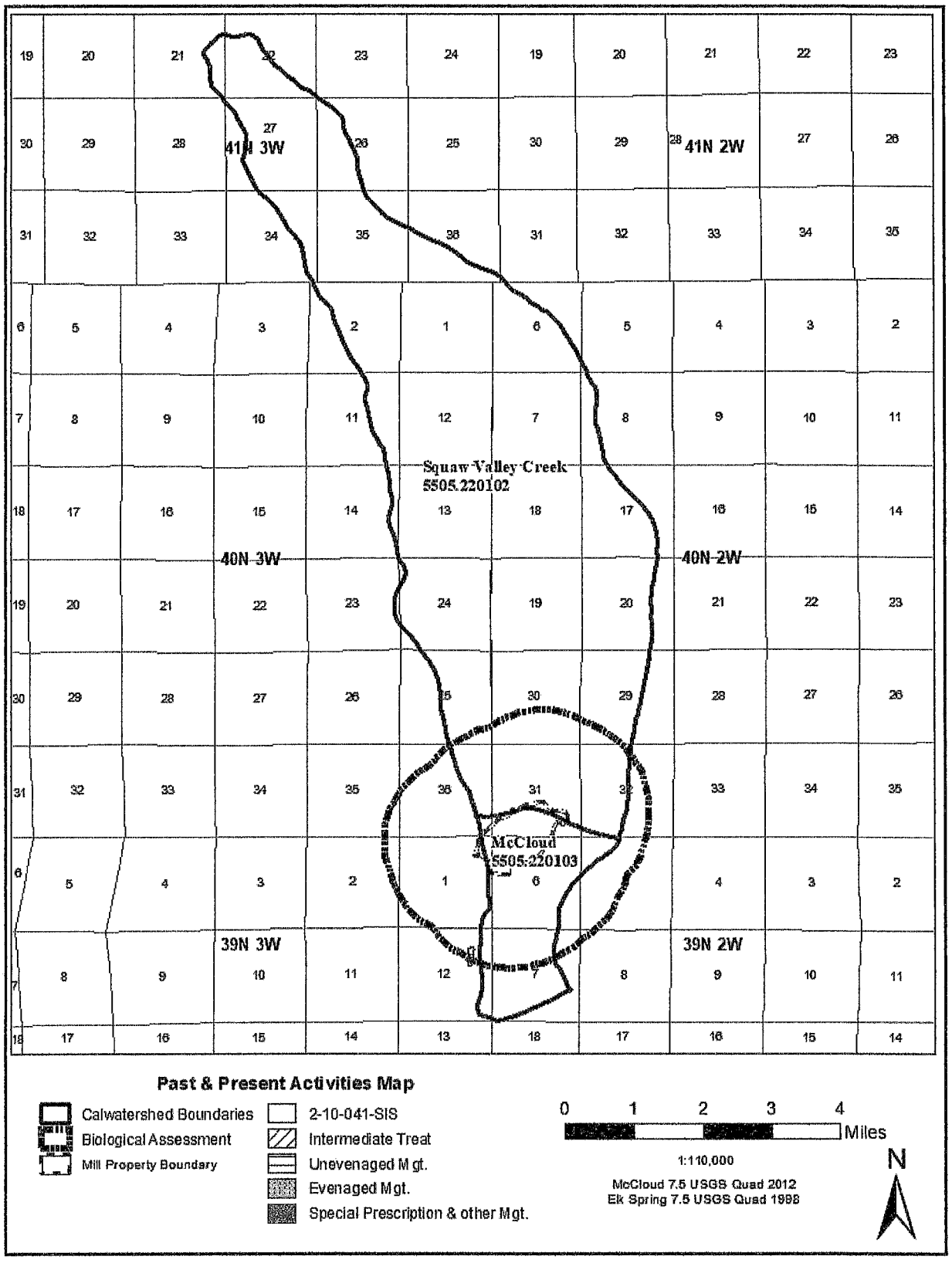
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Biological Assessment
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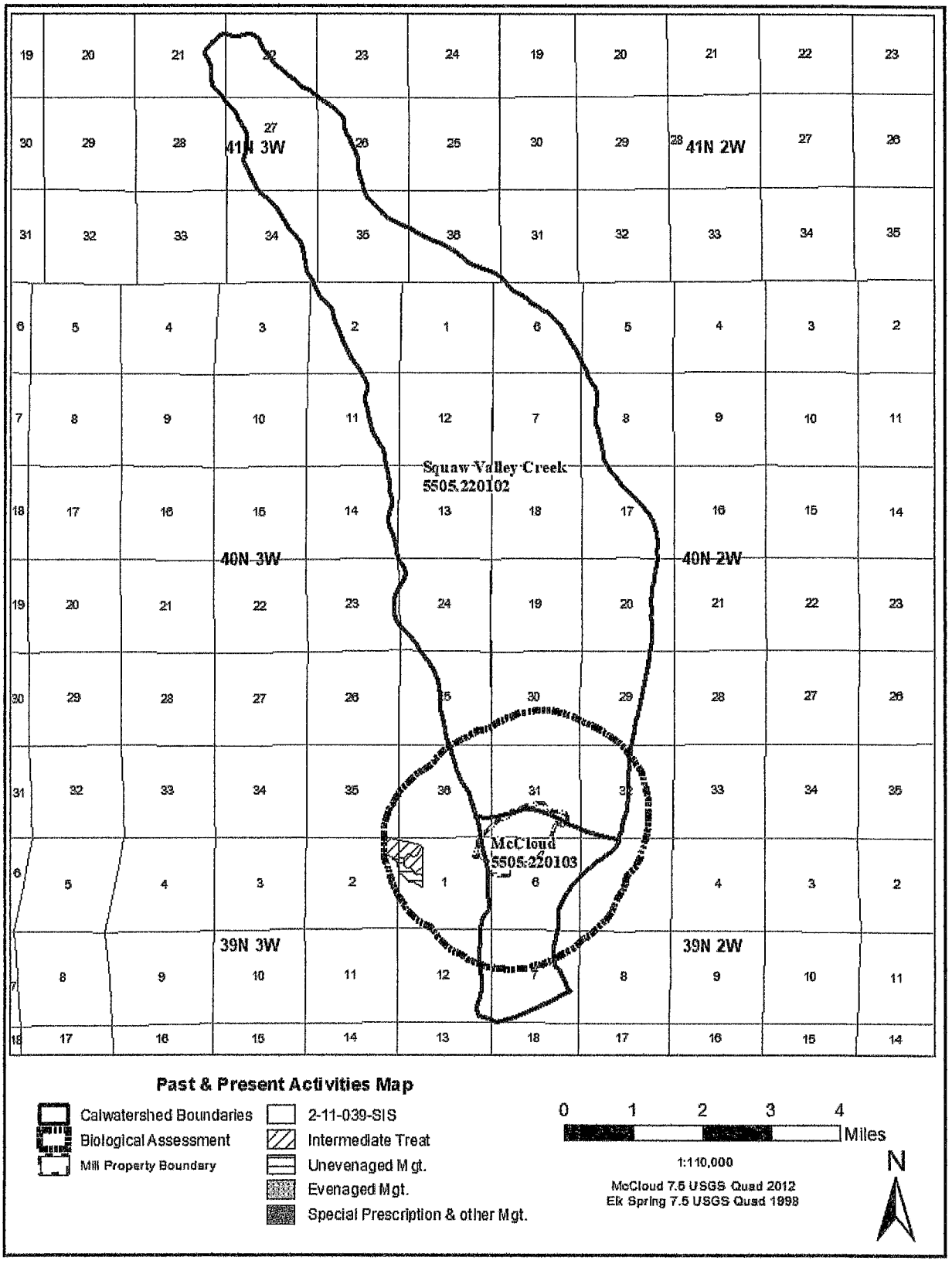
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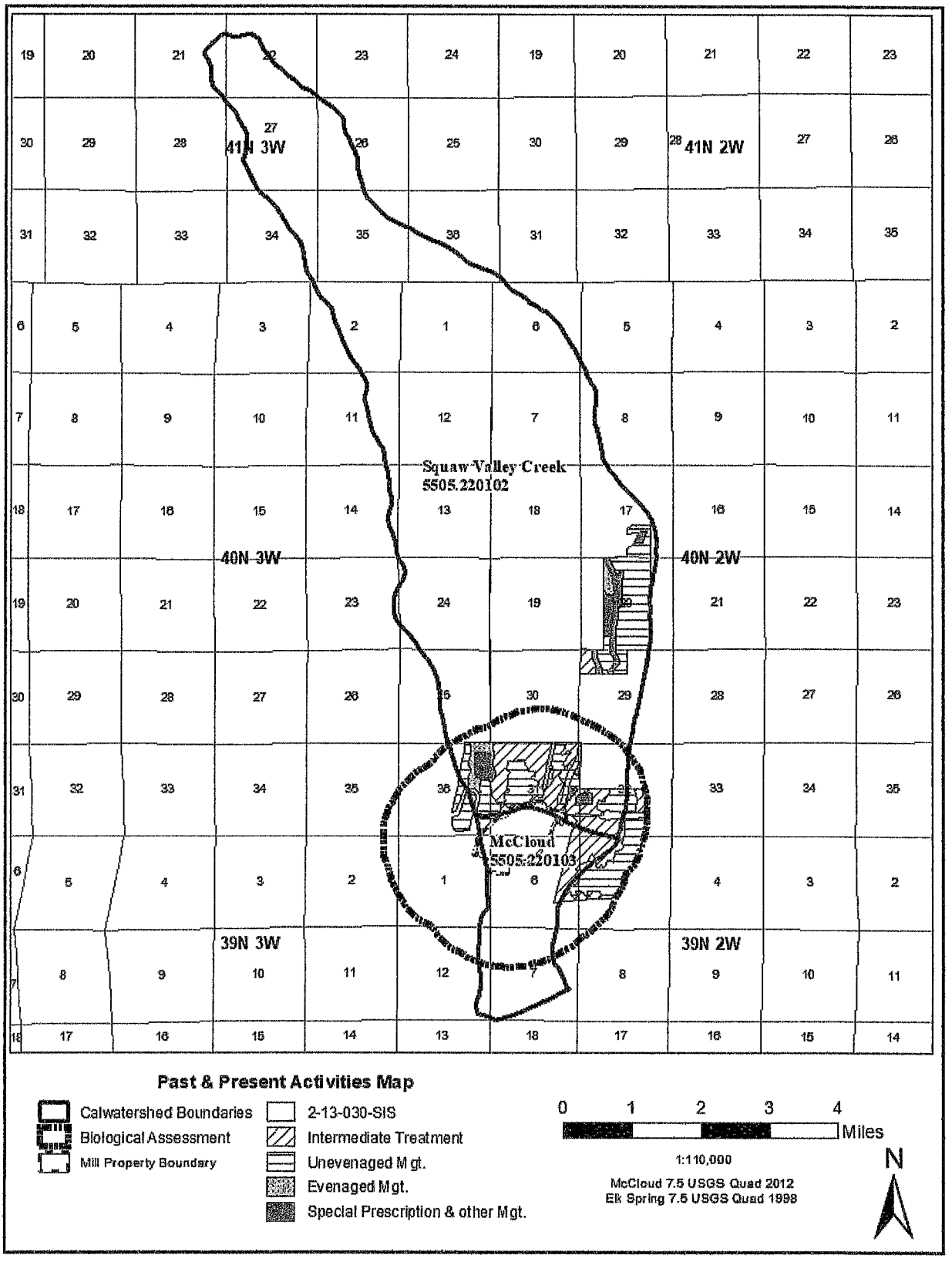
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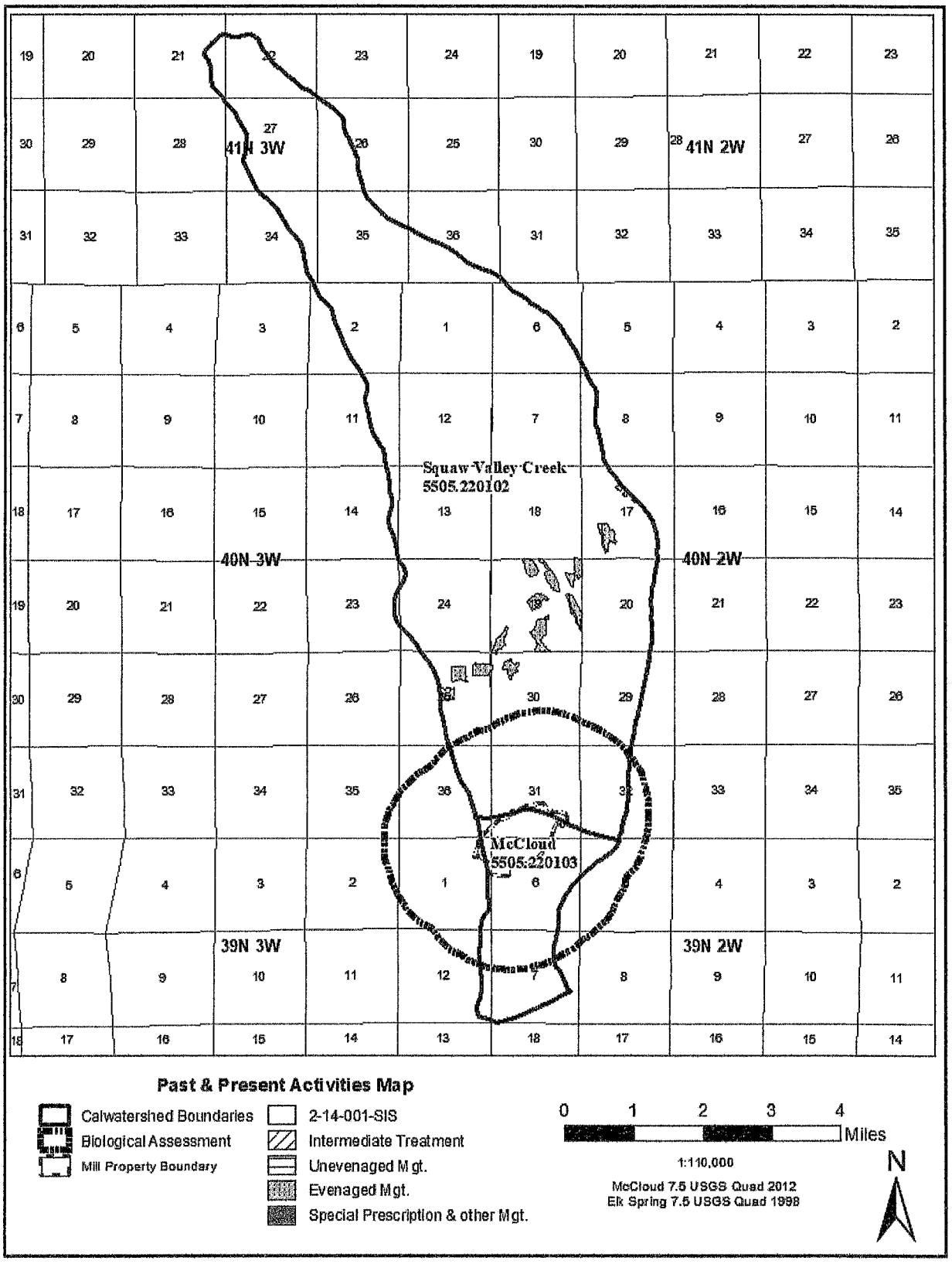
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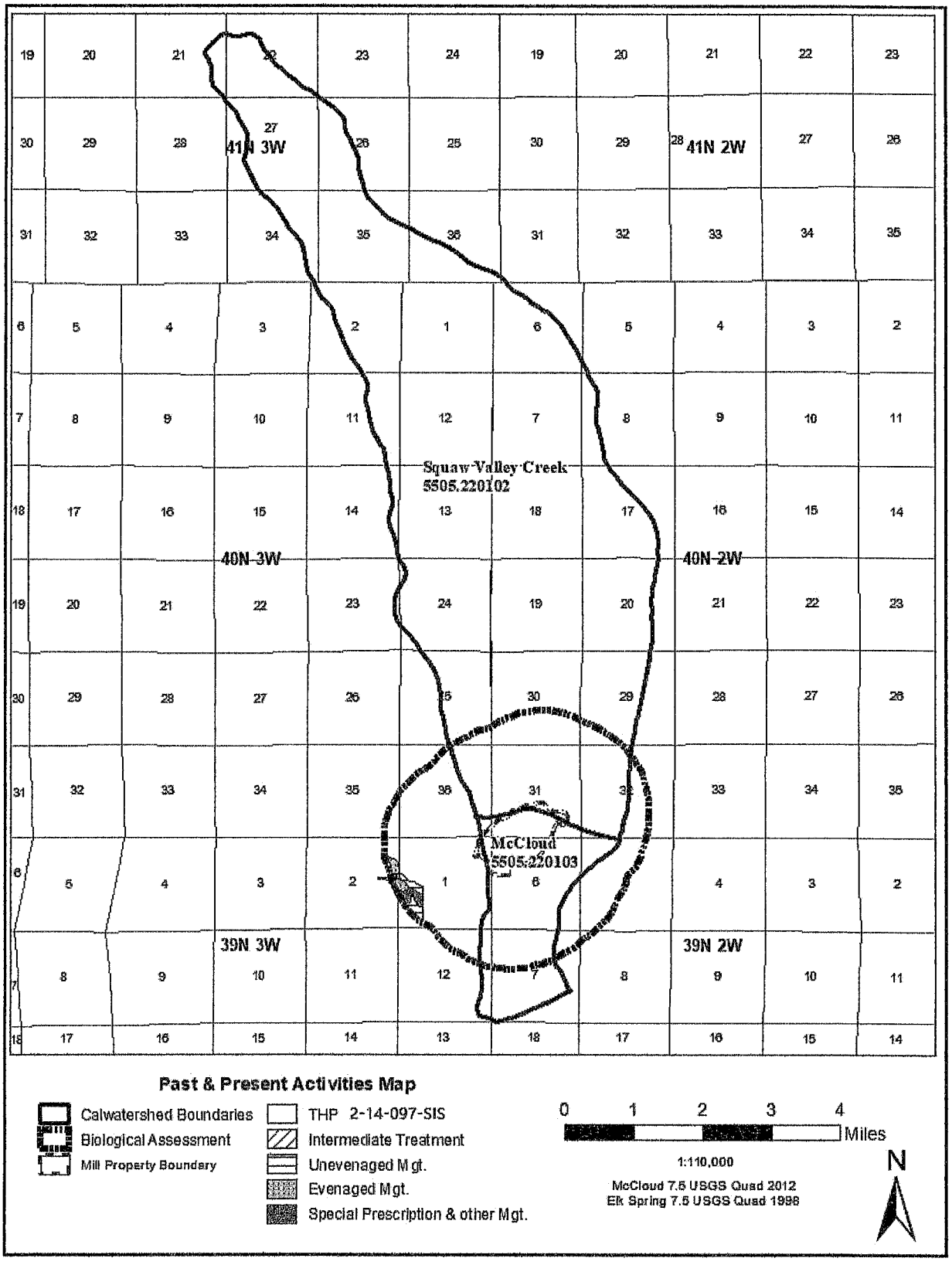
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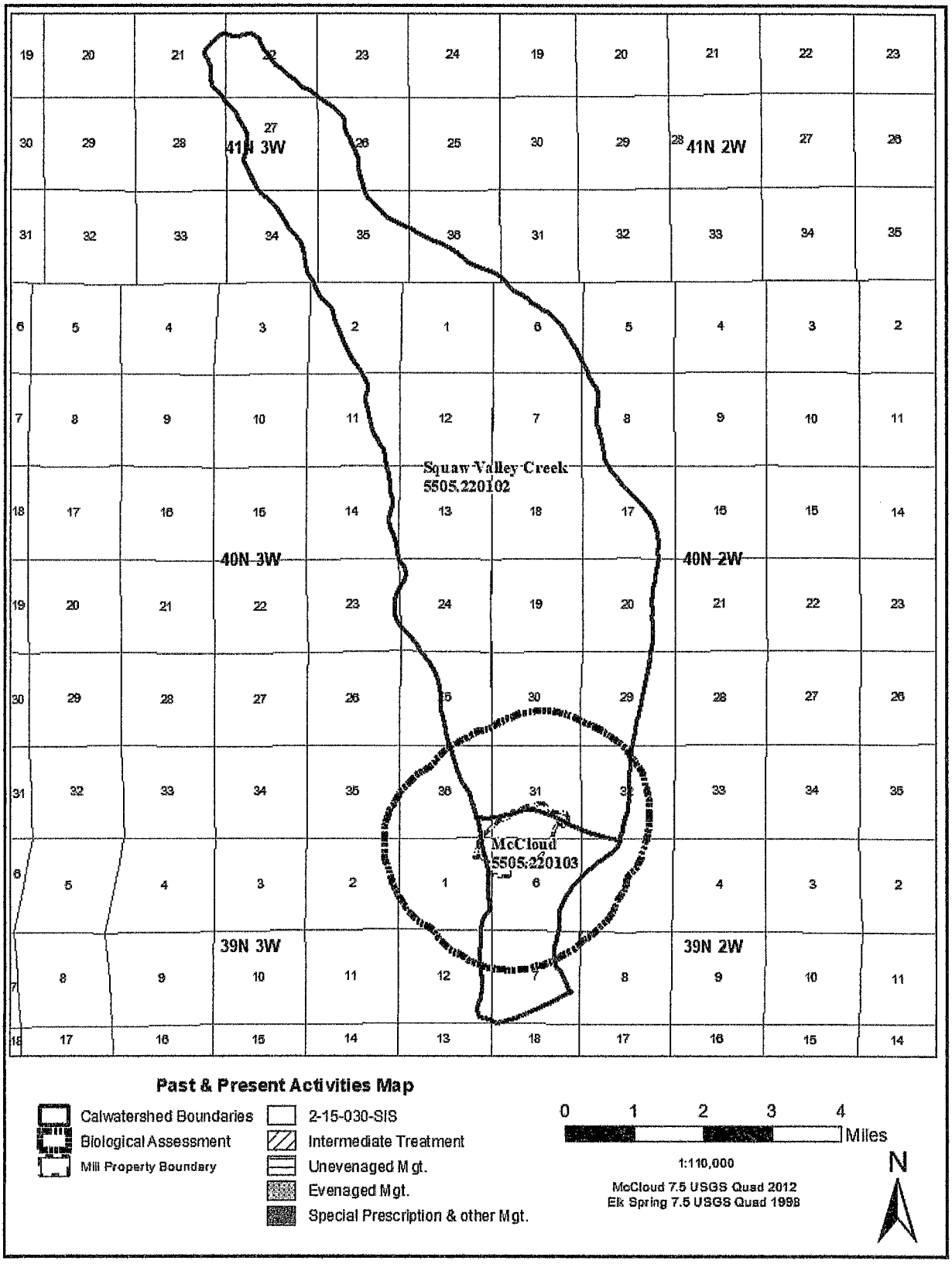
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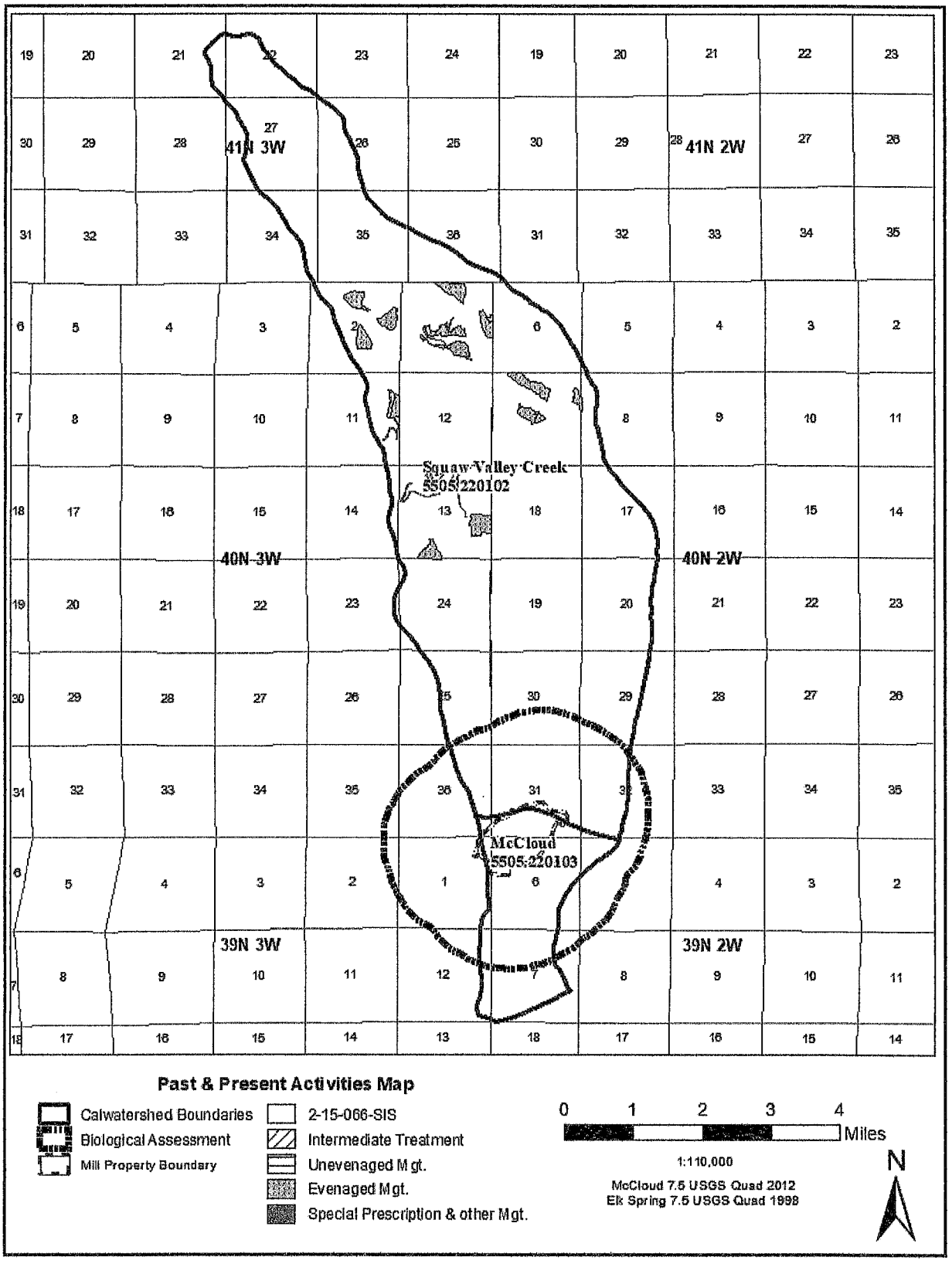
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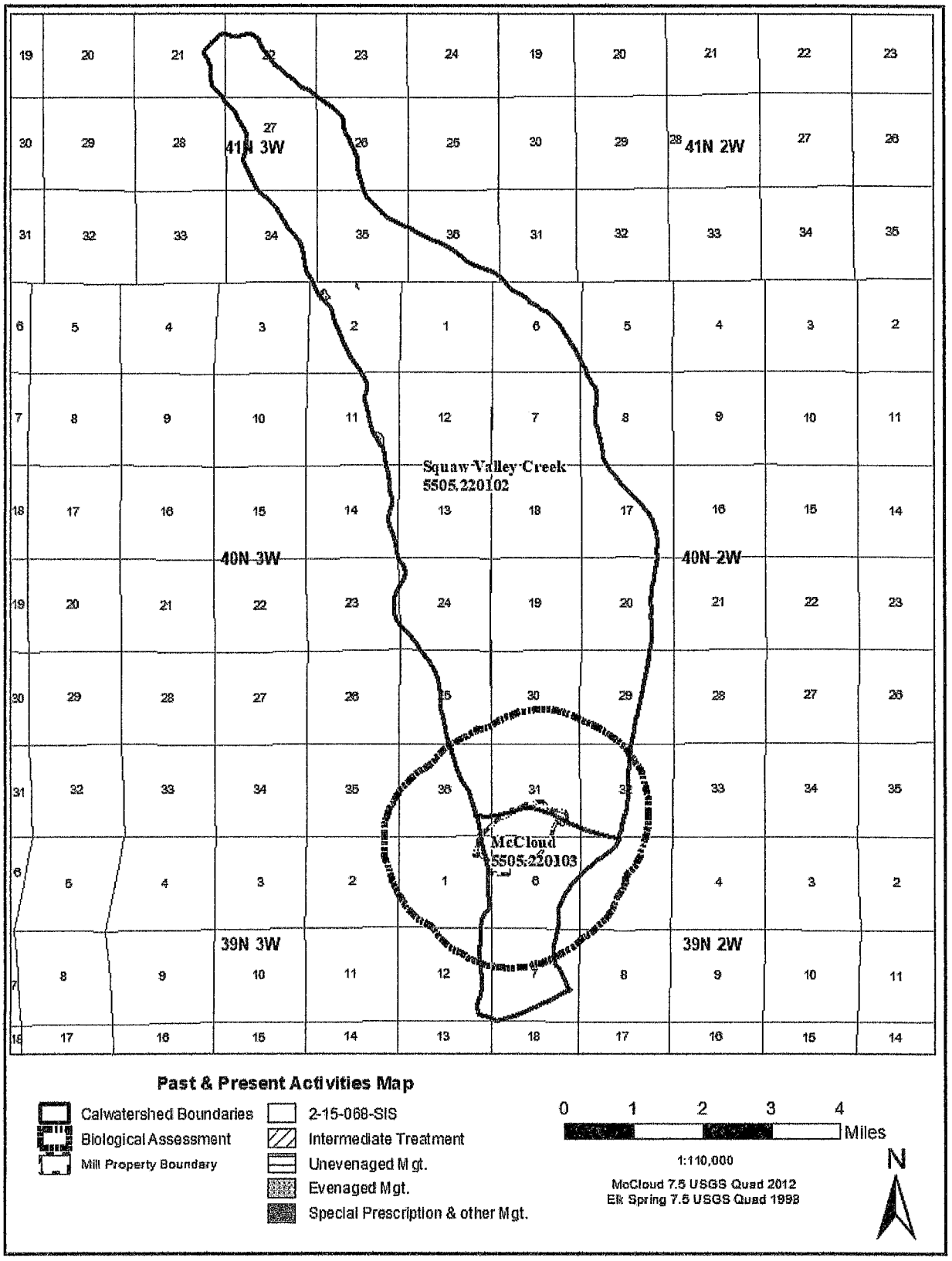
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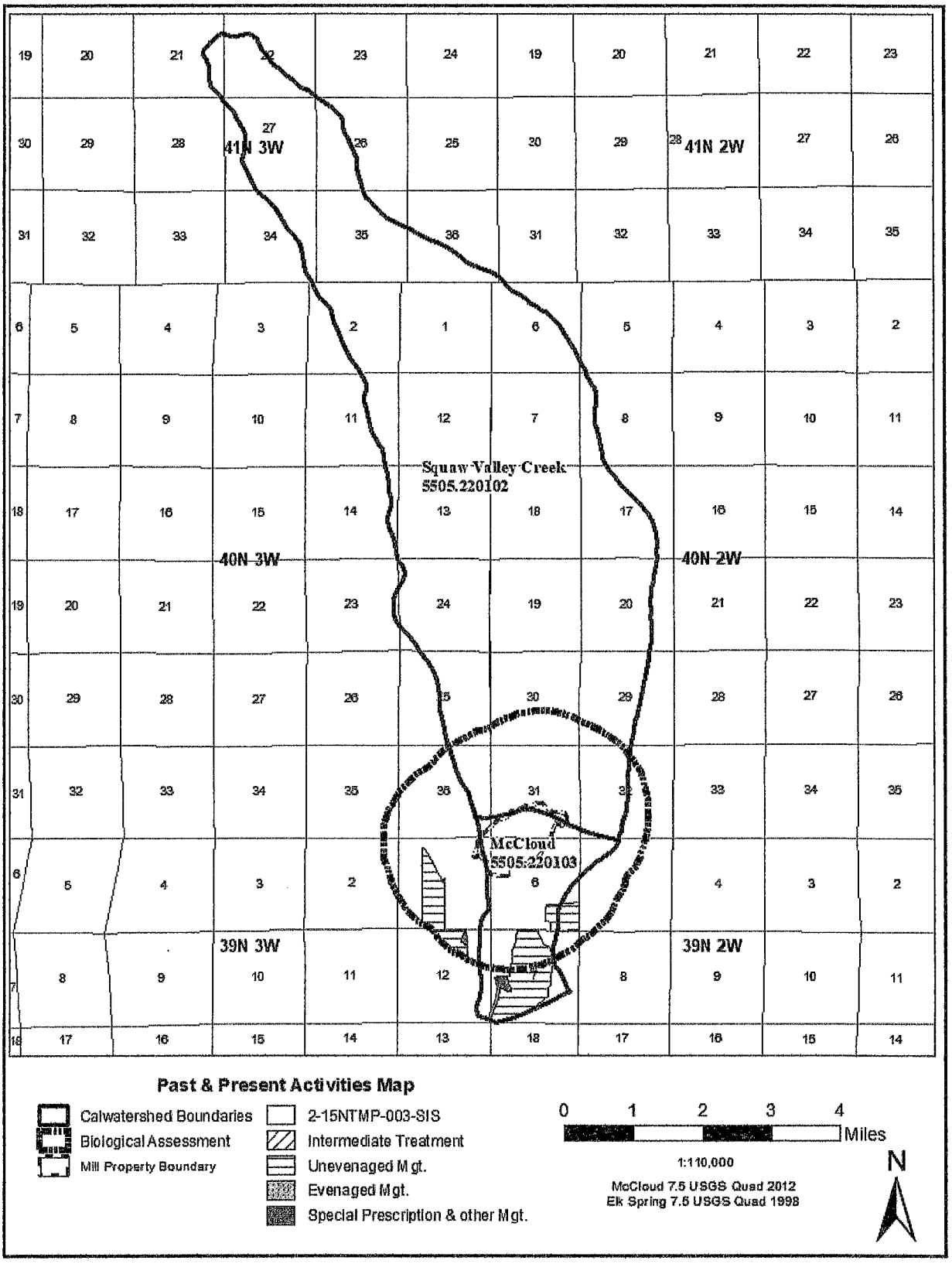
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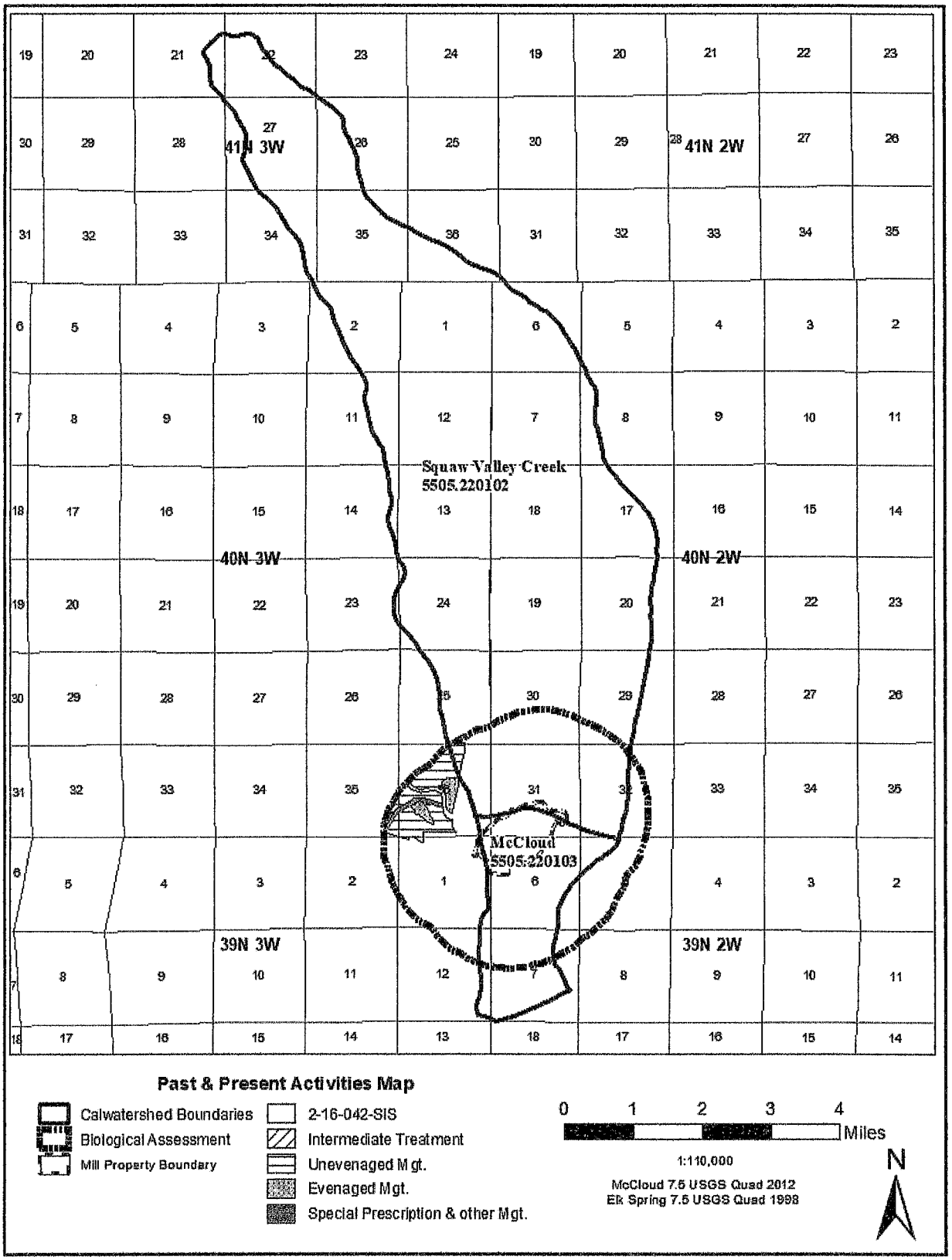
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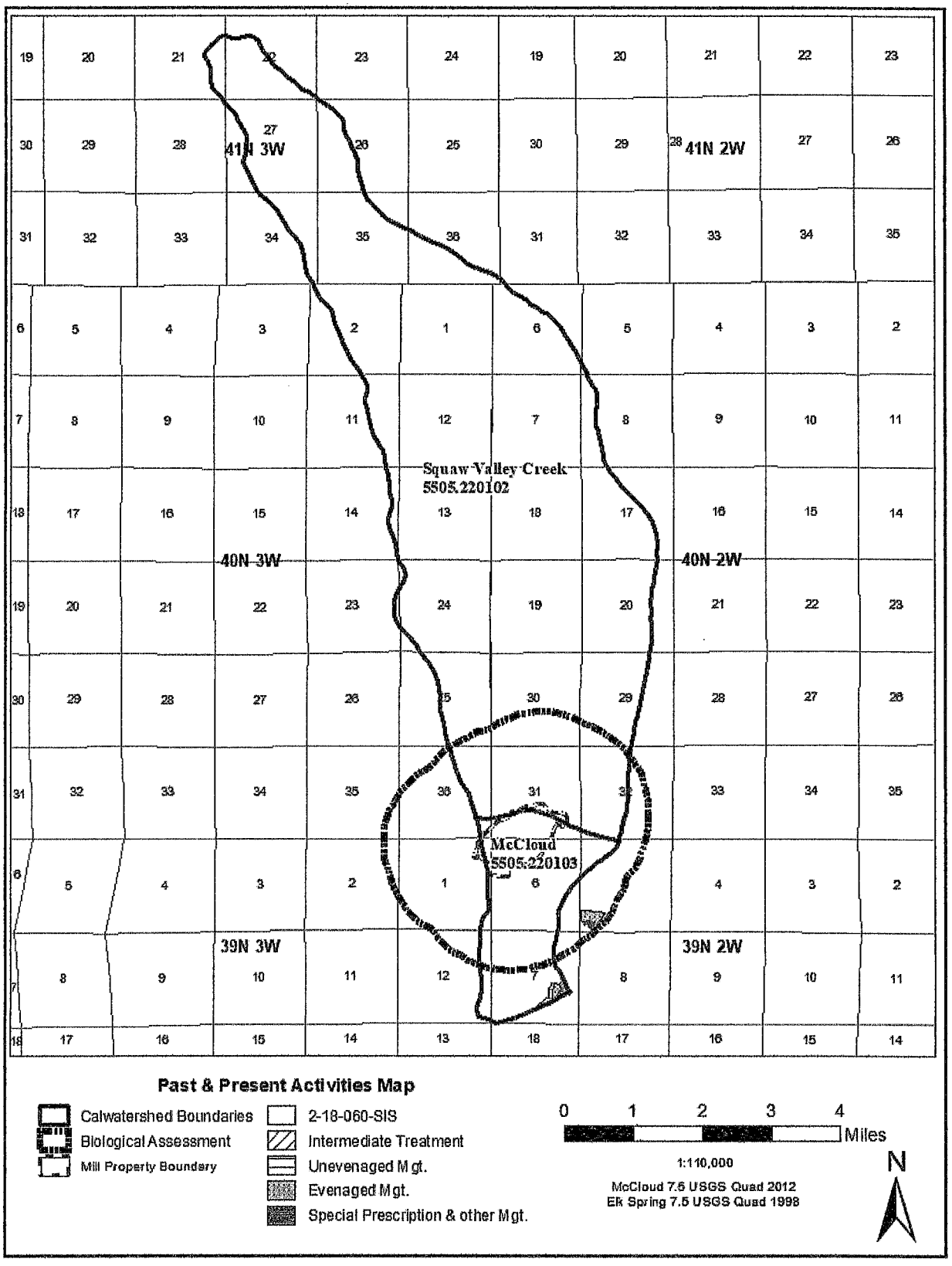
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Elk Spring 7.5 USGS Quad 1998
N

Section V

Erosion Hazard Rating (EHR)

ESTIMATED SURFACE SOIL EROSION HAZARD

I. SOIL FACTORS				FACTOR RATING BY AREA		
A. SOIL TEXTURES	FINE	MEDIUM	COARSE	309	310	
1. Detachability	Low	Moderate	High	27	17	
Rating	1-9	10-18	19-30			
2. Permebility	Slow	Moderate	Rapid	1	2	
Rating	5-4	3-2	1			

B. Depth to Restrictive Layer or Bedrock

	Shallow	Moderate	Deep			
	1"-19"	20"-39"	40"-60" (+)	1	1	
Rating	15-9	8-4	3-1			

C. Percent Surface course Fracments Greater than 2 mm in Size Including rocks or stones

	Low	Moderate	High				FACTOR RATING BY AREA		
	(-) 10-39%	40-70%	71-100%	4	4				
Rating	10-6	5-3	2-1				A	B	
						SUBTOTAL →	33	24	

II. SLOPE FACTOR

Slope	5-15%	16-30%	31-40%	41-50%	51-70%	71-80% (+)	1	1	
Rating	1-3	4-6	7-10	11-15	16-25	26-25			

III. PROTECTIVE VEGETATION COVER REMAINING AFTER DISTURBANCE

	Low	Moderate	High			
	0-40%	41-80%	81-100%	15	15	
Rating	15-8	7-4	3-1			

IV. TWO-YEAR, ONE-HOUR RAINFALL INTENSITY (Hundredths Inch)

	Low	Moderate	High	Extreme			
	(-) 30-39	40-59	60-69	70-80 (+)	6	6	
Rating	1-3	4-7	8-11	12-15			
				TOTAL SUM OF FACTORS →	**55**	**46**	

EROSION HAZARD RATING

<50	50-65	66-75	>75			
Low (L)	Moderate (M)	High (H)	Extreme (E)	**M**	**L**	
			THE DETERMINATION IS →			

NSO Consultation

From: Isidro Barela [mailto:isidrobarela@blackfoxtimber.com]
Sent: Monday, February 04, 2019 9:41 AM
To: Stanish, Anastasia@CALFIRE <Anastasia.Stanish@fire.ca.gov>
Subject: Old Mill Amendment NSO Consultation

Hello Stacy,

I am working with Black Fox Timber's RPF Bob Hutcheson (RPF #2302) on a major amendment on the McCloud Old Mill THP (THP 2-14-110-SIS) which you helped us with Northern spotted Owl consultation. The purpose of this amendment is to convert a portion of the existing plan and add 42 adjacent acres for the purpose of solar power generation.

In the original plan which we received consultation from yourself, Brian Shaw, and Jen Jones (USFWS) and a determination was made by USFWS for a survey exemption in this area due to the lack of suitable NSO habitat. Since this amendment is taking place ~4 years later I wanted to reconsult with you to determine whether anything has changed in regard to NSO's since the original plan and to determine if surveys will still be waived. Also, I've included a map of the proposed areas of conversion for your reference. I appreciate your help!

Thank you,

--
Isidro Barela
Wildlife Biologist
Black Fox Timber Management Group Inc.
105 E. Minnesota Avenue
P.O. Box 687
McCloud, CA 96057

On Wed, Feb 20, 2019 at 12:20 PM Stanish, Anastasia@CALFIRE <Anastasia.Stanish@fire.ca.gov> wrote:

Isidro, this email is in response to your request for a waiver of NSO survey. Because the project area is within the general town limits of McCloud, provides no habitat to support NSO, and the project is greater than 1.3 miles from any known NSO AC, the waiver of survey for the project area remains waived. I obtained concurrence with DFW's Robert Hawkins on this determination.

Please let me know if you have any questions.

Stacy Stanish, RPF No. 3000
Senior Environmental Scientist - Forest Practice Biologist

CA Department of Forestry and Fire Protection
6105 Airport Road
Redding, CA 96002
Phone: (916) 616-8643
Anastasia.Stanish@fire.ca.gov

Scoping and Survey for Rare Plants

Scoping for the original list of sensitive plants for consideration was generated from a query of the CNDDB for the twelve USGS Quadrangles containing and surrounding the map. The twelve Quads are as follows:

1. **Hotlum**
2. **Mt. Shasta**
3. **Ash Creek Butte**
4. **Rainbow Mtn.**
5. **City of Mt. Shasta**
6. **McCloud**
7. **Elk Springs**
8. **Kinyon**
9. **Dunsmuir**
10. **Girard Ridge**
11. **Lake McCloud**
12. **Grizzly Peak**

The final scoping list was determined in consultation with Robin Fallscheer, Environmental Scientists, CDFW. The table below shows the scoping list:

Old Mill Amendment - 12 Quad Scoping List				
Scientific_Name	Common_Name	Global_Rank	State_Rank	Rare_Plant_Rank
Ageratina shastensis	Shasta ageratina	G3	S3	1B.2
Anisocarpus scabridus	scabrid alpine tarplant	G3	S3	1B.3
Balsamorhiza lanata	woolly balsamroot	G3	S3	1B.2
Botrychium crenulatum	scalloped moonwort	G4	S3	2B.2
Botrychium pinnatum	northwestern moonwort	G4?	S2	2B.3
Botrychium pumicola	pumice moonwort	G3	S1	2B.2
Botrypus virginianus	rattlesnake fern	G5	S2	2B.2
Campanula shetleri	Castle Crags harebell	G2	S2	1B.3
Campanula wilkinsiana	Wilkin's harebell	G2	S2	1B.2
Carex halliana	Oregon sedge	G4	S2	2B.3
Chaenactis suffrutescens	Shasta chaenactis	G3	S3	1B.3
Clarkia borealis ssp. borealis	northern clarkia	G3T3	S3	1B.3
Cordylanthus tenuis ssp. pallescens	pallid bird's-beak	G4G5T1	S1	1B.2
Cuscuta jepsonii	Jepson's dodder	G1	S1	1B.2
Draba carnosula	Mt. Eddy draba	G2	S2	1B.3
Epilobium oreganum	Oregon fireweed	G2	S2	1B.2
Erigeron bloomeri var. nudatus	Waldo daisy	G5T4	S3	2B.3
Erigeron nivalis	snow fleabane daisy	G4G5	S3	2B.3
Eriogonum pyrolifolium var. pyrolifolium	pyrola-leaved buckwheat	G4T4	S3	2B.3
Erythranthe taylorii	Shasta limestone monkeyflower	G2	S2	1B.1
Erythronium klamathense	Klamath fawn lily	G4	S2	2B.2
Eurybia merita	subalpine aster	G5	SH	2B.3
Geum aleppicum	Aleppo avens	G5	S2	2B.2
Howellanthus dalesianus	Scott Mountain howellanthus	G3	S3	4.3
Hulsea nana	little hulsea	G4	S3	2B.3
Hymenoxys lemmonii	alkali hymenoxys	G4?	S2S3	2B.2

Iliamna bakeri	Baker's globe mallow	G4	S3		4.2
Ivesia longibracteata	Castle Crags ivesia	G1	S1	1B.3	
Meesia triquetra	three-ranked hump moss	G5	S4		4.2
Meesia uliginosa	broad-nerved hump moss	G5	S3	2B.2	
Moneses uniflora	woodnymph	G5	S2	2B.2	
Ophioglossum pusillum	northern adder's-tongue	G5	S1	2B.2	
Orthocarpus pachystachyus	Shasta orthocarpus	G1	S1	1B.1	
Orthotrichum holzingeri	Holzinger's orthotrichum moss	G3	S2	1B.3	
Parnassia cirrata var. intermedia	Cascade grass-of-Parnassus	G5T4	S3	2B.2	
Penstemon filiformis	thread-leaved beardtongue	G3	S3	1B.3	
Polemonium pulcherrimum var. shastense	Mt. Shasta sky pilot	G5T2	S2	1B.2	
Ptilidium californicum	Pacific fuzzwort	G4G5	S3S4		4.3
Rosa gymnocarpa var. serpentina	Gasquet rose	G5T3T4	S2	1B.3	
Scutellaria galericulata	marsh skullcap	G5	S2	2B.2	
Silene suksdorfii	Cascade alpine campion	G4	S3	2B.3	
Trifolium siskiyouense	Siskiyou clover	GH	SH	1B.1	
Vaccinium scoparium	little-leaved huckleberry	G5	S3	2B.2	

Of that original 45 species on the scoping list, 38 were eliminated:

Scientific_Name	Common_Name	Rationale
Ageratina shastensis	Shasta ageratina	Outside geographic range, no limestone, metavolcanics cliffs, chaparal
Anisocarpus scabridus	scabrid alpine tarplant	Project below elevational range, no open ridges or slopes
Balsamorhiza lanata	woolly balsamroot	Found in foothill woodlands
Botrychium crenulatum	scalloped moonwort	Project below elevational range, lack seeps or stream margins
Botrychium pinnatum	northwestern moonwort	Project below elevational range, no moist fields or shrubby slopes
Botrychium pumicola	pumice moonwort	Project below elevational range, no open volcanic soils
Campanula shetleri	Castle Crags harebell	Found in rock crevices none on project, Outside geographic range
Campanula wilkinsiana	Wilkin's harebell	Project is below elevational range, NO wet meadows, streamsides
Carex halliana	Oregon sedge	Found in northern juniper woodland, Project is below elevational range
Chaenactis suffrutescens	Shasta chaenactis	No serpentine soils
Clarkia borealis ssp. borealis	northern clarkia	Outside geographic range
Draba carnosula	Mt. Eddy draba	Project is below elevational, No rocky slopes
Erigeron bloomeri var. nudatus	Waldo daisy	No serpentine soils
Erigeron nivalis	snow fleabane daisy	Project is below elevational range, found in volcanic rocks, meadows
Eriogonum pyrolifolium var. pyrolifolium	pyrola-leaved buckwheat	Project is below elevational range, found in alpine fell fields
Erythranthe taylorii	Shasta limestone monkeyflower	Associated with limestone, rocky outcrops around Shasta Lake -- none in project area

Erythronium klamathense	Klamath fawn lily	Found in lodgepole, red fir forests-none in project area, project is below elevational range
Eurybia merita	subalpine aster	Project is below elevational range, outside geographic range
Howellanthus dalesianus	Scott Mountain howellanthus	Project is below elevational range, No serpentine soils
Hulsea nana	little hulsea	Project is below elevational range, No volcanic talus
Hymenoxys lemmonii	alkali hymenoxys	Found in sagebrush scrub and yellow pine forests
Iliamna bakeri	Baker's globe mallow	Found in mt. slopes, junitper woodland, lava beds – none in project area
Ivesia longibracteata	Castle Crags ivesia	Outsie geographic range, associated with granite rock crevices- none in the project area
Meesia triquetra	three-ranked hump moss	Found in rich fens, arctic, boreal habitats – none in the project area
Meesia uliginosa	broad-nerved hump moss	Found in rich fens, moist calcareous soil banks, soil covered rock crevices – none in the project area
Moneses uniflora	woodnymph	Found in moist mossy conifer forests – none in the project
Ophioglossum pusillum	northern adder's-tongue	Found in marsh edges, low pastures in valley grasslands, freshwater wetlands – none in the project area
Orthocarpus pachystachyus	Shasta orthocarpus	Found in openings in sagebrush scrub – none in the project area
Orthotrichum holzingeri	Holzinger's orthotrichum moss	Found on rocks in and along streams – none in the project area
Parnassia cirrata var. intermedia	Cascade grass-of-Parnassus	Found in wetlands, outside geographic range
Penstemon filiformis	thread-leaved beardtongue	Found in open rocky places among shrubs, yellow pine forests – none in project area
Polemonium pulcherrimum var. shastense	Mt. Shasta sky pilot	Project is below elevational range, found on volcanic talus – none in project area
Ptilidium californicum	Pacific fuzzwort	Project is below elevational range, usually epiphytic on trees, fallen and decaying logs and stumps
Rosa gymnocarpa var. serpentina	Gasquet rose	Geographic Range, No serpentine soils
Silene suksdorfii	Cascade alpine campion	Project below elevational range, Found in Alpine fell fields – none in project area
Vaccinium scoparium	little-leaved huckleberry	Project below elevational range, found in rocky sub-alpine woodland

The resulting 7 species are the list of species for pre-operation surveys.

Scientific_Name	Common_Name
Botrypus virginianus	rattlesnake fern
Cordylanthus tenuis ssp. pallescens	pallid bird's-beak
Cuscuta jepsonii	Jepson's dodder
Epilobium oreganum	Oregon fireweed
Geum aleppicum	Aleppo avens
Scutellaria galericulata	marsh skullcap
Trifolium siskiyouense	Siskiyou clover

Pre-Survey Preparations

In preparation for surveys, specimens of plants on the survey list were located and examined where they were available and blooming. A field trip for this purpose was organized and led by Merissa Hanisko, CDFW Botanist. The email below is a summary of that field trip:

Field visit Plant Locations
Inbox

Hanisko, Merissa@Wildlife <Merissa.Hanisko@wildlife.ca.gov>
Attachments
Jul 17, 2019, 6:46 AM (6 days ago)
to me, Katie, Shannon

Hi,
Following are the locations of the plant occurrences that we visited on Monday July 8. What a great day!

Pondosa CalFire Station
Cuscuta jepsonii
California Natural Diversity Database (CNDDB) Occurrence #9

Shasta Trinity National Forest-Harris Springs Road Dry Lake
Rorippa columbiae
CNDDB Occurrence #21

Shasta Trinity National Forest-Little Mount Hoffman
Collomia larsenii
CNDDB Occurrence #2

Hulsea Nana
CNDDB Occurrence #10

Shasta Trinity National Forest-Near Medicine Lake
Carex halliana
CNDDB Occurrence #1

Klamath National Forest-Orr Lake Campground
Scutellaria galericulata
CNDDB Occurrence #14

I'm still working on getting all of the photos ready to send. Photos of Hulsea nana are attached.

~Merissa

Merissa Hanisko

Environmental Scientist
California Department of Fish and Wildlife
Northern Region
625 S. Main Street
Yreka, CA 96097
(530) 841-2568
merissa.hanisko@wildlife.ca.gov

On July 18, 2019, the RPF visited a site located on the northeast flank of Black Butte which is a CNDDB occurrence of Cordylanthus tenuis ssp pallescens. This site was known to the RPF from previous survey efforts

with a plan written in 2018. The species was abundant on site and flowering. The elevation of the Black Butte site is approximately 4,400 feet compared to approximately 3,380 at the project site.

On August 20, 2018, the RPF located and photographed Botrypus virgianianus at a CNDDB site near Montgomery Creek at an elevation of approximately 2,150 feet. This observation was verified by Robin Fallscheer, CDFW Botanist.

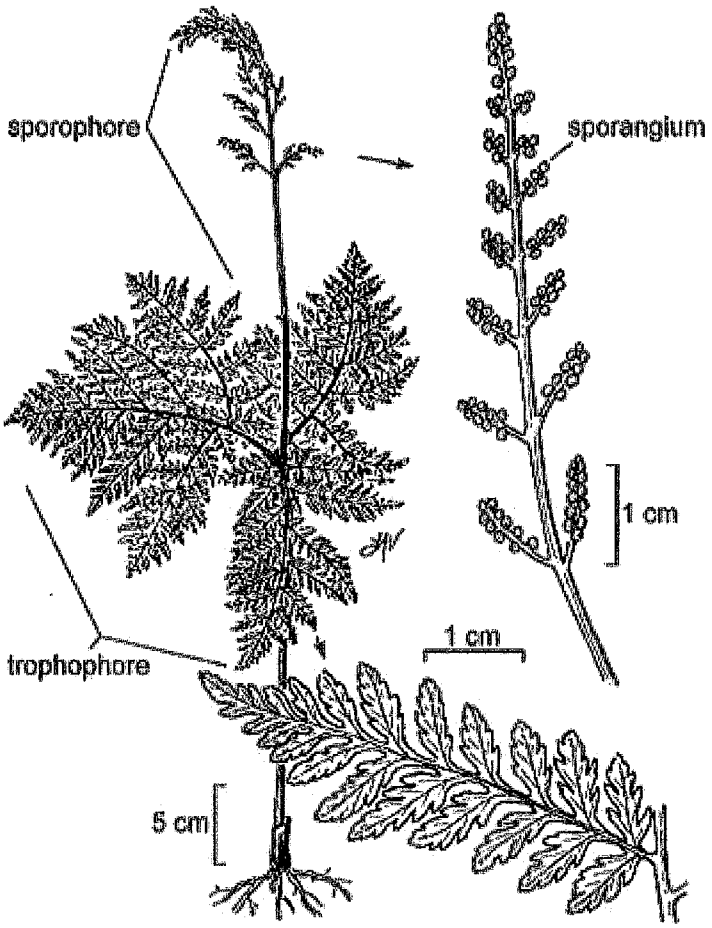
The RPF was unable to examine examples of Epilobium oreganum, Geum aleppicum, and Trifolium siskyouense prior to surveys. However, prior to surveying the RPF compiled a field guide to assist in the potential identification of all species on the survey list which included those species not viewed prior to surveys. The field guide included the descriptions, dichotomous key, and high quality photos for each species (no photos were available for Trifolium siskiyouense). An example from the field guide follows:

Botrypus virgiananus (Rattlesnake fern)

Habit: Plant often robust, herbaceous, deciduous; roots 2 mm thick (1 cm from base), smooth, yellow to brown. **Leaf:** bud hairy; trophophore sessile, < 20 cm wide, ultimate segments linear to ovate, veins free, forked, margins entire to coarsely serrate to deeply lobed; sporophore stalk long, 2--3-pinnate. **Chromosomes:** 2n=184.
Ecology: Moist shaded valleys along small streams; **Elevation:** 700--1200 m. **Bioregional Distribution:**KR, CaR; **Distribution Outside California:** throughout America, Europe, Asia.

Dicotomus key (Family only ie. Genus)

1. Trophophore simple, entire, not midribbed, veins netted with included veinlets; sporangia sunken in simple axis of sporophore ..... OPHIOGLOSSUM
1' Trophophore generally compound (small, simple, entire or 0), generally midribbed, veins free, forked; sporangia sessile or short-stalked, not sunken, in generally pinnatelybranched sporophore
    2. Leaf bud glabrous, trophophore generally < 10 cm wide, generally 1–2-pinnate (0) ..... BOTRYCHIUM
    2' Leaf bud hairy, trophophore generally > 10 cm wide, generally 2–4-pinnate
        3. Leaf deciduous, sporophore and trophophore joined well above ground level; trophophore sessile, blade thin, membranaceous ..... BOTRYPUS
        3' Leaf evergreen for 1 year, sporophore and trophophore joined at to slightly below ground level; trophophore stalked, blade thick, leathery ..... SCEPTRIDIUM



Botrypus virginianus

Field Survey
The survey was conducted on July 18, and 23, 2019 over an eight-hour period. The map below shows travel routes taken:

Results
Botrypus virginianus – This species was not discovered during surveys. It is found in mesic environments such as shaded valleys along streams, bogs, fens, lower montane forests with moderate moisture regimes, meadows seeps, and riparian forests. Mesic sites in the survey are limited to man-made depressions associated with drainage of the site which was historically used for sawmill activities such as log/lumber and equipment storage. These sites were surveyed with no ferns discovered. One fern was discovered occurring in full sun on dry sites. This species was much taller than Botrypus virginianus (averaging 2.5 to 3 feet). It was likely a bracken similar fern.

Cordylanthus tenuis ssp. pallescens - This species was not discovered during surveys. It is found on open volcanic alluvium often associated with yellow pine forests. The survey site may contain potential habitat. The sub-species of Cordylanthus tenuis has a very limited known range with one large population located on the northeast lower slope of Black Butte northwest on Mount Shasta City. Plants in that population were examined on July 18 and were found to be in the beginning of flowering. This site is at a higher elevation than the survey area so plants occurring on the survey site should have been fully in bloom at the time of the survey.

Cuscuta jepsonii – This species was not discovered during surveys. This species occurs as a parasite on Ceanothus diversifolius and Ceanothus prostratus. C. prostratus was present in the survey area. Particular attention was given to discovery and examination of all occurrences of the host. No species of Cuscuta were discovered.

Epilobium oreganum – This species was not discovered during surveys. It occurs in bogs and fens with an affinity for serpentine soils. Plant communities where this species may be found include yellow pine, red fir, lodgepole, and subalpine forests, freshwater wetlands, and wetland-riparian communities. Limited seasonally wet areas exist as man-made drainage related structures within the survey area. These were surveyed with no species of Epilobium discovered.

Geum allepicum – This species was not discovered during surveys. It usually occurs in wetlands associated with meadows. Occassionally this species will occur in non-wetlands. Plant communities where this species occur include sagebrush scrub, and yellow pine forests. With the possible exception of man-made drainage structures, there are no wet areas in the project area. These structures were surveyed with no Geum discovered.

Scutellaria galericulata – This species was not discovered during surveys. It occurs in wetlands within medows or freshwater marshes. Plant communities include yellow pine forests, freshwater wetlands, and wetland-riparian communities. There are no significant wetland associated habitat. Only limited seasonally wet man-made drainage areas occur. These were surveyed with no Scutellaria galericulata discovered.

Trifolium siskiyouense - This species was not discovered during surveys. This species is found in wet mountain meadows. One species of Trifolium was discovered during surveys. Using the dichotomous key it was determined that the Trifolium discoverd was not T. siskiyouense since the key placed it in Group 2 (Involucre forming vestigial ring, inflorescence sessile). T. siskiyouense is in Group 1.

One species belonging to the Grindelia genus was discovered during surveys. The RPF emailed photos of the plant to CDFW with the following response:

Bob Hutcheson <bobhutcheson@blackfoxtimber.com>

to Merissa, Robin

Hi Merissa - I discovered this while surveying on the McCloud mill project. Grindelia but don't know the species.

Bob Hutcheson
Black Fox Timber Management Group
Office - (530) 964-9756
Mobile - (530) 925-9671

---------- Forwarded message ---------
From: **Bob Hutcheson** <bobhutcheson@blackfoxtimber.com>
Date: Fri, Jul 19, 2019 at 8:45 AM
Subject:
To: Bob Hutcheson <bobhutcheson@blackfoxtimber.com>

Attachments area

Hanisko, Merissa@Wildlife <Merissa.Hanisko@wildlife.ca.gov>

to Robin@Wildlife, me

Hi Bob,

Thanks for the photo of Grindelia. I'm not able to determine which species it is based on the photo. There are a few non special status Grindelia species that occur in our area.

Interestingly, when I looked at CalFlora I noticed there is an herbarium specimen from Montague of a federal Threatened Grindelia, Grindelia fraxinipratensis. The CNDDB only includes three records of G. fraxinipratensis and they are all located in the east side of Inyo County. There is one other herbarium specimen from Davis Creek in Modoc County. The Montague herbarium specimen is from 1915 and the current species determination of G. fraxinipratensis is "uncorrected". This might be a species we should keep on our radar. I did look at the Jepson key for distinguishing characteristics of G. fraxinipratensis and was able to determine based on the number of ray flowers and shape of the flower head that the Grindelia in your photo is not G. fraxinipratensis.

Thank you,

Merissa

Merissa Hanisko
Environmental Scientist
California Department of Fish and Wildlife
Northern Region
1625 S. Main Street
Yreka, CA 96097
(530) 841-2568
merissa.hanisko@wildlife.ca.gov

Domestic Water Downstream Sample Letter

January 30, 2019

John Hancock Mutual Life Insurance Co
17700 Mill Plain Blvd., Ste 180
Vancouver, WA 98683-7582

RE: Request for Information on Potentially Affected Resources

Dear Sir or Madam:

I am in the process of preparing an amendment to the Old Mill Timber Harvest Plan (THP) in Siskiyou County. The THP location is as follows:

Township 40N R02W, Portions of the S ½ of Section 31;
Township 39N R02W, Portions of the NW ¼ of Section 6;
Township 40N R03W, Portions of the SE ¼ of Section 36;
Township 40N R03W, Portions of the NE ¼ of Section 1, MDB&M.

The project is within one air miles north of the community of McCloud, CA. The amended area is located within the McCloud, and Squaw Valley Creek planning watersheds (see attached map).

This notice is to request information you might have regarding any sensitive plant or animal species; past (10 year), present, or future (5 years) projects, including harvest plans and road construction or abandonment; archaeological resources; domestic water supplies; or other issues and concerns that may be affected by timber harvesting activities. There are no watercourses in the plan area with the exception of one ephemeral class III that runs through the southeast corner of the property. The closest higher order watercourse is Squaw Valley Creek which is approximately 250 feet to the east of the amended area

.

If you have any knowledge of at-risk resource that could be affected by this proposed project, please contact me at the address listed below within ten (10) days of receipt of this letter. If any resources of the types mentioned above could potentially be affected, measures will be taken to ensure the protection of those resources as required under the California Forest Practice Rules.

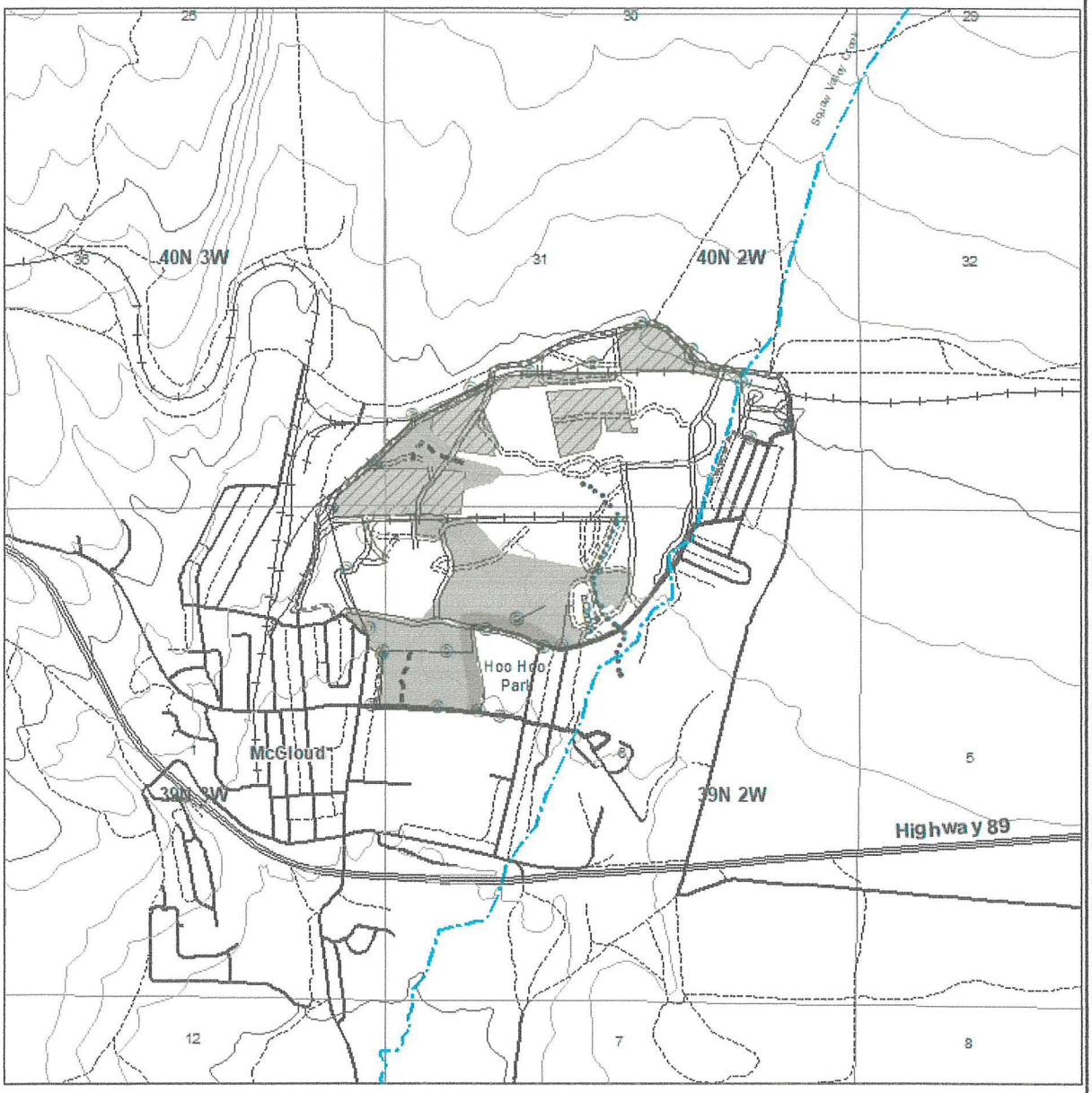
Black Fox Timber Management Group, Inc.
Attn: Foxy THP P.O. Box 687
McCloud, CA 96057

Thank you for your assistance,
Bob Hutcheson
RPF #2302
Black Fox Timber Management Group, Inc.
(530) 964-9756 office
(530) 925-9671 mobile
bobhutcheson@blackfoxtimber.com

Date: 2/4/2019

McCloud Mill THP Vicinity (NOI) Map
T40N R03W Sec. 36 T40N R02W Sec.31
T39N R03W Sec. 1 & T39N R02W Sec.6 MDB&M

Created By: Katie Benson
Black Fox Timber Mgt. Group Inc.



McCloud Mill Property Boundary
THP Area
Amendment Area
Special Treatment Area
Class I watercourse
Class IV watercourse
Unclassified swale
Utility Lines
Highway
Permanent Private Road
Permanant Public Road
Seasonal Private Road
Seasonal Public Road
Railroad

0 750 1,500 2,250 3,000 Feet

1:24,000
1 inch equals 2,000 feet

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

N

Adjacent Landowner List

FOUR RAILS INC
PO BOX 1500
MC CLOUD CA 96057-1500

JOHN HANCOCK MUTUAL LIFE INSURANCE CO
1770 MILL PLAIN BLVD., STE 180
VANCOUVER WA 98693-7582

Adjacent Landowner Sample Letter & Responses

January 30, 2019

John Hancock Mutual Life Insurance Co
17700 Mill Plain Blvd., Ste 180
Vancouver, WA 98683-7582

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.

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Black Fox Timber Management Group, Inc.
Attn: Foxy THP P.O. Box 687
McCloud, CA 96057

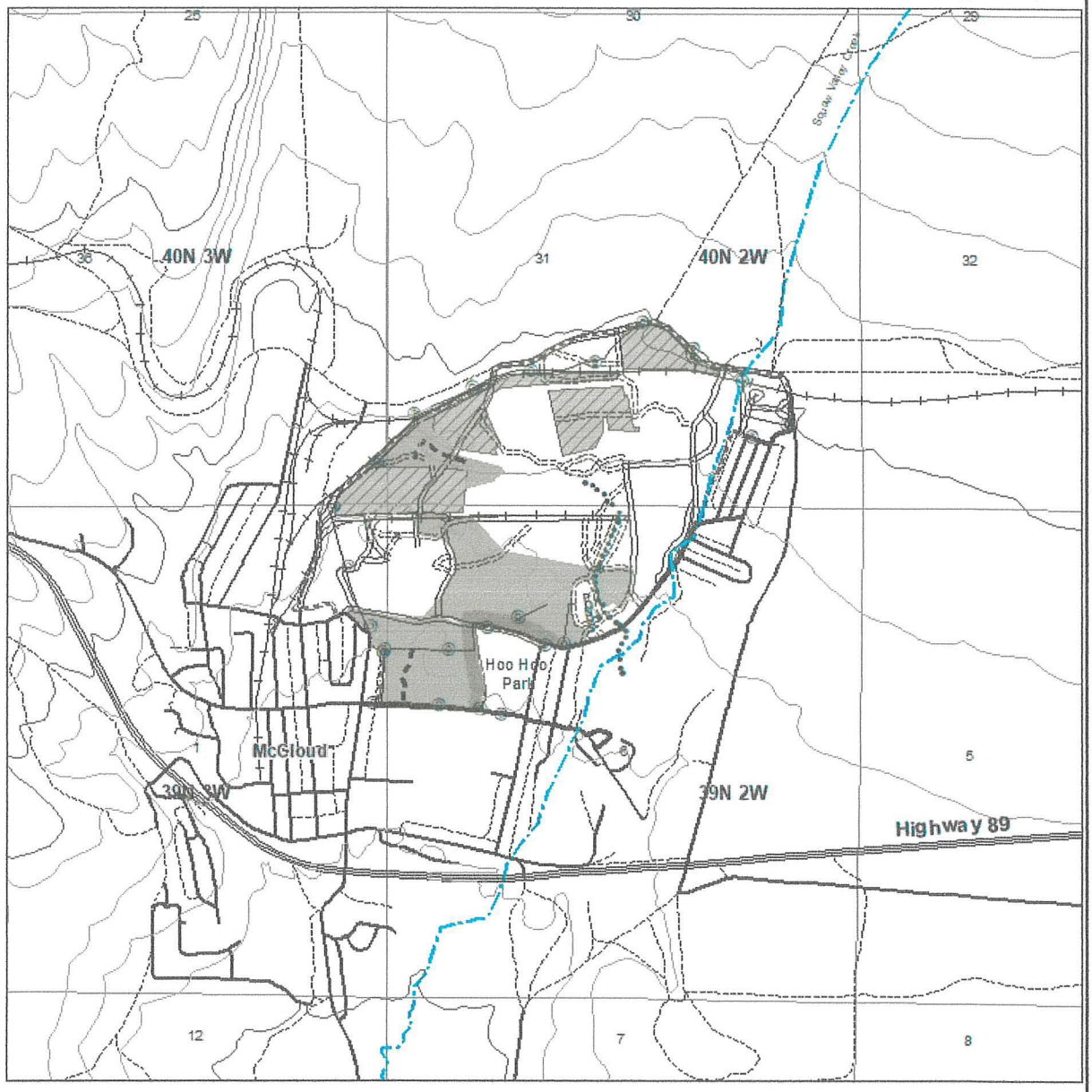
Thank you for your assistance,

Bob Hutcheson
RPF #2302
Black Fox Timber Management Group, Inc.
(530) 964-9756 office
(530) 925-9671 mobile
bobhutcheson@blackfoxtimber.com

Date: 2/4/2019

McCloud Mill THP Vicinity (NOI) Map
T40N R03W Sec. 36 T40N R02W Sec.31
T39N R03W Sec. 1 & T39N R02W Sec.6 MDB&M

Created By: Katie Benson
Black Fox Timber Mgt. Group Inc.



McCloud Mill Property Boundary
THP Area
Amendment Area
Special Treatment Area

Class I watercourse
Class IV watercourse
Unclassified swale
Utility Lines

Highway
Permanent Private Road
Permanent Public Road
Seasonal Private Road
Seasonal Public Road
Railroad

0 750 1,500 2,250 3,000 Feet

1:24,000
1 inch equals 2,000 feet

McCloud 7.5 USGS Quad 2012
Elk Spring 7.5 USGS Quad 1998

N

Landowner Response

Jim Wolter <JWolter@hnrg.com> Wed, Jan 16, 8:50 PM
to me

Bob:

The Bordertown THP lies in both watersheds. There are two more operating seasons remaining on Bordertown THP. HFM plans to harvest some of the area immediately north of the truck scales and over to Thimbleberry Ridge this season.

In addition, HFM will be working on a new thp located in sections 14, 23, 24 and 26 T40N R3W. I have not put together the silviculture for that thp as of yet, but will be doing it soon.

Jim

PROOF OF PUBLICATION
(2015.5 C.C.P.)

Mt. Shasta Area Newspapers
Mount Shasta Herald,
Weed Press, Dunsmuir News
STATE OF CALIFORNIA,
County of Siskiyou

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the Administrative Assistant of the Mt. Shasta Area Newspapers, newspapers of general circulation, published weekly in the cities of Mount Shasta, Weed and Dunsmuir, County of Siskiyou, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Siskiyou, State of California, under the dates of: Mount Shasta Herald-July 9, 1951, Case Number 14392; Weed Press-June 22, 1953, Case Number 15231; Dunsmuir News-May 25, 1953, Case Number 15186; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspapers and not in any supplement thereof on the following dates, to-wit:

February 6,

all in the year 2019

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Mount Shasta, California,

this 6th day of February,

2019.

/s/ Marcella Gerace
Authorized Signature

PROOF OF PUBLICATION OF

Public Notice

Black Fox Timber Management Group is currently preparing a major amendment to the Old Mill Harvest Plan (THP) in Siskiyou County. The amendment is located on the north edge of McCloud, CA. Legal description is: Portions of Section 31 T40N R02W, Portions of Section 6 T39N R02W, Portions of Section 36 T4N R03W, and Portions of Section 1 T39N R03W, MDB&M. As per the California Code of Regulation Title 1481032.10, information is requested regarding surface domestic water use from Squaw Valley Creek, or any other tributaries or ditches within 1,000 feet downstream of the THP boundary so that those supplies may be adequately protected during operations. Responses to this notice are requested within 10 days from the date of this publication. Please respond to Bob Hutcheson, Black Fox Timber Management Group, PO Box 687, McCloud, CA 96057, (530) 964-9756 (office), bobhutcheson@blackfoxtimber.com.
8311 msan fe6c

PROOF OF PUBLICATION

CONFIDENTIAL
AMENDMENT #3

TO THP #
2-14-110-SIS

ATTENTION

THE FOLLOWING AMENDMENT INFORMATION IS REQUIRED BY LAW TO BE KEPT CONFIDENTIAL AND IS NOT FOR PUBLIC VIEWING:

ARCHEOLOGY:
(GOV. CODE § 6254.10 & 14 CCR § 929.1(a)(2))

PAGE 62 THROUGH PAGE 106

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PAGE 62 THROUGH PAGE 106