Siskiyou County
Planning Commission Staff Report
December 18, 2024

Agenda Item Number 1
McDonagh Timberlands Zone Change (Z-24-01)

Applicant:
John J. McDonagh
Wolf Creek Tree Farm
PO BOX 279
McCloud, CA 96057

Property Owner:
John J. and Claudia K. McDonagh
PO BOX 279
McCloud, CA 96057

Project Summary
The project is a proposed zone change for approximately 323 acres from Rural Residential (R-R-B-40) to Timber Production (TPZ) in order to align the zoning with the current use of timber management.

Location:
The project site is located five miles southwest of Highway 3 and the community of Callahan; APN 031-290-010; Township 39N, Range 8W, Section 7, MDB&M; 41.2606, -122.8277.

General Plan:
Soils: Erosion Hazard; Building Foundation Limitations: High Shrink-Swell Behavior Soils; Slope; Wildfire Hazard; Woodland Productivity

Zoning:
Rural Residential Agricultural, 40-acre minimum parcel size (R-R-B-40)

Exhibits:

A. Draft Resolution PC 2024-028
   A Resolution of the Planning Commission of the County of Siskiyou, State of California, Recommending that the Board of Supervisors Determine the Project Exempt from the California Environmental Quality Act and Approve the McDonagh Zone Change (Z-24-01)
   - A-1. Recommended Findings
   - A-2. Notations

B. Comments

C. California Cooperative Forest Management Plan
   - C-1. Revised Vegetation and Site Class Map

D. 1978 Resolution Adopting the Criteria for List “C” for Timber Preserve Zoning (4-11-1978)

Background

Current and Historical Conditions

The applicant is proposing to rezone 323 acres of real property from R-R-B-40 to TPZ to better align the site with the historic, existing, and future use of the property, namely the growing and harvesting of timber. Throughout the history of this parcel, timber production has been a regular source of income.

In 1993, the McKeen Mine Timber Harvest Plan (THP No. 2-93-00224-SIS) was filed for subsequent harvest and completed in 1995. It is estimated that 190 mbf (m=1000, bf=board feet) was harvested on the property, the majority of which was ponderosa pine and white fir.

In 2021, the River Complex Fire burned through the timber stand leaving approximately 30 unburned acres along the western boundary. The existing composition of timber includes white fir, ponderosa pine, Douglas fir, incense cedar, red fir and sugar pine.

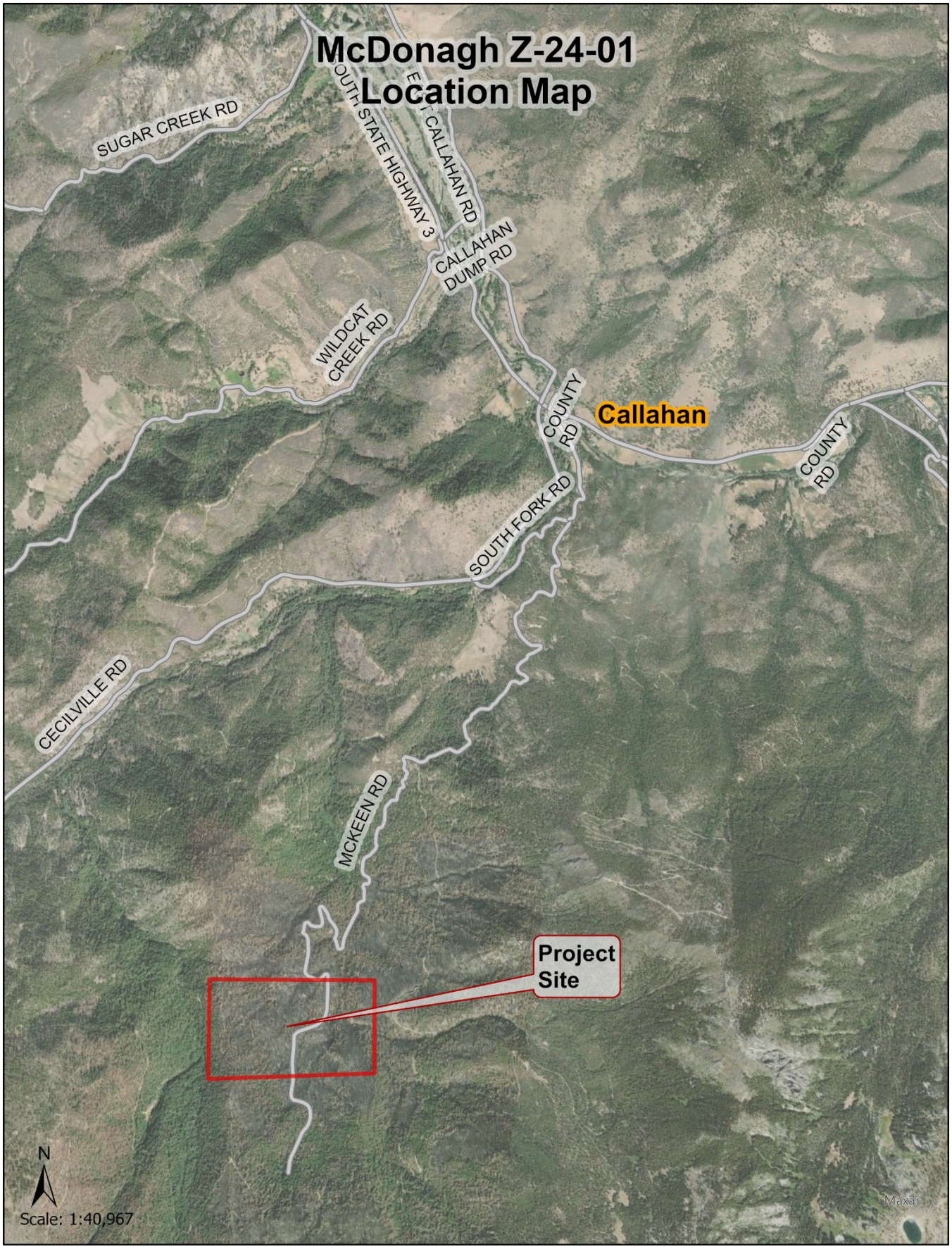
In the Spring of 2022, bark beetles appeared and infected all the standing dead pine burned in the fire. An Emergency Timber Operation (2-22EM-00083-SIS) was conducted to salvage the fire kill timber from the remainder of the property. The insect population has since returned to endemic levels and the property currently has no disease problem. Conservation practices for the property follow the California Forest Practice Rules.

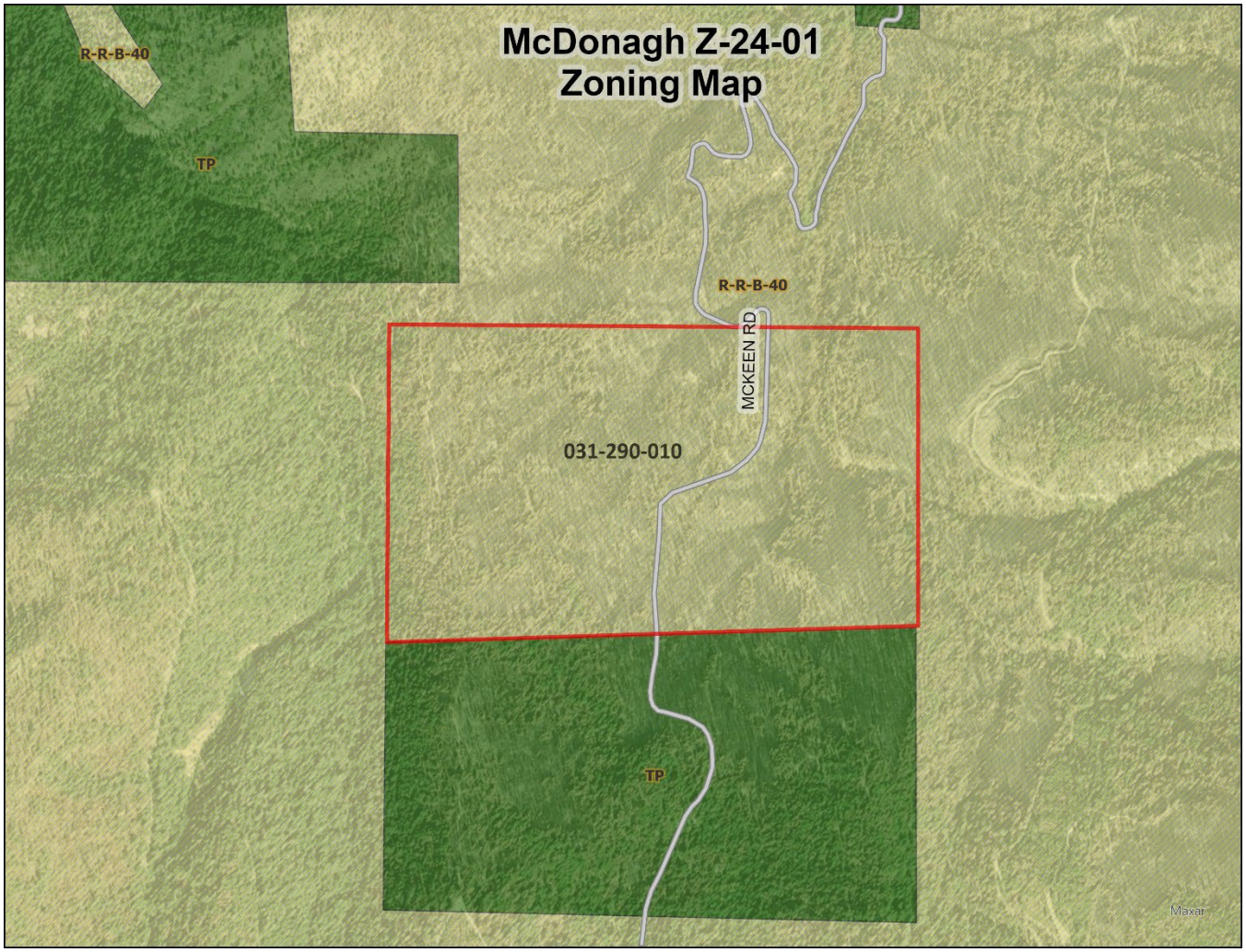
Adjacent Parcels

Direction	Acreage	Zoning	Uses
West	640	RRB40	Klamath National Forest
South	323	TPZ	Timber Management
East	640	RRB40	Klamath National Forest
North	34.4	RRB40	Klamath National Forest

The project site is bordered by the Klamath National Forest to the north, east, and west. The 323-acre parcel directly south of the property is owned by the applicant and is zoned TPZ.

The property straddles two watersheds, the Lower Scott River and Fox Creek. Most of the property is located in the Lower Scott River watershed which contains West Boulder Creek and its tributary, Wolf Creek. Existing improvements on the site include private access dirt roads and the Callahan water diversion. The Callahan Water Company has a granted easement to divert water from Boulder Creek. The Callahan Water Diversion is located on Boulder Creek above the confluence of Wolf Creek. There are no buildings on the property. Many ditches remain from the mining era which have not been in use since the 1950’s.


McDonagh Z-24-01
Location Map
SUGAR CREEK RD
SOUTH STATE HIGHWAY 3
EAST CALLAHAN RD
CALLAHAN DUMP RD
WILDCAT CREEK RD
COUNTY RD
Callahan
COUNTY RD
SOUTH FORK RD
CECILVILLE RD
MCKEEN RD
Project Site
N
Scale: 1:40,967
Maxar



Wildlife Species

Wildlife species that are known to occur or have potential habitat within the area are rainbow trout, which become anadromous steelhead, coho and chinook salmon, the Cascades frog, the western tailed frog, and salamanders. Also present are northern goshawk, mountain lion, black bear, mule deer, California grey and pine squirrel, jack and cottontail rabbit, chipmunk, northwest rattlesnake, lizards, pileated woodpecker, raven, red tail hawk, golden eagle, owl, falcon, vulture, crow, sap sucker, stellar blue jay, and songbirds. The Franklin's bumble bee was federally listed as endangered in 2022. In 2006, one confirmed observation of Franklin's bumble bee was made west of the property. Spotted owl activity areas are located both to the west and east of the property on Klamath National Forest land. The Sierra Nevada red fox is another threatened species possibly present in the area. In addition, there are two endangered species possibly present on the property, the grey wolf and bald eagle.

Soil Conditions

The entire property's soils are deep seated, averaging 5 feet in depth, drain water easily and are well suited for timber production. The property consists of two soil series: Gerle family – Entic Xerumbrepts association (24.8%), Gilligan – Chawanakee families association (75.2%).

Site Classification

The current site classification of the property is 80 acres classified as Site III (24.8% of the property) and 243 acres classified as high Site IV (75.2% of the property).

As of December 2024, post fire reforestation efforts include 50,220 seedlings planted (155 seedlings per acre), consisting of ponderosa pine, Douglas fir, sugar pine, white fir and incense cedar. In the Spring of 2025, 3,000 riparian hardwoods will also be planted along the streams and permanent wet areas throughout the property, consisting of red alder, black cottonwood, and big leaf maple.

This reforestation effort is designed to increase the property's site classification from high Site IV to a solid Site III. The estimated growth of the standing timber is 3.5 to 4 percent per year.

Parcel Creation and Ownership History

The property was originally patented in 1896 and granted to the Central Pacific Railroad. On August 1, 1899, the NW ¼ of Section 7 was purchased by James McKeen and the Helena Mining Company from the Central Pacific Railroad. On September 1, 1901, the NE ¼ of Section 7 was purchased by James McKeen. On August 22, 1905, James McKeen sold his interest in the NE ¼ of Section 7 to the Helena Mining Company. On August 12, 1913, the North ½ of Section 7 was sold to the Shasta Mining Company. On July 8, 1915, the Shasta Mining Company sold to C.G. Strickland. On December 21, 1914, C.G. Strickland sold the property to Largent. On January 8, 1916, Largent sold to Oro Grande Mining. On June 7, 1963, Oro Grande Mining sold to Pool. On November 21, 1963, Pool sold to Walters. On May 3, 1965, Walters sold to Wilburn & Jenson. On October 24, 1968, Friden became the owner of the property. On May 22, 1973, Simonson Lumber Company purchased the property. On July 2, 1979, the Simonson Lumber Company became the Simpco Timber Lands Partnership. In 2020, the current owner, Wolf Creek Tree Farm, acquired the property from the Simpco Timber Lands Partnership.

Analysis

General Plan Consistency

The Land Use Element of the Siskiyou County General Plan identifies the project site as being within the mapped resource overlay areas for Soils: Erosion Hazard; Soils: Severe Septic Tank Limitations; Slope; Wildfire Hazard; and Woodland Productivity. Planning staff has identified that Composite Overall Policies 41.3(e), 41.3(f), 41.5, 41.6, 41.9, 41.12, 41.13, and 41.18 apply to the proposed project.

Staff has conducted a detailed analysis of each of the required findings and has found that the proposed project is consistent with the applicable General Plan policies governing the subject site. Additionally, the use would be compatible with surrounding land uses, would have adequate roadway access for transportation and public health and safety provisions, and would not create environmental impacts to on- or off-site resources. The recommended findings are detailed in the General Plan Consistency Findings section of Exhibit A-1 attached to this staff report and are submitted for the commissioners' review, consideration, and approval.

Zoning Consistency

The subject parcel is zoned Rural Residential 40-acre minimum parcel size (R-R-B-40). After the proposed zone change, the area would be rezoned to Timber Production Zone (TPZ).

Per Government Code 51104(f), “timberland” is defined as privately owned land which is devoted to and used for growing and harvesting of timber and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.

> *The subject parcel meets the definition of “timberland”. Prior to the fire, the property was a fully stocked, mixed conifer forest with growth ranging from 175 to 320 bd ft. per acre per year, which converts to 14.58 cubic feet and 26.67 cubic feet per acre, respectively.*

Per Government Code 51113(c)(3)(A), the parcel shall meet the timber stocking standards set forth in Public Resources Code 4561 and the California Forest Practice Rules 2024. Per Siskiyou County Code 10-6.5102, permitted uses in the TPZ District include the growing and harvesting of timber.

> *The property meets the stocking standards required by Public Resources Code 4561 and the forest practice rules as evidenced by the submitted California Cooperative Forest Management Plan. The property is currently being used for the growing and harvesting of timber. As such, a rezone of the property from R-R-B-40 to TPZ would be consistent with zoning requirements and existing uses already occurring on the property and neighboring parcels.*

Per Siskiyou County Code 10-6.5104, to be zoned TPZ, a parcel must be on List A or B as specified in the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976 or, alternatively, meet the minimum standards adopted by the Board of Supervisors for inclusion under List C for the TPZ district. As the property is not shown on List A or B, it must meet the minimum standards for inclusion under List C.

> *The property meets the minimum standards for inclusion under List C. The property is owned by a single entity (Wolf Creek Tree Farm). List C requires a minimum of 40 acres of Site III while the property contains 80 acres of Site III and 243 acres of high Site IV (which is equivalent to 121.5 acres of Site III). A California Cooperative Forest Management Plan was developed for the property by a Registered Professional Forester and the property meets the stocking standards of the forest practice rules (Article 6, Section 1080.1(a)(2)-(3), Stocking Standards for Substantially Damaged Timberlands). Where only dead, down, or dying trees were salvaged logged following the substantial damage, no restocking is required. No restocking requirements need be met on substantially damaged Timberlands on Sites IV and V after Timber Operations. In addition, from 2023 to 2024, 50,220 seedlings were planted (155 seedlings per acre) to replace what was lost during the 2021 fire.*

Based on staff’s analysis of the proposed use, staff believes that the necessary findings can be made for the approval of this application.

Environmental Review

The proposed project (i.e., zone change to Timberland Production District) is statutorily exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15264, *Timberland Preserves*. Pursuant to this section, "local agencies are exempt from the requirement to prepare an EIR or negative declaration on the adoption of timberland preserve zones under Government Code Sections 51100 et seq. (Gov. Code, Sec 51119)."

Comments

A Notice of Public Hearing was published in the Siskiyou Daily News on December 4, 2024, and mailed to property owners within 300 feet of the applicant's property. No public comments have been received at the time this staff report was written.

A Preliminary Project Review was circulated to Siskiyou County Reviewing Agencies and State Responsible Agencies on June 20, 2024.

California Department of Fish and Wildlife (CDFW) – July 2, 2024

Because the project only includes the rezoning of the parcel and does not include approval of future timber production or forest management activities CDFW has no comments at this time.

Siskiyou County Environmental Health – June 4, 2024

Environmental Health has no objection to the proposed zone change.

Planning Staff Recommendations

- Adopt Resolution PC 2024-028 taking the following actions:
    - Recommend the Board of Supervisors determine the project to be statutorily exempt from the California Environmental Quality Act (CEQA) in accordance with CEQA Guidelines Section 15264, *Timberland Preserves*; and
    - Recommend that the Board of Supervisors approve the Zone Change request based on the recommended findings in Exhibit A-1, attached hereto and incorporated herein.

Suggested Motion

I move that we adopt Resolution PC 2024-028, a resolution of the Planning Commission of the County of Siskiyou, State of California, recommending that the Board of Supervisors determine the Project exempt from CEQA and approve the McDonagh Timberlands Zone Change Request (Z-24-01).

Preparation

Prepared by the Siskiyou County Planning Division. For project specific information or to obtain copies for your review, please contact:

James Phelps, Planner
Siskiyou County Planning Division
806 S. Main Street
Yreka, California 96097

Findings

Zoning Consistency Findings

1. The proposed zone change is consistent with the applicable elements and policies of the Siskiyou County General plan, as documented herein.
2. The proposed zone change is consistent with Siskiyou County Code Title 10, Chapter 6.
3. The proposed zone change from Rural Residential (R-R-B-40) to Timberland Production District (TPZ) is consistent with existing and permitted land uses surrounding the project site.
4. The proposed zone change is compatible with the surrounding zoning of Timberland Production District (TPZ).
5. The Planning Commission has considered all written and oral comments received and based on its analysis of the public testimony and staff's analysis, the Commission has determined that the project as designed and conditioned would be compatible with existing and planned uses of the area.

Timberland Production Zone Inclusion

1. Government Code Section 51104(f) defines "timberland" as "privately owned land… which is devoted to and used for growing and harvesting of timber, or for growing and harvesting of timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre."

2. The property proposed to be rezoned to TPZ meets the definition of "timberland" per Government Code Section 51104(f).

3. Pursuant to Siskiyou County Code §10-6.5104(b), the parcel that is part of this project meets the minimum standards adopted by resolution of the Board for inclusion under List C for the Timber Land Production Zone District (TPZ).

4. The property to be included in the Timberland Production Zone meets the stocking standards requirements of Government Code Section 51113(3)(A), Public Resources Code Section 4561 and the California Forest Practice Rules 2024.

General Plan Consistency Findings

Composite Overall Policies

Policy 41.3(e) – All proposed uses of the land shall be clearly compatible with the surrounding and planned uses of the area.

The use of the land for timber production has been in existence since the 1850s. The use of the land for timber production is clearly compatible with the surrounding area as all surrounding parcels are dedicated to forestry or timber production.

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.

The historic and continued use of the land for timber production will not be disruptive or destroy mapped resources.

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.

No new development is proposed as part of this project. Access to the property is via McKeen Road, a private road capable of accommodating future timber production activities.

Policy 41.12 – All significant historic and prehistoric places and features when identified shall be preserved and protected in accordance with accepted professional practices.

This area falls within the ethnographic boundary of the Scott Valley Shasta Tribe. As part of the California Cooperative Forest Management Plan, a Confidential Archeological Letter (CAL) was written for the property in the McDonagh Emergency Timber Operations of 2022 (2-22-EM-00083-SIS). According to Callahan Mining District (Scott River Mining District) records, there are two named mines in the area.

Policy 41.13 – All rare and endangered plant species as identified and recognized by state and federal government shall be preserved and protected in accordance with accepted professional practices.

The California Cooperative Forest Management Plan identifies plant and animal species that are known to occur or have potential suitable habitat within the plan area. As part of the plan, conditions have been developed to preserve and protect rare and endangered species 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.

Staff has reviewed all Land Use Element policies and has determined that the project is consistent with the Siskiyou County General Plan

Map 2: Erosion Hazard

Policy 7 – Specific mitigation measures will be provided that lessen soil erosion, including contour grading, channelization, revegetation of disturbed slopes and soils, and project time (where feasible) to lessen the effect of seasonal factors (rainfall and wind).

No new development is proposed as part of this project. However, the California Cooperative Forest Management Plan submitted by the applicant includes specific requirements that lessen soil erosion and ensure that the project will not have any negative effects related to soil erosion.

Map 4: Soils: Severe Septic Tank Limitations

Policy 9 – The minimum parcel size shall be one acre on zero to 15 percent slop and five acres on 16 to 29 percent slope.

The property is 323 acres and meets the minimum parcel size requirements.

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 public or quasi-public uses only may be permitted.

The permitted density will not create erosion or sedimentation problems.

No new development is proposed as part of this project.

Map 5: Excessive Slope

Policy 11 – All areas with 30 percent or greater natural slope shall not be developed with facilities requiring septic tanks for sewage disposal.

No new development is proposed as part of this project.

Policy 15 – Areas designated 30 percent or greater natural slope but proven to be less than 30 percent slope shall only be developed when a grading plan for roads, acceptable to the Department of Public Works, has been submitted.

No new development is proposed as part of this project.

Map 10: Wildfire Hazard

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.

No new development is proposed as part of this project. As part of the building application process, all future development must comply with fire safe standards enacted pursuant to Public Resources Code (PRC) Section 4290 and California Code of Regulations, Title 14, Fire Safe Regulations, to the satisfaction of CAL FIRE.

Map 11: Woodland Productivity

Policy 31 – The minimum parcel size shall be one acre on 0-15% slope, and 5 acres on 16-29% slope.

The existing parcel has varying slopes and contains approximately 323 acres, which exceeds the minimum parcel size. The parcel acreage will not change as part of this project.

Policy 32 – Single family residential, light commercial, light industrial, 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.

The proposed zone change to Timberland Production will allow uses that are permitted uses per Policy 32 and will not create erosion or sedimentation problems.

Policy 33 – All land uses and densities shall be designed so as not to destroy timber productivity on large parcels of high suitability woodland soils. (Class I and II.)

The proposed zone change to Timberland Production will not destroy timber productivity and will not change the size of the existing parcel. In addition, the parcel is not classified as Class I or II.

California Environmental Quality Act (CEQA) Findings

1. This project is statutorily exempt from CEQA in accordance with Section 15264 of the CEQA Guidelines.

Exhibit A-2 to Resolution PC 2024-028
Notations and Conditions of Approval

Notations

1. Within ten (10) days following the date of the decision of the Siskiyou County Planning Commission, the decision may be appealed to the Siskiyou County Board of Supervisors. The appeal shall be filed with the Clerk of the Board of Supervisors.
2. Upon adoption of the CEQA exemptions, a check in the amount of $50 made payable to the Siskiyou County Clerk and submitted to the Siskiyou County Planning Division is necessary in order to file the Notice of Exemption. Failure to file the Notice of Exemption extends the statute of limitations for legal challenges to the CEQA exemptions from 35 days to 180 days.

Conditions of Approval

1. The project shall substantially conform to the project description reviewed by the Planning Commission on December 18, 2024, and subsequently approved by the Siskiyou County Board of Supervisors. Any proposed amendment(s) shall be submitted for consideration to the Deputy Director of Planning to determine the review process pursuant to the Siskiyou County Code.
2. The applicant shall defend, indemnify, and hold harmless the County, its agents, officers, and employees from any claim, action, or proceeding (collectively, “Action”) against the County, its agents (including consultants), officers, or employees to attack, set aside, void, or annul the approvals, or any part thereof, or any decision, determination, or Action, made or taken approving, supplementing, or sustaining the project or any part thereof, or any related approvals or project conditions imposed by the County or any of its agencies, departments, commissions, agents (including consultants), officers, or employees, concerning the project, or to impose personal liability against such agents (including consultants), officers, or employees resulting from their non-negligent involvement in the project, which action is brought within the time period provided by law, including any claim for private attorney general fees claimed by or awarded to any party from the County. Said responsibilities shall be pursuant to the County’s standard Agreement for Indemnification in effect at the time of application approval or Agreement for Indemnification if signed and effective prior to the date the application is approved. In the event that the applicant fails to comply with the terms of the applicable agreement, the applicant does hereby consent and agree to all remedies in said agreement and does hereby agree and consent to the County rescinding all applicable project approvals.

From: Trent, Colton@Wildlife
To: Dianne Johnson
Cc: Iacona, Erika@Wildlife
Subject: Early Consultation for Zone Change Z-24-01, APN: 031-290-010
Date: Tuesday, July 2, 2024 11:31:31 AM
Attachments: image001.png

Dear Dianne Johnson,

The California Department of Fish and Wildlife (CDFW) has reviewed the Request for Comment for a Zone Change for a single parcel from R-R B-40 (Rural Residential, RR) to TPZ (Timberland Production District) in Siskiyou County (Project). As a trustee for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and their habitat. As a responsible agency, CDFW administers the California Endangered Species Act (CESA) and other provisions of the Fish and Game Code that conserve the State's fish and wildlife public trust resources.

Since the Project only includes the rezoning of the parcel and does not include approval of future timber production or forest management activities, CDFW has no comments at this time. Please note that Siskiyou County is biodiverse and home to many special status biological resources. Therefore, if the status of this Project changes or timber production/forest management activities are proposed, please re-consult with CDFW.

Please send all future consultation requests to R1CEQARedding@wildlife.ca.gov.

Kind Regards,
Colton
Environmental Scientist
Interior Habitat Conservation Planning
(530) 485-7891
601 Locust Street
Redding, CA 96001
CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

SISKIYOU COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
LAND DEVELOPMENT REVIEW

OWNER MCDONAGH JOHN & CLAUDIA **FILE #** 031-290-010

LOCATION MCKEEN ROAD CALLAHAN T 39N , R 8W , SEC. 7 **PD#** Z-24-01

REQUIREMENTS:

Sewage Disposal Test/Information:

( ) None Required: Connection to Approved Sewage System
( ) Engineered Percolation Tests –
Parcels #
( ) Wet Weather Testing
( ) Engineered Sewage Disposal System
( ) Other

Water Supply Tests/Information:

( ) None Required: Connection to Approved Water System
( ) Well Logs (Existing Wells) ( ) Well Logs for Adjoining Property
( ) Drilled Well – Parcels # ( ) Spring Source-Verification
( ) Pump Test (Static Level) Hours
( ) Bacteriological Analysis ( ) Chemical Analysis ( ) Physical Analysis
( ) Other

Project Information:

( ) Location Map ( ) Mark Project Area ( ) Contour Map
( ) Food Establishment Plans ( ) Swim Pool/Spa Plans
( ) Waste Information (Non-Sewage)
( ) Other

Comments/Conditions:

Environmental Health has no objection to this proposed Zone Change.

Parcel has not be reviewed or approved for buildability at this time for sewer and water.

REHS DATE 6/4/24

ENVIRONMENTAL HEALTH ACTION

(x) Application Accepted ( ) Application Rejected as Incomplete (see comments)

****

(x) Approved ( ) Recommended for Denial
( ) Approved with conditions (see comments)

REHS DATE 6/4/24

Date sent to Planning:

EXHIBIT B - COMMENTS

California Cooperative Forest Management Plan

(Version 1-9-2019)

Property Name: **Wolf Creek Tree Farm**

Property Location Address: Section 7, 5 miles SW of Callahan, 96014 Siskiyou County

Owner Name (s): John and Claudia McDonagh

Plan Author: Daniel O. Prielipp

Signature: Daniel O. Prielipp

Phone: 530 925-0176 RPF#: 2827

This management plan outlines the conditions and capability of property resources, documents the landowner's objectives and decisions, and identifies potential resource improvement projects. It is meant to be a flexible and educational document that considers a planning horizon of at least 5 years but may include objectives that require a much longer period.

This management plan template meets management plan requirements for grant agreements and other provisions available through CAL FIRE, NRCS, USFS, and the American Tree Farm Association. Signature Pages are provided to document acceptance of this management plan in meeting those requirements.

This management plan is a tool for and belongs to the landowner. Signatures are only required for that entity providing funding as requested by the landowner.

USDA United States Department of Agriculture
Natural Resources Conservation Service

SIGNATURES AND APPROVALS

This Forest Management Plan is provided as a guide to help you accomplish the objectives that you have for your forest. This Forest Management Plan will guide you in achieving the benefits of managing your forest and forest related resources. With this Forest Management Plan, you are eligible to participate in the California Department of Forestry and Fire Protections California Forest Improvement Program (CFIP), US Forest Service's Forest Stewardship Program (USFS), the American Forest Foundation's American Tree Farm System (ATFS) and The Natural Resources Conservation Service (NRCS) programs. This plan will need to be reviewed and approved by representatives for each of the programs that are providing funding.

I have reviewed this plan and approve its content.

_____ _____

Landowner (s) **Date**

USFS Forest Stewardship Program

I certify that this Forest Management Plan meets the requirements of the federal Forest Stewardship Program.

_____ _____

Plan Preparer Date

I certify that this Forest Management Plan meets the requirements of the federal Forest Stewardship Program.

_____ _____

Stewardship Forester Date

Forest Stewardship Tracking Number: _____

NRCS Financial Assistance Programs including EQIP

I certify that this Forest Management Plan meets the requirements of the USDA-NRCS Programs and/or the Plan Criteria for forest activity plans in Section III of the USDA NRCS Field Office Technical Guide.

_____ _____ _____

Technical Service Provider Date RPF Number

I certify that this Forest Management Plan meets the requirements of the USDA-NRCS Programs and/or the Plan Criteria for forest activity plans in Section III of the USDA NRCS Field Office Technical Guide.

_____ _____

District Conservationist Date

ATFS Program

I certify that this Forest Management Plan meets the requirements of the American Forest Foundation's American Tree Farm System.

_____ _____ _____

ATFS Inspecting Forester Date Number

Certified Tree Farm Number: (e.g. AL 1234) _____ Date of ATFS Certification: _____

CAL FIRE CFIP MANAGEMENT PLAN CERTIFICATION PAGE

California Registered Professional Forester (RPF) Certification: I certify that I, or my supervised designee, personally inspected this California Forest Improvement Program (CFIP) plan area, and that the plan fully complies with the CFIP and Professional Foresters Law, and meets Federal Forest Stewardship Management Plan Standards. I further certify that this plan is based upon the best available site and landowner information, and if followed, will not be detrimental to the productivity of the natural resources associated with this property.

Name (print or type): Daniel O. Prielipp

Signature: Daniel O. Prielipp Date: 12-12-2023

Organization or Company: Consulting Forester

Address: 4003 Forest Lane
Dunsmuir, CA 96025

Phone: 530 925-0176 RPF#:2827

CAL FIRE Unit Certification: I certify that I, or my supervised designee, personally inspected this California Forest Improvement Program (CFIP) plan area, and that the plan fully complies with the CFIP and Professional Foresters Law, and meets Federal Forest Stewardship Management Plan Standards.

Name (print or type): _____

Signature:_____ Date: _____

California Department of Forestry and Fire Protection

Unit: _____

Address: _____

CAL FIRE STATE OR REGION CFIP COORDINATOR: I certify that the plan fully complies with the CFIP and Professional Foresters Law, and meets Federal Forest Stewardship Management Plan Standards.

Name (print or type):_____ RPF#:_____

Signature:_____ Date: _____

TABLE OF CONTENTS

This Multi-Agency Cooperative Forest Management Plan was developed for use in California by CAL FIRE, the US Forest Service and USDA-Natural Resources Conservation Service using information from a national joint Forest Stewardship, American Tree Farm System, NRCS Planning Process and the California Forest Improvement Act.

Landowner Information

Landowner(s): John and Claudia McDonagh

Mailing: PO Box 279, McCloud CA. 96057

Phone: 530 918-9771 **E-Mail:** dunchadda@yahoo.com

Landowner's Representative: Daniel O. Prielipp

RPF# : 2827

Mailing Address: 4003 Forest Lane, Dunsmuir CA 96025-1919

Phone: 530 925-0176 © 530 235-4031 office **E-Mail:** prielipp@att.net

Management Plan History

Does a Management Plan exist for this property?: Yes.

If Yes:

Type of Plan: (CFIP, EQIP, NTMP, FSP, CAP, Other): THP 2-93-224-SIS(6) McKeen Mine by Belden, Emergency Timber Operations 2-22EM-00083-SIS and California Cooperative Forest Management Plan 2023.

Date of Original Plan Completion: 1993 **Revision Dates:** 12/28/2023

NOTE: Past Plans and Current Amendments are referred to in Appendix #3.

PROPERTY FACTS

Legal Property Description: T39N, R8W section 7

Nearest city or Town: Callahan **County:** Siskiyou

Assessor's Parcel Numbers: 031-290-010-000 (North half), 031-290-020-000 (South half)

GPS Coordinates: 41deg. 15' 27" N and 122 deg. 49' 39" W

Total ownership acreage: 647.6 **Total forested acreage:** 647.6

Does Landowner reside on the property?: No.

Description of Property:

The property borders the US Forest Service on all sides. The Trinity Alps Wilderness Area is off the Southern border. The overall topography including slope, aspect and elevation: Slopes vary from 5 to 60 percent, averaging 15% to 25%. The property's aspect is North facing (65%). Exception are the two ridges and 4 creeks which create East (15%) and West (20%) aspects. No South (0%) facing aspect. Elevation ranges from 4,120 feet at Boulder Creek (NE) to 5,400 feet (SW) at the Fox Creek Ridge trailhead staging area. **See Property Location Map and Parcel Map in Map Section.**

Estimate percent of total acreage that is:

Percent of Land Topography:

Flat (<5% grade) 35%, **Gentle (< 20% grade)** 45%, **Steep (> 35% grade)** 20%

Transportation System:

Vehicle Access (check): Good (at least 50%)

Estimated improved road length (rock surface): N/A

Estimated unimproved road length: 7 Miles.

Watershed Information: Within the French Creek - Scott River Watershed (115,309.3 acres) is:

WBD-HUC12 planning watershed: South Fork Scott River Subwatershed 180102080201

Acres within this watershed: 28,173.74

Property straddles the two watersheds Lower Scott River and Fox Creek. Cal watershed mapper 1105.420303 and 1105.420302 respectively. Most of the property is in the Lower Scott River which contains West Boulder Creek and its tributary Wolf Creek.

Is there a 303d listing on watershed?: No.

Tract number: 10891

Farm number: 2734

PROPERTY HISTORY

The property is located 2.5 miles North of the Trinity / Siskiyou County boundary, adjacent to the Trinity Alps Wilderness which in 1964 was formed from National Forests. By 1984 it had doubled in size, 517,000 aces and was added to the National Wilderness Preservation System. The West Boulder Lakes Trailhead is southeast of the property, the Fox Creek Trail head is on the property's south boundary. There is currently 600 miles of trails in the Trinity Alps Wilderness which are within the 3 National Forests (Shasta/Trinity NF, Klamath NF, Six Rivers NF). Total acreage is now over 750,000 acres.

The forest was burned by Wildfire in 2021. Known as the River Complex Fire it originated on July 29th, in the Trinity Alps Wilderness grew for over a month. Property burned quickly on about the 11th of September. Contained on 10-25-2021 the fire had grown to 200,000 acres. The complex comprises over 20 wildfires started by lighting in late July.

Late in the 19th century, property ownership (Patent Grant) transferred to private ownership of the Central Pacific Railroad Company's sibling Company, the Cal/Oregon Railroad and Telegraph Co. for the Construction and maintenance of Railroads and other types of infrastructure for the Nation. Originally the property was known as Tract 38. Traditionally, odd sections became private like Section 7, becoming part of the checkerboard fabric of private and USFS Lands.

Mining has played a large part in the property's history. Much remains to be discovered. However, the CAS (Confidential Archeological Survey) indicates many activities beginning in circa 1850, such as Mines, Mining camps, Smelters, Assayers office, RR tracts, water ditches. One of which that connects to the McKeen Mine, located off property to the North. In the 1950's the Gold, Copper and Gem stones were all mined away, along with other precious metals and ores. Eventually the ownership transferred to Timber & Land Companies and private individuals. Throughout the property are many log truck and Skid roads. Numerous stumps of varying ages remain from previous harvesting operations.

Prior to 2021 the property consisted a continuous forested landscape of highly stocked stands of Timber with a large white fir component. The North half of the property had trees with smaller Diameters than the South half. A result of more harvesting and mining operations than the South half. The South half had bigger trees. Many commercial size trees remain in the South and West parts of the property after the fire.

South Half history. 323.254 acres Acquired in 2014 from Timbervest
Zoned TPZ(Timber Production Zone). **APN:031-290-020-000**

On March 24th, 1943, E.J. Hjertager & Son Lumber Co. purchased from the Central Pacific Railroad et al, the South half of section 7. They harvested the timber, had an operating lumber mill, and leased out the property for prospecting and mineral extraction.

On December 21st, 1972, the property transferred to Scott Lehman and the Simonson Timber Company. Next it belonged to the Simpco Timber Lands Partnership on July 2nd, 1979, who then had it harvested by the Simonson Timber Company in 1974 through 1976.

On February 14th, 1984 Steven and Ruth Kahn purchased the property from Simpco Timber Lands Partnership.

On July 17th, 1990, the property was acquired by Fruit Growers Supply Company who harvested in 1993 - 1995.

In 2012 the property transferred to Timbervest Partners of California LLC. Mason Bruce and Girard conducted a timber cruse and determined a growth rate of 3.5% to 4%. Total volume estimated by strata cruise was 3,507 mbf.

On Aug, 5th, 2016 McDonagh acquires property from Timbervest. Forester Prielipp Cruised the South half of the property (section 7) with Landowner in 2018. Estimated volume was 4,332 mbf.

On Sep.11th 2021, the River Complex Fire burned through 2/3rds of the forest stand.

In the Summer of 2022 the property had an Emergency Timber Operation to salvage the fire kill timber. 2-22EM-00083-SIS.

Throughout the history of this parcel, timber and mineral extraction was a regular source of income.

North Half history. 324.346 acres. Acquired in 2020 from Simpco Timber Lands Partnership. Zoned Situated within undefined, timber district. The property is currently **Zoned RRB-40** (Rural Residential Building with 40-acre minimum size parcel). **APN: 031-290-010-000**

Tract 38 (Section 7) was patent by Central Pacific Railroad et. al in Feb. 1896 from the US Government.
James McKeen had patented the McKeen mine in 1881, north of property in Section 36. Afterwords on Aug.1st, 1899 purchased the NW 1/4 Section 7 with Helena Mining Co. from CPRR et.al.. On Sep. 1st, 1901, he purchased the NE 1/4 of Section 7 from the Central Pacific Railroad et al. On Aug. 22nd 1905, McKeen sold his interest in the NE 1/4 to Helena Gold Mining Co.
On Aug. 12th, 1913 Helena Mining Co sold the North 1/2 of Section to Shasta Mining Co.
on July 8th, 1915, Shasta Mining Co.sold the North 1/2 of Section 7 to C.G. Strickland.

C.G.Strickland sold to Largent on Dec.21st, 1914.
Largent to Oro Grande Mining, Jan 8th, 1916.

North half of section 7 was Harvested in 1940's.

Oro Grande Mining to Pool & Arron, Jun. 7th, 1963.
Pool to Walters Nov. 21st, 1963
Walters to Wilburn & Jenson May 3rd, 1965
Next Friden became owner on Oct. 24th, 1968.
Simonson purchase property in May 22nd, 1973.
This became Simpco Timber Lands Partnership on July 2nd, 1979.

In 1993 the McKeen Mine THP 2-93-224-SIS (6) (313 ac.) was filed for subsequent harvest and completed in 1995. This included the North ½ of Section 7, T40NR8W as well as currently other ownerships to the North.
It is estimated, 190 mbf was harvested on the property (313 acres X 0.608 mbf/ac = 190mbf), 61% of which was Ponderosa Pine and 16% White fir. Transition method was the silvicultural prescription used to harvest.Trees exhibiting mechanical damage from past logging, evidence of insect, mistletoe activity, live crowns with less than 40 percent and having deformities were harvested. Leaving a better stand after harvest.

Finally, Simpco Timber Lands Partnership sold the property to McDonagh on 11-10-2020. Estimate volume at time of purchase 1,729 mbf.

On Sep.11th 2021, the River Complex Fire burned through the timber stand leaving approximately 30+ acres along the Western Boundary.

In the Summer of 2022, the property had an Emergency Timber Operation to salvage the fire kill timber. 2-22EM-00083-SIS.

Throughout the history of this parcel, timber and mineral extraction was a regular source of income.

CURRENT PROPERTY CONDITIONS

Property Infrastructure

Improvements to the property include the Roads and the Callahan water diversion. The Callahan Water company has a granted easement to divert water from Boulder Creek. No buildings are on the property. Many ditches remain from the mining era but have not been in use since the late 1950's.

The Callahan Water diversion is located on Boulder Creek above the confluence of Wolf Creek. The water is diverted to a gravity fed 4 in., increased to a 6 in. water pipe which is treated down near Callahan and then supplied to the community of Callahan. This is another good place for a gate to prevent public access to the land, limit road damage and protect the water source.

The Forest Service Road 40N17 begins where the South Fork road ends in Callahan and goes around the east and the south of property. At the McKeen Divide the road forks onto 40N21 which then enters the property from the North and becomes 40N24 a private road.

Forest Infrastructure

The forest was burned by Wild fire in September of 2021(River Complex Fire of 2021). The property was a fully stocked, mixed conifer forest of Secondary Growth. The Fire burned the Timber and other fuels with high severity, killing all surface vegetation. The fire did not burn in a mosaic pattern, more typical of a fire with less severity. In the South half of section 7, only 115+ acres of timber remain near the South and Southwest boundaries and 30+ acres remain along the Western boundary in the North half of the Section. Of the living trees near the burned areas, some were affected by the fire as well. Satellite photos shows green foliage turned to light brown from the fire. The remaining trees in the unburned forested landscape will undergo no deleterious effects to growth.

The unburned portion of the property is a fully stocked, mixed conifer forest predominately white fir and a minimal Hardwood component. Willows, Red alders, Big Leaf Maples and cottonwoods make up the hardwood component in riparian areas. Currently the existing composition of Timber include: white fir, ponderosa pine, Douglas-fir, incense cedar, red fir and sugar pine. Many primary species are reclaiming the land including golden chinquapin, manzanita, deer brush, snow bush, Oregon grape, coffee berry, snow berry and bitter cherry. Wild flowers include: golden rod, wild rose, phlox, Tiger, Shasta and rain lilies, lupine, vetch and milkweed. There are also snow drops, horsetails, willow and woolly mullein.

Silvicultural objectives include restoring and maintaining the forest as an uneven aged Structure. The selection method will be used with a seed tree emphasis of having at least 8 trees of 18 inch and greater DBH trees per acre or 4 – 24 inch and greater DBH trees or some combination thereof, to help ensure successful regeneration levels. Because of the fire, no clear cutting is planned for the property. Uneven aged management is preferred and is a requirement for Harvest Plans like NTMP or WFMP.
The minimum stocking for the residual timber, 85 square feet Basil Area. This is comparable to 60 trees per acre with a QMD of 16 inches DBH. The allowed minimum for site III forest land.

The entire property's soils are deep seated 5 ft in depth, drains water easily and are well suited for timber production. The estimated growth of the standing timber is 3.5% to 4% per year.

Site potential can be classified either qualitatively, by their climate, soil and vegetation int different site types or quantitatively, by their potential wood production. Site Productively Class is best described as a species-specific classification of forest land in terms of inherent capacity to grow crops of trees and is usually derived from site index. Site index is determined by measuring tree heights and using increment borings of dominant trees to determine age and the use of research note no.28, A Site Classification for Mixed Conifer Selection Forests of the Sierra Nevada 1942, Duncan Dunning.

Per Title 14 California Code of Regulations, 1060-Site Classification, site information suggests that the project areas mixed conifer forest consist of Site Index III & III/IV. Prior to the fire, growth was ranging from 175 to 320 bd ft. per acre per year.

Site classification of the property is site III and high site IV. (High site IV is a better growing capacity than a site IV). **See Stand Type Map in Maps section.**

Natural regeneration has started and will be supplemented with artificial means and monitored for follow up if necessary. Before the fire trees per acre ranged from 66 -647.

Reforestation efforts include 145 acres on the North half of Section 7, planted in November of 2023. The objective is to restock the forest with Softwoods and Hardwoods. More seedlings (48,500) are arranged for planting in the fall of 2024 for the remainder of the North half and finishing up the South half. The plan is to increase the site class to a solid class III with this new forest with management.

The property has no Disease problem. Bark Beetles appeared in the Spring of 2022 and in 8 months infected all the standing dead Pine burned in the fire. The insect population should return to endemic levels once their food supply of cellulose is removed through decomposition over the next few years. Burn piles will be burned to prevent further infestation. Dispersal of infected material will expose beetles to the suns rays and eliminate them as well.
Conservation practices of the property follow the California Forest Practice Rules. Tittle 14, California Code of Regulations: Chapters 4, 4.5 and 10. All contractors are required to have required license and Insurance for themselves.

ROADS

The road system within the property is private and has a network of roads used to access all of the property (**40N24).** It was constructed to harvest timber, mine precious ore. There are 7 miles of roads occupying about 21 acres. Roads are in good condition. Recently the timber harvest equipment repaired the roads, some of which had been damaged by the trespassing public.

Previous harvest activities within the property have developed a road/ landing/ skid trail system that for the most part will continue to be used for subsequent harvests. **See Roads and Landings Map in the Map section.**

The USFS roads (**40N17 & 40N21)** are Public Seasonal roads, owned and maintained by the Klamath National Forest and used by permission under a cost share easement agreement. These roads are appurtenant to the property's future harvests. Any road work other than routine maintenance that may be needed, may only be conducted with agreement and specification provided by the Klamath National Forest.

The only permanent stream crossing on the property is over a stem of Wolf Creek, a first order, class III, large. Large, due to large watershed above said culvert. Springs are its source. In place is a 24-inch plastic culvert which contained the flow of the Bomb Cyclone of October of 2021. Calculations indicate the lone culvert on the property is adequately sized for 100-year storm events.

All roads are non-improved dirt roads. Exception for the class III crossing, where road is rocked. These roads were designed are maintained for seasonal use under dry conditions.

Roads and Landing are continuously monitored for maintenance and repairs to help reduce erosion and minimize wear and tear to the road. Special care is given due to the Decomposed Granite Landscape of the property.

Gates will help prevent unauthorized use of roads, preventing its damage, especially in Winter months.

To prevent road failures, the standing water in road depressions shall be filled or drained by trenching out the soil/earth dam. This prevents the deepening of the pot holes that can lead to pools where sediment discharge into the watercourse may occur. Effecting water quality.

Access and Security

All boundaries and corners are surveyed with flags, blazes, signs and metal pipe monuments. In ~2010 boundary changes occurred with the neighboring Klamath National Forest (USFS) survey. The property's proximity to the Trinity Alps Wilderness where no section corners existed prior to the survey, had contributed to challenges over locating the correct property lines.

Presently, no gates are placed on the property. It is recommended that gates are installed to prevent vehicular traffic from trespass, wood theft, dumping material and damaging the roads.
Currently we are working with the USFS to install a gate and repair the green bailey bridge over Boulder Creek.

The Local public perception of the property is that it is part of the USFS public land. There is a high usage of unauthorized personnel on the property. Signage is placed on the boundaries to discourage public trespass. Gates will be essential to maintain security and to prevent road damage.

Property is surrounded by the USFS, Klamath National Forest. Since 1970 this Federal Department has given little interest to Harvesting Timber and Forest Management. Management plans take years to approve and the Timber is unsalvageable in less than one year after a wildfire.

Other smaller land owners are located North of the Forest Service land (20,40 &160 acre parcels). These private land owners have ambitions to Manage and harvest their land. Erickson Harvested in 2022 using an Emergency Timber Operation as well. We were able to share Roads and a RR Car Bridge crossing across Boulder Creek. Harvesting under the California FPR & FPA ensures all Forest resources are taken into consideration and protected.

The USFS is working on a mitigation project to harvest some timber, clean up the forest and plant trees in response to the River Complex Fire of 2021. This project is known as the River Complex Risk Reduction Project under NEPA rules to ensure environmental compliance.

Recreation

The property offers recreational opportunities to the owner. Recreation by the general public is not a use of the property; it is not encouraged and is prohibited. There are no intentions to develop the property or opening it up to the general public. There are many recreational activities for the owner, his family and friends. This includes, fishing, hunting, foraging (mushrooms, herbs & berries), hiking, walking, backpacking, environmental surveys, camping and other forest management activities. Boulder Lakes and Fox Creek Wilderness Trailheads are on the South boundary of the property. Prospecting for gold, gem stones and other precious metals, ores and minerals is another activity of interest.

Invasive Species

Noxious weeds and invasive exotic plant species are a serious biodiversity issue of great significance to human and natural resource conditions on the Forested Landscape. Invasive plant species will out compete the native plants and can become monocultures. There have been no invasive species found to date.
If a noxious weed infestation is discovered it is important to immediately implement eradication measures to stop its spread. The Landowner is responsible for both prevention as well management of invasive species.

Soils

See Soil Survey Map in Maps Section.

Geological description of the property includes its formation which is of Dioritic rock from the Mesozoic Era (252-66 million years ago). Off property to the West is Serpentinized Peridotite from the Ordovician Period (485-444 million years ago).

The property consists 3 soil series.

Name of Soil Series	Parent Material	Location	Area Percent	Site
Gerle family (60%) – Entic Xerumbrepts (30%) association	Granite	Southwest half	54%	III
Gilligan (40%) – Chawanakee (35%) families association	residium weathered from Granite rock primarily	Northeast half	44%	IV
Nanny family	mix	Next to Fox Creek	1%	III
Nanny family	mix	Next to W. Boulder Creek	1%	III

Throughout the property large rock fragments on the ground surface helps to slow erosion. This gives soil a low k-factor = 0.17. The surface erosion hazard rating is increased for the absence of foliage from the wildfire on the Gilligan/Chiwanakee soil EHR calculation.

The site of the property is Site III and Site IV. The entire property has productive forest soils. The first of the two primary soil series on the property is the Gerle family (60%) – Entic Xerumbrepts (30%)

association where 60% is Gerle family and 30 % is Entic Xerumbrepts. The Gerle series is a course sandy loam, dark brown in color and occurs on ground moraine and out washed plains.

The other soil series is the Gilligan (40%) – Chawanakee (35%) families association. The Gilligan soil is 13% clay and 68% sand throughout its horizons. The A horizon is an ashy silt loam and light brow grey in color. It occurs 150 – 160 feet above stream terraces. The Chawanakee series is a Loamy, mixed, mesic, shallow Dystric Xerochrepts.

The following are the Forestry Ratings for the property's soil from the California Soil Resources Lab at UC Davis.

Gilligan family soil series

Forestry Ratings: Site, high IV

Potential Fire Damage Hazard -- Low
Potential Seedling Mortality -- High

Soil Rutting Hazard -- Moderate
Road Suitability (Natural Surface) -- Poorly suited
Potential Erosion Hazard (Road/Trail) -- Severe
Log Landing Suitability -- Poorly suited
Construction Limitations for Haul Roads/Log Landings -- Severe
Harvest Equipment Operability -- Poorly suited
Rutting Hazard by Month -- Not limited
Road Construction/Maintenance (Natural Surface) -- Poorly suited
Rutting Hazard by Season -- Not limited
Soil Compactibility Risk -- Medium
Displacement Hazard -- Moderate
Puddling Hazard -- Low
Mechanical Planting Suitability -- Unsuited
Mechanical Site Preparation (Deep) -- Unsuited

Mechanical Site Preparation (Surface) -- Unsuited
Potential Erosion Hazard (Off-Road/Off-Trail) -- Moderate
Windthrow Hazard -- Slight
Hand Planting Suitability -- Moderately suited
Drought Vulnerable Soils -- Moderately drought vulnerable

Chawanakee family

Forestry Ratings, Site high IV

Potential Fire Damage Hazard -- Moderate
Potential Seedling Mortality -- High
Soil Rutting Hazard -- Slight

Road Suitability (Natural Surface) -- Poorly suited
Potential Erosion Hazard (Road/Trail) -- Severe
Log Landing Suitability -- Poorly suited
Construction Limitations for Haul Roads/Log Landings -- Severe
Harvest Equipment Operability -- Poorly suited
Rutting Hazard by Month -- Not limited
Road Construction/Maintenance (Natural Surface) -- Poorly suited

Rutting Hazard by Season -- Not limited
Soil Compactibility Risk -- Medium
Displacement Hazard -- Severe
Puddling Hazard -- Low
Mechanical Planting Suitability -- Unsuited
Mechanical Site Preparation (Deep) -- Unsuited
Mechanical Site Preparation (Surface) -- Unsuited
Potential Erosion Hazard (Off-Road/Off-Trail) -- Severe
Windthrow Hazard -- Severe
Hand Planting Suitability -- Moderately suited
Drought Vulnerable Soils -- Severely drought vulnerable

Gerle family

Forestry Ratings, Site III

Potential Fire Damage Hazard -- Low
Potential Seedling Mortality -- Low
Soil Rutting Hazard -- Slight
Road Suitability (Natural Surface) -- Poorly suited
Potential Erosion Hazard (Road/Trail) -- Severe
Log Landing Suitability -- Poorly suited
Construction Limitations for Haul Roads/Log Landings -- Severe
Harvest Equipment Operability -- Poorly suited
Rutting Hazard by Month -- Not limited
Road Construction/Maintenance (Natural Surface) -- Poorly suited
Rutting Hazard by Season -- Not limited
Soil Compactibility Risk -- Medium

Displacement Hazard -- Moderate
Puddling Hazard -- Low
Mechanical Planting Suitability -- Unsuited
Mechanical Site Preparation (Deep) -- Unsuited
Mechanical Site Preparation (Surface) -- Unsuited
Potential Erosion Hazard (Off-Road/Off-Trail) -- Moderate
Windthrow Hazard -- Slight
Hand Planting Suitability -- Moderately suited
Drought Vulnerable Soils -- Slightly drought vulnerable

Entic Xerumbrepts family

Forestry Ratings, site III

Potential Fire Damage Hazard -- Low

Potential Seedling Mortality -- Low
Soil Rutting Hazard -- Slight
Road Suitability (Natural Surface) -- Poorly suited
Potential Erosion Hazard (Road/Trail) -- Severe
Log Landing Suitability -- Poorly suited
Construction Limitations for Haul Roads/Log Landings -- Severe
Harvest Equipment Operability -- Poorly suited
Rutting Hazard by Month -- Not limited

Road Construction/Maintenance (Natural Surface) -- Poorly suited
Rutting Hazard by Season -- Not limited
Soil Compatibility Risk -- Low
Displacement Hazard -- Severe
Puddling Hazard -- Low
Mechanical Planting Suitability -- Unsuited
Mechanical Site Preparation (Deep) -- Unsuited

Mechanical Site Preparation (Surface) -- Unsuited
Potential Erosion Hazard (Off-Road/Off-Trail) -- Severe
Windthrow Hazard -- Moderate
Hand Planting Suitability -- Moderately suited
Drought Vulnerable Soils -- Slightly drought vulnerable

All soils are deep seated 5 ft in depth, drain aways water easily and is well suited for timber production.
The estimated growth of the timber is 3.5 to 4% per year.
Site of Forestland is site III and high site IV.

The EHR is moderate for the entire property. The burned area having lost protected vegetative cover both living and dead, is now more susceptible to erosion via rain splash. Until the return of sufficient vegetative cover, the burned over area is more susceptible to erosion. (See technical rule addendum #1 for surface soil Erosion Hazard Ratting).

Streams, Wetlands, and Ponds

There are several Class I, II and III watercourses and associate springs and seeps on the property.Erosion and water course channel-forming processes can be framed in terms a simple geomorphic construct based on spatial patterns of sediment production, transport and deposition. It is also important to recognize that these zones are not static and watercourse channels may change in a particular location following large floods, fires, or during extreme droughts.

In general, the channels are 1 to 35 feet wide, 1 to 10 feet deep with moderate amounts of boulders, large to medium sized cobbles, gravel and fine gravel within the pools. In atlas where the stream gradients decrease, riffle and pooling in direct correlation with large woods debris can be found. These areas have maintained the structural complexity and provide adequate/ good aquatic habitat.

The property has 4 named watercourses, all of which flow north to the Scott River. Fox Creek flows along the West boundary line. Wolf Creek and its tributaries are in the middle of the property. West Boulder Creek is on the East boundary and meanders onto and off the property before it is joined by East Boulder Creek on the property, then becomes Boulder Creek above the Callahan Water supply intake system. The confluence of Wolf Creek and Boulder Creek is below the Callahan diversion.

The property has 5 springs which flow year-round. The seeps and wet areas near these springs all flow to class I, II, III streams. Springs provide an important source of perennial flow to several watercourses. Some of the property's seeps and wet areas dry up in the late Summer (**Watercourse Map in Maps Section**).

Property straddles the two watersheds, Lower Scott River and Fox Creek. Cal watershed mapper ID 1105.420303 and 1105.420302 respectively. Most of the property is in the Lower Scott River which contains West Boulder Creek and its tributary Wolf Creek. For Federal classification, the Watershed Boundary Dataset (WBD) Hydrological Unit within the French Creek - Scott River Watershed (115,309.3 acres) is:

WBD-HUC12 planning watershed: South Fork Scott River Subwatershed 180102080201
Acres within this watershed: 28,173.74

Air Resources

Recent Fire has left an excess of unwanted timber both standing and in Piles. A burn plan and a smoke management plan has been filed with the County as we operate in SRA Lands (**CAL FIRE**) and Siskiyou County Air Pollution Control District (**SCAPCD**). Wind direction must be in the less probable South West direction away from Scott Valley. Burning was not allowed for this season Fall of 2023, as USFS and County both were concerned about smoke dispersion. Cal Fire is required to inspect burn piles before lighting. Many snags need to be felled for fire protection and safety reasons. On permissive burn days Burn piles will be lit. These efforts are ongoing. Other methods include lop & scatter, and decomposition.

Fish & Aquatic Species

Sensitive habitats include areas that fulfill special functions or have special values, such as wetlands, streams and riparian habitat. These habitats are regulated under federal regulations (i.e. the Clean Water Act), state regulations (such as the Porter-Cologne Act, California Department of Fish and Wildlife's Streambed Alteration Program), and local ordinances or policies.

Boulder Creek, West, East Boulder Creek and Wolf Creek are the 4 fish barring streams on the property. Present, are Rainbow trout which become anadromous Steelhead. Other sea barring species include the endangered Coho and Chinook Salomon. Fish of up to 8 inches have been seen in the main stem of the streams. Fry and Fingerling have been observed in the Wolf Creek tributaries during the Spring and Summer months. Brook trout are likely present as well.

Other aquatic species which are believed to be present include the Cascade frog which was once seen on east Boulder Creek in ponderosa and white fir dominated forests. Also, possibly here is the Western Tailed Frog whose habitat is restricted to perennial montane streams. Salamanders are present as well.

The Class I streams: Wolf, Fox and the Boulder Creeks are anadromous fish nurseries providing necessary cold and pure water for the juvenile salmonids. Most common are the summer run Salmon and rainbow trout.

The fish habitat was greatly effected by the recent fire of 2021. The canopy of wolf Creek was completely lost. Over 4000 feet of stream length. In addition, all dense vegetation was lost as well leaving the banks unstable. The upper reaches of the stream survived the fire.
All streams were filled with sediment from runoff that turned the clear streams to milky for the following 6 months (2021-2022). Streams with rocky channels consisting bedrock, boulders, and gravel became filled with silt and sand after the fire. The Bomb Cyclone which occurred the following month scoured these watercourses with large debris and volumes of water. The Callahan water diversion was inoperable as grates were embedded with overburden.

Plantings of hardwoods have begun in the riparian zones to provide lower stream temperature, woody debris, and organic material in the future. Species include: Big leaf Maple, Alder, Willow and Cottonwood.

Due to how hot the fire burned very little, if any, down wood remains. Even the large woody debris has been burned from the watercourses so large wood recruitment is necessary.

Many snags are expected to fall across these streams, providing pools and other beneficial structures for fish passage; providing complexity to the ecosystem.

The Class I streams on the property have ample pools and now only partial Canopy help sustain the Salmon which require very cold stream temperatures.

The buffer widths or WLPZ protection or somewhat involved and can be found in article 6 of the FPR. For the class II-L leave the Over Story Canopy (OSC) cover 30 feet from the stream transition line and leave 70% up to 100 feet away. Then the outer zone needs 50% OSC. In addition, since Wolf Creek should quickly return to its pre fire OSC Cover, all trees shading the stream should be retained.

Bird and Animal Species

Northern Goshawk (*Accipiter gentilis*) Board of Forestry sensitive. In spring of 2021 a nest was observed on the property. Personnel who visit the property are encouraged to watch for the Goshawks, especially those that may exhibit territorial or nesting behavior, as well as nests or nest trees (as evidenced by a nest or the presence of white wash and feathers or detritus).
For any sensitive wildlife species, when discovered operations in the immediate area will be suspended and if Harvest timber Ops are in progress, then Cal-Fire and CDFW would be contacted to evaluate the site and if necessary, develop mitigations or protective measures.

The following animals have all been detected on the property over the last several years unless indicate as only being present.

Fisher,
Wolverine present in
Martin present
Mountain Lion
Black Bear
Mule Deer
Squirrel: California grey and pine
Rabbit: Jack and cottontail
Chipmunk

Herp:
Northwest Rattlesnake
Lizards.

Pileated Wood peckers (before and after fire),
Raven
Red Tail Hawk
Goshawk
Golden eagle
Owl
Falcon
Vulture
Crow
Sap sucker
Stellar blue jay
Song birds

The recent fire has changed the landscape greatly and has effected the wildlife dramatically. The center of the property burned hot and as a result the tree roots burned deep below the ground creating tunnels and ground cavities for a variety of animals to provide for their nesting, hunting, and sheltering. The tremendous loss of habitat caused by the River Complex Fire 2021has reduced shade, thermal cover, habitable snags, seed supplies, nesting trees, screening tree and wildlife.

In the open spaces grasses will grow for grazing by deer, elk or foraging of bears. Also are found rattle snakes, mountain lions, lizards, rabbits, woodpeckers, turkey vultures, and jays.

Wildlife and Wildlife species are found more often in the unburned, least impacted areas.

Many water sources are present including 5 springs. The wildlife corridors along the hydraulically connected streams are important habitat for the migration of many land and aquatic animals. Fox Creek was lightly effected by the fire but Wolf Creek completely lost over 4,000 feet of its vegetation cover and shade. West and East Boulder Creek was heavily effected by the fire losing much of its canopy as well.

Threatened or Endangered Species - plants or animals

Special-status plants and animals are species that are legally protected under the State and Federal Endangered Species Acts, and other regulations, and species that are considered rare by the scientific community.

A California Natural Diversity Database (**CNDDB**) search was conducted for occurrences near and adjacent to the property. **See CNDDB Map and Report in Appendix 4.**

LANDOWNER MANAGEMENT OBJECTIVES

The landowner's objectives are protecting, enhancing and maintaining forest productivity, wildlife habitat, stream and watershed conditions and visual qualities as part of recreation.

Future projects will enhance the forest resources by improving forest health and timber production, protecting the watershed resources and water quality.

In support of the objectives, soil, water and forest ecosystem quality and productivity will be enhanced through land stewardship practices. These practices will be designed to restore and/or maintain the vitality, structure and functioning of the natural processes of the forest ecosystem and its components where needed, to enhance the conditions and functions that support biodiversity and to restore and/or maintain the aesthetic quality of the property. General objectives in support of this are:

* fire hazard reduction,
* forest management for growth and sustained yield of wood products,
* protection of water quality and quantity, including aquatic and riparian habitat,
* protection of soil productivity and stability,
* maintenance of a natural balance and diversity of native species for the purpose of long-term ecosystem health,
* control of soil erosion through careful project planning, drainage control and planting for soil stabilization,
* and protection of the aesthetic quality of the property

Desired Forest Condition:

To ensure a healthy Forest, with its many resources: the type of forest desired is one that provides for all these resources. The goal is to Re-established the forest which was lost by fire in 2021: a multi-layered canopy of mixed conifer and Hardwood Forest with indigenous, non-pest and non-invasive plants and animals. Forested resources are all protected and enhanced.

Burned areas need to be site prepped for both artificial and natural regeneration.

Fire Protection

Fire is not a stranger to this forest. Evidence of past fires have been notice by charred scars on the old growth trees. The forest, both on and adjacent to the property has a risk for naturally occurring fires and even human caused fires from unauthorized campsites and use of firearms by hunters in the fall when the fire risk is generally the highest.
Forest management of the stands of trees left on the property will help the forest to be better prepared for the next wildfire. The recent fires, of large size and high severity feed upon the dense over crowed stands of large timber consuming a vast and valuable resource.

Snags will be managed, especially on ridge line where lighting can strike them and start a wildfire. Roads are to be maintained and kept in good condition to allow fire personnel access to property. All rules pertaining to fire will be followed.

Forest Health:

Insect and Disease.

To protect the property of any outbreak or endemic of harmful Insects and disease.
The occurrence of insects and disease will be recognized to prevent epidemic outbreaks which damage trees and other plants. The bark beetle (Ips sp.) was present 5 month after the fire. As cellulose rots away it is expected that the insect's population will return to endemic levels. In July of 2022 almost all standing dead Pine had bark beetles in them. Periodic inspection and response for infestation of insects and disease that are detrimental to the timber or other forest resources will be addressed.

Invasive Plants and Animals

Monitoring for invasive species will also be an ongoing management activity. The property must be free invasive plants and animals. Infestations must be quickly addressed to minimize impacts. There are no known invasive plant or animals species on the property at this time.

Trespass

Minimizing the public access and use of the property will benefit the landowner in various ways, dumping, road damage, timber theft, vandalism and Fire. Locals see the area as a playground and are sometimes not accepting to traffic barriers or signs. A human presence and hidden cameras will likely be needed to monitor gates.

Wildlife:

Desired Species habitat improvement.

Landowner's objectives include the reestablishment of the mixed conifer/hardwood forest, particularly along Wolf Creek and its tributaries to improve wildlife habitat. This will provide important wildlife habitat that will increase abundance and richness of many different wildlife species (biodiversity). Wildlife watering stations are being constructed at the 3 springs to help improve the wildlife populations.

T & E Species habitat concerns.

Special-status plants and animals are species that are legally protected under State and Federal Endangered Species Acts, and other regulations, and species that are considered rare by the scientific community.

Sensitive habitats include areas that fulfill special functions or have special values, such as wetlands, streams and riparian habitat. These habitats are regulated under federal regulations (i.e. the clean water act), state regulations (such as the Poter-Cologne Act, California Department of Fish and Wildlife's Streambed Alteration Program) and local ordinances or policies

A California Natural Diversity Database (**CNDDB**) search was conducted for occurrences near and adjacent to the property. **See CNDDB Map and Report in Appendix 4.**

> **The Franklin's Bumblebee (*Bombus franklini*) was federally listed as Endangered on September 23, 2022. In 2006, one confirmed observation was made to the west on Timbervest land. The property falls within the limited habitat for this organism. The establishment of wildflowers and the prudent use of chemicals will benefit the species.**

The California wolverine was living West of the property 25 years ago. There are two Martins north and northeast of the property (**see CNDDB map in Map section**). If T&E species are observed every effort will be made to avoid disturbing the organism. If the animal is residing on the property, care will be taken to report and observe any possible habitat that needs to be preserved.

Spotted owl activity areas are located both to the west and east of property. Sierra Nevada Red Fox is another Threatened species possibly present.

In addition, there are two Endangered species possibly present on the property, the Grey Wolf and Bald eagle. Active eagle nest requires at least a 10-acre buffer. The spotted owl's buffers are larger. Enhancements to T & E habitat is a subject for further discussion. Reforestation will certainly restore the habitat for wildlife species.

Additional Objectives:

In the stand remaining after the fire, harvesting the trees in the near term, will be for the purpose of income and reducing the potential of damage and loss from wildfire, pests and moisture stress; restore natural plant communities; achieve a desired understory plant community; improve aesthetics and open space values; improve wildlife habitat; and achieve a desired level of shrub density. The areas destroyed by the fire, will be reforested by both artificial and natural reproduction. This new stand will be monitored and adjusted to produce a better timbered forest, Christmas trees and firewood for near term income. This plan is the foundation for this family forest tree farm and the legacy for future generations. Current plans include rezoning the property on the North ½ of section 7, from RRB-40 to Timber Production Zone (TPZ).

MANAGEMENT PLAN IMPLEMENTATION

Constraints and Proposed Alternatives:

A. **Project as Proposed:** Future projects as proposed include CFIP practices to re-establish a fast growing productive forest by managing the natural reproduction and supplementing by artificial conifer seedlings. The proposed practices will help achieve the landowner's goals of improving timber production, wildlife habitat, water quality and reducing brush fuels. In addition to these positive benefits, the future projects will provide jobs for many different individuals, thereby stimulating the local economy.

The proposed activities will have a positive effect on the following natural resources:

Timber Productivity: Productivity of timber resources will increase as areas not currently supporting conifer production after the fire will be planted and managed.

Soils: By establishing a new forest, will help increase the organic layer of the soil that was removed by the fire, thus helping the soils ability to capture water within the profile, and reducing erosion.

Water Quality: The new forest will reduce the threat of sediment and ash entering the watercourses through erosion.

Wildlife: Decreasing the pioneer brushes increases sunlight levels reaching the forest floor. An increase in sunlight increases the number of herbaceous forbs available to both omnivores and herbivores.

Economy: These activities will provide jobs for many different contractors who specialize in timber extraction, fire hazard reduction, forestry and natural resource management.

The activities proposed will NOT have an adverse effect upon the resources of the state.

B. **No Project:** Under this alternative, no portion of the project will be implemented.

Under this alternative, the re-establishment of a new forest will be slow. Brush stocking levels will increase and competition for limit resources such as sunlight, water and nutrients will grow as well, reducing the chances of the natural reproduction to be successful and limit the production of a fully stocked forest.

This alternative will have an adverse effect upon:

Soils: A return of a fire, due to the build up brush fuel loading, will burn hot and eliminate the build up of organic material, thus increasing the chances of heavy erosion to occur.

Water Quality: Fire danger potential of the property leads to a greater chance of sediments reaching watercourses through erosion.

Wildlife: The project area at the moment has limited habitat for wildlife. Unmanaged forest lands after a catastrophic fire will benefit some animals. But the potential for another wildland fire increases the loss of important habitat.

The no project alternative would not meet any of the landowner's objectives and may contribute future adverse effects on natural resources. Therefore, the "no project" alternative was not chosen to be implemented.

The project as proposed **(Alternative A)** is necessary in order to achieve the goals for forest management described above. The following proposed forest management treatments will maintain a high quality productive timber stand, decrease wildland fire potential, maintain and improve water quality, wildlife habitat, and provide jobs to the local economy in an efficient manner.

Soils:

As most of the organic nutrients of the soil are found in the surface leaf litter and in the top few inches of soil, disturbance to this zone should be kept at a minimum to insure continued productivity of the soil. It is important to provide for replenishment of the nutrients in this zone, especially following removal of vegetation. This can be done by retaining a mixture of conifers and hardwoods as this enhances leaf litter decomposition and by allowing foliage and limbs of trees and shrubs that are cut to rot into the ground as these portions of plants contain the majority of the nutrients in the plants.

The most obvious cause of soil degradation and consequent loss of soil productivity is from soil erosion. Soil erosion is a constantly occurring natural event which can be greatly aggravated by human disturbance. In mountainous areas road building, vegetation removal and fire are the main causes of accelerated erosion. Whenever soil is exposed to rainfall impact and/or water is concentrated on bare soil erosion will increase. For these reasons, it is best to maintain a continuous vegetative cover or at least minimize disturbance to ground cover(leaf and twig cover).

Roads, Culverts & Ditches:

In general, roads are known to be the main contributors of sediment to stream systems. Sediment is eroded primarily because of drainage structures which have been improperly sized, installed, constructed and/or maintained. Drainage structures failures are more often caused by high rain

fall from summer thunderstorms which overload or plug them, than from winter rainfall. This can be alleviated to a degree by installing culverts of adequate size, installing trash racks on culverts, keeping culvert inlets free of debris, constructing water-bars and rolling dips of sufficient depth so they will not fill up with sediment or debris and keeping them cleaned out. Water breaks should not exceed the following standards (based on a moderate Erosion Hazard Rating):

* <11% Gradient - 200 ft.
* 11-25% Gradient - 150 ft.
* 26-50% Gradient - 100ft.
* >50% Gradient - 75 ft.

Water breaks should be located to allow water to be discharged in to some form of vegetative cover, rocks or other non-erodible material and should be constructed to provide for unrestricted discharge at the lowest end of the water break so that water will be discharged and spread in such a manner that erosion will be minimized.

Water breaks should be cut diagonally a minimum of six inches into the firm roadbed or skid trail and should have a continuous firm embankment at least six inches in height at the lower edge of the water break cut.

Most erosion can be minimized through regular maintenance of roads. Drainage structures should be checked periodically durning the summer but, especially after severe thunderstorms. Before the winter rain period, all drainage structures should be inspected, cleaned out, and repaired. Ideally, these should be inspected periodically durning the winter. It will soon be evident where the problem spots are and corrective measures can be taken.

Forest landowners who wish to practice good stewardship on their lands need to assess the potential negative impact of their management activities on soil and water resources, both on and off their property.

Reforestation and Afforestation:

Reforestation conditions are being closely monitored in the burned over areas currently being replanted. Natural and artificial regeneration are working to restock the fire damaged forest,145 acres were planted in the burned over lands in the North half of the property . APN 031-290-010-000, (Planting area #1,2&3. **See Planting Map in Map section**). Completed on 11-20-2023. The seedling were planted on a 15 to 20 foot spacing.

Seedling species	Amount
Sugar pine	20,112
Ponderosa pine	14,570
Jeffery pine	5,294
Douglas-fir	5,505
Incense cedar	3,443
Total	48,924

Another 255 acres will be planted next year, Fall of 2024, (Planting area #4). After purchasing seed, Cal Forest in Etna was contracted to grow them to seedlings. There were 2.5 lbs. of DF, 1.5 lbs. of IC and 1 lb. PP for a total of 60,000 - 65,000 seeds. They will be planted next fall in planting area # 4.

This will complete tree planting on(APN: 031-290-010-000) and will complete planting on(APN: 031-290-020-000)

2,500 Hardwood species have been ordered for stream side restoration: Cottonwoods, Big leaf maple, Red alders and Willows. They will be planted in planting area #1, #2 & #4. This includes 16 acres of riparian area and 1 ½ miles of stream length burned in the fire. They will be planted up to 20 to 35 feet, each side of the streams, on Wolf Creek and East, West Boulder Creeks.
(APN: 031-290-010-000 and APN: 031-290-020-000) (**See Planting Map in Map Section)**

Site prep for planting seedlings will include scalping the plant area of any competing vegetation. Follow up will monitor the planted and natural regeneration sites to assess the seedlings performance. If necessary, a round of replanting the problem sites in an effort to completely restock the burned over areas.

Forest Improvement:

While this plan is intended to be relevant for a ten-year period, it is important to recognize that natural resource management is a dynamic process and will require adjustments and updates as time progresses. This may be due to changes in environmental conditions such as insect infestations, fire, snowstorms and/or drought. By implementing the specified recommendations in a timely manner and conducting evaluations of your progress at yearly intervals, you can avoid the expense of developing a new plan every ten years.
Management is accomplished by joining a combination of regular and on-going maintenance and by implementing specific projects. Monitoring of regular maintenance has to do with making sure that; work is being performed where, when and how it is supposed to be done; the work being done is having the desired results, and any necessary adjustments are made to the maintenance action(s) in the future if intended goals and objectives are not being met.
Monitoring is only effective if the results are incorporated into the on-going management of the property.

Pests:

Insects, diseases, plants and animals can damage trees, especially seedlings and other forms of vegetation. Damage includes mortality, reduced growth, reduced tree quality, top killing, degradation and reduced quantity and quality of seed production. If the damage affects the attainment of land and resource management goals and objectives, the destructive agents are considered pests. In addition to plants, pests, such as plague-infected rodents can also affect humans.

Continued monitoring of the forest resources for signs of insect and disease problems will need to be undertaken to reduce the possibility of insect of disease epidemics.

The bark beetle (*Ips sp*.) appeared 5 months after the River Complex Fire (2020) was put out. Three months later most all the Pine was infected. No other Pest species are present on the property. Prior to the fire there were sightings of dwarf mistletoe and witches' broom in cedars.

Burn piles will help alleviate this problem with the Bark beetle's brooding material. To avoid significant problems with insect populations increasing out of control. Board of Forestry technical addendum #3 describes methods for treating Pine brood material. CFPR (937.6) physical, biological, cultural or chemical management.

Notable noxious plant species in Siskiyou County include the Thistles (Musk, Scotch, Bull, Taurian, Canada, Wavyleaf, Yellowspine), Starthistles (Purple, Yellow), Knapweed (Squarrose, Diffuse, Spotted, Meadow, Russian), Leafy Spurge, Dyers Woad, Scotch Broom, Dalmatian Toadflax, Rush Skeletonweed. Photos are included in the noxiousweedid.pdf at www.co.siskiyou.ca.us/ site.

In 2022 the Forest Service was looking for Dyers Woad (*Isatis tinctorius*) at the Boulder Lakes Trailhead. Also known local as Marlahan Mustard this plant takes over range land. The seeds get mixed in with hay and alfalfa bails which then get fed to horses at the Trail heads; dispersing the seeds into the wilderness.

Resources for further information:

California Invasive Plant Council. www.cal-ipc.org

Klamath National Forest. www.fs.usda.gov Klamath National Forest Noxious weed and Non-native Invasive Plant List. Last updated in 2013.

Fire Protection:

Fire is a seasonal threat to the area (June-October). Fire risk increases on the ridge tops and dry sites, in softwoods, in young trees and with proximity to roads and neighbors. Fire risks decreases near streams and wetlands, with hardwoods an in older timber. The greatest risk in this location is from human caused fire, in the late summer and early fall.

Fire permits are easily attained on the internet for fires 4 foot and less in diameter. After the Salvage harvest of 2022 large piles of logs are piled for burning. The property is reducing fuels from the wildfire by pile burning. A Smoke management plan, good for 10-years is filed with Siskiyou County Air Quality Management. On permissive burn days burning is allowed after getting a General Burn permit from Cal-Fire, good for one month. The wind direction must blow smoke away from Scott valley. **County Smoke Plan and General Burn Permit from Cal-Fire Fire are in Appendix 1.**

When pile burning or chain sawing the practice of having tools for fire suppression is required CFPR 938 Fire protection. For Pile burning a backpack sprayer is highly recommended along with the other hand tools like McCloud, Polaski and Shovel. Protective clothing, headwear and eye protection is important from sparks and embers from the large piles.

There are various activities to help prevent forest fire and to minimize its impact on the forested property. Stand improvements like thinning will reduces fuels and eliminate their continuity. Thinning from below will both reduce the fuels and provide growing space for the understory canopy of saplings, poles and naturally regenerating seedlings. Eventually, larger trees will be harvested by thinning from above to again reduce the fuels. A spacing of about 20 feet is optimal for softwoods. Tolerant species such as the true firs and Incense cedar can have about 16 feet. This will provide the growing space for trees to reach commercial timber size faster. Accumulation of slash/dead vegetation will then be removed by pile burning or lop and scatter methods.

The River Complex (2021), a wildfire started by lighting within the Trinity Alps Wilderness Area burned most of the property in a non-mosaic fire pattern. The wildfire started on July 29th and spread North for over a month. The property was burned between the 10th and the 11th of September. This fire can be tracked at the following web link: http://zoom.earth/maps/satellite-hd/#view=41.145687,-122.334207,9.85z/date=2021-09016,pm/overlays=heat

This was one of many catastrophic fire events which occurred that year. Others include the Caldor and Dixie Fires, both of which burned their ways completely across the Sierra Nevada Mountain Range. A phenomenon never seen before in recorded human history.

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Burn scars that were seen on trees prior to the River Complex indicate a large fire was likely in the 50's. The fire regime has over time been infrequent. This allowed for the buildup of fuels which produce fires difficult to suppress. Though, the property owner made attempts to reduce the fuel load prior to the fire since the properties were purchased. The trend now, is for wildfires that quickly become large, burn hot and travel fast under the right climatic conditions where the moisture content of the fuels is low, and air temperature is high. The presence of unauthorized people is another source of fire ignition. Campfires are prohibited without permit and permission. Gates will help prevent fires.

There are no current fuel hazards on the property. Potential fuel hazards are possible in the burn area if brush species become established and outcompete the trees. In which case, manual thinning and burning will be performed to remove unwanted plants. Fuel reduction will be very important as the forest reestablishes. This will include reducing trees per acre for optimum growth, competition for moisture and nutrients.

The property roads are to remain accessible for firefighters and emergency vehicles. The road network has numerous snags in its proximity due to the fire. To protect access routes Hazard trees will be felled. Fallen snags will be cleared from the road to maintain sufficient width for emergency vehicles.

Another important feature important for fire protection are strategically located Shaded fuel breaks and fuel breaks. Forested areas under un-even aged management practices can over time become shaded fuel breaks. The relative lack of understory will then help to prevent surface fires from becoming hot and destructive. When sufficiently thinned and managed the residual forest will become a shaded fuel break.

This idea shall be shared with the neighboring USFS as we each have an interest in connecting with fire protection features and making fire protection plans.

Roads are often good fuel breaks and can be easily widened to provide greater fire protection and safer evacuation and access routes.

Security:

Theft of timber from forestlands can destroy generations of careful forest stewardship and cause irreparable environmental damage. Prosecuting vandals is expensive and convictions are often very difficult to obtain.

Landowners must take the responsibility to prevent vandalism, trespass and timber theft on their property. Prevention is the best defense.

The best way to prevent timber theft, vandalism and trespass is to protect your property with the following steps.

Mark forest boundaries. Most property boundaries in forests are obscure, giving timber thieves a good excuse for removing trees through unauthorized logging. Your forest boundaries should be clearly marked with a combination of ownership signs, paint marks, posted signs, flagging and fencing, where appropriate. Posted signs should be placed conspicuously, without creating a visual nuisance.

Contact Information of Enforcement Agencies.

Siskiyou County Sheriff
Klamath National Forest, Scott Valley Ranger District
Cal-Fire
Siskiyou County Air Quality Control board.
Water Quality Control Board
Siskiyou County Dept. of Agriculture

Streams, Wetlands, and Ponds:

The watercourses throughout the property are Class **I,II** and **III**. To protect the quality of water in these creeks care needs to be taken to prevent sediment and debris from entering them. A buffer of undisturbed vegetation, leaf litter and soil needs to be maintained on either side of the creeks to act as a sediment filter strip and to protect stream banks from erosion.

* Class I buffers should be 75 feet wide on slopes up to 30%, 100 feet wide on 30-50% slopes and 150 feet wide on slopes greater than 50%
* Class II buffers should be 50 feet wide on slopes up to 30%, 75 feet wide on 30-50% slopes and 100 feet wide on slopes greater than 50%.
* Class III buffers should be 25 feet wide on slopes up to 30%, 50 feet wide on slopes greater than 30%

Life of all types are drawn to the watercourses. It is important to protect the various species whether listed or not. If an occupied nest is discovered or any wildlife, care will be taken to not disturb them. Habitat Requirement of Salmonids in Streams is a vast subject. A great amount of helpful information is in the Book, “Influences of Forest and Rangeland Management on Salmonid Fishes and their Habitats” by William R. Meehan. Habitat needs of salmon and trout in streams vary with the season of the year and stage of the life cycle. Water temperatures that reach 75 to 79 degrees Fahrenheit is lethal for the 3 salmonid fishes seen on the property. The optimal water temperature for an adult Coho or Steelhead to enable upstream migration for adult Coho and Steelhead is 45 to 61 degrees Fahrenheit. Stream depth needs to be at least 7 inches. Chinook need at least 8.5 inches.

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Large and small woody debris can be brought back into the riparian zone as 1.5 miles of vegetated stream length was totally burned, leaving no course woody debris. To provide optimal riparian habitat, large woody debris recruitment will need to be provided for in stream habitat structure and fluvial geomorphic functions. This will help to stabilize the bank. Small woody debris will 3 inches + diameter would provide habitat for many species including anadromous salamanders. To provide optimal riparian habitat, large woody debris recruitment will need to be provided for in stream habitat structure and fluvial geomorphic functions. This will help to stabilize the bank. Small woody debris with 3 inches + diameter would provide habitat for many species including anadromous salamanders.
There are no wetlands road crossings.

Log weirs can be winched and anchored in place to speed up this process of improving the aquatic habitat and Anadromy. Course woody debris can be added to the riparian zone. Water quality and quantity are sufficient for the fish species. Over time stream sediment from the fire will flush away and the quality will improve. Gravel beds for spanning must be frees of sand and sediment to allow oxygen to the Salmonid eggs.

The Hardwoods: cottonwood, big leaf maple, willow and red alder are all being planted in 2024. An order has been submitted for 2,500 of seedlings. This will be a significant improvement to the fish and aquatic habitat as the trees grow and cast their shade upon the watercourse.

Given the surrounding presence of the certain animals and the desire to provide them an enhanced habitat is further considered. In the book American Marten, Fisher, Lynx and Wolverine: Survey Methods for Their Detection, by Zielinski and Kucera. General technical report PSW- GTR-157, (1994). Subjects include: setting up photographic Baiting Stations, and Tracking Plates. It is possible to identify these animal tracks with this publication.

As the trees are replanted and grow the desired habitat will return in time.

Wildlife:

The recent fire has changed the landscape greatly and has effected the wildlife dramatically. The center of the property burned hot and as a result the tree roots burned deep below the ground creating tunnels and ground cavities for a variety of animals to provide for their nesting, hunting, and sheltering. The tremendous loss of habitat caused by the River Complex Fire of 2021, has reduced shade, thermal cover, habitable snags, seed supplies, nesting trees, screening tree and wildlife. Wildlife and Wildlife species are found more often in the unburned, least impacted areas.
The management of this new forest, over time, will greatly improve wildlife habitat for all species. Enhancing the wetland areas that are incorporated with in this new forest and the establishment of fast growing riparian hardwoods adding shade and green grasses for wildlife.

Access for migrating wildlife species is sufficient in the open landscape of the property. In the open spaces grasses will grow for grazing by deer, elk or foraging of bears. Also are found rattle snakes, mountain lions, lizards, rabbits, woodpeckers, turkey vultures, and jays.

Hunting is a viable option. The habitat has improved with the more open terrain, growing grasses and other forage for wildlife. Deer population will likely increase. The new tree stands planted will provide protection by screening predators and thermal cover for warmth.

When populations increase to extreme levels, predators and hunting will help bring the ecosystem back into balance.

Recreation and Aesthetics:

There are many recreational activities on the property. These include fishing, hunting, foraging (mushrooms, herbs & berries), hiking, walking, backpacking, environmental surveys camping and other forest management activities. Boulder Lakes and Fox Creek Wilderness Trailheads are on the South boundary of the property.

Prospecting for gold, gem stones and other precious metals, ores and minerals is another activity of interest.

The Aesthetic qualities of the property are considerable. Clean water from springs, the creeks that flow down from snow melt and seeps from the Trinity Alps Wilderness Area. The migration of wildlife from the Alps and surrounding area that allows a rare sightings of large mammals. The views are glorious. Though the fire of 2021 devastated the tree farm, the trees, flowers and wildlife are coming back with vigor. The management of this grand design is recreation in extreme.

The Ideal Forested property lost in 2021 is greatly missed. When nature starts over again to create forested stands of timber, a new perception of aesthetics emerges. Once the forest has returned and the trees are producing seed material then the transition regeneration method will return the whole property forest to Uneven aged management.

As for the Southern and Westerly forested areas untouched by the fire the aesthetics needs only to be preserved. Selection is a regeneration method used in Uneven aged Management which removes trees individually or in small groups. This selective process of harvesting will maintain a beautiful forest indefinitely over time if not forever.

Uneven aged management attributes include the establishment and/or maintenance of a multi-aged, balanced stand structure, promotion of growth on leave trees through out a broad range diameter classes and encouragement of natural reproduction 14 CCR (933.2). This is preferred over even aged Management practices that leave a higher impact on the landscape's beauty.
Landowners and Tree Farmers receives personal satisfaction and pride from the beauty, rare and endangered species and archeological / historical sites are protected and managed. These attributes are beneficial to recreation programs.

Air Resources:

Burning Piles are essential good Forest Management. Burn piles will be lit to reduce the threat of future fires but to help prevent further Bark beetle infestations.

Due to inversion layer above Scott Valley smoke can get trapped in the valley effecting air quality. New rules for pile burning on the property are ever changing as risk of wildfires increase. For the Burn piles less than 4 feet in diameter you only need a Cal Fire permit and a permissive burn day (842-8123). For larger Piles a burn permit is needed from both Cal Fire and the Siskiyou County Air Quality. The large pile Cal Fire permit is good for 30 days. In addition, a Smoke Management Plan is needed with Siskiyou County Air Quality. This document is good for the life of the plan and can be updated to allow burning for many years. Both agencies will be notified in advance of burning operations. Cal Fire phone is (530)842-3516. SC Air pollution Control phone is (530) 841-4031.

Property owner has obtained all the approved these documents but has been unable to burn (2023) due to wet conditions. The Smoke Management Plan indicates burning is allowed only when the wind direction is not pushing smoke toward Scott Valley. The ideal wind direction would be from the Northwest. Adequate smoke dispersion is essential to maintain good air quality.

The no action alternative may result in a Bark Beetle outbreak. Pine brood (larva) that is present in the Log piles must be burned. If burning does not occur it would have been better to spread out the pile and expose the Brood material to the sunlight ultra violet energy.

Climate Considerations and Carbon Sequestration:

Fuel treatment is part of a complex carbon equation and though methods to quantify potential greenhouse gas **(GHG)** emissions have been developed for numerous sources, the connection between potential emissions and their ultimate potential effects on or contributions to climate change and global warming have not been precisely defined. No known quantitative significance threshold exists for potential global warming impacts.

Catastrophic wildfires represent a significant carbon loss and source of GHG emissions throughout the world. By not managing the property, conditions are being created that are far more conducive to unnatural, devastating, and destructive crown fires as opposed to conditions created and enhanced by forest management and fuel-reduction practices. Wildfires are one of the primary contributors to GHG's and may emit up to 100 tons of C02 per acre depending on forest type, density, and fire intensity (Helms 2007).

Reforestation efforts will return the trees to the forest and sequester carbon as the recent fire has taken 80% the trees. Both natural and artificial means of indigenous conifer and hardwood seedling resembling the previous species.

The residual stands on the property are in tack storing more and more carbon. There is a forest here of mature trees. Uneven aged management will help ensure that these old, large trees will continue to serve in their capacity to store and sequester carbon by increasing timber growth and volume. Controlling the hazardous fuels will produce a forest less likely to burn and release the stored carbon back into the atmosphere. A fire resilient forest will reduce carbon emissions and require less suppression efforts.

As the timber grows, atmospheric carbon dioxide is incorporated into its permanent plant tissue. Reduction of Greenhouse gases will help ameliorate the climate; reducing global warming. The uptake of Carbon in the Forest will offset the carbon dioxide from Industrial effluent.

Presently in the US, carbon credits for carbon offsets are now about $12 per metric ton. Unfeasible for now, future opportunities will be considered.

Family Legacy:

The property is registered as a Tree Farm by the American Forest Foundation(#CA-2769). The intention is to continue with Timber, Land and Wildlife management activities, while enjoying the recreation. Once the North half, APN 031-290-010-000, is rezoned the whole property will be in TPZ. This will help to curtail development leaving the forestland to provide its resources for generations to come. The Wolf Creek Tree Farm will be a family owned forest, to improve upon and enjoy and pass on to next generations.

Conservation Easement have and will continue to be considered for the property. Opportunities were not financially viable. Often these Conservation easement contracts lead to problems: management from the grave, situation where management of the forest is controlled by people who are too remote and unaware of the property to be effective.

.

PLANNED MANAGEMENT ACTIVITIES AND REQUIRED PERMITS

Forest Management Recommendation:

While this plan is intended to be relevant for a ten-year period, it is important to recognize that natural resource management is a dynamic process and will require adjustments and updates as time progresses. This may be due to changes in environmental conditions such as insect infestations, fire, snowstorms, and/or drought. By implementing the specified recommendations in a timely manner, and conducting evaluations of your progress at yearly intervals, you can avoid the expense of developing a new plan every ten years.

The resulting stewardship recommendations are generally based on the premise that the relative ecological quality and/or sensitivity of an area will dictate what long-term land uses are most appropriate. When suitable, land uses have been identified, then appropriate stewardship practices can be designed to achieve your specified objectives.

* Conduct Forest Stand Improvement practices such as release, slash disposal and planting in the targeted areas.
* Maintenance measures should be implemented on project areas at least once every 3 years (or as necessary) to maintain the desired end-state conditions.
* When necessary, re-mark all property boundaries.
* Every year you evaluate the progress of your Forest Management Plan implementation and revise the plan as needed.
* Landowners should employ Best Management Practices (**BMPs**) to minimize soil erosion and water pollution. These BMPs include recommendations for runoff diversion structures for forest roads and skid trails, streamside buffer zones, contour operations, and regeneration activities.

Harvest Documents:

Most commercial biomass removal activities need a CAL FIRE permit or other entity permit. Identify needed or current Cal Fire THP, NTMP and/or Categorical Exclusion for proposed timber management activities. Other agency permits may be necessary for proposed management activities related to other types of conservation projects such as, but not limited to, water drafting, ponds, road maintenance, crossing replacements and dust control.

The landowners are familiar with the States and Federal requirements regarding the Timber Harvest Plan process and vegetation management.

Planting:

The majority of the areas burned over from the fire of 2021, can be regenerated with commercial conifer seedlings. Care and handling of lifted bare-root seedlings are extremely important to planting success. If seedlings are stored, they should be stored at cool temperatures (33-35F). Otherwise, they should be planted immediately. Planting is accomplished by hand.

Realizing that seedlings require special care when they are out of their natural environment will insure success in regenerating your site. Successful survival and growth depends on the care taken during storage, transportation, and planting. Seedlings should be picked up immediately after they are lifted at the nursery.

The main consideration during planting is protection of the seedlings, especially the root systems. Seedling roots should not be allowed to dry; putting seedlings in buckets of water or covering them with wet burlap will protect them until they are in the ground.

Inter-planting under stocked area of natural reproduction with about 120-200 seedlings per acre. These seedlings should be planted approximately 15-20 feet apart, allowing space for the existing natural reproduction.

Monitoring:

Management of the vegetation is accomplished by doing a combination of regular and on-going maintenance and by implementing specific projects. *Monitoring of regular maintenance has to do with making sure that: 1) work is being performed where, when, and how it is supposed to be done; 2) the work being done is having the desired results; and 3) any necessary adjustments are made to the maintenance action(s) in the future if intended goals and objectives are not being met.*

Periodic monitoring and seasonal inspection should be on-going to detect problems at the earliest possible stage. The long-range cost projections for implementation should be adjusted on an annual basis, as well as at the completion of each major phase of work. The program for implementation could be adjusted annually depending upon availability of funds - specific tasks could be increased or decreased for a particular year, and a prioritized work program will be regularly updated to be responsive to changes in funding and ensure a proactive approach to implementation.

Evaluation of the effectiveness of on-going and routine site maintenance, or measurement of the change over time, should be done by staff or a designated representative each spring for three seasons to assess how well vegetation management goals and objectives are being met.

Monitoring is only effective if the results are incorporated into the on-going management of the property.

Some Required Components of Monitoring Plans

- Clearly stated Goal(s) of the project.
- Clearly stated Objectives of the project.
- Performance Standards: must be measurable, quantifiable indicators of performance of the project relative to the stated goals and objectives (is the project doing what you said it would or wanted it to do?).
- Monitoring Methods: how often, when, what data to collect and how; description of report format; identification of who gets the report and when do they get it.

It should be noted that some projects will straddle the somewhat arbitrary margin between forest and fire damaged landscape types. Common sense should dictate which parameters to draw upon in assembling an appropriate and effective project-monitoring plan.

RESOURCE MANAGEMENT UNIT INFORMATION

Name or Unit #: Planting area #1, #2 and 4 **Acres:** 255

Location: Planting area #4 is in the center of property (section 7), south of the planted area #1, #2, #3. T39N, R8W, Section 7, MDM. **(See Planting Maps in**

APN 031-290-010-000 North Half and APN 031-290-020-000 South Half

Objectives:

The re-establishment of the forested landscape recently lost is the goal. Seedling for this project have been ordered (60-65,000). The species mix includes: Douglas-fir, Ponderosa Pine, Sugar Pine and Incense cedar. In addition, Hardwood seedling will be planted in the inner zone of 1.5 miles of the watercourses. The 4 hardwood species are Willow, Red alder, Big leaf maple and Cottonwood. Planting area #4 is to be planted in 2024. Some site prep may be necessary to prepare ground for planting. Scalping the ground of any weeds or other growth can be expected. The fire has burned all the slash leaving only snags. To provide optimal growing conditions for these seedlings in porous soil, chipper material of wood residue will be used as needed around the seedlings for ground cover to help retain soil moisture and prevent mortality.

Forest Description:

The age of the stand lost in the fire was variable with multiple cohorts. Harvesting in the 40's indicates a cohort 80 years of age. Stand density created enough to stunt growth and produce poles with little tapper.

In 2021, the Property burned. In the Planting area management unit, the newly planted seedlings will grow to maturity in about 80 years and be harvested. In 80 years, the stand can be harvested. Un-commercial Intermediate treatments may need to be done to ensure adequate spacing for maximum growth.

The seedlings planted this year along with the recent natural regeneration are the only trees present. Planted trees include the conifers: Douglas-fir, Incense cedar, Ponderosa pine and Sugar Pine, **(Management Unit #4).** Also, Hardwoods will be planted in the watercourse's inner zones: Cottonwoods, Willows, Big Leaf Maple and Red Alder, **(Management Unit #1,2&4).**

The forest cover type of the property is Sierra Nevada Mixed Conifer. This type is common to the Klamath Mountains. Succession within the type varies. In general, disturbances such as wildfire favor ponderosa pine, sugar pine and Douglas-fir, while no disturbance favors white fir and incense cedar. Shade tolerance of the 5 species overlaps, with ponderosa being the most intolerant. Next Douglas fir is less intolerant but will grow fast when released in time from the understory. Sugar pine is intermediate, and white fir to the most tolerant. The plurality of white fir is explained by the North aspect of the property and minimal disturbances over the age of the stands. Incense cedar has a broad range of tolerance. Mostly considered tolerant on the property as it is found in the shade.

After fire or clear cutting, many herbs and shrubs – for example, manzanita and ceanothus species- quickly become established from seeds stored in the organic layers (Quick 1956) or from sprouts. Ceanothus species are nitrogen fixers but will compete with young conifers.

Among the prevalent shrub / bush species found in this type are green leaf manzanita, gooseberry, red current, deerbrush, mountain whitethorn, snow brush, squaw carpet, bear clover, bitter cherry and chinkapin. More than 100 species of grasses and forbs, and shrubs contribute to the flora of the Type (Tappeiner, Forest cover Type of the US and Canada).

Site index, soil type, elevation, slope:

The planting area is a site III and IV, a high site IV close to a III. The soil type is the soil series: Gilligan (40%) – Chawanakee (35%) families association. The Gilligan soil is 13% clay and 68% sand throughout its horizons. The A horizon is an ashy silt loam and light brow grey in color. It occurs 150 – 160 feet above stream terraces. The Chawanakee series is a Loamy, mixed, mesic, shallow Dystric Xerochrepts. Elevation ranges from 4,200 to 5,400 feet. The slopes are up to 44%.

DBH/size class, basal area, trees/acre, stocking, growth/yield potential:

With only seedling present the Basal Area is 0. All trees are seedlings. Plantings of seedling are on a 15 -20 foot spacing which equates to stocking of 150 trees per acre. Growth rate of the site is about 3.25%. No potential for yield until timber reaches maturity in 80 years. When these trees reach a DBH of 12 inches you will then only need 60 trees per acre to achieve a basil area of 85 square feet.

Riparian, meadows, aquatic habitat, stream and other watercourses:

The newly planted hardwoods next to the streams will help stabilize the banks by setting roots deep into the soil. Also, when mature these trees will prove leaf canopy cover to prevent rain splash / through fall from eroding the stream banks. This shade will reduce water temperature and provide better aquatic habitat especially the salmon.

Spring areas will be planted with hardwoods to enhance the lotic aquatic life of macro invertebrates like snails, segmented worms, mayflies, dragon flies, stoneflies, caddisflies and true bugs. These animals and insects are part of the food web and break down organic material for the riparian areas. They require cold and pure waters for their survival.

Wildlife habitat:

No living understory or downed woody debris is present in the planting area. Many snags are standing and will become valuable nesting sites for cavity nesting wildlife. In time as these snags fall and hollow out habitat will increase for various mammals. A gradual process that will take 10 to 20 years to produce cavities in the solid logs. Beneath the fallen snag is more opportunity for wild life including Snakes, lizards, salamanders and other mammals and herps.

Unit Management Resource Concerns and Recommendations:

Erosion concerns:

Due to the decomposed granitic soils on the property, avoid using the roads during wet periods if such use would likely damage the road drainage features. Consider gates, barricades, or signs to limit use of roads during the winter period (Nov. 15th - April 15th) or other wet periods.

Planting of hardwoods in the stream buffer zone will help to minimize erosion and protect water quality.

MANAGEMENT ACTIVITY DECISIONS, SCHEDULE AND TRACKING

Management Unit	Acres/ feet	NRCS Practice Code (optional)	Treatment Activity Short Description	Dates		Program Used?	Net Cash Flow	
				Planned	Completed	Type?	Cost	Income
Planting #4	255 a		Plant conifer seedlings 65,000	Nov. 2023	Nov. 2024	Cal Fire CFIP app. pending	$96,000 estimate	0
Planting #4	255 a		Scalpping planting site	Nov. 2023	Nov. 2024		included	0
Planting #1, #2, #4	8,000 ft of stream length 16 acres		Hardwood seedlings 2,500	Nov. 2023	Nov. 2024	Cal Fire CFIP app. pending	$4,000	0

California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA) Information

Forest management activities including conservation practices may impact special environmental and/or cultural values such as threatened or endangered species and archaeological sites. Landowners need to know their locations and what they can do to protect them. Landowners also need to know that environmental and cultural reviews by regulatory agencies are required when a ground practice is proposed, and a permit and/or government assistance becomes part of the project.

* **Biological, See Appendix 4**

* **Archaeology, See Appendix 5**

ADDITIONAL CEQA/NEPA NOTIFICATION FOR GROUND PRACTICES

Any future ground practice to implement this plan using public entity reimbursement funds requires a signed CAL FIRE CFIP Environmental Checklist (CEQA) or an NRCS CPA-52 (NEPA) Checklist. Along with this checklist a process of "discovery" or survey for unknown values along with a discussion of possible mitigations is required. Additionally, the checklist must be filled out by an RPF or Certified Planner. Archaeological values require an Archaeological Records Check, an entity Archaeologist review and Native American notification for the practice area.

PROVIDE A PROJECT NOTIFICATION TO THE FOLLOWING AGENCIES

- **County Clerk**
- **CA Department of Fish and Wildlife**
- **Regional Water Quality Control Board**
- **US Forest Service as they are adjacent to property**
- **If the project adjoins a State Highway, contact CALTRANS**

FOR GROUND-DISTURBING PROJECTS, PROVIDE A PROJECT NOTIFICATION TO:

- **Native American Heritage Commission**
- **Tribal contacts**
- **Local Historical Society**

ADDITIONAL PROFESSIONAL ASSISTANCE

American Forest Foundation Tree Farm System treefarmsystem.org	Lois Kaufman	(530) 472-1938
Forest Landowners of California in Sacramento,	forestlandowners.org	(877) 326-3778
Siskiyou County Agriculture Department at Yreka Service Center.		(530) 841-4025
Siskiyou County Air Pollution Control District Web site: co.siskiyou.ca.gov Burn Day Recording (daily permissive and marginal)	Jim Smith, Eric Olson	(530) 841-4025 (530) 841-4031 (530) 842-8123
CalFire www.fire.ca.gov CFIP Andrew Hubbs email Andrew.hubbs@fire.ca.gov	Damon Denman	(530) 598-2618 (530) 842-3516
USFS, Klamath National Forest Supervisor's office Salmon/Scott Ranger District, Fort Jones.		 (530) 842-6131 (530) 468-5391
United States Fish and Wildlife Service in Yreka at 1829 S. Oregon St. fws.gov		 (530) 842-5763
U.C. Cooperative Extension in Redding at 1851 Hartnell Ave. web site is ucanr.edu	Ricky Satomi – rpsatomi@ucanr.edu	(530) 224-4900
NRCS in Yreka at 215 Executive Ct.		(530) 842-6121 (530) 842-6123 Ext. 2
Siskiyou Resource Conservation District in Etna at 450 Main Street, Website: siskiyourcd.com		 (530) 467-3975
CV Regional water quality control board in Redding		(530) 224-4801
California Department of Fish and Wildlife.		(530) 524-5694

MAPS

All management plan map(s) shall contain the following elements as a minimum:

- **On a recent USGS Topographical or GIS Topo map include property and management unit boundaries at a scale of 4 inches = 1 mile (1 inch = 1320 feet) minimum.**
- **Title, north arrow, scale, legend (including road layout, water resources, infrastructure identification, timber land, other land uses, unit boundaries, and etc as necessary to show activities).**

Maps Required:

1. **Property Location Map: Delineate property boundaries, access roads, nearest town or well-known land mark.**
2. **Parcel Map: Include property boundaries, road layout, water resources, infrastructure identification,**
3. **Management Unit Map: Show location of forest type and management unit boundaries.**
4. **Soil Types Map: Show name and location of soil types present. Soil maps are available from NRCS Web Soil Survey: https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm, or from your local NRCS office.**
5. **Water Resources Map: Show name, location and classification of streams and other water resources.**
6. **Road Assessment Map: Show locations of roads and major skid trails. Indicate map points where projects such as road rehabilitation and culvert replacement are proposed**
7. **Project Map: Show location of proposed management activities**
8. **Other maps: As needed, other areas, including threatened and endangered species and archeological sites may be noted on a separate, confidential map.**

Aerial Photos are encouraged and may be used in addition to the Main Management Plan Map.

Appendix 1

Selected Conservation Practice Standards and Specifications

- **NRCS Conservation Practices Standards and associated documents are located in Section IV of the Field Office Technical Guide (FOTG): https://efotg.sc.egov.usda.gov/**
- **CAL FIRE CFIP Guidelines**

Appendix 2

Tax and Business Management

This section includes a series of statements related to tax and business management that should be included in plans.

Property tax –

- **The forest management plan should document the current tax status of the property. Your state might have specific property tax programs that you may be eligible to participate in. Please be aware of the program rules and regulations.**

Income tax –

- **Include a statement that timber harvest and other revenue generating activities generally produce a federal and state income tax liability. Tax credits may be available for some management activities.**

Estate tax –

- **Include a statement that good estate planning can help to lessen tax liability when passing land to heirs and that landowners should seek good planning and tax advice.**

Record keeping –

- **Include a statement that good record keeping can help landowners manage their assets; increase their revenues; and minimize their tax liability.**

Land Use –

- **Document the land use classifications of the property from the county land use plan.**

Appendix 3

Past Plans, Amendments and Updates

Appendix 4

Supporting Data

- **Soil Survey Data and/or Ecological Site Descriptions (ESDs)**
- **Modelling outputs**
- **Alternative Deduction References**
- **Other References and maps**

Appendix 5

Confidential Addendums

Confidential Archeological Letter (CAL) was written for whole property in the McDonagh Emergency Timber Operations of 2022 (2-22-EM-00083-SIS).

CAL (supplemental)

According to the Callahan Mining District (Scott River Mining District) records, there are two named mines on the property.

The Richie Mine was discovered earlier but unnamed in the CAL as there is a dump there of artifacts including cans and glass bottles. It is believed the Munson Mill and the Richie Mine are in the same location. Mineralization is a vein deposit. Au is associated with gem stones including Bornite, Chalcopyrite and Malachite. Malachite dust is toxic and must not be inhaled during cutting and polishing.

The Bouveayx Mine, previously not in the CAL, is documented in the Table below, artifacts associated with this mine have yet to be found.

Mine	Type	Ore	Valid Minerals	Location	Latitude	Longitude
Richie Mine	Mine	Cu occurrence/ mine	Bornite Chalcopyrite Malachite	7,000 ft. South of Sugar Hill	41.25611	-122.82694
Bouveayx Mine	Hill	Au occurrence/ mine		3,400 ft. South of Sugar Hill	41.26389	-122.83667

The Boulder Creek placer (Fippen and Haydon Mine) is located off of the property to the North. This Mine received water from ditches on the property. Lat/Long (41.26667, -122.82806). A former placer Au-Ag-Pb mine located 3,700 feet SE of Sugar Hill.

Similarly, the Oro Grande Mining Company Mine (McKeen; Cummings; Shasta) is to the North on Gus Erickson property . A former Au mine located 4,200 feet E. of Sugar Hill along West Boulder Creek. Mineralization is hosted in granite.

Appendix 1

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- **CAL FIRE CFIP Guidelines**

General Burn Permit - Permit Number: 231020153414McDonagh

State of California
Department of Forestry and Fire Protection
LE-5 (Rev 8/20)

Permittee					
Name	John McDonagh				
Address	PO Box 279				
City	McCloud	State CA		Zip Code: 96057	
Phone	(530) 918-9771	Email: dunchadda@yahoo.com			
Burn Location					
Address	APN 031-290-010 & 031-290-020				
City	Forks Of Salmon	State	CA	Zip Code	96031
County	Siskiyou County			Battalion	None
Section 7, T39N., R08W.					

Activity

- Burn debris in greater than 4' x 4' piles

Conditions of Use	
This permit is valid during	10/22/2023 - 11/05/2023
Burning shall be confined to hours	7:30am - 6:00pm
Before burning, call the Fire Station	(530) 842-7066
Before Burning, call CAL FIRE	(530) 842-3516
Before Burning, call the Air District	(530) 842-8123

This permit is subject to the terms and conditions of use as shown above

1. Permittee must not burn during very hot and dry periods when winds are strong enough that burning would be considered unsafe (example: wind keeps leaves in motion or extends a light flag or cloth).
2. The fire shall be: (a) attended at all times by at least one prudent and responsible person; (b) confined within cleared firebreaks or barriers adequate to prevent it from escaping control; and (c) Must maintain control of the fire at all times.
3. When the burning operation authorized by this permit is in an incinerator: (a) a minimum clearance of 10 feet from all flammable material must be provided and maintained; (b) all openings must be screened with nonflammable material with holes not larger than ¼ inch; and (c) must be attended at all times by a responsible person until fire is dead out.
4. This permit does not relieve the permittee of any duty to use reasonable and ordinary care to prevent damage to the property of others or injury to persons as prescribed by law. In the event of an escape of the fire that requires suppression action, the permit holder may be held liable for suppression costs.
5. This permit does not relieve the permittee of any legal responsibility for the safe use of fire or allow burning in violation of any State law, county ordinance, local regulations restricting, or regulating the use of fire.
6. It is illegal to burn garbage including treated lumber or plywood.
7. The responsible person shall be in possession of the permit at all times.
8. To reduce air toxic emissions and protect community health, the use of burn barrels has been prohibited statewide since 2004. For certain areas with very low population density, temporary exemptions that allow for the use of burn barrels may be in place. Contact your local air pollution control district for more information.
9. This permit is valid only on days which are determined "Permissive Burn Days" by the local Air Pollution Control District, pursuant to its authority under CCR Title 17 §80100-80330 and local Air District rules. Prior to burning, contact the local Air Pollution Control District at **(530) 842-8123.**
10. Before burning, permittee shall contact the CAL FIRE at **(530) 842-3516.** If cannot be reached, call **(530) 842-7066.**
11. Must follow all conditions listed on the permit.

Weather Conditions

Max Wind Speed *(MPH)*: **10**	Max Temperature *(Dry Bulb)*: **90**	Min Humidity *(RH)*: **20**

Acceptable Wind Direction: **NW,N,NE,E,SE,S,SW,W**

Special Instructions

Must follow all conditions listed above (1-7). Must maintain control of fire at all times. Must validate burn day status and burn hours at Siskiyou County Air Pollution (530 842-8123). Call CALFIRE prior to burning (530) 842-7066. It's illegal to burn garbage, including treated lumber or Plywood. The permit shall be held in possession by lead person conducting burn or readily accessible on-site. The permit SHALL be provided immediately upon request by any

EXHIBIT C - FOREST MANAGEMENT PLAN

General Burn Permit - Permit Number: 231020153414McDonagh

Peace Officer, Air Pollution Control representative, CAL FIRE representative, Forest Service representative or local fire district representative. Not providing permit immediately upon request shall make the permit null and void.
CAL FIRE Inspector
Keith Cummings Chief Officer — **Date**: 10/22/2023
Permittee's Signature
I own or legally control the above described land or have authorization from the owner(s) to sign. I agree to comply with all fire laws, ordinances, and regulations. I further agree to comply with specific terms of this permit.


VIOLATIONS OF ANY BURNING PERMIT TERMS ARE A VIOLATION OF STATE LAW RENDERS THE PERMIT NULL AND VOID PERMIT IS VOID DURING PERIODS WHEN BURNING IS PROHIBITED BY STAE LAW, LOCAL ORDIANCE, OR PROCLAMATION OF PUBLIC OFFICERS

(Public Resources Code 4421, 4422, 4423 and 4425)

Health & Safety Code 13009 states that persons who lose control of a permitted burn may be held liable for suppression costs.

PLEASE READ THE ATTACHMENTS. IT CONTAINS INFORMATION ON THE LAWS AND RULES RELATING TO FIRE

EXHIBIT C - FOREST MANAGEMENT PLAN

CALIFORNIA
SISKIYOU
Form: FSA-156EZ

USDA United States Department of Agriculture
Farm Service Agency

Abbreviated 156 Farm Record

FARM : 2734
Prepared : 1/21/21 1:09 PM
Crop Year : 2021

Tract Number : 10891

Description	:	
FSA Physical Location	:	CALIFORNIA/SISKIYOU
ANSI Physical Location	:	CALIFORNIA/SISKIYOU
BIA Unit Range Number	:	
HEL Status	:	NHEL: No agricultural commodity planted on undetermined fields
Wetland Status	:	Wetland determinations not complete
WL Violations	:	None
Owners	:	JOHN J MCDONAGH
Other Producers	:	None
Recon ID	:	06-093-2021-32

Tract Land Data

Farm Land	Cropland	DCP Cropland	WBP	WRP	CRP	GRP	Sugarcane
584.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
State Conservation	**Other Conservation**	**Effective DCP Cropland**	**Double Cropped**	**MPL**	**EWP**	**DCP Ag. Rel Activity**	**Broken From Native Sod**
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

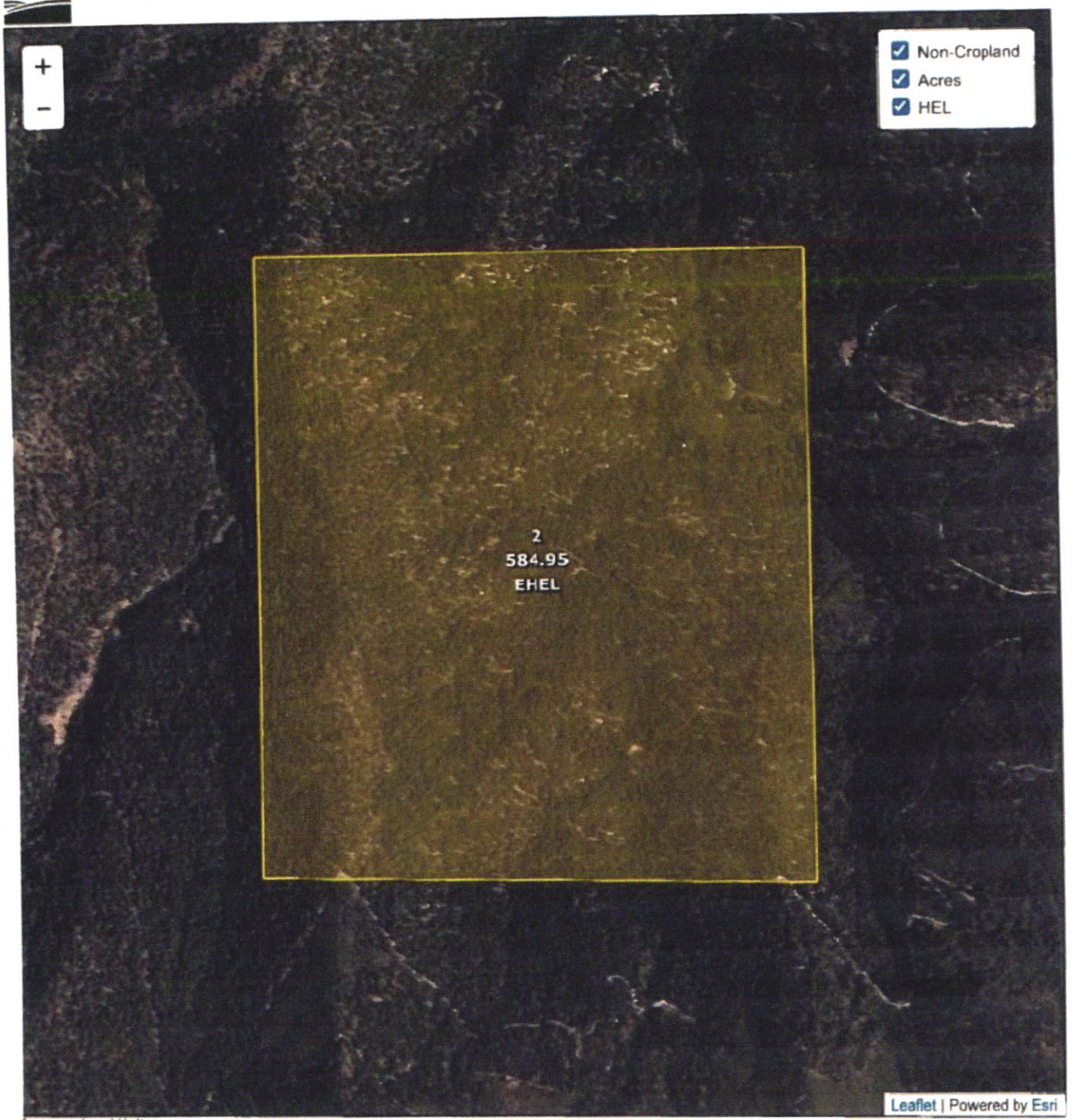
DCP Crop Data

Crop Name	Base Acres	CCC-505 CRP Reduction Acres	PLC Yield

NOTES

EXHIBIT C - FOREST MANAGEMENT PLAN

USDA **Siskiyou County, California**



Common Land Unit
Cropland
Non-cropland
CRP

Farm **2734**
Tract **10891**

Wetland Determination Identifiers
- **Restricted Use**
- **Limited Restrictions**
- **Exempt from Conservation Compliance Provisions**

2021 Crop Year

N
W E
S

Tract 2 of 2

EXHIBIT C - FOREST MANAGEMENT PLAN

Appendix 2

Tax and Business Management

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Appendix 3

Past Plans, Amendments and Updates

Project Area Map of the McDonagh Emergency Timber Operations 2022

Sec 7, T39N, R8W MDBM Datum: WGS84 PROJECT AREA (approx.) **600 acres**

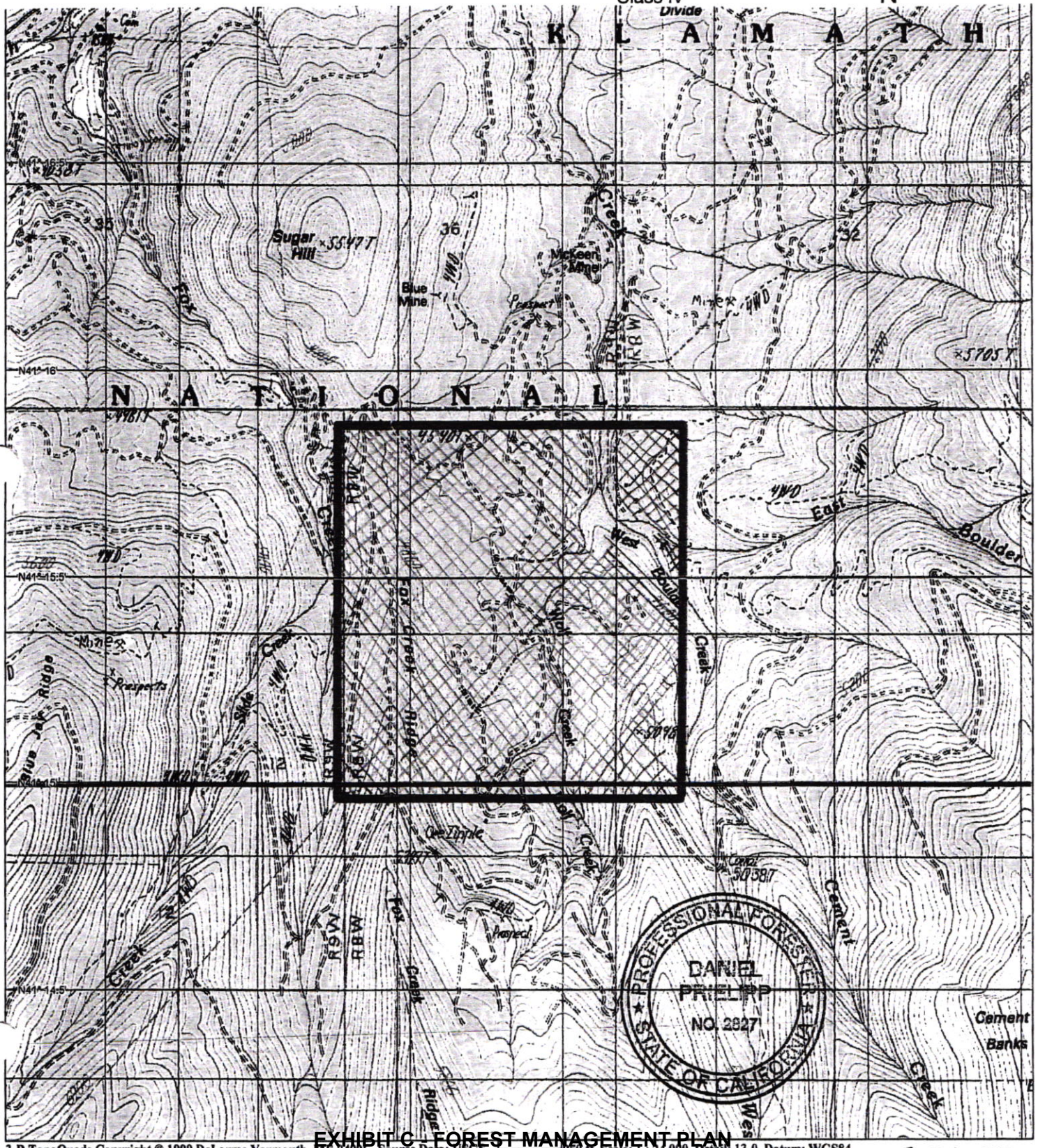
Callahan, and Billy Peak CA 7.5' USGS Quads 1:24,000 Contour interval: 40 feet

Map Legend: Project Area is crosshatched

Roads: County/State
Secondary paved
Primitive

Watercourse: Class I
Class II
Class III
Class IV

N



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 950 ft Scale: 1 : 24,000 Detail: 13-0 Datum: WGS84

3-21-22

Project Area Map for Temporary Stream crossings (4)
McDonagh Emergency Timber Operations 2022

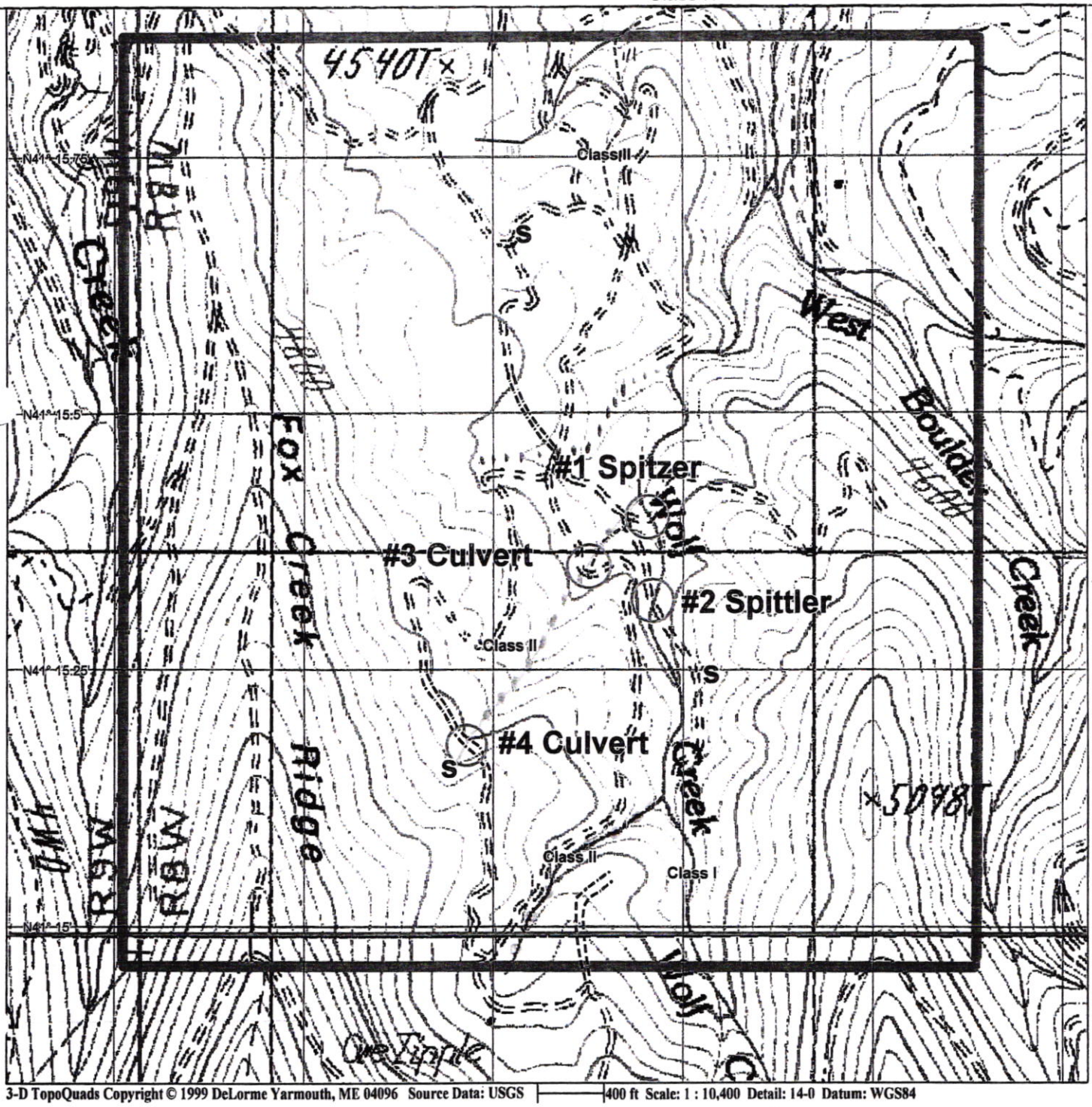
Callahan, and Billy Peak CA 7.5' USGS Quads 1:24,000 Contour interval: 40 feet
Section 7, T39N, R8W MDBM Datum: WGS84 Wolf Creek D. Prielipp 3-28-22

Map Legend:

Crossings numbered 1-4
Roads: County/State
Secondary paved
Primitive

Watercourse: Class I
Class II
Class III
Class IV

N



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 400 ft Scale: 1 : 10,400 Detail: 14-0 Datum: WGS84

WOLF CREEK TREE FARM

T39N, R8W, SEC.&, MDM.

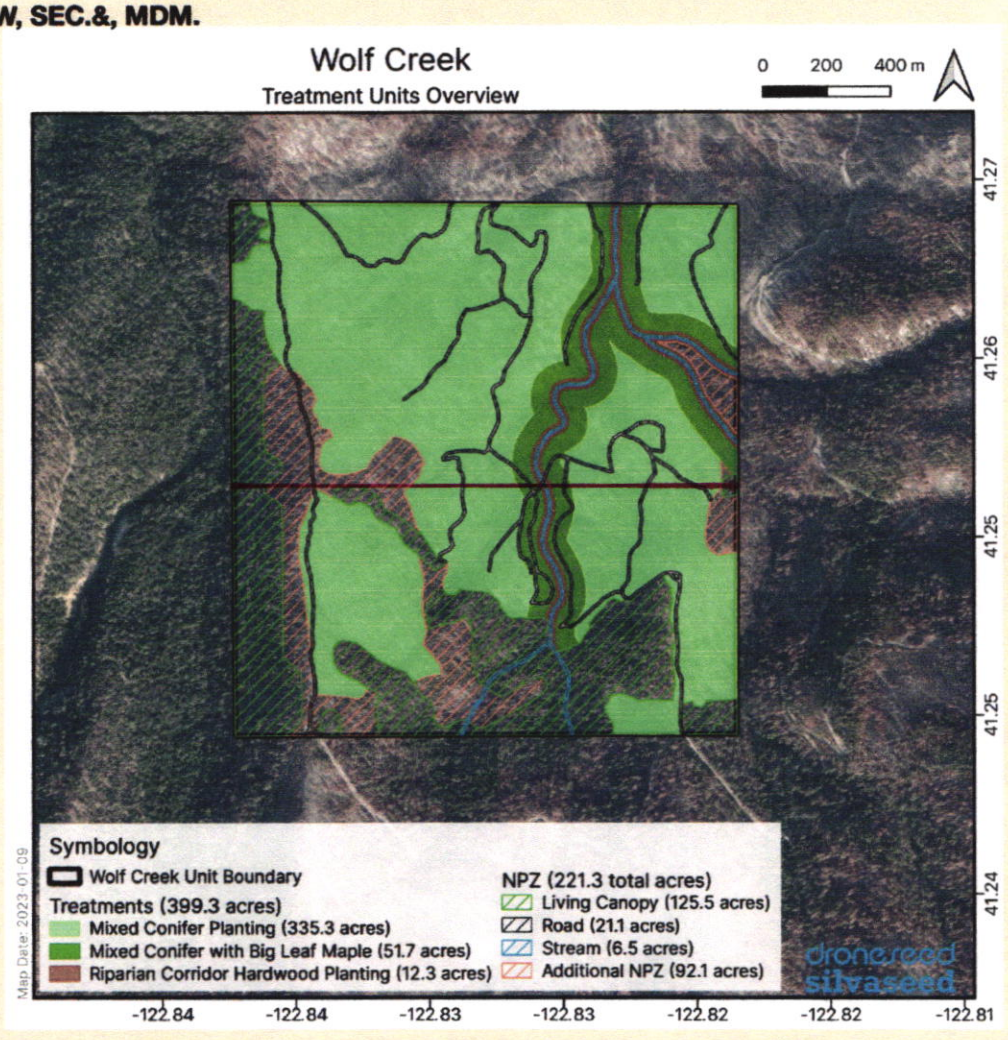


Figure 3. Wolf Creek property map showing treatment areas and No Plant Zones (NPZs). "Additional NPZ" also includes environmentally sensitive areas (ESAs), which are not specifically delineated on this map.

Table 2. Property area divisions for forest carbon project, as depicted in Figure 3

Layer	Acres
Reforestation Project Area (Mixed Conifer, Mixed Conifer w/ Big Leaf Maple, and Riparian Corridor Hardwoods)	399.3
Living Canopy	125.5
Road	21.1
Stream	6.5
Additional NPZ	92.1

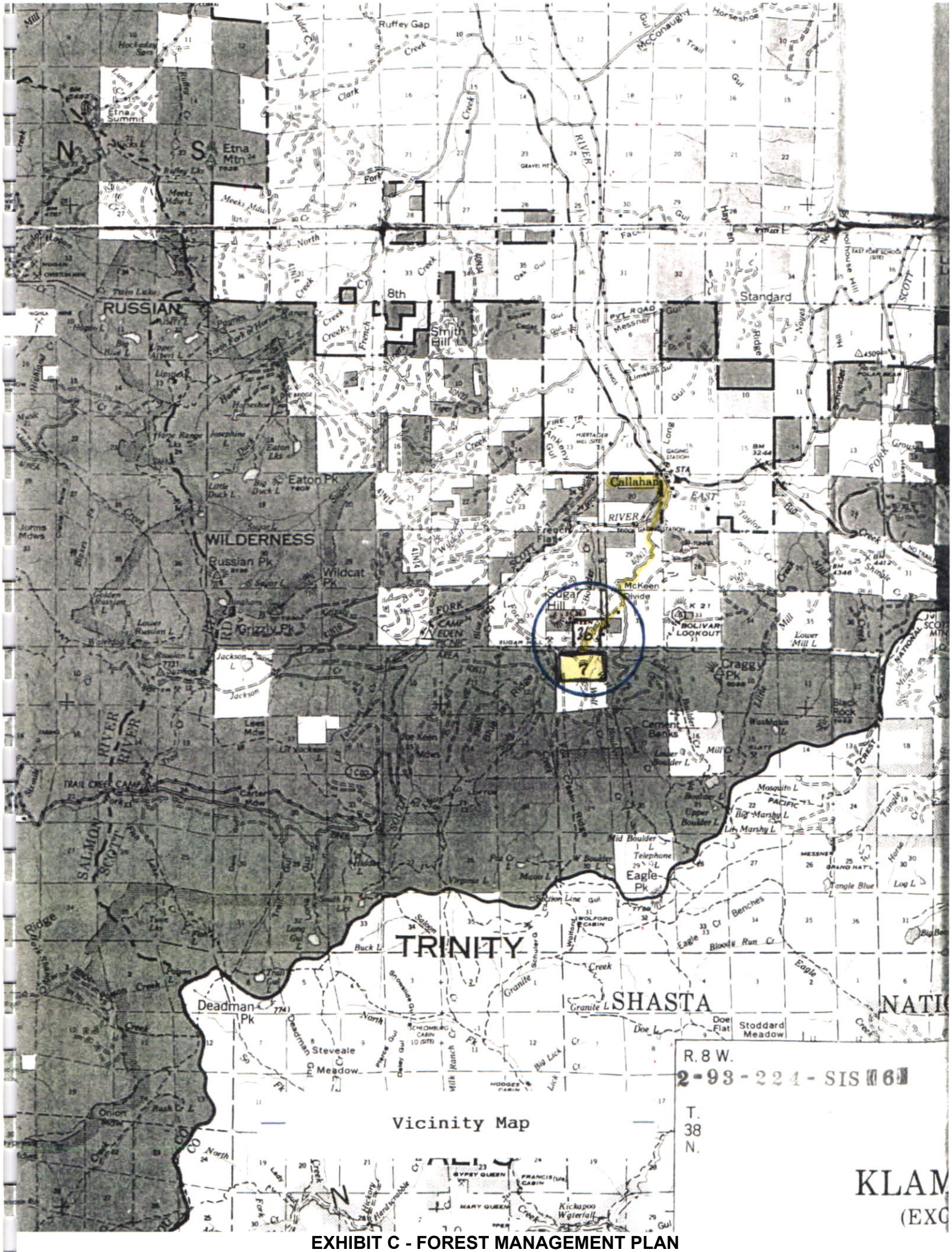


EXHIBIT C - FOREST MANAGEMENT PLAN

2-93-221-SIS(6)

PLAN ADDENDUM

Silviculture

Item #15.

The Timber Harvesting Plan area was last harvested 10 to 15 years ago, and prior to that, in the 1940's. The present stand is generally evenage. Trees bored for age (14" to 22" DBH) averaged between 75 and 108 years. During past harvest, the overstory was removed leaving a residual, irregular stand.

The transition method is the silvicultural prescription being utilized to harvest this evenaged, irregular stand. Individual trees have been marked for harvest based on the following criteria:

Those trees exhibiting mechanical damage from past logging.
Trees depicting evidence of insect activity.
Trees showing mistletoe.
Trees with less than 40% live crown and trees having deformities.

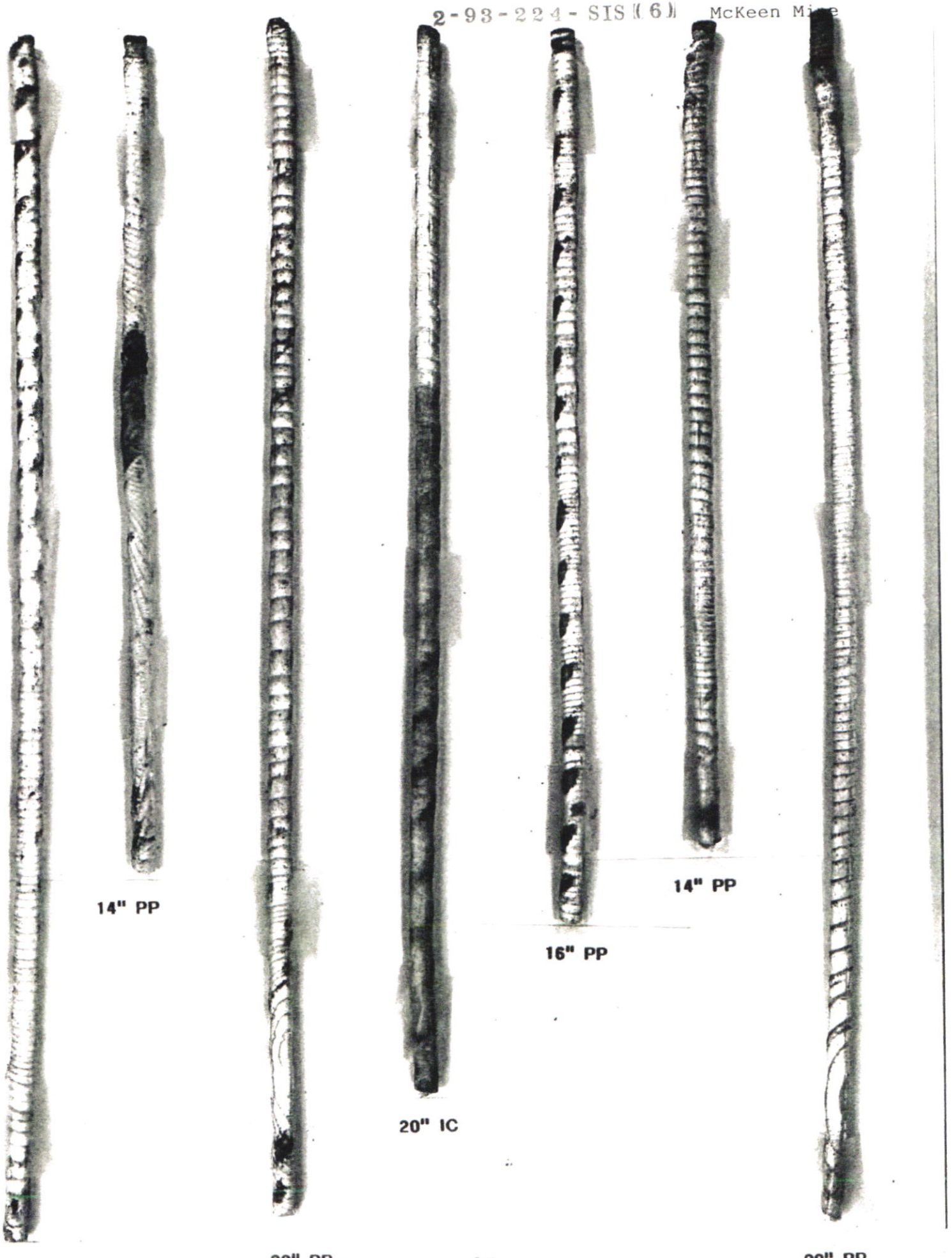
The planned harvest only amounts to the removal of an average 648 board feet per acre. The total harvest volume of 326 MBF is spread over 510 acres.

Harvest volume by species is heavy to Ponderosa Pine at 64%. The balance of the stand composition is 15% White Fir, 13% Douglas-fir, 9% Incense Cedar, and 1% Sugar Pine.

Increment borings indicate that the maximum lateral growth occurs at 14" to 22" DBH. Some sample borings indicate tree release at age 60 to 70 years, but slowing down the last radial inch. The stand table reveals the tree diameters comprising the harvest.

Basal area information:

Total basal area average over the 510 acres is approximately 65 square feet. The average basal area to be removed is 20 square feet with a leave of 45 square feet. Immediately following completion of timber operations, the minimum of 300 point count will be met, in addition to 50% of 75 square feet of basal area.


14" PP
20" IC
16" PP
14" PP
22" PP
20" PP
20" PP

STAND TABLE BY TYPE 2-93-224-SIS(6)

GEORGE E. BELDEN, CONSULTING FORESTRY Plots 13 BFT:E PAGE 2
PROJECT MCKEENMI TRACT: MINESECT7 Trees 273 CUB:1 DATE: 07/20/93
TWP 40N RGE 08W SEC 07 TY 02 AC 313.00 TIME: 08:59am

		D 4 H							
	TOTALS	REF	00-09	10-13	14-17	18-21	22-25	26-29	30-33	34-37	38+
TYPE											
TOT HGT	57			56	55	62	67	87			
TREES/AC	6.5			0.9	4.3	1.1	0.2	0.0			
BA/AC	8.6			0.7	5.2	2.0	0.6	0.0			
CUFT/AC	155			11	90	40	13	1			
BDFT/AC	608			41	344	163	53	7			
BDFT%	100			7	57	27	9	1			
LOGS/AC	14			2	9	3	1	0			
TONS/AC	0			0	0	0	0	0			
POLES/AC											

STAND TABLE BY TYPE

GEORGE E. BELDEN, CONSULTING FORESTRY Plots 13 BFT:E PAGE 1
PROJECT MCKEENMI TRACT: MINESECT7 Trees 273 CUB:1 DATE: 07/20/93
TWP 40N RGE 08W SEC 07 TY 02 AC 313.00 TIME: 08:59am

SPECIES	D4H	AVE. TOT.HT	TREES/ ACRE	TONS/ ACRE	BA/ ACRE	CUFT/ ACRE	BDFT/ ACRE	BDFT PCT	LOGS/ ACRE	POLES/ ACRE
CON FIR	12	63	0.3		0.2	4	14	15	1	
	14	58	0.6		0.6	11	42	42	1	
	16	55	0.3		0.4	8	30	30	1	
	18	41	0.0		0.1	1	2	2		
	20	72	0.0		0.1	2	8	8		
	22	93	0.0		0.0		1	1		
	24	82	0.0		0.0		2	2		
CON FIR	AVE.	58	1.3		1.4	26	99	16	2	
DOUG FIR	12	53	0.1	0.02	0.1	1	3	3		
	14	60	0.4	0.18	0.4	7	27	35	1	
	16	57	0.1	0.09	0.2	4	15	18		
	18	69	0.2	0.18	0.3	7	31	39		
	22	93	0.0	0.01	0.0		1	1		
	28	101	0.0	0.01	0.0	1	3	4		
DOUG FIR	AVE.	61	0.8	0.49	1.0	20	79	13	2	
INC CED	12	18	0.0		0.0		1	1		
	14	34	0.1		0.1	1	2	4		
	16	52	0.1		0.2	3	9	21		
	18	45	0.0		0.1	1	4	10		
	20	61	0.1		0.2	4	15	33		
	22	46	0.1		0.2	3	11	25		
	24	52	0.0		0.1	1	2	5		
INC CED	AVE.	48	0.4		0.8	12	45	7	1	
P PINE	10	18	0.0		0.0					
	12	55	0.5		0.4	6	23	6	1	
	14	53	1.2		1.3	22	85	23	2	
	16	56	1.4		1.9	33	128	35	3	
	18	64	0.6		1.0	20	83	23	2	
	20	55	0.1		0.1	3	10	3		
	22	82	0.1		0.2	6	26	7		
	24	68	0.0		0.1	2	10	3		
	26	79	0.0		0.0		2			
P PINE	AVE.	57	3.9		5.2	93	368	61	9	
SUG PINE	16	53	0.1		0.1	2	6	34		
	18	60	0.1		0.1	2	9	53		
	28	82	0.0		0.0		2	13		
SUG PINE	AVE.	57	0.1		0.2	4	17	3		
TYPE AVE.		57	6.5	0.49	8.6	155	608	100	14	

TYPE MBF SUMMARY BY SPECIES, SORT AND GRADE

GEORGE E. BELDEN, CONSULTING FORESTRY Plots 13 BFT:E PAGE 1
PROJECT MCKEENMI TRACT: MINESECT7 Trees 273 CUB:1 DATE: 07/20/93
TWP 40N RGE 08W SEC 07 TY 02 AC 313.00 TIME: 08:59am

SP	SORT	GRADE	PCT BDFT	Bdft / Acre GROSS	Bdft / Acre NET	TOT MBF	%Bdft/Ac by gross len. 12-19	20-25	26-34	35-40	AV LN	BDFT/ LOG	LOGS ACRE
CF	DOMESTIC	WHT.FIR	100	105	99	31	100				16	40	2
CF	TOTAL		16	105	99	31	100				16	40	2
DF	DOMESTIC	2SAWMILL	4	3	3	1	100				16	137	
DF	DOMESTIC	3SAWMILL	24	21	19	6	100				16	84	
DF	DOMESTIC	4SAWMILL	70	57	56	17	100				16	39	1
DF	DOMESTIC	PINE5SAW	1	1	1		100				16	35	
DF	TOTAL		13	82	79	25	100				16	46	2
IC	DOMESTIC	I.CEDAR	100	45	45	14	100				16	58	1
IC	TOTAL		7	45	45	14	100				16	58	1
PP	DOMESTIC	4SAWMILL		1	1		100				16	45	
PP	DOMESTIC	PINE4SAW	10	43	38	12	100				16	84	
PP	DOMESTIC	PINE5SAW	89	346	326	102	100				16	40	8
PP	DOMESTIC	PINE6SAW	1	2	2	1	100				16	70	
PP	DOMESTIC	R		1	1		100				16	20	
PP	CULL	CULL		1									
PP	TOTAL		61	394	368	115	100				16	42	9
SP	DOMESTIC	PINE4SAW	17	3	3	1	100				16	130	
SP	DOMESTIC	PINE5SAW	83	14	14	4	100				16	48	
SP	TOTAL		3	17	17	5	100				16	54	
TYPE TOTAL			100	644	608	190	100				16	43	14

LOG STOCK TABLE - MBF

GEORGE E. BELDEN, CONSULTING FORESTRY — Plots 13 — BFT:E — PAGE 1
PROJECT MCKEENMI — Trees 273 — CUB:1 — DATE: 07/20/93
TWP 40N RGE 08W SEC 07 TY 02 AC 313.00 — TIME: 08:59am

SPC	SO	GR	LEN	MBF	PERCENT VOLUME BY SCALING DIAMETER TOTALS	00-05	06-07	08-11	12-13	14-15	16-19	20-23	24-29	30+
CF	DO	NG	10		1		1	0						
	DO	NG	12		1		1							
	DO	NG	14		0		0							
	DO	NG	16	30	98		28	61	3	5	1			
CF	PCT	TOTAL		31	16		5	10	0	1	0			
DF	DO	2S	16	1	4				2		1	1		
	DO	3S	16	6	24			6	17	0	1			
	DO	4S	10		1		1							
	DO	4S	12		0		0							
	DO	4S	16	17	69		18	48	2		1			
	DO	5S	16		1		1	1						
DF	PCT	TOTAL		25	13		3	7	3	0	0	0		
IC	DO	NG	10		0		0							
	DO	NG	12		1		1							
	DO	NG	16	14	99		12	44	23	8	11			
IC	PCT	TOTAL		14	7		1	3	2	1	1			
PP	DO	4S	16		0		0	0						
	DO	4S	16	12	10				8	1	0			
	DO	5S	10	1	1		1							
	DO	5S	11		0		0							
	DO	5S	12	1	1		1							
	DO	5S	14		0		0							
	DO	5S	16	100	87		22	56	5	4	1			
	DO	6S	16	1	1			1						
	DO	R	16		0		0							
PP	PCT	TOTAL		115	61		14	34	8	3	1			
SP	DO	4S	16	1	17				7		4	6		
	DO	5S	10		1		1							
	DO	5S	16	4	82		15	49	15	3				
SP	PCT	TOTAL		5	3		0	1	1	0	0	0		
TYPE	MBF	TOT.		190	190		44	106	26	9	4	1		

STAND TABLE BY TYPE 2-93-224-SIS(6)

GEORGE E. BELDEN, CONSULTING FORESTRY Plots 13 BFT:E PAGE 1
PROJECT MCKEENMI TRACT: MINESECT7 Trees 273 CUB:1 DATE: 07/20/93
TWP 40N RGE 08W SEC 07 TY 02 AC 313.00 TIME: 08:59am

		D 4 H						
	TOTALS	REF	00-09	10-13	14-17	18-21	22-25	26-29	30-33	34-37	38+
CON FIR											
TOT HGT	58			63	57	56	87				
TREES/AC	1.3			0.3	0.9	0.1	0.0				
BA/AC	1.4			0.2	1.0	0.1	0.0				
CUFT/AC	26			4	19	3	1				
BDFT/AC	99			14	71	10	3				
BDFT%	16			2	12	2	0				
LOGS/AC	2			1	2	0	0				
TONS/AC											
POLES/AC											
DOUG FIR											
TOT HGT	61			53	59	69	93	101			
TREES/AC	0.8			0.1	0.5	0.2	0.0	0.0			
BA/AC	1.0			0.1	0.6	0.3	0.0	0.0			
CUFT/AC	20			1	11	7	0	1			
BDFT/AC	79			3	42	31	1	3			
BDFT%	13			0	7	5	0	0			
LOGS/AC	2			0	1	0	0	0			
TONS/AC	0			0	0	0	0	0			
POLES/AC											
INC CED											
TOT HGT	48			18	45	56	47				
TREES/AC	0.4			0.0	0.2	0.2	0.1				
BA/AC	0.8			0.0	0.2	0.3	0.2				
CUFT/AC	12			0	3	5	3				
BDFT/AC	45			1	11	19	14				
BDFT%	7			0	2	3	2				
LOGS/AC	1			0	0	0	0				
TONS/AC											
POLES/AC											
P PINE											
TOT HGT	57			54	55	63	79	79			
TREES/AC	3.9			0.5	2.6	0.6	0.1	0.0			
BA/AC	5.2			0.4	3.3	1.2	0.3	0.0			
CUFT/AC	93			6	55	23	8	0			
BDFT/AC	368			23	214	94	36	2			
BDFT%	61			4	35	15	6	0			
LOGS/AC	9			1	6	2	0	0			
TONS/AC											
POLES/AC											
SUG PINE											
TOT HGT	57				53	60		82			
TREES/AC	0.1				0.1	0.1		0.0			
BA/AC	0.2				0.1	0.1		0.0			
CUFT/AC	4				2	2		0			
BDFT/AC	17				6	9		2			
BDFT%	3				1	1		0			
LOGS/AC	0				0	0		0			
TONS/AC											

Appendix 4

Supporting Data

- **Soil Survey Data and/or Ecological Site Descriptions (ESDs)**
- **Modelling outputs**
- **Alternative Deduction References**
- **Other References and maps**

K Factor, Whole Soil

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
127	Gerle family-Entic Xerumbrepts association, 50 to 90 percent slopes.	.15	281.6	43.9%
128	Gilligan-Chawanakee families association, 30 to 90 percent slopes.	.17	344.0	53.6%
130	Gilligan-Holland families association, 15 to 70 percent slopes.	.17	7.0	1.1%
165	Nanny family, 2 to 30 percent slopes.	.02	6.7	1.0%
166	Nanny family, 30 to 50 percent slopes.	.02	2.8	0.4%
188	Tangle family, 15 to 50 percent slopes.	.10	0.0	0.0%
Totals for Area of Interest			**642.2**	**100.0%**

Description

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Layer Options (Horizon Aggregation Method): Surface Layer (Not applicable)

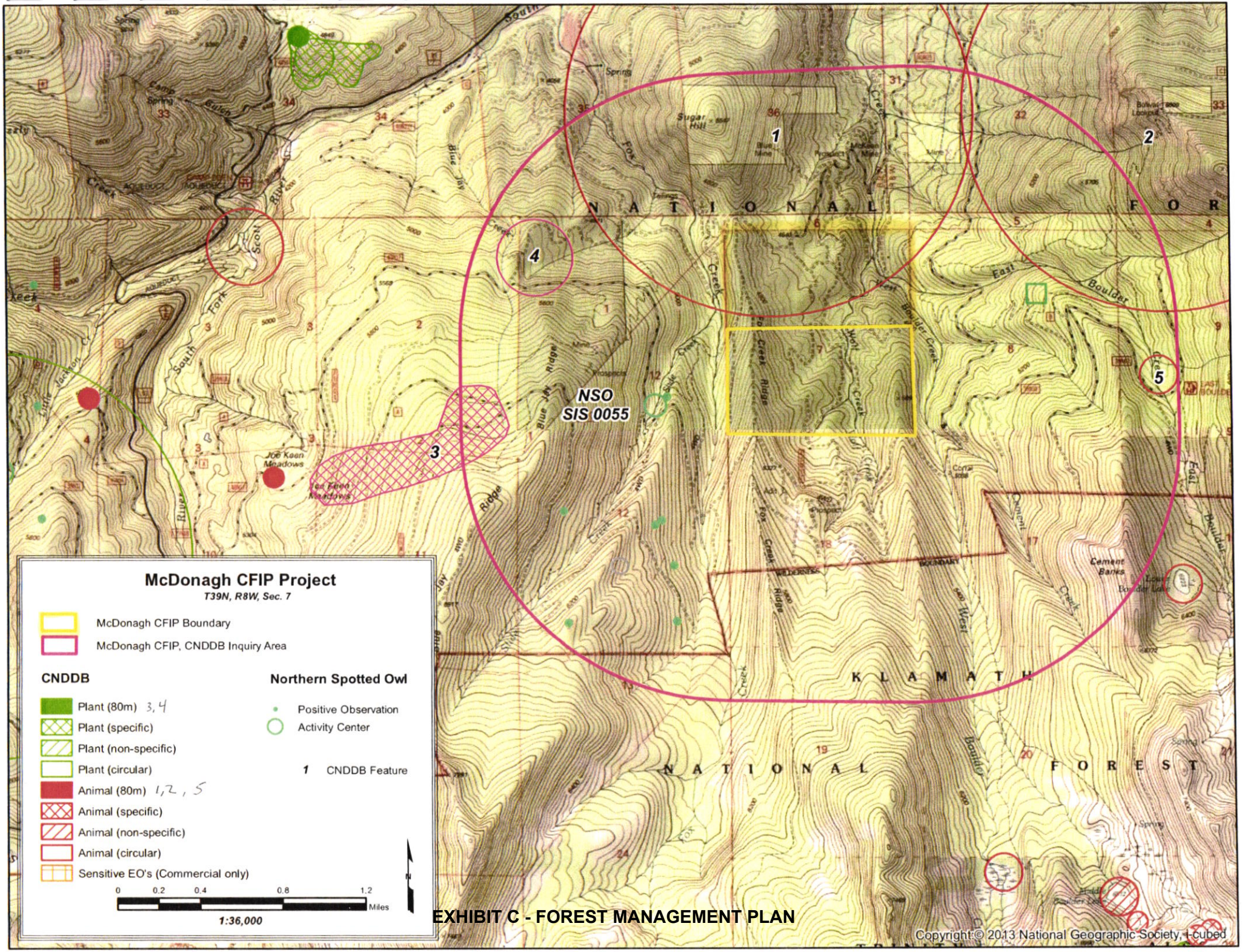


EXHIBIT C - FOREST MANAGEMENT PLAN

CNDDB Report for McDonagh Tree Farm - Wolf Creek CFIP Project

Feature #	Element Code	Occurrence #	Scientific Name	Common Name
1	AMAJF01030	130	Martes caurina	Pacific marten
2	AMAJF01030	120	Martes caurina	Pacific marten
3	CTT51120CA	14	Darlingtonia seep	Darlingtonia seep
4	CTT51120CA	12	Darlingtonia seep californica	Darlingtonia seep
5	AAABH01060	88	Rana cascadae	Cascades frog

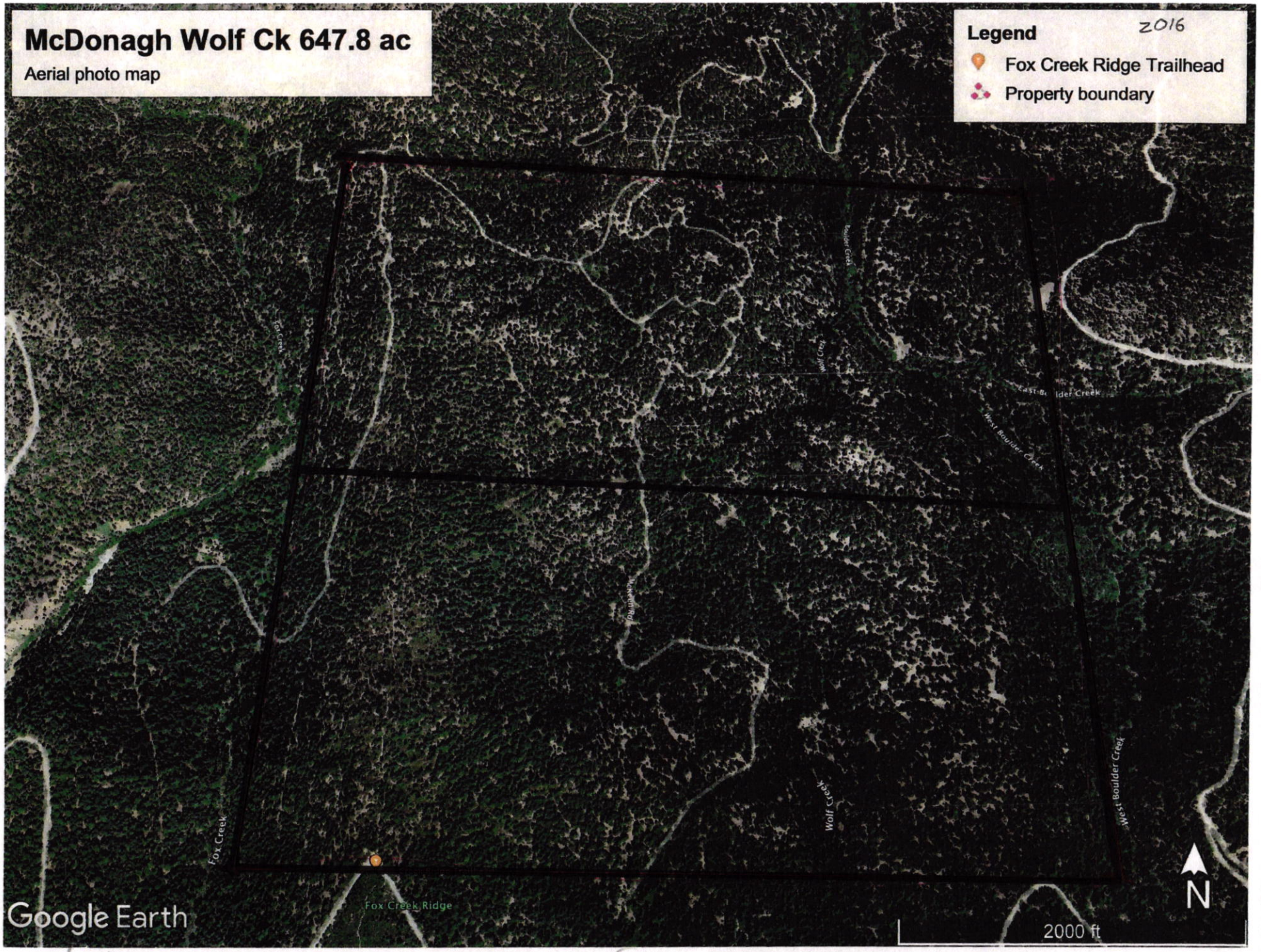


EXHIBIT C - FOREST MANAGEMENT PLAN

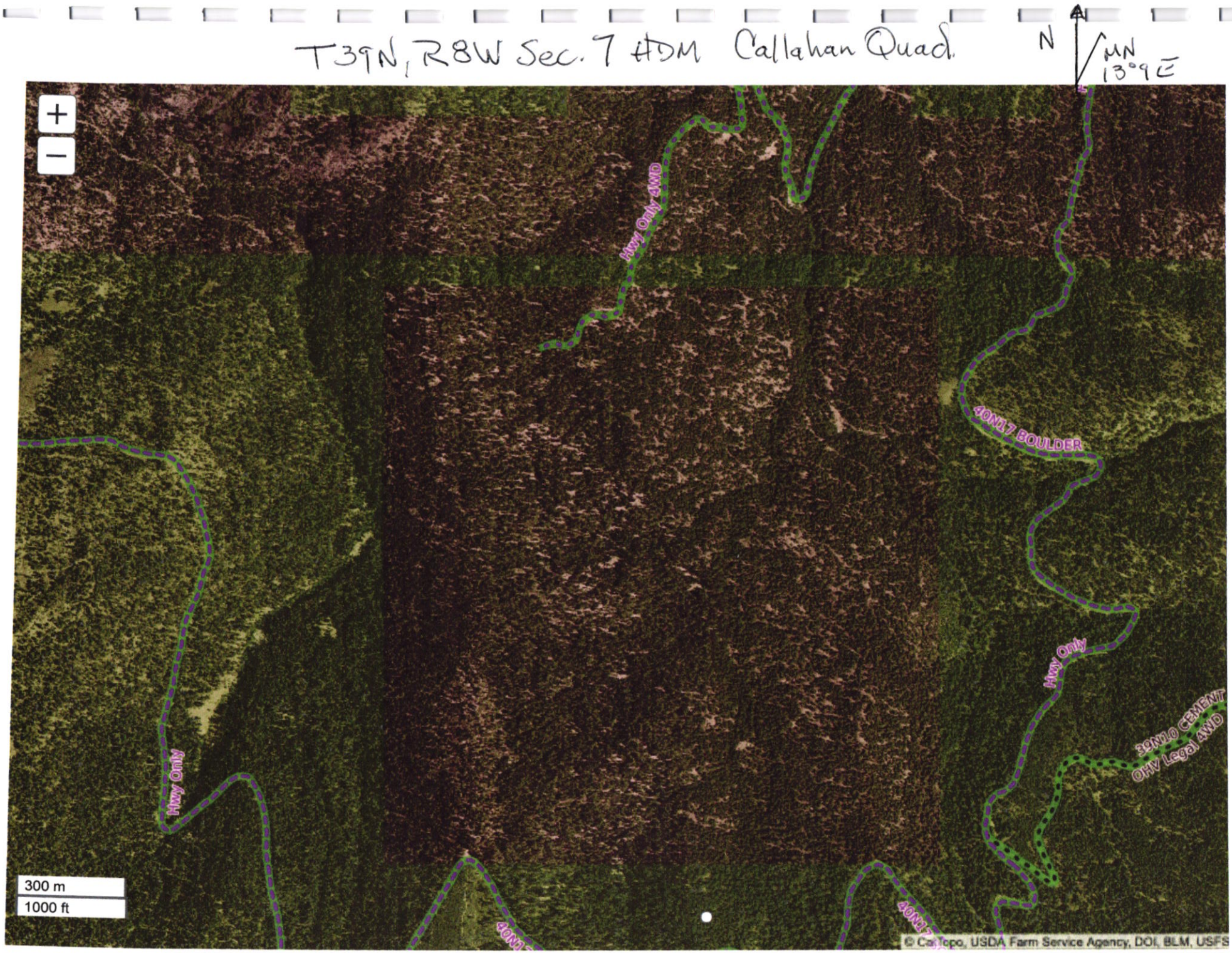


EXHIBIT C - FOREST MANAGEMENT PLAN

Appendix 5

Confidential Addendums

Confidential Archeological Letter (CAL) was written for whole property in the McDonagh Emergency Timber Operations of 2022 (2-22-EM-00083-SIS).

CAL (supplemental)

According to the Callahan Mining District (Scott River Mining District) records, there are two named mines on the property.

The Richie Mine was discovered earlier but unnamed in the CAL as there is a dump there of artifacts including cans and glass bottles. It is believed the Munson Mill and the Richie Mine are in the same location. Mineralization is a vein deposit. Au is associated with gem stones including Bornite, Chalcopyrite and Malachite. Malachite dust is toxic and must not be inhaled during cutting and polishing.

The Bouveayx Mine, previously not in the CAL, is documented in the Table below, artifacts associated with this mine have yet to be found.

Mine	Type	Ore	Valid Minerals	Location	Latitude	Longitude
Richie Mine	Mine	Cu occurrence/ mine	Bornite Chalcopyrite Malachite	7,000 ft. South of Sugar Hill	41.25611	-122.82694
Bouveayx Mine	Hill	Au occurrence/ mine		3,400 ft. South of Sugar Hill	41.26389	-122.83667

The Boulder Creek placer (Fippen and Haydon Mine) is located off of the property to the North. This Mine received water from ditches on the property. Lat/Long (41.26667, -122.82806). A former placer Au-Ag-Pb mine located 3,700 feet SE of Sugar Hill.

Similarly, the Oro Grande Mining Company Mine (McKeen; Cummings; Shasta) is to the North on Gus Erickson property . A former Au mine located 4,200 feet E. of Sugar Hill along West Boulder Creek. Mineralization is hosted in granite.

STEP 4 - *REFERENCE CONDITIONS*

This step describes how ecological conditions have changed over time, resulting in current conditions as described in Step 3. A reference will be developed based upon historic conditions for comparison with current conditions. This is an attempt using historical data to determine how the ecosystem adapted/ developed. The time period will vary by ecosystem features and data availability. Where actual data is lacking, descriptions of historical conditions will be constructed from a multitude of sources, inferences, and professional judgement.

This step begins with an historic overview that sets the framework for the step. Following the overview are answers to key questions by issue as presented in Step 2. See Figure 4-1 Historic Features, contained in the Map Packet located at the end of this document, for a visual display of several historic features present in the watershed.

HISTORIC OVERVIEW

The analysis area falls within the ethnographic boundary of the Scott Valley Shasta Tribe. Permanent Shastan village settlements in Scott Valley were generally located at the edge of the valley or at the confluence of major tributaries or streams. A few villages were located on higher hills among the oaks, and situated near large springs. According to Heizer and Hester (1970), seven villages were located along Scott River.

Dwelling houses were semi-subterranean with dirt sidewalls and split-board endwalls. These houses were only occupied during the winter. In spring they were abandoned for brush shelters. Temporary camps, associated with seasonal hunting and gathering, were single family bark houses. Later in the fall, during hunting expeditions, they camped in the open.

Subsistence strategies relied on seasonal exploitation of a variety of animal and vegetal resources from varying ecological zones. The mountainous terrain was utilized during summer and fall for seasonal hunting and gathering of plant foods. Among the vegetal foods collected were acorns, pine nuts, seeds, bulbs, greens, roots, berries, and other fruits. Non-vegetal foods included deer meat, bear, small mammals, salmon, trout, suckers, eels (Pacific lamprey), crawfish, turtles, mussels, fowl, insects, and grubs. Mountain lion and wildcat were also hunted. Manzanita berries were used as a cider drink and milkweed was a source for chewing gum.

Shasta Indian land management practices included burning for wild seed and tobacco crops. Fire was also used during deer hunting in late fall when the Shasta would encircle the deer with fire. Fires were also set on hills in the fall when oak leaves began to drop. Subsequently, areas which had new growth of hazel and beargrass were visited by basketweavers. These areas were visited two to three years after burning.

Existing literature does not address the use of high mountain spiritual or ceremonial areas. Holt (1977), however, does mention that "during a certain moon each year...boys and young men went alone on dark, stormy nights to a certain rocky point and piled stones. This was to make them brave..."

In the 1820s and '30s, the first Euro-Americans exploiting a resource in the area were the Hudson Bay Company fur trappers. Scott Valley was particularly utilized for trapping beaver, mink, and other furbearing animals.

The landscape within the watershed has experienced a dynamic evolution of resource exploitation and land ownership. The discovery of gold in the 1850s in Shasta County brought an influx of people to areas such as South Fork, Slide, Jackson, Wildcat, Fox, and Boulder Creeks. Miners displaced American Indians as the extractive process of mining progressed.

Initially, placer gold was taken from old bench gravels and river tributaries which yielded substantial amounts of the metal. Placer mining could be performed by one individual or several men and did not require a large expenditure of capital especially when compared to later mining technologies. The Chinese followed the miners and successfully recovered gold by re-working old claims. In the 1892 State Mineralogist's Report, it states "Mining in this district is exclusively placer, and is confined to...bars of the South Fork of Scott River." In former years the main Scott River below the junction of the South and East Forks at Callahan was mined for two or three miles, and considerable gold taken from its channel and high bars, but the latter are now worked out, and gold in the river channel is at such a depth that it cannot be profitably mined. On the South Fork about twenty white miners and fifty Chinese were engaged in mining, the former in small claims in gulches and high bars, and the latter in about half a dozen claims in the

bed of the river and hydraulics in one of the high bars. The output of the District averages $75,000 annually. In the 1894 Report, the Chinese-owned Montezuma mine was in operation one-half mile from Callahan. The claim, which increased from forty to sixty acres, consisted of "part of a river bed, with a 20 ft. bank of gravel, on the South Fork of Scott River. The gold is both coarse and fine; the former lies near the bedrock. Bedrock lies from 20-30' below water-level. All the gravel from the full width of the valley is run through the sluices. The sluices are 4'x4' and 3,000' long".

Around 1900, the French Beaudry Company bought 3,000 acres of mining property extending to near Callahan to the area around Wildcat Creek. Although miners were on Wildcat Creek prior to the presence of the company, the construction of a boarding house and sawmill has been attributed to the company. Other companies with mining interests included the Oro Grande Mining Company and Sugar Hill Mining Company. Boulder Creek was included in the Boulder Creek Mining District.

During this time period the Slide Creek Mine was intensively worked through the use of a self shooter which effectively ground sluiced the creek. It has been stated that this method left a chasm from thirty to forty feet deep. More recent hydraulic mining may have obliterated evidence of this activity. Any of the water channels west of the creek may have been used with the shooter or later hydraulic mining. Placer mining also occurred at the mouth of Fox Creek and followed the creek to the falls. The A.B.C. Mine followed a high channel or rim "on the hillside above the ford at Fox Creek. This channel was mined for about a quarter of a mile, producing over $700,000 at $18.00/oz."

Hydraulic mining began in the area sometime after 1850 and operations were often concurrent with hard rock and dredge mining. This form of mining may have existed into the 1930s along with dredge and small scale, depression-era placer mining. Large scale dredge mining, however, continued until the 1950s.

Dredge mining took place within the Callahan Mining District by 1907 with the use of the Wade dredge. The Scott River received the most impact with activity occurring north of Callahan for approximately five miles. An article in a 1907 Mount Shasta Herald newspaper stated, "dredger mining started on the Scott River...averaged $10,000/week." After a general decline within the state, operations sporadically continued in the 1930s with the Yuba dredge along the Scott River. In 1936, the Yuba Dredge Company built a settlement at the mouth of Sugar Creek which housed approximately 16 workers. The dredge worked down river from Sugar Creek, operating 24 hours a day until 1950. Approximately 75,000 yards of rock could be moved in a week, recovering up to 300 ounces of gold. It did not operate during the war years. Some dredging also occurred along the mouth of Wildcat Creek and at the Last Chance Mine, one mile south of Callahan. These dredges were superior in moving deep gravels and large boulders.

Mining has continued sporadically into the 1960s. In a 1969 Mines and Geology Report, the Cummings or McKeen Mine, was one of a number of gold-quartz mines in the Callahan Mining District. The total output was valued at $500,000.

During the early mining period, Callahan's Ranch (now referred to as the town of Callahan) was the hub of activity, supplying food and materials to the mines. In 1853, M. B. Callahan filed a land claim and opened a hotel where he could feed and lodge miners and travelers. By 1900, Callahan had three hotels and five saloons. The California Stage Company ran a stage line from Sacramento to Old Shasta to Yreka and into Oregon. The Old Hayden Hotel was a stage stop along this route between 1852 and 1887.

Other small, local towns were in existence within the vicinity of Callahan during the early mining days. Springtown and South Fork were occupied by the Irish and Chinese, respectively. It has been speculated that, between the years 1850-54, as many as 3,000 men were living along the creeks around Callahan.

During the 1860s and early 1870s, Elisha Mancell (Deacon) Lee became well known for delivering heavy mining equipment to Black Bear Mine, on Black Bear Creek. The trail originated at Wildcat Creek and partially followed an old Indian trail to the mine. (The Black Bear Mine became one of the most productive gold quartz mines in the area). The Deacon Lee Trail also was part of a trail system that linked Callahan to the Salmon River mining region.

To support early mining activities, many individuals acquired homesteads and went into ranching. As Wells states, "As early as 1851 land claims were taken up in Scott and Shasta Valleys, the first industry being the cutting of hay for the Yreka and Scott Bar market, as well as the grazing of cattle for a supply of beef." One rancher, James B. Hayden, "had a fine ranching property about a mile from town where large bands of sheep roamed." The Denny brothers began farming in Noyes Valley from the 1860s. Soon thereafter, many ranchers began dairying and Scott Valley became well-known for its butter and cheese. In the mid-1850s, A. H. Denny fenced an area on Wildcat Creek, bought a few milk cows, and sold milk to the miners. By the 1860s, the towns of Etna Mills and Fort Jones had thriving flour mills. (Etna was previously named Aetna Mills in 1854; Rough &

Ready from 1855-56, Etna Mills in 1863; and subsequently Etna in 1870).

As a response to the economic growth within ranching and dairying industries, Siskiyou County's principal exports, by 1877, were wool, butter, and flour. In the same year, Scott Valley was expected to produce 250,000 bushels of grain. By 1915, two dairy creameries were operating in "the prime dairy region of Scott Valley." Scott Valley was also known to produce from thirty to eighty bushels of oats without irrigation. It has been documented in a report of the State Conservation Commission for 1912 that Scott Valley was classified as having 55,000 irrigatable acres. However, in a 1915 document by French, he states that "There are one hundred and fifty thousand acres of arable land in Scott Valley, of which only ten percent are under irrigation. An abundant rainfall provides sufficient moisture to the soil, though ditch-diverting water increases the yield of later crops of alfalfa. Cattle raising brings in most of the revenue to the fortunate ranchers, who until very recently have been reluctant to part with any portions of their large holdings. Yielding to the urge of land-hungry seekers of homes attracted by improved transportation facilities, these far-reaching ranches are now beginning to be subdivided to satisfy the demand of more intensive farmers and dairymen."

Early documented grazing on public lands within Siskiyou County was in 1851 in Scott Valley. A trading post was established in Fort Jones to supply the miners with beef and staples. In the July 1905 Forest Service "Use Book" it states "Every effort will be made to assist the stock owner to a satisfactory distribution of stock on the range. Grazing permits for the 1906 season would be given preference in the following order; small nearby owners and then persons living in or close to the reserve whose stock have regularly grazed upon the reserve range and are dependent upon its use. The protection of settlers and home builders against unfair competition in the use of the range is a prime requisite. Priority in occupancy and use of the range and the ownership of improved farming land in or near the reserve will be considered, and preference will be given to those who have continuously used the range for the longest period." Land use expanded through the *Homestead Act of 1906* (34 Stat. 233) which provided that "those lands within Forest reserves chiefly valuable for agriculture were to be released for homestead entry purposes. Homestead cases on the KNF to date were 729 patented and 159 rejected or relinquished."

Forest Service management of the watershed was initially the responsibility of the Trinity National Forest. During the 1930s, Callahan was selected for an administrative site. When the Trinity and Shasta National Forests were combined in 1951, the Scott River drainage became part of the Klamath National Forest (KNF) and the existing Callahan District of the Trinity National Forest. On August 9, 1970, the Oak Knoll and Seiad, as well as the Scott River and Callahan Districts were combined. The first was named the Oak Knoll District and the second the Scott River District.

Recreational activities within the watershed has always been an integral part of management within the KNF. Recreation includes but is not limited to activities such as hunting, fishing, mining, snowmobiling, sledding, backpacking, horseback riding, and camping. Sightseeing and fishing in many of the high elevation lakes has been a major factor within a larger recreational setting. In 1939, Powder Basin Inc. was organized primarily to develop a ski area for the people of Scott Valley and vicinity. The ski lodge supported a downhill ski run near the first switchback on the county road on the Etna side of Salmon Mountain Summit. A Swedish Speed Ski Lift (tow rope) was in operation on the slope below the lodge. Powder Basin was only in existence for a few years. In the 1960s, International Paper Company developed a public park at Camp Eden. This site is now owned by Fruit Growers Supply Company and is primarily used as a picnic and fishing area.

KEY QUESTIONS BY ISSUE

UPSLOPE HYDROLOGIC PROCESSES

Key Question 1- What were historical (pre-Euro-American settlement) and reference erosion rates, and what disturbances affected them?

Summary Response- Historical erosion rates were influenced by natural erodibility and instability, the occurrence of flooding, natural wildfires, or American Indian burning. Landsliding rates can be estimated based upon pristine conditions and inherent instability of landforms. This forms the basis for reference conditions. Effect of natural fires and timing of flooding is difficult to estimate and will not be factored into reference conditions. The discussion of reference erosion rates will be qualitative and the quantitative number will be presented in Step 5.

Background Information- Erosion rates previous to Euro-American settlement were influenced by natural erodibility and instability, the occurrence of flood events, and natural wildfire or Native American burning. The geomorphology of the area was basically the same as today with similar processes as described in Step 3. Active landslides, inner gorges, toe zones of large earthflows, and other unstable features provided the majority of sediment to streams during periodic flood events. The timing and frequency of floods was primarily dependent on heavy rainfall or rain-on-snow climatic events but was somewhat influenced by the openness of the timbered

stands (refer to Forest Health section discussed later in this step).

While flooding provided the mechanism to trigger large inputs of sediment to streams, fire was the primary upslope disturbance. Fires, either lightning or human started, frequently burned through the area impacting watershed conditions. Fires were generally low intensity with some patches of high intensity in upslope areas. They were less common and of lower intensity in riparian areas due to low slope position and moist conditions (refer to Fire section discussed later in this step). Fires increased erosion and landsliding, especially high intensity fire on granitic soils, while maintaining open stands.

Fire recurrence intervals in pre-settlement times have been studied in the Klamath Mountains area, but watershed impacts of these fires are not well known. Most burned acreage was likely burned at low intensity although patches of high intensity fire certainly occurred at various times and places. Therefore, while pre-settlement fire is acknowledged to have caused watershed disturbance historically, quantifying historic effects of wildfire is difficult. For modeling purposes, reference watershed conditions are considered pristine; no effects of fire or other disturbance.

RIPARIAN RESERVES

Key Question 1- What are the historic and reference riparian conditions in the watershed?

Summary Response- Riparian habitat conditions have been, and will continue to be shaped by ecological processes and events such as fire, floods, and drought as well as past and present human activities. Reference habitat components important to aquatic species have been compiled from unmanaged streams within the watershed. These are listed in Table 4-1 Reference Habitat Parameters, Table and 4-2 Reference Woody Material.

Background Information- There is a limited amount of information pertaining to riparian conditions prior to Euro-American settlement available based on historical accounts. In the early 1830s, Hudson's Bay Company trappers discovered the Scott Valley and Scott River. They described the Scott Valley as all one swamp caused by beaver dams (Wells 1881 in Sommarstrom 1990). In spite of trapping, the earliest map of "Scott's Valley" in 1853 indicates that beaver dams were still obvious around Kidder Creek near Greenview. The map also shows a defined stream channel for the Scott River rather than a marshy area of ill-defined channels (Sommarstrom 1990).

This general perception of beaver dams dominating the riparian zones of the Scott Valley probably applies to the lower gradient reaches of Scott River tributaries within the analysis area as well as the Scott River. These areas would have been dominated by wetland vegetation periodically altered by beaver activity or severe flooding. The riparian zones of higher gradient, more confined upland portions of these same streams were dominated by upland trees except in close proximity to perennial water. Intermittent streams had vegetation little different than adjacent uplands.

A review of 1944 air photos shows that in general, many upland areas are relatively open compared to the current conditions, at least in those areas not impacted by timber harvest. By contrast, the riparian areas along larger, upland area streams appear mostly dominated by dense stands of timber. Apparently, the frequent fires that periodically reduced tree densities in the mid to upper slope areas had relatively minor effects on riparian areas. Most riparian areas probably had older conifers trees at densities near site potential. Infrequent severe flooding and debris torrents would decimate vegetation within the flood zones and create areas of early seral vegetation. Overall, about 70-80% of upland riparian areas were fully stocked mid to late-seral stages.

Little, if anything, is known about fish habitat conditions prior to trapping and mining operations. It is assumed the habitat was in good condition to support the salmon and steelhead populations that were said to exist by miners and R. D. Hume in Snyder's (1931) report. The extent of change removing beaver, and mining had on the physical characteristics of the streams including pools, fine sediments, riparian vegetation and stream channels is unknown, however can probably be considered extensive.

Factors affecting riparian habitat quality may vary from stream to stream, however, the physical and biological components that create and maintain riparian habitat are similar. These components are important within the aquatic, semi-aquatic, and surrounding riparian and upslope area and are able to sustain the character of a stream corridor. They are also continually changing as ecological processes within the watershed modify and reshape the habitat. Together, these components maintain and restore productivity and resilience. The following describes how these components contribute to a fully functioning aquatic ecosystem.

Upslope processes are critical in providing and maintaining suitable amounts and intensities of water flow, and natural delivery mechanisms of sediment without accelerated rates of erosion and sediment yield. Headwater areas are important for exchange of water, sediment, and nutrients. The timing,

magnitude and duration of peak and low flows is critical to sustaining aquatic habitat and patterns of sediment, nutrient, and wood routing.

Riparian areas are essential in maintaining stream temperatures, dissolved oxygen levels, and other elements of water quality. They also ensure large wood recruitment, stabilize the channel, provide for filtration of sediment, and increase habitat diversity.

Forested riparian ecosystems should have a diversity of plant communities. Late-seral stages in a community should predominate and consist of endemic conifer and hardwood species, with intermingled areas of early-seral stages such as grasses and forbs. Ideally, this should be a multi-layered canopy including signs of decadence such as standing and fallen dead trees. An overstory of conifers should provide future recruitment of large wood, and shade and thermal cover of the streams and lakes. An intermediate layer of mixed deciduous and coniferous vegetation should provide thermal buffering, nutrient cycling, bank stability, and recruitment of terrestrial insects as an aquatic food source. The vegetative canopy should provide stream surface shading during the summer and should be at site potential.

Wet meadow areas should have stable overhanging banks with herbaceous vegetation and/or woody vegetation providing canopy cover, bank stability, and sediment filtration. The water table should be near the meadow surface, with the stream meandering through the meadow. Few signs of gullying or compaction should be apparent.

Diverse and complex instream habitats are essential for all life stages of aquatic species and should include large, deep pools for holding and rearing. Large woody material is critical for maintenance of these diverse habitats as it maintains stream channels and provides a source of cover through a range of flows and seasonal conditions. A diverse substrate is necessary with small percentages of fines and embeddedness for successful egg and alevin development. Sub-surface interstitial areas are also critical for invertebrates and juvenile fishes. An abundance of cool, well-oxygenated water, free of excessive suspended sediment is important for aquatic species production and survival.

Reference conditions for instream habitat components within the watershed have been identified in reference streams. Reference streams are either wilderness streams or reaches that are unroaded and primarily unmanaged.

Values in Callahan reference streams are averaged across all channel types, watershed areas, and elevations. Table 4-1 Reference Habitat Parameters, and Table 4-2 Callahan Reference Woody Material, both show more detailed breakdowns of local reference conditions.

Table 4-1 Reference Habitat Parameters

Stream	WA Area	Reach Length	Width/ Depth	% Substrate composition 1/					Pool Tailouts	Channel Widths/ Pool 2/		# of Pools/Mile		% Shade 3/
	(ac)	(m)		Fines	Gravel	Cobble	Boulder	Bedrock	% Fines	SCI	Primary	SCI	Primary	
W Boulder	1,500	449	26	29	17	33	21	0	6	3	0	140	0	69
Up Sugar 1	2,500	474	18	9	22	3	12	53	<1	2	12	160	31	62
Up Sugar 2	2,500	386	18	11	27	21	22	18	<1	3	29	134	13	90
Up Sugar 3	2,500	904	18	4	36	16	39	5	<1	2	25	157	14	75
L Etna Mill 1	6,700	328	40	12	39	10	12	31	<1	2	7	88	25	84
L Etna Mill 2	6,700	379	40	15	44	10	31	35	<1	1	14	157	13	78
U Etna Mill 1	6,700	730	31	-	32	34	33	4	<1	2	0	90	0	83
U Etna Mill 2	6,700	527	31	1	15	12	26	45	<1	1	21	168	9	65
Wooley 1	9,500	871	23	3	13	38	35	11	<1	6	17	26	9	79
Wooley 2	6,000	620	-	1	28	35	18	19	N/A	N/A	N/A	N/A	N/A	-
Wooley 3	15,700	862	31	2	30	39	25	46	4	9	10	11	9	-

1/ Substrate particle size breakdown; fines = <4mm, gravel 4-64mm, cobble 64-256mm, boulder >256mm
2/ Bankfull channel width divided by number of pools in each category. SCI pools are of a depth at least two time that of the pool tail crest. Primary pools are greater than three feet in depth.
3/ Average percent shade includes both canopy cover and topographic shade; not just vegetation.
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Table 4-2 Reference Woody Material					
Diameter* Class (m)	Pieces	Volume (cume)	Length1/ Class (m)	Pieces	Volume (cume)
.4	3.6	2.1	2-8	3.4	3.6
.4-.8	4.1	15.9	8-16	3.2	10.5
.8	.8	14.5	16+	2.0	18.4
TOTAL	8.5	32.5	---	8.5	32.5
1/ Minimum diameter =.4m, while minimum length varied and usually was 3+ meters					

AQUATIC DEPENDENT SPECIES

Key Question 1- What were the distributions and population sizes of aquatic dependent species?

Summary Response- Past human activities have influenced populations of aquatic dependent species. Trapping, mining, timber harvest, water diversion, and artificial propagation have affected both the numbers and distribution of anadromous and resident fish.

Background Information- It is difficult to determine the historical population size of salmon and steelhead in the Scott River watershed, however fish numbers were sufficient to supply the primary subsistence food and be the basis for the economy of the indigenous people prior to the mid 1800s. Starting in the 1820s, fur trappers removed thousands of Beaver from Scott Valley (then known as Beaver Valley) which set in motion the immense changes in the character of the Scott River and its tributaries (Scott River Watershed CRMP 1995). In the early 1830s, the Hudson Bay trappers discovered Scott Valley and its river. They reportedly trapped beaver on both forks (east and south) and described the Scott Valley as all one swamp caused by beaver dams (Wells 1881 in Sommarstrom 1990). The removal of beaver from the valley was the first unnatural change in the landscape. This likely affected tributaries as well. After 1850 and the discovery of gold in the area, fish populations were subject to additional human impact including mining, commercial timber harvest, water diversions and dams, artificial propagation, and other historical activities. The 1861 flood, in combination with mining activities, caused the Scott River to alter its course from the west side to the east side of the valley.

Stocks and species of salmonids that existed at the time of cannery development on the Klamath in 1912 included spring and fall run chinook salmon, coho salmon, and steelhead trout. Three fish canneries were operating at the mouth of the Klamath River which was heavily fished for salmon with no limits. Steelhead trout were an incidental catch since migration times coincide with salmon. Both Snyder and R. D. Hume in Snyder's (1931) report state that historically the spring run of chinook salmon was the "main run" of salmon and the population was very pronounced in the Klamath River basin. "These spring salmon have now come to be limited" and "practically extinct" while the fall run was reduced to "very small proportions" (Snyder 1931). By the mid 1930s it was reported that anadromous fish populations within the Klamath Basin were already significantly jeopardized (Taft and Shapovalov 1935). They reported "unfortunately no exact recorded facts exist concerning the size of the present and past runs of steelhead in the Klamath River. It would, nevertheless, be perfectly safe to say that the general consensus of opinion of fishermen and residents on the river is that these runs have decreased alarmingly, particularly during the past few years." Suggestions during the early 1930s to determine the decline of the spring run chinook included mining operations, overfishing both in the river and ocean, irrigation, and the building of Copco Dam.

Mining had other impacts to the Klamath fishery. "During the period of placer mining, large numbers of salmon were speared or otherwise captured on or near their spawning beds, and if credence is given to the reports of old miners, there then appeared the first and perhaps major cause of early depletion" (Snyder 1931). Taft and Shapovalov (1935) studied occurrence of benthic invertebrates in Klamath River tributaries and found mined areas had consistently fewer organisms than non-mined areas.

In 1965, the California Department of Fish and Game estimated the Scott River's fish population at 10,000 chinook, 2,000 coho, and 20,000 to 40,000 steelhead (CDWR 1965). These estimates were probably only a portion of the average fish populations that existed within the Scott subbasin in the early 1800s. Long-time valley resident Steve Farrington, owner of Farrington's Store in Callahan, reported seeing hundreds of steelhead on "short walks from Callahan to Frank Hayden's" from the 1940s through '60s. These conditions are not commonly observed today.

Many dams were built in the Klamath system to divert water for mining, agriculture, and domestic use. These dams and diversions blocked salmon and steelhead from more than 200 miles of spawning and rearing habitat along Klamath River tributaries (CDWR 1960 from CH2MHill). Unscreened or poorly screened water diversions and ditches resulted in a significant loss of juvenile fish in which Taft and Shapovalov (1935) reported as the "most serious present loss of trout and salmon". During their review of Klamath River ditches most were found to contain juvenile fish. In a survey of diversions in the Klamath basin, Scott River was reported to have seventy diversions, most of which were unscreened. The vast majority of screened diversions needed repair.

Artificial propagation began within the Klamath River Basin in 1896 when eggs taken from a tributary to the Sacramento were raised to fry and introduced into the upper Klamath. Eggs from the Sacramento River

were also taken in 1907, 1911, 1913 and 1917 for a total of 4,950,000; these were released in the Klamath River. A small hatchery was established at the mouth of the Klamath River in the 1890s that released fry originating from the Rogue River, and after Copco Dam was established, a hatchery was developed at Fall Creek (Snyder 1931). The affect these historic hatcheries and resulting fish had on the Callahan watershed is unknown. A hatchery was also built to mitigate the effects Iron Gate Dam would have on the salmonid fishery.

There are no historic records of amphibians and reptiles in this watershed. It is presumed that suitable habitat existed, but whether it was occupied or not is unknown. No records exist regarding the extent or condition of this habitat.

FOREST HEALTH

Key Question 1- Under natural disturbance regimes, what were the vegetation communities and what were the stand densities of the conifer communities?

Summary Response- Fire was the dominant disturbance regime, affecting all vegetation communities. Analysis of the 1944 aerial photos show for the most part, open stands of large conifers. Openings in the forest were prevalent. Meadows, shrubfields, and patches of small trees were found throughout the watershed.

Background Information- The natural disturbance regime for the watershed was dominated by fire. Natural fires were ignited by lightning. Fires were also ignited by American Indians. They ignited fires to enhance acorn production and facilitate gathering in oak woodland communities, improve beargrass quality for basket making in meadows and improve seed production of grasses, improve travel, and to facilitate hunting. The vegetation in all plant communities developed and adapted to a disturbance regime dominated by fire.

The result of disturbance regimes was a mosaic of meadows, shrubfields, and open stands of conifers. The best available information on historic vegetative conditions are 1944 aerial photos. The area of focus for analysis was the higher elevations and other areas where no human activity was evident. Analysis of the 1944 photos shows for the most part, open stands of large conifers with dense stands limited to the lower half of north slopes and drainage bottoms. Openings in the forest were prevalent. Meadows, shrubfields, and patches of small trees are found throughout the watershed. The picture from the 1944 photos is a structurally diverse landscape.

In the low elevation shrubfields, frequent high intensity fires were the most common natural disturbance. Frequent high intensity fires eliminated any competing conifers and helped perpetuate shrubfields in the landscape. This community grows into dense patches and is ready to burn again within a few years after burning. Plants in this community have adapted to this frequent fire regime by crown sprouting after a fire and/or by sprouting from seed banks in the soil.

In the oak woodland, frequent low to moderate intensity fires maintained an open understory and a scattered large tree overstory. Frequent low intensity fires cleaned up the surface litter and removed concentrations of small trees. Mature trees were resistant to damage by low intensity fires. The frequent burning stimulated acorn production, which was important to American Indians and many wildlife species.

In the various mixed conifer communities, which in total cover the largest area of the watershed, frequent low intensity fires were the primary ecological process shaping them. These fires varied in frequency and intensity depending on their position on the slope, the steepness of the slope, aspect, elevation, time of year, and size and density of trees. With frequent influence by fire, the understory of these stands was maintained relatively open, with few sapling and pole-size trees or brush. Frequent fires cleaned the forest floor of litter and understory vegetation. Some sites escaped the influence of frequent fires, especially on north and east aspects and riparian areas, where a thicker understory of shade-tolerant vegetation was often present. South and west aspects, especially at lower elevations, had much less coarse woody material and fewer snags than found on these sites today.

Above the mixed conifer was found the true fir community that had a different fire regime. This higher elevation community was cooler and moister than the mixed conifer resulting in less widespread fire activity. Fires were mostly limited in size, with infrequent large fires. True fir is sensitive to damage by fire and even low to moderate intensity fires could kill large trees. Small fires would normally kill trees in small patches and in natural regeneration created patches of even-aged and even-sized trees across this community.

In the higher elevation areas of meadows and shrubfields intermixed with small patches of trees, lightning fires were common, but moist conditions and lack of fuel continuity limited their spread and intensity.

Information from analysis done on other parts of the KNF has shown that prior to the removal of fire as a disturbance regime in the mixed conifer zone,

ponderosa pine and sugar pine were the dominant conifer species on south and west aspects, and the upper one-third of north and east aspects. Douglas-fir and white fir dominated the cooler, moister sites, i.e., the lower one-third of slopes, and the lower two-thirds of north and east aspects. It is expected that this same species composition would be found in the analysis area.

Key Question 2- What were the endemic levels of mortality in conifer stands?

Summary Response- Endemic levels of mortality in natural conifer stands averages less than half a percent of the standing volume per year.

Background Information- Endemic levels of insects and diseases have always been present in the landscape. However, amounts of these infestations were probably less prior to fire suppression activities (circa 1910) than today. Decreases in natural stand densities were largely due to mortality from lightning strikes, minor insect activity, and until recently, ground fires. This kept stocking at or below site capacity which tended to moderate the amount of mortality experienced during drought periods. Root disease pockets, blowdown, or areas which escaped American Indian underburning, would accumulate fuel. This would eventually promote a hot fire and develop a mosaic of size and age classes over the landscape. Also, because there was less incidence of high stocking levels, and resultant competition for moisture and nutrients, vegetation remained more vigorous overall and less susceptible to large scale mortality.

Broad scale mortality in natural stands in California ranges from 0.2-0.5% of the standing volume per acre per year. Natural mortality due to lighting strikes, and insect and diseases is approximately 0.2%/ac/yr. (personal communication David Schultz 1996).

FIRE MANAGEMENT

Key Question 1- What was the historic fire regime for each vegetation community?

Response- The historic fire regime, prior to settlement by Euro-Americans can generally be described as having frequent fires; 1-30 year intervals. Lightning ignited fires accounted for the majority of these fires. Being influenced by weather, vegetation and topography, lightning fires burned seasonally uninterrupted by humans until early in this century. American Indian burning is known to have occurred in the watershed, but information is limited. Discussions found within the Forest Health issue address the historic fire regime. For more information, a brief description of historic fire regimes by plant community is included in Appendix D - Fire and Fuels.

LATE-SUCCESSIONAL HABITAT

Key Question 1- What was the historic distribution and pattern of late-successional habitat in the watershed?

Response- The best tools available for looking at historic distribution and pattern of late-successional habitat are the 1944 aerial photos. By analyzing mid to high elevation areas showing little or no evidence of human activity, generalizations about forest conditions can be made. In 1944, dense late-successional conifer stands were limited to drainage bottoms and the lower half of north aspects. In most of these stands the density appeared to range from 70-90% crown closure with few stands exhibiting complete crown closure. Throughout the mixed conifer zone, open, late-successional conifers were well distributed. In 1944, it appears that between 60-80% of the conifers were in a late-seral state. The open conifer stands were dotted with meadows and small shrubfields. Estimates of density in the open forest range from 30-60% crown closure. This pattern would be expected with a fire-dominated natural disturbance regime.

Key Question 2- What were the historic dispersal routes in the watershed?

Response- For late-successional depen-dent wildlife species, the same basic dispersal routes to adjacent watersheds were apparent in the 1944 photos as were described in Step 3. Dispersal routes followed forested drainages and saddles into the North Fork Salmon, Upper South Fork Salmon, Trinity Alps, and Big Mill Creek. Within the watershed, the continuous open mixed conifer forest provided dispersal habitat from densely forested drainage to densely forested drainage. Dispersal to the north and east would have been difficult due to the lack of conifer forest cover.

TERRESTRIAL WILDLIFE

Key Question 1- What was the historic distribution of habitats for the identified species?

Summary Response- *Bald Eagle:* Anadromous fish runs in the Scott River would have supported a nesting population of bald eagles. Large riparian trees (cottonwoods and sycamores) and large ponderosa pine would provide nesting habitat. The alpine lakes were barren of fish and would not have furnished foraging habitat as they do currently. Before the agricultural development of Scott Valley, wintering waterfowl provided a food source for winter migrant and resident bald eagles.

Northern spotted owl and *goshawk:* The habitat requirements for these two species are very similar and at this level of analysis, can be discussed together. As shown in the discussion on late-

successional habitat, suitable nesting and roosting habitat for these two species would have been limited to forested drainage bottoms and the lower half of north slopes. The open forest stands with numerous meadows and small shrubfields provided excellent foraging habitat. The diversity of habitats (open forest, meadows, and shrubfields) would have provided habitat for many prey species. Distribution and density of spotted owls and goshawks was most likely limited by availability of nesting habitat (dense late-successional forest).

Pacific fisher: Denning and nesting habitat would be restricted to the same general areas as suitable nesting/roosting spotted owl habitat. The numerous meadows and other small forest openings apparent in the 1944 photos, would have provided excellent fisher foraging habitat. Snow depth in the more open stands could have limited fisher use.

American marten: The structural diversity in the true fir and higher elevation mixed conifer forests provided good to excellent marten habitat. The small forest openings and meadows that were prevalent in these areas also provided excellent foraging opportunities. During the 1930s and '40s, marten were trapped extensively in Wildcat, Grizzley, and Jackson Creek areas.

Great gray owl: The extensive meadow complexes and forests near the headwaters of most drainages on south and west sides of the watershed would have provided good great gray owl habitat. There have been no documented sightings of great gray owls in the analysis area.

Willow flycatcher: Before gold mining and agricultural development, the extensive riparian vegetation along the Scott River and its major tributaries, would have provided willow flycatcher habitat. Riparian shrubs in high elevation meadows would have also provided habitat. Historically, willow flycatchers nested wherever riparian deciduous shrubs occurred in California (Grinnell and Miller 1944).

Deer and elk: Before the goldrush, deer and elk were common. Early reports (1800s) commented on the abundance of elk in many parts of Siskiyou County including Scott Valley. The open forest, extensive meadows and shrubfields evident in 1944 photos, show habitat conditions that probably supported good populations of deer and elk. Important winter range was found at the lower elevation foothills surrounding Scott Valley, with summer range in the higher elevation meadows and shrubfields from East Boulder Creek to Etna Mill Creek.

ROADS

Key Question 1- Why and how was the road system developed?

Summary Response- The road system in the watershed was constructed from the late 1890s to about 1980. Early roads provided access to mines, following old trails, later roads were constructed for fire access, and lastly to provide access to new areas for timber harvest.

Background Information- The road system has been developed over the years primarily in association with resource development and/or extraction. Road construction initially followed old trail alignments and centered around providing access for workers and equipment to mines. Peak construction periods occurred in the late 1890s and late 1920s during boom mining cycles. In the 1930s, roads were constructed for fire access by the Civilian Conservation Corps including the High C Road (FS Road 41N14). A fourth surge of road construction occurred when the Forest Service began offering timber sales in 1960-80. These road systems were developed into new areas for log transport.

See Appendix I - Numerical Listing of Roads and Their Status, which identifies the approximate date built of individual roads or road segments.

TIMBER OUTPUT ON PUBLIC LANDS

Key Question 1- When, where, and how was the timber in the watershed harvested?

Summary Response- Small-scale logging, meeting only local needs, occurred from the 1850s to 1930s on the flatter slopes adjacent to Scott Valley. Much of this land is now in private ownership. Logging did not access most higher elevation slopes until the 1960s; where the majority of National Forest (NF) land is located. Most logging was sanitation-type harvests, however in the mid to late 1960s and in the early '80s, clearcutting was done. Approximately 100MMBF have been harvested from NF lands in the watershed.

Background Information- See Figure 4-2 Historically Logged Areas, 1955-1995, contained in the Map Packet located at the end of this document, which shows approximately 23,000 acres (50% of NF lands outside wilderness) have been logged during the past forty years.

Small scale logging began in the 1850s when miners came to Scott Valley. Logging was probably confined to flatter slopes along the valley, which is now mostly in private ownership. Logging continued on a fairly small scale, meeting only local needs, until sometime in the 1930s. There were three known small sawmills operating in the watershed in the 1930s; one at

McKeen Divide, Munson's Mill in Wolf Creek, and one below the bridge along Boulder Creek. These met local lumber needs with a small quantity being shipped from the valley. Three other mills operated from the 1950s until the early '70s. Long Bell Mill was located about one mile up French Creek and operated until the late '50s. Munson's Mill located at the dredger camp closed in the late '60s. Hertager operated a mill in Wildcat Creek which closed in the early '70s. These mills not only met local needs, but shipped lumber out of the valley. The volume produced by these mills was probably less than ten MMBF per year. There are no lumber mills operating in the watershed presently.

Even with the mills mentioned above operating in the watershed, logging was still pretty much confined to the flatter slopes along the valley. There were three main roads accessing the higher elevation areas until the late 1960s; the Foster Mine Road, High CC Road, and Clatt Mine Road. Two were used mostly for mining and not for logging. Logging did not access most of the higher elevation slopes, which is where most of the NF land is located, until the late 1960s.

Roading and logging began to increase rapidly in the late 1960s and continued until the mid 1980s when logging decreased due to the management direction change for National Forests in the range of the northern spotted owl. It is estimated that close to 100 MMBF has been logged on NF lands in the watershed since the 1960s. Most of the privately owned land in the watershed has been logged within the last twenty years.

The majority of the area logged on NF land has been sanitation type harvests with stands remaining essentially stocked soon after logging. There were basically two time periods when clearcutting was done; the mid to late 1960s and in the early '80s. These plantations have all been established and are growing well. The oldest plantations are about 30 years old and will be ready for a commercial harvest in 10-15 years.

Due to the logging being confined to the flatter ground, most logging in the watershed was by use of tractors until the 1980s when a substantial amount of skyline logging was done on NF land.

HUMAN USES

Key Question 1- What are the prehistoric and historic land uses within the watershed?

Summary Response- Based on ethnographic research, it is generally understood that the Scott Valley band of the Shasta Indians inhabited this area prior to Euro-American settlement. Their uses of the lands included transient living areas, seasonal hunting, the day-to-day activities necessary to live, such as food gathering, fishing, spiritual uses, and burning for wild seed and tobacco products, and to enhance hunting success.

Following an influx of Euro-Americans, the watershed was utilized for a variety of uses primarily related to resource extraction and/or development. Earliest use was believed to be fur trapping, followed by placer, hydraulic, and later hard rock mining. Private lands were acquired through homesteading and developed into ranches. Cattle and sheep were grazed to provide a supply of beef and wool in support of the miners. Some ranches took up dairying while others took farming. Scott Valley became well known for its dairy products and good climate for growing oats and grains without irrigation. Varying levels of timber harvest have occurred (see previous section).

Background Information- Refer to the Historic Overview section at the beginning of this step.

11-13-24

Wolf Creek McDonagh Tree Farm Site Map. For rezone to TPZ.

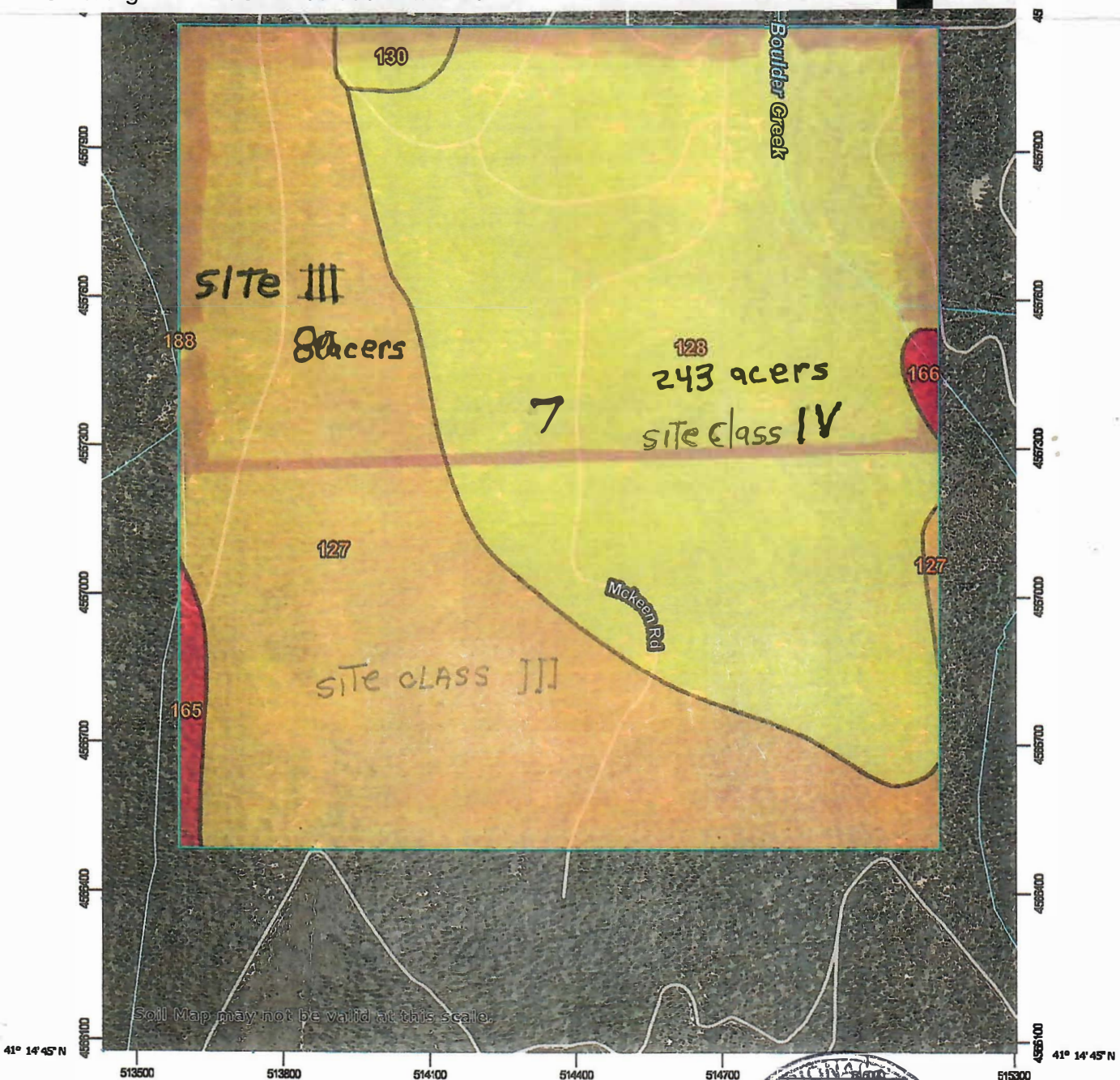
N. 1/2 Sec 7, T39N, R8W MDBM AREA 323 acres.

Map Legend **Scale 1:12,100**

Rezone Parcel 031-290-010 area.
Contour interval: 40 feet
Watercourse
Class I

Site Class	Area (acres)
III	80
IV	243
Total	323

All surrounding land belongs to the USFS-Klamath National Forest
Forest Type: Sierra Nevada Mix Conifer
Stocking: not Stocked due to wildfire



PROFESSIONAL FORESTER
DANIEL PRIELIPP
NO. 2627
STATE OF CALIFORNIA

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

12/27/2021

EXHIBIT C-1 - REVISED SITE CLASSIFICATION

RESOLUTION ADOPTING THE CRITERIA
FOR LIST "C" FOR TIMBER PRESERVE
ZONING

WHEREAS, pursuant to Section 51100 of the Government Code the Board of Supervisors has adopted procedures for zoning Timber Land preserve and,

WHEREAS, the Board of Supervisors formed a Timber Advisory Committee and has requested said committee to prepare a criteria for inclusion of timberland under List "C", and;

WHEREAS, the Timber Preserve Advisory Committee on February 15, 1978 prepared said criteria for presentation to the Board of Supervisors and;

WHEREAS, the Board of Supervisors has reviewed said criteria and deemed said criteria appropriate;

NOW THEREFORE BE IT RESOLVED BY THE BOARD OF SUPERVISORS has adopted the attached Exhibit "A" as the criteria for List "C" for Timber Preserve Zoning.

The foregoing resolution was adopted at a regular meeting of the Board of Supervisors of the County of Siskiyou, State of California, held the 11th day of April 1978 by the following vote:

AYES: Supervisors McArdle, Hayden, Belcastro and Torrey.

NOES: None.

ABSENT: None.

Signed and approved by me after its passage this 11th day of April 1978.

Chairman of the Board of Supervisors

ATTEST: Norma Price, County Clerk

by Lou Jurkovsky
Deputy

RESOLUTIONS

NO. 119

BOOK 8

EXHIBIT D - RESOLUTION ADOPTING LIST C

EXHIBIT "A"

CRITERIA FOR LIST C

TO BE CONSIDERED FOR INCLUSION INTO TIMBER PRESERVE ZONING ALL APPLICANTS SHALL PROVIDE THE FOLLOWING INFORMATION AND/ OR MEET THE FOLLOWING MINIMUM STANDARDS:

1) Map showing legal description and the assessor's parcel number(s) and map(s). Additionally, as part of the management plans, the map shall contain the following elements.

   a.) stated scale (scale shall not be less than 4 inches per mile).
   b.) location of existing roads and principal streams.
   c.) broad timber types including any unstocked areas.
   d.) estimated site classes.
   e.) name of owners of surrounding lands and type of zoning.
   f.) total number of areas in parcel.
   g.) total number of stocked areas.
   h.) total areas of the various site classes.
   i.) date.
   j.) name of preparer.

2) A plan for forest management of the parcel prepared by, or approved as to content by a registered professional forester. The plan shall address the following considerations:

   a.) Status of access, both legal and physical.
   b.) Approximate age and condition of forest stands.
   c.) Statement of owner's objective in owning and managing the property.
   d.) Measures to be employed for the control of insects & diseases.
   e.) Measures, if any, for stocking understocked areas and for treating overstocked areas.
   f.) Plan for protection from fire, trespass and other agents.
   g.) Timetable for eventual harvest.
   h.) Schedule for inventory.
   i.) Evidence that the owner possesses the knowledge to manage the forest property, or has sought advice and information from appropriate sources.
   j.) Signature and License number of Registered Professional Forester.
   k.) Signature of owner
   l.) Date.

3) The parcel shall currently meet the stocking standards of the Forest Practice Rules, or the owner must enter into an agreement with the Board to meet the standards within five years.

4) The parcel shall contain a minimum equivalency to 40 acres of site Class III Timberland to the following productivity schedule:

Site Class	Minimum Number of Acres*	Minimum Parcel Equillivency
I	18 Acres	2.2:1
II	25 Acres	1.6:1
III	40 Acres	1:1
IV	80 Acres	1:2
V	120 Acres	1:3

* Based on Relative productivity of Site Classes. Tech. Bulletin #354 USDA Dunning & Reineke