Napa Communities Firewise Foundation Request for Proposals (RFP)

Broom Removal at Hogback Ridge Fire Break Project

Issued by: Napa Communities Firewise Foundation (NCFF)
Date Issued: September 10, 2025

CONTACT PERSON: Jeff Enos
Email: jeff@napafirewise.org
Cell: 707-333-4332
The Napa Communities Firewise Foundation
P.O. Box 2336
Napa, CA 94558
PROJECT TITLE: Broom Removal at Hogback Ridge Fire Break Project
PROJECT ID: FS23-SFA-CDS and **MVFSC21.20**

FUNDING: Funding for this project is provided in whole by a grant from the Cooperative Fire Program of the U.S. Forest Service (USFS), Department of Agriculture, Pacific Southwest Region, under the authority of the Consolidated Appropriations Act of 2023, P.L. 117-328. The Federal Assistance Listing (formerly Catalog of Federal Domestic Assistance - CFDA) number and name are 10.730 Community Project Funds- Congressionally Directed Spending. The federal grant award number is 23-DG-11052012-184. The funding period requires all work to be completed by February 2026.

A contract awarded under this grant will be subject to OMB guidance in subparts A through F of 2 CFR 200 as adopted and supplemented by the USDA in 2 CFR Part 400. Electronic copies of the CFRs can be obtained at the following site: www.ecfr.gov.

In accordance with federal law, NCFF is prohibited from discriminating on the basis of race, color, national origin, sex, age or disability. Not all prohibited bases apply to all programs. NCFF is an equal opportunity provider and employer.

ATTACHMENTS

- Attachment 1: Project Area Map
- Attachment 2: Hogback Ridge VTP 2025-19 Project Specific Analysis (PSA)
- Attachment 3: Hogback Ridge VTP 2025-19 Addendums A, B & C
- Attachment 4: Form AD-1048

Project Summary:

The Hogback Ridge Fire Break Project will create a 10-mile 242-acre fuel break along the southwest reach of the Mayacamas Range, straddling Napa and Sonoma Counties to reduce wildfire risk and improve firefighter access and response capabilities. This project addresses a historically high-risk area where major wildfires, including the 2017 Nuns Fire, have repeatedly spread between the two counties, threatening thousands of residents, critical infrastructure, wineries, and sensitive natural habitats. Through a combination of hand crews and mechanical treatments, hazardous fuels will be cleared while preserving healthy native trees and minimizing environmental impacts. The project will strengthen a strategic ridgetop fire road network, providing safe, reliable access for emergency operations under non-emergency "blue sky" conditions. Once completed, this fuel break will protect surrounding communities, cultural resources, and ecosystems, while laying the foundation for future ecological restoration and long-term fire resilience.

1.0 Scope of Work

The Napa Communities Firewise Foundation (NCFF) is seeking proposals from qualified and experienced contractors to provide all labor, materials, and equipment necessary to implement invasive plant removal in Hogback Ridge Fire Break Project for an ecological restoration project focused on the removal of invasive French Broom. The primary objective is to permanently eliminate the non-native French broom and create a landscape where native vegetation can thrive without competition from broom. The project area is four distinct polygons totaling 23.5 acres in the Hogback Ridge Fire Break project. This project will require a multi-visit approach to address the regrowth from seeds. We anticipate multiple site visits and treatments throughout the Fall and Winter of 2025.

The awarded contractor will be responsible for providing a comprehensive Herbicide Treatment (HT) plan to achieve the complete elimination of broom within the designated project areas. The plan must account for all stages of plant growth, including new sprouts from the seed bank.

2.0 Project Specifications

2.1 Designated Project Areas:

The Napa County Resource Conservation District (RCD) has mapped four distinct polygons of broom infestation. These areas have been marked with orange/white diagonal striped tape and white tape with written information. A mandatory bid walk will be conducted to view these polygons. The herbicide treatments will be applied to these four specific polygons. See MAP.

1. **Hetrick and Ruffin Access Road:** 50 feet wide by 680 feet long.
2. **Ruffin Parcel:** A 200-foot-wide polygon, 3,300 feet long.
3. **Ming Driveway:** A 200-foot-wide polygon, 1,090 feet long.
4. **Old Mt. Veeder School Access Road:** 50 feet wide by 1,000 feet long.

2.2 Best Management Practices (BMPs) and Safety:

The contractor must strictly adhere to all California Department of Pesticide Regulation (CDPR) Best Management Practices (BMPs) to prevent herbicide drift. This includes:

- Monitoring and recording temperature, wind speed, and wind direction at the time of application. This data must be included with your invoice.
- Ensuring no herbicide drifts onto adjacent vineyards or other sensitive areas, including residences and areas with people or pets.
- Respecting neighbors and domestic animals.
- Driving slowly on dusty roads. Once rain begins, roads must be given time to drain and firm up before driving on them. Proper prior planning and monitoring of weather forecasts are essential to stay on schedule.
- Herbicide use is only permitted where necessary to prevent invasive and re-sprouting species.
- Herbicide use is **not** permitted within the Sensitive Plant Species Zones (STZs).
- All herbicide use must comply with the Hogback Ridge VTP #2025-19 Project Specific Analysis (PSA) and Addendum to the CalVTP PEIR, including mitigation measures **SPR HAZ-5, HAZ-6, HAZ-7, HAZ-8, and HAZ-9**. This document and its appendices are included as an attachment.
- Snags may be removed only after assessment by an RPF or Qualified biologist. If a snag contains a sensitive species, the California Department of Fish and Wildlife (CDFW) must be consulted before removal.

2.3 Contractor Qualifications:

- Proposers must have a **current Qualified Applicator License (QAL)** on file with the NCFF.
- The Contractor is responsible for any specific permissions or permits needed to do the work. By submitting this bid the Contractor certifies that they have all the certifications and licenses required to complete the Project and will provide proof upon request.
- Applicant must follow all rules in the attached Hogback Ridge VTP #2025-19 Project Specific Analysis (PSA) and Addendum to the CalVTP PEIR in relation to herbicide use.
-

3.0 Proposal Submission Requirements

Key Dates

- **Release of RFP:** September 10, 2025
- **Mandatory Bid Walk:** September 18, 2025 at 10:00 AM.
  Meet at the turnout near 1801 Mount Veeder Road.
- **Proposal Due Date:** September 25, 2025 5:00 PM PST
- **Award Date:** September 30, 2025 5:00 PM
- **Work Period:** Issuance of Task Order to February 20, 2026.

3.1 Proposal Submission:
Proposals shall be submitted electronically. Proposals must be submitted via email to Jeff Enos at jeff@napafirewise.org with the subject: Broom Removal Hogback Ridge Fire Break Project RFP, by 5 pm PST, September 25, 2025.

Faxed or late proposals will not be accepted. It is the responsibility of the proposer to assure that the proposal is received prior to the deadline date and time. Proposals received after the submission deadline will not be considered. Any changes to this RFP are invalid unless specifically modified by the NCFF and issued as a separate addendum document. Should there be any question as to changes to the content of this document, the NCFF's copy shall prevail.

3.2 Required Proposal Content
Your proposal should demonstrate your understanding of the project's intent and provide a detailed plan to achieve the desired outcome. Please include the following:

1. **Cost Proposal:** A cost proposal shall be submitted specifying a total project cost. Estimated quantities should be based upon the best available information at the time of advertisement for the RFP. You may structure your proposal with a per-acre or a total project cost.
2. **Understanding of Project Goals:** Clearly state your understanding of what the NCFF aims to achieve—the complete and permanent elimination of broom and the promotion of native vegetation.
3. **Herbicide Treatment (HT) Plan:** Detail your multi-stage plan to treat the existing broom and manage the regrowth from seeds. Explain your methodology, proposed products, and the anticipated timeline for treatments across the specified seasons (Fall 2025 & Winter 2025).
4. **Safety and Environmental Plan:** Describe your procedures for preventing herbicide drift and ensuring the safety of nearby people, pets, and non-target vegetation.
5. Your Best Management Practices (BMPs) and policies.
6. **Equipment**: The contractor shall include in their proposal information about the types of equipment that will be used in each polygon, as well as operator experience with each significant piece of equipment. Project proposals shall include sufficient information about equipment types.
7. **Experience, Qualifications, and References:** Proposers shall provide a general description of the contractor's experience and qualifications related to invasive species removal or work of similar

scope and complexity. Provide experience and/or resumes of key staff indicating the names and roles of staff and their experience of working with the specific equipment being proposed. Please indicate everyone's availability for this project and describe the specific role they would play in this project. Provide a description of two to three recent projects with a similar scope of work, including contact information for the references who oversaw these projects.

8. Provide references for at least three past jobs similar in scope and desired outcome. Include client names, contact information, and a brief description of the project.
9. Include photographs demonstrating successful outcomes from similar projects.
10. **Insurance Certificates:** Provide copies of insurance certificates reflecting the requirements summarized below:
    - Workers Compensation Insurance with statutory limits (not less than $1,000,000] per occurrence);
    - General liability insurance (not less than $2,000,000 per occurrence for personal injury and property damage).
    - Business Auto Liability Insurance (not less than $1,000,000 combined single limit for bodily injury and property damages covering all vehicles including hired cars, owned and non-owned vehicles.
11. **Licenses:** Provide proof of California Business, and Qualified Applicator License (QAL).
12. **Completed Form AD-1048.** All subrecipients and contractors must complete the form AD-1048, Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion, Lower Tier Covered Transactions. Blank forms are available electronically.
13. **Prevailing Wage Project:** Vendor should provide proof of Prevailing Wage and registration with the California Department of Industrial Relations.

4.0 Communications:

- **Questions:** Submit all questions in writing via email to the Project Lead Jeff Enos Jeff@napafirewise.org at least **48 business hours** before the proposal deadline. Anonymous questions and answers will be shared with all bidders within 48 hours.
- **Invoices:** Invoices should be sent to invoices@napafirewise.org, with a copy to the Project Lead Jeff Enos Jeff@napafirewise.org

5.0 General Information

- In accordance with federal law, NCFF is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. NCFF is an equal opportunity provider and employer.
- A Letter of Agreement (LOA) status will be shared at the bid walk.
- This project does not require traffic control or dedicated staging areas.

6.0 Proposal Submission and Bid Walk

- **Bid Walk:** A mandatory bid walk will be held on September 18 at 10:00 am to view the designated polygons. Please contact Jeff Enos, jeff@napafirewise.org/707-333-4332 to confirm your attendance.

- **Submission Deadline:** Proposals must be submitted to Jeff Enos by **September 30, 2025**.

7.0 Evaluation Process

An evaluation committee will evaluate all proposals received for completeness and the proposer's ability to meet all specifications as outlined in this RFP. The following evaluation criteria and weight of importance shall be used in evaluating and selecting a contractor. Cost proposal criteria points will be awarded on a relative scale as described below.

Vendor will be chosen by our Best Score Rubric as detailed below. An evaluation committee will consider all proposals received for completeness and the proposer's ability to meet specifications as outlined in this RFP. Best Score=best value/quality work. All possible and effective work is our goal, and our Best Score Rubric is based on this

BEST SCORE RUBRIC, PROPOSAL, and INVOICE REQUIREMENTS

1. Cost of Proposal- *60 points*
    - Cost analysis is primarily cost per acre but also includes ease of running project for NCFF.

2. Experience- *25 points*
    - Successful history of work in Napa County.
    - References
    - Safety record
    - Traffic control history with NCFF or County Roads if applicable.
    - Equipment specialization for Project.
    - Qualifications, certifications, licenses.

3. Approach to work- *15 points*
    - Actively manage crews to respect any noted landowner requests regarding landscaping/ structures/ property lines.
    - Schedule/rate of work/availability/staffing
    - Ability to vary work by parcel/ use mapping applications (Avenza, Field Maps, OnXHunt, etc.)
    - Ability to recognize and document hazards or obstacles.
    - Understanding of Proposal Treatment Prescription
    - Accuracy of invoicing with progress note and images of before and after.

(End of project-specific RFP copy. The following standard policies & appendices detail our general rules and may not apply if in conflict with Project-specific RFP copy above.)

This RFP provides Vendors with a common project description to prepare a Proposal for invasive species herbicide treatment. Please review the attached information and confirm interest in the Project with NCFF Project Lead within three business days.

NCFF holds the highest standards for quality of work. Napa County and its neighbors demand the highest standards of safety, environmental compliance, and work quality. Vendor must abide by all applicable standards listed in the appendices for environmental and safety matters.

Napa Communities Firewise Foundation contracts fuels-treatment/ hazard-reduction projects in Napa County. These are public safety projects. We follow applicable laws and regulations. Prescriptions are for as much hazard reduction as possible, yet we are sometimes limited in scope by environmental constraints such as preventing ground/soil disturbance, keeping shade over watercourses, or electrical hazards.

Vendor must declare all work that they plan to decline in the Project within the Proposal, not after the awarding. For example, unstable soils, too close to wires or other hazards, too steep, too big of a tree, etc. Provide a map and/or detailed list of addresses and areas.

The Prescription, CEQA Notice of Exemption (NOE,) Vegetation Management Program (VMP,) unstable soil areas, and Watercourse Lake Protection Zones (WLPZ) define actual work zones.

The more specific your company's Proposal is regarding treatment distances and areas earns points in multiple categories of scoring rubric. All treatments must be quantified in acres.

NCFF will share a georeferenced PDF of parcels that have been either approved or denied for service. For the purposes of your Proposal, assume 100% cooperation from landowners, but if some parcels are untreatable, we will mutually agree to match the budget, Proposal, and LOA parcels for the final contracted scope.

REQUIRED CONTRACTOR COMMITMENTS & UNIVERSAL POLICIES

All work will comply with the CEQA Notice Of Exemption (NOE), Cal VTP, or Vegetation Management Program (VMP)

Onsite Supervisors must perform job briefings, site assessments, and JSA daily. Documents will be verified by Field Monitor. There shall always be an English-speaking supervisor onsite during work and staff certified in First Aid

Exceptions: On private property, outside of County ROW, landowners may mark live, healthy specimens with pink flagging to be DO NOT CUT. Within the County ROW, the normal prescription applies unless a significant investment by a landowner is in the ROW.
Private Property Issues: No access to private curtilage without LOA and Project-related purpose. All fencing must be left in good condition or repaired if removed. Photo documentation is highly recommended in any case regarding potential disputes about damage. If a section of road in inaccessible due to landslides, paving, weather, etc., discuss and

document with assigned NCFF monitor.

The contractor must follow all the Best Management Practices (BMPs):

- **Ensure that there is no drift of herbicide** onto nearby vineyards or other sensitive areas, such as where people and pets are living. The contractor shall monitor the temperature, wind, and write down the speed and direction of wind at the time of application and supply this information on the invoice.
- **Noxious and invasive seeds transit avoidance**
    - Equipment, vehicles, trousers, and footwear shall be cleaned before entering the site so as to eliminate the transfer of noxious plants to the jobsite. For example, start thistle, stinkwork, broom… If determined that a Vendor did transport seeds to a site, then the Vendor is responsible for mitigating.

- **NOTE:**
    - Roads are currently dusty, drive slowly. Once the rain starts, roads must be given time to drain and firm up before driving on them. Proper prior planning and looking at weather forecasts must be utilized to stay on schedule. Respect neighbors and domestic animals.
    - Vendor is responsible for bringing water, (for mixing pesticide etc.), bathroom and handwashing station.

AD-1048

OMB No. 0505-0027
Expiration Date: 09/30/2025

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transactions

The following statement is made in accordance with the Privacy Act of 1974 (5 U.S.C. § 552a, as amended). This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, and 2 CFR §§ 180.300, 180.335, Participants' responsibilities. The regulations were amended and published on August 31, 2005, in 70 Fed. Reg. 51865-51880. Copies of the regulations may be obtained by contacting the Department of Agriculture agency offering the proposed covered transaction.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0505-0027. The time required to complete this information collection is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The provisions of appropriate criminal or civil fraud, privacy, and other statutes may be applicable to the information provided.

(Read instructions on page two before completing certification.)

A. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency;

B. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

ORGANIZATION NAME	PR/AWARD NUMBER OR PROJECT NAME

NAME(S) AND TITLE(S) OF AUTHORIZED REPRESENTATIVE(S)	
SIGNATURE	DATE

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, disability, age, marital status, family/ parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the State or local Agency that administers the program or contact USDA through the Telecommunications Relay Service at 711 (voice and TTY). Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

Instructions for Certification

(1) By signing and submitting this form, the prospective lower tier participant is providing the certification set out on page 1 in accordance with these instructions.

(2) The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the Department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.

(3) The prospective lower tier participant must provide immediate written notice to the person(s) to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(4) The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person, ""primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549, at 2 CFR Parts 180 and 417. You may contact the Department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

(5) The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it may not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the Department or agency with which this transaction originated.

(6) The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

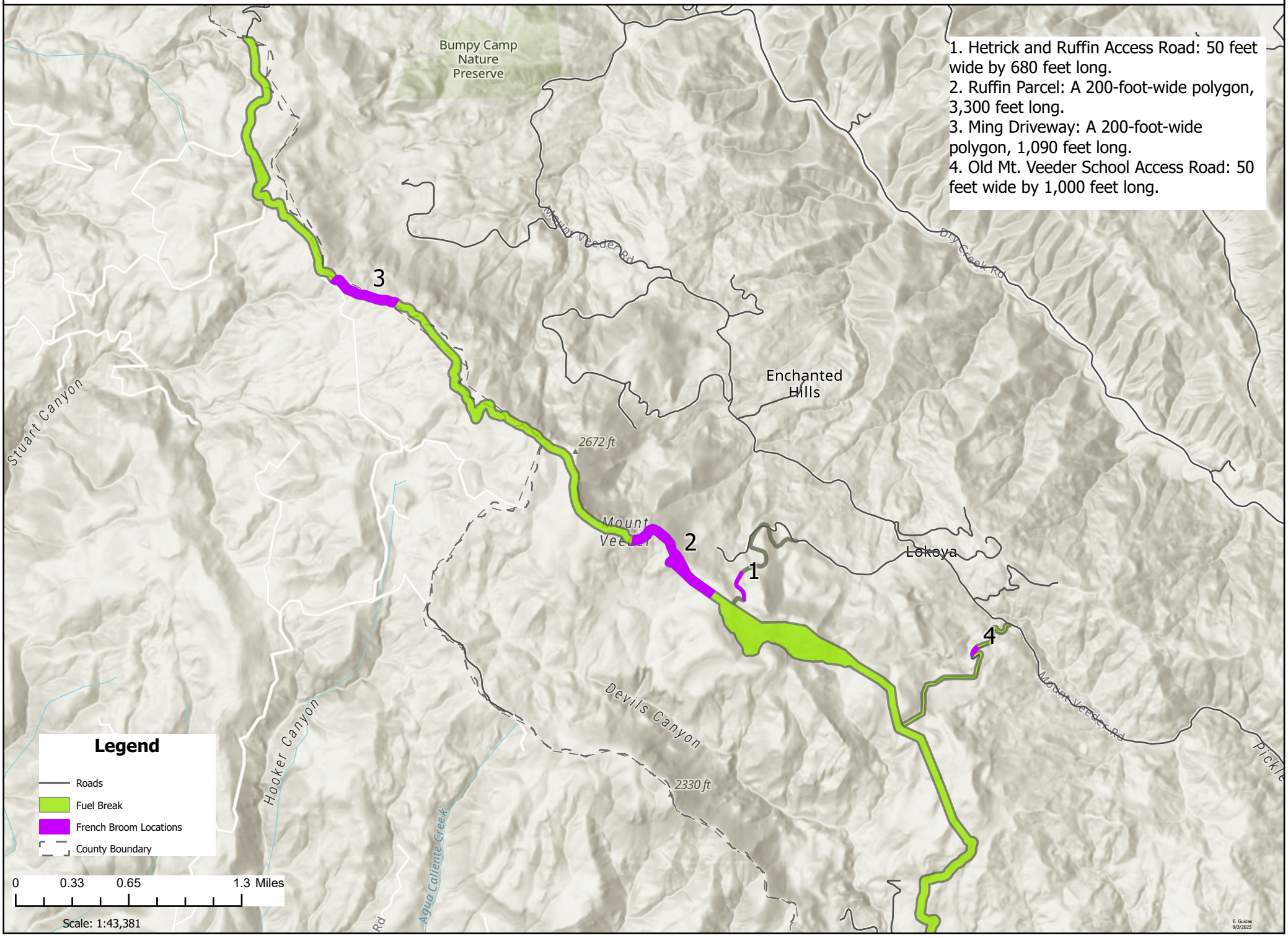
(7) A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the General Services Administration's System for Award Management Exclusions database.

(8) Nothing contained in the foregoing shall be construed to require establishment of a system of records to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(9) Except for transactions authorized under paragraph (5) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the Department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

The Napa Communities Firewise Foundation

Hogback French Broom Removal Locations



Attachment A

Mitigation Monitoring and Reporting for the

Hogback Ridge CalVTP # 2025-19

Introduction

CEQA Guidelines require public agencies “to adopt a reporting and monitoring program for changes to the project which it has adopted or made a condition of project approval to mitigate or avoid significant effects on the environment.” A mitigation monitoring and reporting program (MMRP) is required for approval of the proposed project outlined in the PSA. Standard Project Requirements (SPRs) and Mitigation measures (MMs), which are part of the program description, outlined in the CalVTP PEIR, have been adopted. These SPRs and MMs have been designed to avoid or mitigate significant environmental effects which were identified in the PEIR.

Roles and Responsibilities

The implementing entity (Napa Community Firewise Foundation) is responsible for completing all treatments as well as implementing the SPRs and MMs described in this document. The project proponent (Napa County) is responsible for verification that all project requirements have been met. The lead agency (Napa County) is responsible for determining if the project as proposed is in compliance with CEQA and the CalVTP PEIR, or if further review is necessary.

Reporting

The implementing entity will document the compliance of the proposed project with the required SPRs and mitigation measures either by adapting the project-specific MMRP table or preparing a separate post-project implementation report.

STANDARD PROJECT REQUIREMENTS AND MITIGATION MEASURES CHECKLIST

Applicable. The SPR or mitigation measures listed below are applicable to the initial treatment and/or treatment maintenance. A yes/no is placed next to the initial treatment and treatment maintenance to indicate if it is applicable to that stage of treatment. MMs and SPRs not applicable to this project's initial or maintenance treatments are listed as such in the table.

Timing. This column identifies the time frame in which the SPR or mitigation measure will be implemented (e.g., prior to treatment, during treatment, etc.).

Implementing Entity. The implementing entity is the agency or organization responsible for carrying out the requirement.

Verifying/Monitoring Entity. The verifying/monitoring entity is the agency or organization responsible for ensuring that the requirement is implemented.

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Administrative Standard Project Requirements				
SPR AD-1 Project Proponent Coordination: For treatments coordinated with CAL FIRE, CAL FIRE will meet with the project proponent to discuss all natural and environmental resources that must be protected using SPRs and any applicable mitigation measures; identify any sensitive resources onsite; and discuss resource protection measures. For any prescribed burn treatments, CAL FIRE will also discuss the details of the burn plan in the incident action plan (IAP). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities coordinated with CAL FIRE	Napa Community Firewise Foundation	Napa County
SPR AD-2 Delineate Protected Resources: The project proponent will clearly define the boundaries of the treatment area and protected resources on maps for the treatment area and with highly-visible flagging or clear, existing landscape demarcations (e.g., edge of a roadway) prior to beginning any treatment to avoid disturbing the resource. "Protected Resources" refers to environmentally sensitive places within or adjacent to the treatment areas that would be avoided or protected to the extent feasible during planned treatment activities to sustain their natural qualities and processes. This work will be performed by a qualified person, as defined for the specific resource (e.g., qualified Registered Professional Forester or biologist). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities	Napa Communities Firewise Foundation	Napa County
SPR AD-3 Consistency with Local Plans, Policies, and Ordinances: The project proponent will design and implement the treatment in a manner that is consistent with applicable local plans (e.g., general plans, Community Wildfire Protection Plans, CAL FIRE Unit Fire Plans), policies, and ordinances to the extent the project is subject to them. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities	Napa Communities Firewise Foundation	Napa County
SPR AD-4 Public Notifications for Prescribed Burning: At least days prior to the commencement of prescribed burning operations, the project proponent will: 1) post signs along the closest public roadway to the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or smoke concerns; 2) publish a public interest notification in a local newspapers or other widely distributed media source describing the activity, timing, and contact information; 3) send the local county supervisor and county administrative officer (or equivalent official responsible for distribution of public information) a notification letter describing the activity, its necessity, timing, and measures being taken	Initial Treatment: Y Treatment Maintenance: Y	Prior to Prescribed Burning Operations	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
to protect the environment and prevent prescribed burn escape. This SPR applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance. ❖ *Posting of road signs may not be applicable when burning is occurring in some remote areas of the property (due to the large size of the ownership). In these instances, public notification will only occur via 2) and 3) above.*				
SPR AD-5 Maintain Site Cleanliness: If trash receptacles are used on-site, the project proponent will use fully covered trash receptacles with secure lids (wildlife proof) to contain all food, food scraps, food wrappers, beverages, and other worker generated miscellaneous trash. Remove all trash, debris, and barriers from the project site upon completion of project activities. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities	Napa Communities Firewise Foundation	Napa County
SPR AD-6 Public Notifications for Treatment Projects. One to three days prior to the commencement of a treatment activity, the project proponent will post signs in a conspicuous location near the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or concerns. This SPR applies to all treatment activities and all treatment types, including treatment maintenance. Prescribed burning is subject to the additional notification requirements of SPR AD-4.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities along public roads.	Napa Communities Firewise Foundation	Napa County
SPR AD-7 Provide Information on Proposed, Approved, and Completed Treatment Projects. For any vegetation treatment project using the CalVTP PEIR for CEQA compliance, the project proponent will provide the information listed below to the Board or CAL FIRE during the proposed, approved, and completed stages of the project. The Board or CAL FIRE will make this information available to the public via an online database or other mechanism. Information on proposed projects (PSA in progress): ▶ GIS data that include project location (as a point); ▶ project size (typically acres); ▶ treatment types and activities; and ▶ contact information for a representative of the project proponent. The project proponent will provide information on the proposed project to the Board or CAL FIRE as early as feasible in the planning phase. The project proponent will provide	Initial Treatment: Y Treatment Maintenance: Y	Prior to, during, and upon completion of all treatment activities	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
this information to the Board or CAL FIRE with sufficient lead time to allow those agencies to make the information available to the public no later than two weeks prior to project approval. The project proponent may also make information available to the public via other mechanisms (e.g., the proponent's own website). Information on approved projects (PSA complete): ▶ A completed PSA Environmental Checklist; ▶ A completed Mitigation Monitoring and Reporting Program (using Attachment A to the Environmental Checklist); ▶ GIS data that include a polygon(s) of the project area, showing the extent of each treatment type included in the project (ecological restoration, fuel break, WUI fuel reduction). Information on completed projects: ▶ GIS data that include a polygon(s) of the treated area, showing the extent of each treatment type implemented (ecological restoration, fuel break, WUI fuel reduction) ▶ A post-project implementation report (referred to by CAL FIRE as a Completion Report) that includes ■ Size of treated area (typically acres); ■ Treatment types and activities; ■ Dates of work; ■ A list of the SPRs and mitigation measures that were implemented ■ Any explanations regarding implementation if required by SPRs and mitigation measures (e.g., explanation for feasibility determination required by SPR BIO-12; explanation for reduction of a no-disturbance buffer below the general minimum size described in Mitigation Measures BIO-1a and BIO-2b). This SPR applies to all treatment activities and all treatment types, including treatment maintenance.				
■ SPR AD-8 Request Access for Post-Treatment Assessment. For CAL FIRE projects, during contract development, CAL FIRE will include access to the treated area over a prescribed period (usually up to three years) to assess treatment effectiveness in achieving desired fuel conditions and other CalVTP objectives as well as any necessary maintenance, as a contract term for consideration by the landowner. For public landowners, access to the treated area over a prescribed period will be a requirement of	Initial Treatment: Y Treatment Maintenance: Y	For all CAL FIRE projects	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
the executed contract. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.				
SPR AD-9: Obtain a Coastal Development Permit for Proposed Treatment Within the Coastal Zone Where Required. When planning a treatment project within the Coastal Zone, the project proponent will contact the local Coastal Commission district office, or applicable local government to determine if the project area is within the jurisdiction of the Coastal Commission, a local government with a certified Local Coastal Program (LCP), or both. All treatment projects in the Coastal Zone will be reviewed by the local Coastal Commission district office or local government with a certified LCP (in consultation with the local Coastal Commission district office regarding whether a Coastal Development Permit (CDP) is required). If a CDP is required, the treatment project will be designed to meet the following conditions: i. The treatment project will be designed in compliance with applicable provisions of the Coastal Act that provide substantive performance standards for the protection of potentially affected coastal resources, if the treatment activity will occur within the original jurisdiction of the Commission or an area of a local coastal government without a certified LCP; and ii. The treatment project will be designed in compliance with the applicable provisions of the certified LCP, specifically the substantive performance standards for the protection of potentially affected coastal resources, if the treatment activity will occur within the jurisdiction of a local coastal government with a certified LCP. ▪ This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: N Treatment Maintenance: N			
Aesthetic and Visual Resource Standard Project Requirements				
SPR AES-1 Vegetation Thinning and Edge Feathering: The project proponent will thin and feather adjacent vegetation to break up or screen linear edges of the clearing and mimic forms of natural clearings as reasonable or appropriate for vegetation conditions. In general, thinning and feathering in irregular patches of varying densities, as well as a gradation of tall to short vegetation at the clearing edge, will achieve a natural transitional appearance. The contrast of a distinct clearing edge will be faded into this transitional band. This SPR only applies to mechanical and manual treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During treatments within the viewshed of Archer Taylor Preserve	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
SPR AES-2 Avoid Staging within Viewsheds: The project proponent will store all treatment-related materials, including vehicles, vegetation treatment debris, and equipment, outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. The project proponent will also locate materials staging and storage areas outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During treatments within the viewshed of Archer Taylor Preserve	Napa Communities Firewise Foundation	Napa County
SPR AES-3 Provide Vegetation Screening: The project proponent will preserve sufficient vegetation within, at the edge of, or adjacent to treatment areas to screen views from public trails, parks, recreation areas, and roadways as reasonable or appropriate for vegetation conditions. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During complete fuel break treatment types.	Napa Communities Firewise Foundation	Napa County
Air Quality Standard Project Requirements				
SPR AQ-1 Comply with Air Quality Regulations: The project proponent will comply with the applicable air quality requirements of air districts within whose jurisdiction the project is located. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities	Napa Communities Firewise Foundation	Napa County
SPR AQ-2 Submit Smoke Management Plan: The project proponent will submit a smoke management plan for all prescribed burns to the applicable air district, in accordance with 17 CCR Section 80160. Pursuant to this regulation a smoke management plan will not be required for burns less than 10 acres that also will not be conducted near smoke sensitive areas, unless otherwise directed by the air district. Burning will only be conducted in compliance with the burn authorization program of the applicable air district(s) having jurisdiction over the treatment area. Example of a smoke management plan is in Appendix PD-2. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to prescribed burning on greater than 10 acres. This requirement will be negotiated with the applicable air quality control jurisdiction.	Napa Communities Firewise Foundation	Napa County
SPR AQ-3 Create Burn Plan: The project proponent will create a burn plan using the CAL FIRE burn plan template for all prescribed burns. The burn plan will include a fire behavior model output of First Order Fire Effects Model and BEHAVE or other fire behavior modeling simulation and that is performed by a qualified fire behavior technical specialist that predicts fire behavior, calculates consumption of fuels, tree	Initial Treatment: Y Treatment Maintenance:	Prior to prescribed burning	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
mortality, predicted emissions, greenhouse gas emissions, and soil heating. The project proponent will minimize soil burn severity from broadcast burning to reduce the potential for runoff and soil erosion. The burn plan will be created with input from a qualified technician or certified State burn boss. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.	Y			
▪ SPR AQ-4 Minimize Dust: To minimize dust during treatment activities, the project proponent will implement the following measures: Limit the speed of vehicles and equipment traveling on unpaved areas to 15 miles per hour to reduce fugitive dust emissions, in accordance with the California Air Resources Board (CARB) Fugitive Dust protocol. If road use creates excessive dust, the project proponent will wet appurtenant, unpaved, dirt roads using water trucks or treat roads with a non-toxic chemical dust suppressant (e.g., emulsion polymers, organic material) during dry, dusty conditions. Any dust suppressant product used will be environmentally benign (i.e., non-toxic to plants and will not negatively impact water quality) and its use will not be prohibited by ARB, EPA, or the State Water Resources Control Board (SWRCB). The project proponent will not over-water exposed areas such that the water results in runoff. The type of dust suppression method will be selected by the project proponent based on soil, traffic, site-specific conditions, and air quality regulations. Remove visible dust, silt, or mud tracked-out on to public paved roadways where sufficient water supplies and access to water is available. The project proponent will remove dust, silt, and mud from vehicles at the conclusion of each workday, or at a minimum of every 24 hours for continuous treatment activities, in accordance with Vehicle Code Section 23113. Suspend ground-disturbing treatment activities, including land clearing and bulldozer lines, when there is visible dust transport (particulate pollution) outside the treatment boundary, if the particulate emissions may "cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property," per Health and Safety Code Section 41700. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities	Napa Communities Firewise Foundation	Napa County
SPR AQ-5 Avoid Naturally Occurring Asbestos: The project proponent will avoid ground-disturbing treatment activities in areas identified as likely to contain naturally	Initial Treatment: N			

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
occurring asbestos (NOA) per maps and guidance published by the California Geological Survey, unless an Asbestos Dust Control Plan (17 CCR Section 93105) is prepared and approved by the air district(s) with jurisdiction over the treatment area. Any NOA-related guidance provided by the applicable air district will be followed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Treatment Maintenance: N			
SPR AQ-6: Prescribed Burn Safety Procedures. Prescribed burns planned and managed by non-CAL FIRE crews will follow all safety procedures required of CAL FIRE crew, including the implementation of an approved Incident Action Plan (IAP). The IAP will include the burn dates; burn hours; weather limitations; the specific burn prescription; a communications plan; a medical plan; a traffic plan; and special instructions such as minimizing smoke impacts to specific local roadways. The IAP will also assign responsibilities for coordination with the appropriate air district, such as conducting onsite briefings, posting notifications, weather monitoring during burning, and other burn related preparations. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during prescribed burning	Napa Communities Firewise Foundation	Napa County
Archaeological, Historical, and Tribal Cultural Resources Standard Project Requirements				
SPR CUL-1 Conduct Record Search: An archaeological and historical resource record search will be conducted per the applicable state or local agency procedures. Instead of conducting a new search, the project proponent may use recent record searches containing the treatment area requested by a landowner or other public agency in accordance applicable agency guidance. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: N	During Preparation of PSA: Completed by ALTA	Napa Communities Firewise Foundation	Napa County
SPR CUL-2 Contact Geographically Affiliated Native American Tribes: The project proponent will obtain the latest Native American Heritage Commission (NAHC) provided Native Americans Contact List. Using the appropriate Native Americans Contact List, the project proponent will notify the California Native American Tribes in the counties where the treatment activity is located. The notification will contain the following: A written description of the treatment location and boundaries. Brief narrative of the treatment objectives. A description of the activities used (e.g., prescribed burning, mastication) and associated acreages.	Initial Treatment: Y Treatment Maintenance: N	During Preparation of PSA: Completed by CALFIRE Certified Archaeological Surveyor	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
A map of the treatment area at a sufficient scale to indicate the spatial extent of activities. A request for information regarding potential impacts to cultural resources from the proposed treatment. A detailed description of the depth of excavation, if ground disturbance is expected. In addition, the project proponent will contact the NAHC for a review of their Sacred Lands File. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR-CUL-3 Pre-field Research: The project proponent will conduct research prior to implementing treatments as part of the cultural resource investigation. The purpose of this research is to properly inform survey design, based on the types of resources likely to be encountered within the treatment area, and to be prepared to interpret, record, and evaluate these findings within the context of local history and prehistory. The qualified archaeologist and/or archaeologically-trained resource professional will review records, study maps, read pertinent ethnographic, archaeological, and historical literature specific to the area being studied, and conduct other tasks to maximize the effectiveness of the survey. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: N	During Preparation of PSA: Completed by CALFIRE Certified Archaeological Surveyor	Napa Communities Firewise Foundation	Napa County
SPR CUL-4 Archaeological Surveys: The project proponent will coordinate with an archaeologically-trained resource professional and/or qualified archaeologist to conduct a site-specific survey of the treatment area. The survey methodology (e.g., pedestrian survey, subsurface investigation) depends on whether the area has a low, moderate, or high sensitivity for resources, which is based on whether the records search, pre-field research, and/or Native American consultation identifies archaeological or historical resources near or within the treatment area. A survey report will be completed for every cultural resource survey completed. The specific requirements will comply with the applicable state or local agency procedures. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: N	During Preparation of PSA: Completed by CALFIRE Certified Archaeological Surveyor	Napa Communities Firewise Foundation	Napa County
SPR CUL-5 Treatment of Archaeological Resources: If cultural resources are identified within a treatment area, and cannot be avoided, a qualified archaeologist will notify the culturally affiliated tribe(s) based on information provided by NAHC and assess, whether an archaeological find qualifies as a unique archaeological resource, an historical resource, or in coordination with said tribe(s), as a tribal cultural resource. The project proponent, in consultation with culturally affiliated tribe(s), will develop effective protection measures for important cultural resources located within treatment areas. These measures may include adjusting the treatment location or design to entirely avoid	Initial Treatment: Y Treatment Maintenance: N	During Preparation of PSA: Completed by CALFIRE Certified Archaeological Surveyor	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
cultural resource locations or changing treatment activities so that damaging effects to cultural resources will not occur. These protection measures will be written in clear, enforceable language, and will be included in the survey report in accordance with applicable state or local agency procedures. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR CUL-6 Treatment of Tribal Cultural Resources: The project proponent, in consultation with the culturally affiliated tribe(s), will develop effective protection measures for important tribal cultural resources located within treatment areas. These measures may include adjusting the treatment location or design to entirely avoid cultural resource locations or changing treatment activities so that damaging effects to cultural resources will not occur. The project proponent will provide the tribe(s) the opportunity to submit comments and participate in consultation to resolve issues of concern. The project proponent will defer implementing the treatment until the tribe approves protection measures, or if agreement cannot be reached after a good-faith effort, the proponent determines that any or all feasible measures have been implemented, where feasible, and the resource is either avoided or protected. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: N	During Preparation of PSA: Completed by CALFIRE Certified Archaeological Surveyor	Napa Communities Firewise Foundation	Napa County
SPR CUL-7 Avoid Built Historical Resources: If the records search identifies built historical resources, as defined in Section 15064.5 of the State CEQA Guidelines, the project proponent will avoid these resources. Within a buffer of 100 feet of the built historical resource, there will be no prescribed burning or mechanical treatment activities Buffers less than 100 feet for built historical resources will only be used after consultation with and receipt of written approval from a qualified archaeologist. If the records search does not identify known historical resources in the treatment area, but structures (i.e., buildings, bridges, roadways) over 50 years old that have not been evaluated for historic significance are present in the treatment area, they will similarly be avoided. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities	Napa Communities Firewise Foundation	Napa County
SPR CUL-8 Cultural Resource Training: The project proponent will train all crew members and contractors implementing treatment activities on the protection of sensitive archaeological, historical, or tribal cultural resources. Workers will be trained to halt work if archaeological resources are encountered on a treatment site and the treatment method consists of physical disturbance of land surfaces (e.g., soil	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
disturbance). This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Biological Resources Standard Project Requirements				
SPR BIO-1: Review and Survey Project-Specific Biological Resources. The project proponent will require a qualified RPF or biologist to conduct a data review and reconnaissance-level survey prior to treatment, no more than one year prior to the submittal of the PSA, and no more than one year between completion of the PSA and implementation of the treatment project. The data reviewed will include the biological resources setting, species and sensitive natural communities tables, and habitat information in this PEIR for the ecoregion(s) where the treatment will occur. It will also include review of the best available, current data for the area, including vegetation mapping data, species distribution/range information, CNDDB, California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, relevant BIOS queries, and relevant general and regional plans. Reconnaissance-level biological surveys will be general surveys that include visual and auditory inspection for biological resources to help determine the environmental setting of a project site. The qualified surveyor will 1.) identify and document sensitive resources, such as riparian or other sensitive habitats, sensitive natural community, wetlands, or wildlife nursery site or habitat (including bird nests), and 2.) assess the suitability of habitat for special-status plant and animal species. The surveyor will also record any incidental wildlife observations. For each treatment project, habitat assessments will be completed at a time of year that is appropriate for identifying habitat and no more than one year prior to the submittal of the PSA, unless it can be demonstrated in the PSA that habitat assessments older than one year remain valid (e.g., site conditions are unchanged and no treatment activity has occurred since the assessment). If more than one year passes between completion of the PSA and initiation of the treatment project, the project proponent will verify the continued accuracy of the PSA prior to beginning the treatment project by reviewing for any data updates and/or visiting the site to verify conditions. Based on the results of the data review and reconnaissance-level survey, the project proponent, in consultation with a qualified RPF or biologist, will determine which one of the following best characterizes the treatment:	Initial Treatment: Y Treatment Maintenance: Y	Prior to PSA submittal and treatments	Napa Communities Firewise Foundation	Napa County
1. Suitable Habitat Is Present but Adverse Effects Can Be Clearly Avoided. If, based on the data review and reconnaissance-level survey, the qualified RPF or biologist determines that suitable habitat for sensitive biological resources is present but	Initial Treatment: Y	During All Treatments	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
adverse effects on the suitable habitat can clearly be avoided through one of the following methods, the avoidance mechanism will be implemented prior to initiating treatment and will remain in effect throughout the treatment: a. by physically avoiding the suitable habitat, or b. by conducting treatment outside of the season when a sensitive resource could be present within the suitable habitat or outside the season of sensitivity (e.g., outside of special-status bird nesting season, during dormant season of sensitive annual or geophytic plant species, or outside of maternity and rearing season at wildlife nursery sites). Physical avoidance will include flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway) to delineate the boundary of the avoidance area around the suitable habitat. For physical avoidance, a buffer may be implemented as determined necessary by the qualified RPF or biologist. 2. Suitable Habitat is Present and Adverse Effects Cannot Be Clearly Avoided. Further review and surveys will be conducted to determine presence/absence of sensitive biological resources that may be affected, as described in the SPRs below. Further review may include contacting USFWS, NOAA Fisheries, CDFW, CNPS, or local resource agencies as necessary to determine the potential for special-status species or other sensitive biological resources to be affected by the treatment activity. Focused or protocol-level surveys will be conducted as necessary to determine presence/absence. If protocol surveys are conducted, survey procedures will adhere to methodologies approved by resource agencies and the scientific community, such as those that are available on the CDFW webpage at: https://www.wildlife.ca.gov/Conservation/Survey-Protocols. Specific survey requirements are addressed for each resource type in relevant SPRs (e.g., additional survey requirements are presented for special-status plants in SPR BIO-7). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Treatment Maintenance: Y			
SPR BIO-2: Require Biological Resource Training for Workers. The project proponent will require crew members and contractors to receive training from a qualified RPF or biologist prior to beginning a treatment project. The training will describe the appropriate work practices necessary to effectively implement the biological SPRs and mitigation measures and to comply with the applicable environmental laws and regulations. The training will include the identification, relevant life history information, and avoidance of pertinent	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
special-status species; identification and avoidance of sensitive natural communities and habitats with the potential to occur in the treatment area; impact minimization procedures; and reporting requirements. The training will instruct workers when it is appropriate to stop work and allow wildlife encountered during treatment activities to leave the area unharmed and when it is necessary to report encounters to a qualified RPF, biologist, or biological technician. The qualified RPF, biologist, or biological technician will immediately contact CDFW or USFWS, as appropriate, if any wildlife protected by the California Endangered Species Act (CESA) or Federal Endangered Species Act (ESA) is encountered and cannot leave the site on its own (without being handled). This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Sensitive Natural Communities and Other Sensitive Habitats				
▪ SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats. If SPR BIO-1 determines that sensitive natural communities or sensitive habitats may be present and adverse effects cannot be avoided, the project proponent will: require a qualified RPF or biologist to perform a protocol-level survey following the CDFW "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" (current version dated March 20, 2018) of the treatment area prior to the start of treatment activities for sensitive natural communities and sensitive habitats. Sensitive natural communities will be identified using the best means possible, including keying them out using the most current edition of *A Manual of California Vegetation* (including updated natural communities data at http://vegetation.cnps.org/), or referring to relevant reports (e.g., reports found on the VegCAMP website). map and digitally record, using a Global Positioning System (GPS), the limits of any potential sensitive habitat and sensitive natural community identified in the treatment area. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Sensitive natural communities have been delineated by the project RPF. Riparian zones are the only identified SNC. These areas will be protected by SPR HYD-4.	Napa Communities Firewise Foundation	Napa County
▪ SPR BIO-4: Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function. Project proponents, in consultation with a qualified RPF or qualified biologist, will design treatments in riparian habitats to retain or improve habitat functions by implementing the following within riparian habitats: Retain at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation within the limits of riparian habitat identified and mapped	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities a WLPZ buffer shall be established around all Class I	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
during surveys conducted pursuant to SPR BIO-3. Native riparian vegetation will be retained in a well distributed multi-storied stand composed of a diversity of species similar to that found before the start of treatment activities. Treatments will be limited to removal of uncharacteristic fuel loads (e.g., removing dead or dying vegetation), trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the riparian vegetation types characteristic of the region. This includes hand removal (or mechanized removal where topography allows) of dead or dying riparian trees and shrubs, invasive plant removal, selective thinning, and removal of encroaching upland species. Removal of large, native riparian hardwood trees (e.g., willow, ash, maple, oak, alder, sycamore, cottonwood) will be minimized to the extent feasible and 75 percent of the pretreatment native riparian hardwood tree canopy will be retained. Because tree size varies depending on vegetation type present and site conditions, the tree size retention parameter will be determined on a site-specific basis depending on vegetation type present and setting; however, live, healthy, native trees that are considered large for that type of tree and large relative to other trees in that location will be retained. A scientifically-based, project-specific explanation substantiating the retention size parameter for native riparian hardwood tree removal will be provided in the Biological Resources Discussion of the PSA. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, presence of sufficient seed trees, light availability, and changes in stream shading may inform the tree size retention requirements. Removed trees will be felled away from adjacent streams or waterbodies and piled outside of the riparian vegetation zone (unless there is an ecological reason to do otherwise that is approved by applicable regulatory agencies, such as adding large woody material to a stream to enhance fish habitat, e.g., see Accelerated Wood Recruitment and Timber Operations: Process Guidance from the California Timber Harvest Review Team Agencies and National Marine Fisheries Service). Vegetation removal that could reduce stream shading and increase stream temperatures will be avoided. Ground disturbance within riparian habitats will be limited to the minimum necessary to implement effective treatments. This will consist of the minimum disturbance area necessary to reduce hazardous fuels and return the riparian community to a natural		watercourses, Class II watercourses, springs, wet areas, and ponds. The WLPZ buffer width shall be determined based on HYD-4. All specifications described in this SPR shall be implemented within this WLPZ buffer during treatment.		

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
fire regime (i.e., Condition Class 1) considering historic fire return intervals, climate change, and land use constraints. Only hand application of herbicides approved for use in aquatic environments will be allowed and only during low-flow periods or when seasonal streams are dry. The project proponent will notify CDFW when required by California Fish and Game Code Section 1602 prior to implementing any treatment activities in riparian habitats. Notification will identify the treatment activities, map the vegetation to be removed, identify the impact avoidance identification methods to be used (e.g., flagging), and appropriate protections for the retention of shaded riverine habitat, including buffers and other applicable measures to prevent erosion into the waterway. In consideration of spatial variability of riparian vegetation types and condition and consistent with California Forest Practice Rules Section 916.9(v) (February 2019 version), a different set of vegetation retention standards and protection measures from those specified in the above bullets may be implemented on a site-specific basis if the qualified RPF and the project proponent demonstrate through substantial evidence that alternative design measures provide a more effective means of achieving the treatment goals objectives and would result in effects to the Beneficial Functions of Riparian Zones equal or more favorable than those expected to result from application of the above measures. Deviation from the above design specifications, different protection measures and design standards will only be approved when the treatment plan incorporates an evaluation of beneficial functions of the riparian habitat and with written concurrence from CDFW. ▪ This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
▪ SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub. The project proponent will design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present. An ecological definition of type conversion is used in the CalVTP PEIR for assessment of environmental effects: a change from a vegetation type dominated by native shrub species that are characteristic of chaparral and coastal sage scrub vegetation alliances to a vegetation type characterized predominantly by weedy herbaceous cover or annual grasslands. For the PEIR, type conversion is considered in terms of habitat function, which is defined here as the arrangement and capability of habitat features to provide refuge, food source, and reproduction habitat to plants and	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities within chaparral ecosystems. See the treatment specifications described in the PSA.	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
animals, and thereby contribute to the conservation of biological and genetic diversity and evolutionary processes (de Groot et al. 2002). Some modification of habitat characteristics may occur provided habitat function is maintained (i.e., the location, essential habitat features, and species supported are not substantially changed). ▪ During the reconnaissance-level survey required in SPR BIO-1, a qualified RPF or biologist will identify chaparral and coastal sage scrub vegetation to the alliance level and determine the condition class and fire return interval departure of the chaparral and/or coastal sage scrub present in each treatment area. ▪ For all treatment types in chaparral and coastal sage scrub, the project proponent, in consultation with a qualified RPF or qualified biologist will: Develop a treatment design that avoids environmental effects of type conversion in chaparral and coastal sage scrub vegetation alliances, which will include evaluating and determining the appropriate spatial scale at which the proponent would consider type conversion, and substantiating its appropriateness. The project proponent will demonstrate with substantial evidence that the habitat function of chaparral and coastal sage scrub would be at least maintained within the identified spatial scale at which type conversion is evaluated for the specific treatment project. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, spatial needs of sensitive species, presence of sufficient seed plants and nurse plants, light availability, and edge effects may inform the determination of an appropriate spatial scale. The treatment design will maintain a minimum percent cover of mature native shrubs within the treatment area to maintain habitat function; the appropriate percent cover will be identified by the project proponent in the development of treatment design and be specific to the vegetation alliances that are present in the identified spatial scale used to evaluate type conversion. Mature native shrubs that are retained will be distributed contiguously or in patches within the stand. If the stand consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity, to the extent needed to avoid type conversion. ▪ These SPR requirements apply to all treatment activities and all treatment types, including treatment maintenance. ▪ Additional measures will be applied to ecological restoration treatment types: For ecological restoration treatment types, complete removal of the mature shrub layer will not occur in native chaparral and coastal sage scrub vegetation types.				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Ecological restoration treatments will not be implemented in vegetation types that are within their natural fire return interval (i.e., time since last burn is less than the average time listed as the fire return interval range in Table 3.6-1) unless the project proponent demonstrates with substantial evidence that the habitat function of chaparral and coastal sage scrub would be improved. A minimum of 35 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density (i.e., if baseline shrub canopy density is 60 percent, post treatment shrub canopy density will be no less than 40 percent). A different percent relative cover can be retained if the project proponent demonstrates with substantial evidence that alternative treatment design measures would result in effects on the habitat function of chaparral and coastal sage scrub that are equal or more favorable than those expected to result from application of the above measures. Biological considerations that may inform a deviation from the minimum 35 percent relative cover retention include but are not limited to soil moisture requirements, increased soil temperatures, changes in light/shading, presence of sufficient seed plants and nurse plants, erosion potential, and site hydrology. If the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity. ▪ These SPR requirements apply to all treatment activities and only the ecosystem restoration treatment type, including treatment maintenance. ▪ A determination of compliance with the SB 1260 prohibition of type conversion in chaparral and coastal sage scrub is a statutory issue separate from CEQA compliance that may involve factors additional to the ecological definition and habitat functions presented in the PEIR, such as geographic context. It is beyond the legal scope of the PEIR to define SB 1260 type conversion and statutory compliance. The project proponent, acting as lead agency for the proposed later treatment project, will be responsible for defining type conversion in the context of the project and making the finding that type conversion would not occur, as required by SB 1260. The project proponent will determine its criteria for defining and avoiding type conversion and, in making its findings, may draw upon information presented in this PEIR.				
▪ SPR BIO-6: Prevent Spread of Plant Pathogens. When working in sensitive natural communities, riparian habitats, or oak woodlands that are at risk from plant	Initial Treatment: Y	During all treatment activities	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
pathogens (e.g., Ione chaparral, blue oak woodland), the project proponent will implement the following best management practices to prevent the spread of *Phytopthora* and other plant pathogens (e.g., pitch canker (*Fusarium*), goldspotted oak borer, shot hole borer, bark beetle): clean and sanitize vehicles, equipment, tools, footwear, and clothes before arriving at a treatment site and when leaving a contaminated site, or a site in a county where contamination is a risk; include training on *Phytopthora* diseases and other plant pathogens in the worker awareness training; minimize soil disturbance as much as possible by limiting the number of vehicles, avoiding off-road travel as much as possible, and limiting use of mechanized equipment; minimize movement of soil and plant material within the site, especially between areas with high and low risk of contamination; clean soil and debris from equipment and sanitize hand tools, buckets, gloves, and footwear when moving from high risk to low risk areas or between widely separated portions of a treatment area; and follow the procedures listed in Guidance for plant pathogen prevention when working at contaminated restoration sites or with rare plants and sensitive habitat (Working Group for *Phytoptheras* in Native Habitats 2016). ▪ This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Treatment Maintenance: Y	within the oak woodland and riparian ecosystems.		
Special-Status Plants				
▪ SPR BIO-7: Survey for Special-Status Plants. If SPR BIO-1 determines that suitable habitat for special-status plant species is present and cannot be avoided, the project proponent will require a qualified RPF or botanist to conduct protocol-level surveys for special-status plant species with the potential to be affected by a treatment prior to initiation of the treatment. The survey will follow the methods in the current version of CDFW's "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities." ▪ Surveys to determine the presence or absence of special-status plant species will be conducted in suitable habitat that could be affected by the treatment and timed to coincide with the blooming or other appropriate phenological period of the target	Initial Treatment: Y Treatment Maintenance: Y	Prior to initiating mechanical treatments, shaded, or non-shaded fuel break construction. *See Botany Report in attachment B.*	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
species (as determined by a qualified RPF or botanist), or all species in the same genus as the target species will be assumed to be special-status. ▪ If potentially occurring special-status plants are listed under CESA or ESA, protocol-level surveys to determine presence/absence of the listed species will be conducted in all circumstances, unless determined otherwise by CDFW or USFWS. ▪ For other special-status plants not listed under CESA or ESA, as defined in Section 3.6.1 of this PEIR, surveys will not be required under the following circumstances: If protocol-level surveys, consisting of at least two survey visits (e.g., early blooming season and later blooming season) during a normal weather year, have been completed in the 5 years before implementation of the treatment project and no special-status plants were found, and no treatment activity has occurred following the protocol-level survey, treatment may proceed without additional plant surveys. If the target special-status plant species is an herbaceous annual, stump-sprouting, or geophyte species, the treatment may be carried out during the dormant season for that species or when the species has completed its annual lifecycle without conducting presence/absence surveys provided the treatment will not alter habitat or destroy seeds, stumps, or roots, rhizomes, bulbs and other underground parts in a way that would make it unsuitable for the target species to reestablish following treatment. ▪ This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Environmentally Sensitive Habitat Areas				
▪ SPR BIO-8: Identify and Avoid or Minimize Impacts in Coastal Zone ESHAs. When planning a treatment project within the Coastal Zone, the project proponent will, in consultation with the Coastal Commission or a local government with a certified Local Coastal Program (LCP) (as applicable), identify the habitat types and species present to determine if the area qualifies as an Environmentally Sensitive Habitat Area (ESHA). If the area is an ESHA, the treatment project may be allowed pursuant to this PEIR, if it meets the following conditions. If a project requires a CDP by the Coastal Commission or a local government with a certified LCP (as applicable), the CDP approval may require modification to these conditions to further avoid and minimize impacts: The treatment will be designed, in compliance with the Coastal Act or LCP if a site is within a certified LCP area, to protect the habitat function of the affected ESHA, protect habitat values, and prevent loss or type conversion of habitat and vegetation types that define the ESHA, or loss of special-status species that inhabit the ESHA.	Initial Treatment: N Treatment Maintenance: N			

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Treatment actions will be limited to eradication or control of invasive plants, removal of uncharacteristic fuel loads (e.g., removing dead, diseased, or dying vegetation), trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the vegetation types present in the ESHA. A qualified biologist or RPF familiar with the ecology of the treatment area will monitor all treatment activities in ESHAs. Appropriate no-disturbance buffers will be developed in compliance with the Coastal Act or relevant LCP policies for treatment activities in the vicinity of ESHAs to avoid adverse direct and indirect effects to ESHAs. ▪ This SPR applies to all treatment activities and all treatment types, including treatment maintenance.				
Invasive Plants and Wildlife				
▪ SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife. The project proponent will take the following actions to prevent the spread of invasive plants, noxious weeds, and invasive wildlife (e.g., New Zealand mudsnail): clean clothing, footwear, and equipment used during treatments of soil, seeds, vegetative matter, other debris or seed-bearing material, or water (e.g., rivers, streams, creeks, lakes) before entering the treatment area or when leaving an area with infestations of invasive plants, noxious weeds, or invasive wildlife; for all heavy equipment and vehicles traveling off road, pressure wash, if feasible, or otherwise appropriately decontaminate equipment at a designated weed-cleaning station prior to entering the treatment area from an area with infestations of invasive plants, noxious weeds, or invasive wildlife. Anti-fungal wash agents will be specified if the equipment has been exposed to any pathogen that could affect native species; inspect all heavy equipment, vehicles, tools, or other treatment-related materials for sand, mud, or other signs that weed seeds or propagules could be present prior to use in the treatment area. If the equipment is not clean, the qualified RPF or biological technician will deny entry to the work areas; stage equipment in areas free of invasive plant infestations unless there are no uninfested areas present within a reasonable proximity to the treatment area; identify significant infestations of invasive plant species (i.e., those rated as invasive by Cal-IPC or designated as noxious weeds by California Department of Food and Agriculture) during reconnaissance-level surveys and target them for removal during	Initial Treatment: Y Treatment Maintenance: Y	During all Treatment Activities	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
treatment activities. Treatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles; treat invasive plant biomass onsite to eliminate seeds and propagules and prevent reestablishment or dispose of invasive plant biomass offsite at an appropriate waste collection facility (if not kept on site); transport invasive plant materials in a closed container or bag to prevent the spread of propagules during transport; and implement Fire and Fuel Management BMPs outlined in the "Preventing the Spread of Invasive Plants: Best Management Practices for Land Mangers" (Cal-IPC 2012, or current version). ▪ This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Wildlife				
▪ SPR BIO-10: Survey for Special-Status Wildlife and Nursery Sites. If SPR BIO-1 determines that suitable habitat for special-status wildlife species or nurseries of any wildlife species is present and cannot be avoided, the project proponent will require a qualified RPF or biologist to conduct focused or protocol-level surveys for special-status wildlife species or nursery sites (e.g., bat maternity roosts, deer fawning areas, heron or egret rookeries, monarch overwintering sites) with potential to be directly or indirectly affected by a treatment activity. The survey area will be determined by a qualified RPF or biologist based on the species and habitats and any recommended buffer distances in agency protocols. ▪ The qualified RPF or biologist will determine if following an established protocol is required, and the project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate survey protocols. Unless otherwise specified in a protocol, the survey will be conducted no more than 14 days prior to the beginning of treatment activities. Focused or protocol surveys for a special-status species with potential to occur in the treatment area may not be required if presence of the species is assumed.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all Treatment Activities for the Pallid Bat within the mapped BIO STZs on Attachment C maps.	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
▪ SPR BIO-11. Install Wildlife-Friendly Fencing (Prescribed Herbivory). If temporary fencing is required for prescribed herbivory treatment, a wildlife-friendly fencing design will be used. The project proponent will require a qualified RPF or biologist to review and approve the design before installation to minimize the risk of wildlife entanglement. The fencing design will meet the following standards: Minimize the chance of wildlife entanglement by avoiding barbed wire, loose or broken wires, or any material that could impale or snag a leaping animal; and, if feasible, keeping electric netting-type fencing electrified at all times or laid down while not in use. Charge temporary electric fencing with intermittent pulse energizers; continuous output fence chargers will not be permitted. Allow wildlife to jump over easily without injury by installing fencing that can flex as animals pass over it and installing the top wire low enough (no more than approximately 40 inches high on flat ground) to allow adult ungulates to jump over it. The determination of appropriate fence height will consider slope, as steep slopes are more difficult for wildlife to pass. Be highly visible to birds and mammals by using high-visibility tape or wire, flagging, or other markers. ▪ This SPR applies only to prescribed herbivory and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During Prescribed Herbivory treatments	Napa Communities Firewise Foundation	Napa County
▪ SPR BIO-12. Protect Common Nesting Birds, Including Raptors. The project proponent will schedule treatment activities to avoid the active nesting season of common native bird species, including raptors, that could be present within or adjacent to the treatment site, if feasible. Common native birds are species not otherwise treated as special status in the CalVTP PEIR. The active nesting season will be defined by the qualified RPF or biologist. ▪ If active nesting season avoidance is not feasible, a qualified RPF or biologist will conduct a survey for common nesting birds, including raptors. Existing records (e.g., CNDDB, eBird database, State Wildlife Action Plan) should be reviewed in advance of the survey to identify the common nesting birds, including raptors, that are known to occur in the vicinity of the treatment site. The survey area will encompass reasonably accessible areas of the treatment site and the immediately surrounding vicinity viewable	Initial Treatment: Y Treatment Maintenance: Y	During active bird nesting season. March – July.	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
from the treatment site. The survey area will be determined by a qualified RPF or biologist, based on the potential species in the area, location of suitable nesting habitat, and type of treatment. For vegetation removal or project activities that would occur during the nesting season, the survey will be conducted at a time that balances the effectiveness of detecting nests and the reasonable consideration of potential avoidance strategies. Typically, this timeframe would be up to 3 weeks before treatment. The survey will occur in a single survey period of sufficient duration to reasonably detect nesting birds, including raptors, typically one day for most treatment projects (depending on the size, configuration, and vegetation density in the treatment site), and conducted during the active time of day for target species, typically close to dawn and/or dusk. The survey may be conducted concurrently with other biological surveys, if they are required by other SPRs. Survey methods will be tailored by the qualified RPF or biologist to site and habitat conditions, typically involving walking throughout the survey area, visually searching for nests and birds exhibiting behavior that is typical of breeding (e.g., delivering food). ▪ If an active nest is observed (i.e., presence of eggs and/or chicks) or determined to likely be present based on nesting bird behavior, the project proponent will implement a feasible strategy to avoid disturbance of active nests, which may include, but is not limited to, one or more of the following: Establish Buffer. The project proponent will establish a temporary, species-appropriate buffer around the nest sufficient to reasonably expect that breeding would not be disrupted. Treatment activities will be implemented outside of the buffer. The buffer location will be determined by a qualified RPF or biologist. Factors to be considered for determining buffer location will include: presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and expected treatment activities. Nests of common birds within the buffer need not be monitored during treatment. However, buffers will be maintained until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. Modify Treatment. The project proponent will modify the treatment in the vicinity of an active nest to avoid disturbance of active nests (e.g., by implementing manual treatment methods, rather than mechanical treatment methods). Treatment modifications will be determined by the project proponent in coordination with the qualified RPF or biologist.				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Defer Treatment. The project proponent will defer the timing of treatment in the portion(s) of the treatment site that could disturb the active nest. If this avoidance strategy is implemented, treatment activity will not commence until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. ▪ Feasible actions will be taken by the project proponent to avoid loss of common native bird nests. The feasibility of implementing the avoidance strategies will be determined by the project proponent based on whether implementation of this SPR will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. Considerations may include limitations on the presence of environmental and atmospheric conditions necessary to execute treatment prescriptions (e.g., the limited seasonal windows during which prescribed burning can occur when vegetation moisture, weather, wind, and other physical conditions are suitable). If it is infeasible to avoid loss of common bird nests (not including raptor nests), the project proponent will document the reasons implementation of the avoidance strategies is infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). ▪ The following avoidance strategies may also be considered together with or in lieu of other actions for implementation by a project proponent to avoid disturbance to raptor nests: Monitor Active Raptor Nest During Treatment. A qualified RPF, biologist, or biological technician will monitor an active raptor nest during treatment activities to identify signs of agitation, nest defense, or other behaviors that signal disturbance of the active nest is likely (e.g., standing up from a brooding position, flying off the nest). If breeding raptors are showing signs of nest disturbance, one of the other avoidance strategies (establish buffer, modify treatment or defer treatment) will be implemented or a pause in the treatment activity will occur until the disturbance behavior ceases. Retention of Raptor Nest Trees. Trees with visible raptor nests, whether occupied or not, will be retained. ▪ This SPR applies to all treatment activities and treatment types, including treatment maintenance.				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Geology, Soils, and Mineral Resource Standard Project Requirements				
▪ SPR GEO-1 Suspend Disturbance during Heavy Precipitation: The project proponent will suspend mechanical, prescribed herbivory, and herbicide treatments if the National Weather Service forecast is a "chance" (30 percent or more) of rain within the next 24 hours. Activities that cause mechanical soil disturbance may resume when precipitation stops and soils are no longer saturated (i.e., when soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur). Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials. This SPR applies only to mechanical, prescribed herbivory, and herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During Saturated soil conditions or when there is a 30% chance of rain. Applies to Mechanical, Prescribed herbivory, and herbicide treatments.	Napa Communities Firewise Foundation	Napa County
▪ SPR GEO-2 Limit High Ground Pressure Vehicles: The project proponent will limit heavy equipment that could cause soil disturbance or compaction to be driven through treatment areas when soils are wet and saturated to avoid compaction and/or damage to soil structure. Saturated soil means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. If use of heavy equipment is required in saturated areas, other measures such as operating on organic debris, using low ground pressure vehicles, or operating on frozen soils/snow covered soils will be implemented to minimize soil compaction. Existing compacted road surfaces are exempted as they are already compacted from use. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During periods of soil saturation. Applies to mechanical treatments.	Napa Communities Firewise Foundation	Napa County
▪ SPR GEO-3 Stabilize Disturbed Soil Areas: The project proponent will stabilize soil disturbed during mechanical, prescribed herbivory treatments, and prescribed burns that result in exposure of bare soil over 50 percent or more of the treatment area with mulch or equivalent immediately after treatment activities, to the maximum extent practicable, to minimize the potential for substantial sediment discharge. If mechanical, prescribed herbivory, or prescribed burn treatment activities could result in substantial sediment discharge from soil disturbed by machinery, animal hooves, or being bare, organic material from mastication or mulch will be incorporated onto at least 75 percent of the disturbed soil surface where the soil erosion hazard is moderate or high, and 50	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities; *There will be limitations to the extent practicable for prescribed burning treatments. See PSA Discussion*	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
percent of the disturbed soil surface where soil erosion hazard is low to help prevent erosion. Where slash mulch is used, it will be packed into the ground surface with heavy equipment so that it is sufficiently in contact with the soil surface. This SPR only applies to mechanical, prescribed herbivory, and prescribed burns that result in exposure of bare soil over 50 percent of the project area treatment activities and all treatment types, including treatment maintenance.		*under Impact GEO-1.*		
▪ SPR GEO-4 Erosion Monitoring: The project proponent will inspect treatment areas for the proper implementation of erosion control SPRs and mitigations prior to the rainy season. If erosion control measures are not properly implemented, they will be remediated prior to the first rainfall event per SPR GEO-3 and GEO-8. Additionally, the project proponent will inspect for evidence of erosion after the first large storm or rainfall event (i.e., ≥ 1.5 inches in 24 hours) as soon as is feasible after the event. Any area of erosion that will result in substantial sediment discharge will be remediated within 48 hours per the methods stated in SPRs GEO-3 and GEO-8. This SPR applies only to mechanical, prescribed herbivory, and prescribed burning treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to rainy season, and after first large storm or rainfall event with greater than or equal to 1.5 " in 24 hours.	Napa Communities Firewise Foundation	Napa County
▪ SPR GEO-5 Drain Stormwater via Water Breaks: The project proponent will drain compacted and/or bare linear treatment areas capable of generating storm runoff via water breaks using the spacing and erosion control guidelines contained in Sections 914.6, 934.6, and 954.6(c) of the California Forest Practice Rules (February 2019 version). Where waterbreaks cannot effectively disperse surface runoff, including where waterbreaks cause surface run-off to be concentrated on downslopes, other erosion controls will be installed as needed to maintain site productivity by minimizing soil loss. This SPR applies only to mechanical, manual, and prescribed burn treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to rainy season. Pertains to Mechanical, manual, and prescribed burn treatment activities.	Napa Communities Firewise Foundation	Napa County
▪ SPR GEO-6 Minimize Burn Pile Size: The project proponent will not create burn piles that exceed 20 feet in length, width, or diameter, except when on landings, road surfaces, or on contour to minimize the spatial extent of soil damage. In addition, burn piles will not occupy more than 15 percent of the total treatment area (Busse et al. 2014). The project proponent will not locate burn piles in a Watercourse and Lake Protection Zone as defined in SPR HYD-4. This SPR applies to mechanical, manual, and prescribed burning treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During pile burning	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ SPR GEO-7 Minimize Erosion: To minimize erosion, the project proponent will: (1) Prohibit use of heavy equipment where any of the following conditions are present: (i) Slopes steeper than 65 percent. (ii) Slopes steeper than 50 percent where the erosion hazard rating is high or extreme. (iii) Slopes steeper than 50 percent that lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake. (2) On slopes between 50 percent and 65 percent where the erosion hazard rating is moderate, and all slope percentages are for average slope steepness based on sample areas that are 20 acres, or less, heavy equipment will be limited to: (i) Existing tractor roads that do not require reconstruction, or (ii) New tractor roads flagged by the project proponent prior to the treatment activity. (3) Prescribed herbivory treatments will not be used in areas with over 50 percent slope. ▪ This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	Napa Communities Firewise Foundation	Napa County
▪ SPR GEO-8 Steep Slopes: The project proponent will require a Registered Professional Forester (RPF) or licensed geologist to evaluate treatment areas with slopes greater than 50 percent for unstable areas (areas with potential for landslide) and unstable soils (soil with moderate to high erosion hazard). If unstable areas or soils are identified within the treatment area, are unavoidable, and will be potentially directly or indirectly affected by the treatment, a licensed geologist (P.G. or C.E.G.) will determine the potential for landslide, erosion, of other issue related to unstable soils and identity measures (e.g., those in SPR GEO-7) that will be implemented by the project proponent such that substantial erosion or loss of topsoil would not occur. This SPR applies only to mechanical treatment activities and WUI fuel reduction, non-shaded fuel breaks, and ecological restoration treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to treatments on slopes exceeding 50%	Napa Communities Firewise Foundation	Napa County
Greenhouse Gas Emissions Standard Project Requirements				
▪ SPR GHG-1 Contribute to the AB 1504 Carbon Inventory Process: The project proponent of treatment projects subject to the AB 1504 process will provide all necessary data about the treatment that is needed by the U.S. Forest Service and FRAP to fulfill requirements of the AB 1504 carbon inventory, and to aid in the ongoing	Initial Treatment: N			

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
research about the long-term net change in carbon sequestration resulting from treatment activity. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Treatment Maintenance: N			
▪ Hazardous Material and Public Health and Safety Standard Project Requirements				
▪ SPR HAZ-1 Maintain All Equipment: The project proponent will maintain all diesel- and gasoline-powered equipment per manufacturer's specifications, and in compliance with all state and federal emissions requirements. Maintenance records will be available for verification. Prior to the start of treatment activities, the project proponent will inspect all equipment for leaks and inspect everyday thereafter until equipment is removed from the site. Any equipment found leaking will be promptly removed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatments	Napa Communities Firewise Foundation	Napa County
▪ SPR HAZ-2 Require Spark Arrestors: The project proponent will require mechanized hand tools to have federal- or state-approved spark arrestors. This SPR applies only to manual treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During manual treatment activities	Napa Communities Firewise Foundation	Napa County
▪ SPR HAZ-3 Require Fire Extinguishers: The project proponent will require tree cutting crews to carry one fire extinguisher per chainsaw. Each vehicle would be equipped with one long-handled shovel and one axe or Pulaski consistent with PRC Section 4428. This SPR applies only to manual treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities	Napa Communities Firewise Foundation	Napa County
▪ SPR HAZ-4 Prohibit Smoking in Vegetated Areas: The project proponent will require that smoking is only permitted in designated smoking areas barren or cleared to mineral soil at least 3 feet in diameter (PRC Section 4423.4). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities	Napa Communities Firewise Foundation	Napa County
▪ SPR HAZ-5 Spill Prevention and Response Plan: The project proponent or licensed Pest Control Advisor (PCA) will prepare a Spill Prevention and Response Plan	Initial Treatment: Y	Prior to herbicide treatment activities	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
(SPRP) prior to beginning any herbicide treatment activities to provide protection to onsite workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants. The SPRP will include (but not be limited to): a map that delineates staging areas, and storage, loading, and mixing areas for herbicides; a list of items required in an onsite spill kit that will be maintained throughout the life of the activity; procedures for the proper storage, use, and disposal of any herbicides, adjuvants, or other chemicals used in vegetation treatment. ▪ This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	Treatment Maintenance: Y			
▪ SPR HAZ-6 Comply with Herbicide Application Regulations: The project proponent will coordinate pesticide use with the applicable County Agricultural Commissioner(s), and all required licenses and permits will be obtained prior to herbicide application. The project proponent will prepare all herbicide applications to do the following: Be implemented consistent with recommendations prepared annually by a licensed PCA. Comply with all appropriate laws and regulations pertaining to the use of pesticides and safety standards for employees and the public, as governed by the EPA, DPR, and applicable local jurisdictions. Adhere to label directions for application rates and methods, storage, transportation, mixing, container disposal, and weather limitations to application such as wind speed, humidity, temperature, and precipitation. Be applied by an applicator appropriately licensed by the State. ▪ This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to herbicide treatment activities	Napa Communities Firewise Foundation	Napa County
▪ SPR HAZ-7 Triple Rinse Herbicide Containers: The project proponent will triple rinse all herbicide and adjuvant containers with clean water at an approved site, and dispose of rinsate by placing it in the batch tank for application per 3 CCR Section 6684. The project proponent will puncture used containers on the top and bottom to render them unusable, unless said containers are part of a manufacturer's container recycling program, in which case the manufacturer's instructions will be followed.	Initial Treatment: Y Treatment Maintenance: Y	During herbicide treatment activities	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Disposal of non-recyclable containers will be at legal dumpsites. Equipment will not be cleaned, and personnel will not be washed in a manner that would allow contaminated water to directly enter any body of water within the treatment area or adjacent watersheds. Disposal of all herbicides will follow label requirements and waste disposal regulations. ▪ This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.				
▪ SPR HAZ-8 Minimize Herbicide Drift to Public Areas: The project proponent will employ the following herbicide application parameters during herbicide application to minimize drift into public areas: application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative); spray nozzles will be configured to produce the largest appropriate droplet size to minimize drift; low nozzle pressures (30-70 pounds per square inch) will be utilized to minimize drift; and spray nozzles will be kept within 24 inches of vegetation during spraying. ▪ This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to herbicide treatment activities	Napa Communities Firewise Foundation	Napa County
▪ SPR HAZ-9 Notification of Herbicide Use in the Vicinity of Public Areas: For herbicide applications occurring within or adjacent to public recreation areas, residential areas, schools, or any other public areas within 500 feet, the project proponent will post signs at each end of herbicide treatment areas and any intersecting trails notifying the public of the use of herbicides. The signs will include the signal word (i.e., Danger, Warning or Caution), product name, and manufacturer; active ingredient; EPA registration number; target pest; treatment location; date and time of application; restricted entry interval, if applicable per the label requirements; date which notification sign may be removed; and a contact person with a telephone number. Signs will be posted prior to the start of treatment and notification will remain in place for at least 72 hours after treatment ceases. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to herbicide treatment activities occurring within 500 ft of public areas.	Napa Communities Firewise Foundation	Napa County
Hydrology and Water Quality Standard Project Requirements				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ SPR HYD-1 Comply with Water Quality Regulations: Project proponents must also conduct proposed vegetation treatments in conformance with appropriate RWQCB timber, vegetation and land disturbance related Waste Discharge Requirements (WDRs) and/or related Conditional Waivers of Waste Discharge Requirements (Waivers), and appropriate Basin Plan Prohibitions. Where these regulatory requirements differ, the most restrictive will apply. If applicable, this includes compliance with the conditions of general waste discharge requirements (WDR) and waste discharge requirement waivers for timber or silviculture activities where these waivers are designed to apply to non-commercial fuel reduction and forest health projects. In general, WDR and Waivers of waste discharge requirements for fuel reduction and forest health activities require that wastes, including but not limited to petroleum products, soil, silt, sand, clay, rock, felled trees, slash, sawdust, bark, ash, and pesticides must not be discharged to surface waters or placed where it may be carried into surface waters. The specifications for each WDR and Waiver vary by region. Regions 2 (San Francisco Bay), 4 (Los Angeles), 8 (Santa Ana), and 7 (Colorado River) are highly urban or minimally forested and do not offer WDRs or Waivers for fuel reduction or vegetation management activities. The current applicable WDRs and Waivers for timber and vegetation management activities are included in Appendix HYD-1. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to All Treatment Activities	Napa Communities Firewise Foundation	Napa County
▪ SPR HYD-2 Avoid Construction of New Roads: The project proponent will not construct or reconstruct (i.e., cutting or filling involving less than 50 cubic yards/0.25 linear road miles) any new roads (including temporary roads). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to All Treatment Activities	Napa Communities Firewise Foundation	Napa County
▪ SPR HYD-3 Water Quality Protections for Prescribed Herbivory: The project proponent will include the following water quality protections for all prescribed herbivory treatments: Environmentally sensitive areas such as waterbodies, wetlands, or riparian areas will be identified in the treatment prescription and excluded from prescribed herbivory project areas using temporary fencing or active herding. A buffer of approximately 50 feet will be maintained between sensitive and actively grazed areas. Water will be provided for grazing animals in the form of an on-site stock pond or a portable water source located outside of environmentally sensitive areas.	Initial Treatment: Y Treatment Maintenance: Y	During Prescribed Herbivory treatment activities.	Napa Communities Firewise Foundation	Napa County

<table>
<tr><th>Standard Project Requirements</th><th>Applicable? (Y/N)</th><th>Timing</th><th>Implementing Entity</th><th>Verifying/Monitoring Entity</th></tr>
<tr><td>Treatment prescriptions will be designed to protect soil stability. Grazing animals will be herded out of an area if accelerated soil erosion is observed.
▪ This SPR applies to prescribed herbivory treatment activities and all treatment types, including treatment maintenance.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>▪ SPR HYD-4 Identify and Protect Watercourse and Lake Protection Zones: The project proponent will establish Watercourse and Lake Protection Zones (WLPZs) on either side of watercourses as defined in the table below, which is based on 14 CCR Section 916 .5 of the California Forest Practice Rules (February 2019 version). WLPZ's are classified based on the uses of the stream and the presence of aquatic life. Wider WLPZs are required for steep slopes.
► Procedures for Determining Watercourse and Lake Protection Zone (WLPZ) widths
<table>
<tr><th>Water Class</th><th>Class I</th><th>Class II</th><th>Class III</th><th>Class IV</th></tr>
<tr><td>Water Class Characteristics or Key Indicator Beneficial Use</td><td>1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or
2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.</td><td>1) Fish always or seasonally present offsite within 1000 feet downstream and/or
2) Aquatic habitat for nonfish aquatic species.
3) Excludes Class III waters that are tributary to Class I waters.</td><td>No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high-water flow conditions after completion of timber operations.</td><td>Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.</td></tr>
<tr><td colspan="5">WLPZ Width (ft) – Distance from top of bank to the edge of WLPZ</td></tr>
</table></td><td>Initial Treatment: Y

Treatment Maintenance: Y</td><td>Prior to All Treatment Activities</td><td>Napa Communities Firewise Foundation</td><td>Napa County</td></tr>
</table>

Standard Project Requirements				Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
< 30 % Slope	75	50	Sufficient to prevent the degradation of downstream beneficial uses of water. Determined on a site-specific basis.				
30-50 % Slope	100	75					
>50 % Slope	150	100					

Source: 14 CCR Section 916.5 [936.5, 956.5] (February 2019 version)

- The following WLPZ protections will be applied for all treatments:

Treatment activities with WLPZs will retain at least 75 percent surface cover and undisturbed area to act as a filter strip for raindrop energy dissipation and for wildlife habitat. If this percentage is reduced a qualified RPF will provide the project proponent with a site- and/or treatment activity-specific explanation for the percent surface cover reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced percent as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). This requirement is based on 14 CCR Section 916.4 [936.4, 956.4] Subsection (b)(6) (February 2019 version) and 14 CCR Section 916.5 (February 2019 version).

Equipment, including tractors and vehicles, must not be driven in wet areas or WLPZs, except over existing roads or watercourse crossings where vehicle tires or tracks remain dry.

Equipment used in vegetation removal operations will not be serviced in WLPZs, within wet meadows or other wet areas, or in locations that would allow grease, oil, or fuel to pass into lakes, watercourses, or wet areas.

WLPZs will be kept free of slash, debris, and other material that harm the beneficial uses of water. Accidental deposits will be removed immediately.

Burn piles will be located outside of WLPZs.

No fire ignition (nor use of associated accelerants) will occur within WLPZs however low intensity backing fires may be allowed to enter or spread into WLPZs.

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Within Class I and Class II WLPZs, locations where project operations expose a continuous area of mineral soil 800 square feet or larger shall be treated for reduction of soil loss. Treatment shall occur prior to October 15th and disturbances that are created after October 15th shall be treated within 10 days. Stabilization measures shall be selected that will prevent significant movement of soil into water bodies and may include but are not limited to mulching, rip-rap, grass seeding, or chemical soil stabilizers. Where mineral soil has been exposed by project operations on approaches to watercourse crossings of Class I, II, or III within a WLPZ, the disturbed area shall be stabilized to the extent necessary to prevent the discharge of soil into watercourses or lakes in amounts that would adversely affect the quality and beneficial uses of the watercourse. Where necessary to protect beneficial uses of water from project operations, protection measures such as seeding, mulching, or replanting shall be used to retain and improve the natural ability of the ground cover within the WLPZ to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes. Equipment limitation zones (ELZs) will be designated adjacent to Class III and Class IV watercourses with minimum widths of 25 feet where side-slope is less than 30 percent and 50 feet where side-slope is 30 percent or greater. An RPF will describe the limitations of heavy equipment within the ELZ and, where appropriate, will include additional measures to protect the beneficial uses of water. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
▪ SPR HYD-5 Protect Non-Target Vegetation and Special-status Species from Herbicides: The project proponent will implement the following measures when applying herbicides: Locate herbicide mixing sites in areas devoid of vegetation and where there is no potential of a spill reaching non-target vegetation or a waterway. Use only herbicides labeled for use in aquatic environments when working in riparian habitats or other areas where there is a possibility the herbicide could come into direct contact with water. Only hand application of herbicides will be allowed in riparian habitats and only during low-flow periods or when seasonal streams are dry. No terrestrial or aquatic herbicides will be applied within WLPZs of Class I and II watercourses, if feasible. If this is not feasible, hand application of herbicides labeled	Initial Treatment: Y Treatment Maintenance: Y	During application of herbicides	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
for use in aquatic environments may be used within the WLPZ provided that the project proponent notifies the applicable regional water quality control board no fewer than 15 days prior to herbicide application. The feasibility of avoiding herbicide application within WLPZ of Class I and II watercourses will be determined by the project proponent and may be based on whether doing so will preclude achieving CalVTP program objectives, including, but not limited to, protection of vulnerable communities. The reasons for infeasibility will be documented in the PSA. No herbicides will be applied within a 50-foot buffer of ESA or CESA listed plant species or within 50 feet of dry vernal pools. For spray applications in and adjacent to habitats suitable for special-status species, use herbicides containing dye (registered for aquatic use by DPR, if warranted) to prevent overspray. Application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative); No herbicide will be applied during precipitation events or if precipitation is forecast 24 hours before or after project activities. ▪ This SPR applies to herbicide treatment activities and all treatment types, including treatment maintenance.				
▪ SPR HYD-6 Protect Existing Drainage Systems: If a treatment activity is adjacent to a roadway with stormwater drainage infrastructure, the existing stormwater drainage infrastructure will be marked prior to ground disturbing activities. If a drainage structure or infiltration system is inadvertently disturbed or modified during project activities, the project proponent will coordinate with owner of the system or feature to repair any damage and restore pre-project drainage conditions. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to All Treatment Activities	Napa Communities Firewise Foundation	Napa County
▪ Noise Standard Project Requirements				
▪ SPR NOI-1 Limit Heavy Equipment Use to Daytime Hours: The project proponent will require that operation of heavy equipment associated with treatment activities (heavy off-road equipment, tools, and delivery of equipment and materials) will occur during daytime hours if such noise would be audible to receptors (e.g., residential land uses, schools, hospitals, places of worship). Cities and counties in the treatable landscape typically restrict construction-noise (which would apply to vegetation treatment noise) to particular daytime hours. If the project proponent is subject to local	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
noise ordinance, it will adhere to those to the extent the project is subject to them. If the applicable jurisdiction does not have a noise ordinance or policy restricting the time-of-day when noise-generating activity can occur noise-generating vegetation treatment activity will be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday and federal holidays. If the project proponent is not subject to local ordinances (e.g., CAL FIRE), it will adhere to the restrictions stated above or may elect to adhere to the restrictions identified by the local ordinance encompassing the treatment area. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
▪ SPR NOI-2 Equipment Maintenance: The project proponent will require that all powered treatment equipment and power tools will be used and maintained according to manufacturer specifications. All diesel- and gasoline-powered treatment equipment will be properly maintained in accordance with manufacturers' recommendations. This SPR applies to all activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all Treatment Activities	Napa Communities Firewise Foundation	Napa County
▪ SPR NOI-3 Engine Shroud Closure: The project proponent will require that engine shrouds be closed during equipment operation. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: N Treatment Maintenance: N			
▪ SPR NOI-4 Locate Staging Areas Away from Noise-Sensitive Land Uses: The project proponent will locate treatment activities, equipment, and equipment staging areas away from nearby noise-sensitive land uses (e.g., residential land uses, schools, hospitals, places of worship), to the extent feasible, to minimize noise exposure. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all Treatment Activities	Napa Communities Firewise Foundation	Napa County
▪ SPR NOI-5 Restrict Equipment Idle Time: The project proponent will require that all motorized equipment be shut down when not in use. Idling of equipment and haul trucks will be limited to 5 minutes. This SPR applies to all treatment activities and all treatment types, including treatment maintenance. ❖ *This SPR may not be possible during prescribed burning operations, when fire engines must remain idling.*	Initial Treatment: N Treatment Maintenance: N			

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ SPR NOI-6 Notify Nearby Off-Site Noise-Sensitive Receptors: For treatment activities utilizing heavy equipment, the project proponent will notify noise-sensitive receptors (e.g., residential land uses, schools, hospitals, places of worship) located within 1,500 feet of the treatment activity. Notification will include anticipated dates and hours during which treatment activities are anticipated to occur and contact information, including a daytime telephone number, of the project representative. Recommendations to assist noise-sensitive land uses in reducing interior noise levels (e.g., closing windows and doors) will also be included in the notification. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: N Treatment Maintenance: N			
▪ Recreation Standard Project Requirements				
▪ SPR REC-1 Notify Recreational Users of Temporary Closures. If a treatment activity would require temporary closure of a public recreation area or facility, the project proponent will coordinate with the owner/manager of that recreation area or facility. If temporary closure of a recreation area or facility is required, the project proponent will work with the owner/manager to post notifications of the closure at least 2 weeks prior to the commencement of the treatment activities. Additionally, notification of the treatment activity will be provided to the Administrative Officer (or equivalent official responsible for distribution of public information) of the county(ies) in which the affected recreation area or facility is located. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: N Treatment Maintenance: N			
▪ Transportation Standard Project Requirements				
▪ SPR TRAN-1 Implement Traffic Control during Treatments: Prior to initiating vegetation treatment activities the project proponent will work with the agency(ies) with jurisdiction over affected roadways to determine if a Traffic Management Plan (TMP) is needed. A TMP will be needed if traffic generated by the project would result in obstructions, hazards, or delays exceeding applicable jurisdictional standards along access routes for individual vegetation treatments. If needed, a TMP will be prepared to provide measures to reduce potential traffic obstructions, hazards, and service level degradation along affected roadway facilities. The scope of the TMP will depend on the type, intensity, and duration of the specific treatment activities under the CalVTP. Measures included in the TMP could include (but are not be limited to) construction signage to provide motorists with notification and information when approaching or traveling along the affected roadway facilities, flaggers for lane closures to provide temporary traffic control along affected roadway facilities, treatment schedule	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during any treatment that would require a TMP. For instance if tree removal will be conducted from a public road.	Napa Communities Firewise Foundation	Napa County

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
restrictions to avoid seasons or time periods of peak vehicle traffic, haul-trip, delivery, and/or commute time restrictions that would be implemented to avoid peak traffic days and times along affected roadway facilities. If the TMP identifies impacts on transportation facilities outside of the jurisdiction of the project proponent, the TMP will be submitted to the agency with jurisdiction over the affected roadways prior to commencement of vegetation treatment projects. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
▪ Smoke generated during prescribed burn operations could potentially affect driver visibility and traffic operations along nearby roadways. Direct smoke impacts to roadway visibility and indirect impacts related to driver distraction will be considered during the planning phase of burning operations. Smoke impacts and smoke management practices specific to traffic operations during prescribed fire operations will be identified and addressed within the TMP, if a TMP is determined by the project proponent to be necessary. The TMP will include measures to monitor smoke dispersion onto public roadways, and traffic control operations will be initiated in the event burning operations could affect traffic safety along any roadways. This SPR applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during any treatment that would require a TMP. The need for this will be assessed by the project proponent and lead agency during the preparation of a Burn plan.		
▪ Public Services and Utilities Standard Project Requirements				
▪ SPR UTIL-1: Solid Organic Waste Disposition Plan. For projects requiring the disposal of material outside of the treatment area, the project proponent will prepare an Organic Waste Disposition Plan prior to initiating treatment activities. The Solid Organic Waste Disposition Plan will include the amount (e.g., tons) of solid organic waste to be managed onsite (i.e., scattering of wood materials, generating unburned piles, and pile burning) and transported offsite for processing (i.e., biomass power plant, wood product processing facility, composting). If the project proponent intends to transport solid organic waste offsite, the Solid Organic Waste Disposition Plan will clearly identify the location and capacity of the intended processing facility, consistent with local and state regulations to demonstrate that adequate capacity exists to accept the treated materials. This SPR applies only to mechanical and manual treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Aesthetics and Visual Resources				
▪ Mitigation Measure AES-3: Conduct Visual Reconnaissance for Non-Shaded Fuel Breaks and Relocate or Feather and Screen Publicly Visible Non-Shaded Fuel Breaks ▪ The project proponent will conduct a visual reconnaissance of the treatment area prior to implementing non-shaded fuel breaks to observe the surrounding landscape and determine if public viewing locations, including scenic vistas, public trails, and state scenic highways, have views of the proposed treatment area. If none are identified, the non-shaded fuel break may be implemented without additional visual mitigation. ▪ If the project proponent identifies public viewing points, including heavily used scenic vistas, public trails, recreation areas, and state scenic highways with lengthy views (i.e., longer than a few seconds) of a proposed non-shaded fuel break treatment area, the project proponent will, prior to implementation, attempt to identify any feasible change in location of the fuel break to reduce its visibility from public viewpoints. If no feasible location changes exist that would reduce impacts to public viewers and achieve the intended wildfire risk reduction objectives of the proposed non-shaded fuel break, the project proponent will implement, where feasible, a shaded fuel break rather than a non-shaded fuel break, if the shaded fuel break would achieve the intended wildfire risk reduction objectives. With the shaded fuel break, the project proponent will thin and feather adjacent vegetation to break up the linear edges of the fuel break and strategically preserve vegetation at the edge of the fuel break, as feasible, to help screen public views and minimize the contrast between the fuel break and surrounding vegetation.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during implementation of a non-shaded fuel break	Napa Community Firewise Foundation	Napa County
Air Quality				
▪ Mitigation Measure AQ-1: Implement On-Road Vehicle and Off-Road Equipment Exhaust Emission Reduction Techniques ▪ Where feasible, project proponents will implement emission reduction techniques to reduce exhaust emissions from off-road equipment. It is acknowledged that due to cost, availability, and the limits of current technology, there may be circumstances where implementation of certain emission reduction techniques will not be feasible. The project proponent will document the emission reduction techniques that will be applied and will explain the reasons other techniques that could reduce emissions are infeasible.	Initial Treatment: Y Treatment Maintenance: Y	During treatment activities: *See Transportation section of PSA for exclusions due to infeasibility.*	Napa Communities Firewise Foundation	Napa County

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ Techniques for reducing emissions may include, but are not limited to, the following: Diesel-powered off-road equipment used in construction will meet EPA's Tier 4 emission standards as defined in 40 CFR 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. Tier 3 models can be used if a Tier 4 version of the equipment type is not yet produced by manufacturers. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. Prior to implementation of treatment activities, the project proponent will demonstrate the ability to supply the compliant equipment. A copy of each unit's certified tier specification or model year specification and operating permit (if applicable) will be available upon request at the time of mobilization of each unit of equipment. Use renewable diesel fuel in diesel-powered construction equipment. Renewable diesel fuel must meet the following criteria: meet California's Low Carbon Fuel Standards and be certified by CARB Executive Officer; be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., non-petroleum sources), such as animal fats and vegetables; contain no fatty acids or functionalized fatty acid esters; and have a chemical structure that is identical to petroleum-based diesel and complies with American Society for Testing and Materials D975 requirements for diesel fuels to ensure compatibility with all existing diesel engines. ❖ *This mitigation is infeasible, and will thus not be applied. Diesel fuel will be used for all mechanical treatments. See PSA discussion for more details.* Electric- and gasoline-powered equipment will be substituted for diesel-powered equipment. ❖ *This mitigation is infeasible, and will thus not be applied. Diesel engines will be used for all mechanical treatments. See PSA discussion for more details* Workers will be encouraged to carpool to work sites, and/or use public transportation for their commutes. Off-road equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NO_X and PM.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Archaeological, Historical, and Tribal Cultural Resources				
▪ Mitigation Measure CUL-2: Protect Inadvertent Discoveries of Unique Archaeological Resources or Subsurface Historical Resources ▪ If any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, are discovered during ground-disturbing activities, all ground-disturbing activity within 100 feet of the resources will be halted and a qualified archaeologist will assess the significance of the find. The qualified archaeologist will work with the project proponent to develop a primary records report that will comply with applicable state or local agency procedures. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan will be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find constitutes a unique archaeological resource, subsurface historical resource, or tribal cultural resource), the archaeologist will work with the project proponent to develop appropriate procedures to protect the integrity of the resource. Procedures could include preservation in place (which is the preferred manner of mitigating impacts to archaeological sites), archival research, subsurface testing, or recovery of scientifically consequential information from and about the resource. Any find will be recorded standard DPR Primary Record forms (Form DPR 523) will be submitted to the appropriate regional information center.	Initial Treatment: Y Treatment Maintenance: Y	If Cultural resources are discovered	Napa Communities Firewise Foundation	Napa County
Biological Resources				
▪ Mitigation Measure BIO-1a: Avoid Loss of Special-Status Plants Listed under ESA or CESA ▪ If listed plants are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will avoid and protect these species by establishing a no-disturbance buffer around the area occupied by listed plants and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway), exceptions to this requirement are listed later in this measure. The no-disturbance buffers will generally be a minimum of 50 feet from listed plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid killing or damaging listed plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate buffer size will be determined based on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities if ESA or CESA listed plants are discovered.	Napa Communities Firewise Foundation	Napa County

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
the treatment method being used, and environmental conditions and terrain. For example, paint-on or wicking application of herbicides to invasive plants may be implemented within 50 feet of listed plant species without posing a risk, especially if the listed plants are dormant at the time of application. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform the determination of buffer width. If a no-disturbance buffer is reduced below 50 feet from a listed plant, a qualified RPF or botanist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report) with a science-based justification for the deviation. No fire ignition (nor use of associated accelerants) will occur within 50 feet of listed plants. ▪ For species listed under ESA or CESA, if the project proponent cannot avoid loss by implementing no-disturbance buffers, the project proponent will implement Mitigation Measure BIO-1c. ▪ The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist, in consultation with CDFW and USFWS, as appropriate depending on species status and location, that the listed plants would benefit from treatment in the occupied habitat area even though some of the listed plants may be lost during treatment activities. For a treatment to be considered beneficial to listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to listed plants, no compensatory mitigation for loss of individuals will be required.				
▪ Mitigation Measure BIO-1b: Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA ▪ If non-listed special-status plant species (i.e., species not listed under ESA or CESA, but meeting the definition of special-status as stated in Section 3.6.1 of the Program EIR) are determined to be present through application of SPR BIO-1 and SPR	Initial Treatment: Y Treatment Maintenance:	During all Treatment Activities. There is a population of Cobb mountain lupine discovered	Napa Communities Firewise Foundation	Napa County

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
BIO-7, the project proponent will implement the following measures to avoid loss of individuals and maintain habitat function of occupied habitat: Physically avoid the area occupied by the special-status plants by establishing a no-disturbance buffer around the area occupied by species and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The no-disturbance buffers will generally be a minimum of 50 feet from special-status plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid loss of or damaging to special-status plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate size and shape of the buffer zone will be determined by a qualified RPF or botanist and will depend on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform an appropriate buffer size and shape. Treatments may be conducted within this buffer if the potentially affected special-status plant species is a geophytic, stump-sprouting, or annual species, and the treatment can be conducted outside of the growing season (e.g., after it has completed its annual life cycle) or during the dormant season using only treatment activities that would not damage the stump, root system or other underground parts of special-status plants or destroy the seedbank. Treatments will be designed to maintain the function of special-status plant habitat. For example, for a fuel break proposed in treatment areas occupied by special-status plants, if the removal of shade cover would degrade the special-status plant habitat despite the requirement to physically or seasonally avoid the special-status plant itself, habitat function would be diminished and the treatment would need to be modified or precluded from implementation. No fire ignition (nor use of associated accelerants) will occur within the special-status plant buffer. ▪ A qualified RPF or botanist with knowledge of the special-status plant species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because	Y	within the project area. See the PSA for protections along with Attachment C operations maps for the location.		

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
implementation of the treatment would not maintain habitat function of the special-status plant habitat (i.e., the habitat would be rendered unsuitable) or because the loss of special-status plants would substantially reduce the number or restrict the range of a special-status plant species. If the project proponent determines the impact on special-status plants would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status plants or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-1c will be implemented. ▪ The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants would benefit from treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required.				
▪ Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants ▪ If significant impacts on listed or non-listed special-status plants cannot feasibly be avoided as specified under the circumstances described under Mitigation Measures BIO-1a and 1b, the project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant impacts that require compensatory mitigation and describes the compensatory mitigation strategy being implemented and how unavoidable losses of special-status plants will be compensated. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. If the special-status plant taxa are listed under ESA or CESA, the plan will be submitted to CDFW and/or USFWS (as appropriate) for review and comment.	Initial Treatment: Y Treatment Maintenance: Y	Prior to treatment within a special status plant STZ, if avoidance is not possible.	Napa Communities Firewise Foundation	Napa County

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ The first priority for compensatory mitigation will be preserving and enhancing existing populations outside of the treatment area in perpetuity, or if that is not an option because existing populations that can be preserved in perpetuity are not available, one of the following mitigation options will be implemented by the project proponent instead: creating populations on mitigation sites outside of the treatment area through seed collection and dispersal (annual species) or transplantation (perennial species); purchasing mitigation credits from a CDFW- or USFWS-approved conservation or mitigation bank in sufficient quantities to offset the loss of occupied habitat; and if the affected special-status plants are not listed under ESA or CESA, compensatory mitigation may include restoring or enhancing degraded habitats so that they are made suitable to support special-status plant species in the future. ▪ If relocation efforts are part of the Compensatory Mitigation Plan, the plan will include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements. The following performance standards will be applied for relocation: the extent of occupied area will be substantially similar to the affected occupied habitat and will be suitable for self-producing populations. Re-located/re-established populations will be considered suitable for self-producing when: habitat conditions allow for plants to reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and reestablished habitats contain an occupied area comparable to existing occupied habitat areas in similar habitat types in the region. ▪ If preservation of existing populations or creation of new populations is part of the mitigation plan, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands and actions (e.g., the number and type of credits, location of mitigation bank or easement, restoration or enhancement actions), parties responsible for the long-term management of the land, and the legal and funding mechanisms (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ If mitigation includes dedication of conservation easements, purchase of mitigation credits, or other offsite conservation measures, the details of these measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, funding assurances, and success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations. ▪ If mitigation includes restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. ▪ If the loss of occupied habitat cannot be offset (e.g., if preservation of existing populations or creation of new populations through relocation efforts are not available for a certain species), and as a result treatment activities would substantially reduce the number or restrict the range of listed plant species, then the treatment will not qualify as within the scope of this PEIR. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit for state-listed plants), if these requirements are equally or more effective than the mitigation identified above.				
▪ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities) ▪ If California Fully Protected Species or species listed under ESA or CESA are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid adverse effects to the species by implementing the following. ▪ <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> ▪ The project proponent will implement one of the following 2 measures to avoid mortality, injury, or disturbance of individuals: ▪ 1. Treatment will not be implemented within the occupied habitat. Any treatment activities outside occupied habitat will be a sufficient distance from the occupied habitat such that mortality, injury, or disturbance of the species will not occur, as	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities if ESA or CESA listed animals are discovered. The following will apply during the NSO breeding season if ACs are discovered. From February 1st to July 31st a no treatment buffer of 500 ft from any	Napa Communities Firewise Foundation	Napa County

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
determined by a qualified RPF or biologist using the most current and commonly-accepted science and considering published agency guidance; OR ▪ 2. Treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, CDFW and/or USFWS/NOAA Fisheries will be consulted to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species. For species listed under ESA or CESA, if the project proponent cannot avoid mortality, injury or disturbance by implementing one of the two options listed above, the project proponent will implement Mitigation Measure BIO-2c. Injury or mortality of California Fully Protected Species is prohibited pursuant to Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code and will be avoided. ▪ <u>Maintain Habitat Function</u> The project proponent will design treatment activities to maintain the habitat function, by implementing the following: While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; dens; tree snags; large raptor nests [including inactive nests]; downed woody debris; food sources). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that listed or fully protected wildlife with specific requirements for high canopy cover (e.g., Humboldt marten, fisher, spotted owl, coastal California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50		discovered AC shall be implemented for mechanical, manual, and prescribed fire treatment activities. See attachment B for the full analysis of the NSO and the determination of this buffer.		

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
percent for coastal California gnatcatcher]) such that habitat function is maintained. A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.				
▪ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) ▪ If other special-status wildlife species (i.e., species not listed under CESA or ESA or California Fully Protected, but meeting the definition of special status as stated in Section 3.6.1 of the Program EIR) are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid or minimize adverse effects to the species by implementing the following. ▪ <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> The project proponent will implement the following to avoid mortality, injury, or disturbance of individuals: ▪ For all treatment activities except prescribed burning, the project proponent will establish a no-disturbance buffer around occupied sites (e.g., nests, dens, roosts, middens, burrows, nurseries). Buffer size will be determined by a qualified RPF or biologist using the most current, commonly accepted science and will consider published agency guidance; however, buffers will generally be a minimum of 100 feet, unless site conditions indicate a smaller buffer would be sufficient for protection or a larger buffer would be needed. Factors to be considered in determining buffer size will include, but not be limited to, the species' tolerance to disturbance; the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; baseline levels of noise and human activity; and treatment activity. Buffer size may be adjusted if the qualified RPF or biologist determines that such an adjustment would not be likely to adversely affect (i.e., cause mortality, injury, or disturbance to) the species within the nest, den, burrow, or other occupied site. If a no-disturbance buffer is reduced	Initial Treatment: N Treatment Maintenance: N	See mitigations in PSA for the Pallid Bat. Prior to removal of snags in the Bio STZs, a qualified biologist or RPF will conduct focused surveys to determine current habitation per SPR BIO – 10. If a non – listed species is observed this document will be amended.	Napa Community Firewise Foundation	Napa County

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
below 100 feet from an occupied site, a qualified RPF or biologist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified RPF or biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified RPF, biologist, or biological technician will be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in mortality, injury or disturbance to special-status species. For prescribed burning, the project proponent will implement the treatment outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, the qualified RPF or biologist will determine the period of time within which prescribed burning could occur that will avoid or minimize mortality, injury, or disturbance of the species. The project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate limited operating periods. ▪ Maintain Habitat Function For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following: While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that special-status wildlife with specific requirements for high canopy cover (e.g., northern goshawk, Sierra Nevada snowshoe hare) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted) such that the habitat function is maintained. A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding habitat function. ▪ A qualified RPF or biologist with knowledge of the special-status wildlife species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status wildlife species' habitat or because the loss of special-status wildlife would substantially reduce the number or restrict the range of a special-status wildlife species. If the project proponent determines the impact on special-status wildlife would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status wildlife or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the non-listed special-status wildlife would benefit from treatment in the occupied habitat area even though some of the non-listed special-status wildlife may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to non-listed special-status wildlife, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status wildlife, no compensatory mitigation will be required. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding the determination that a non-listed special-status species would benefit from the treatment.				
▪ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities) ▪ If the provisions of Mitigation Measure BIO-2a, BIO-2b, BIO-2d, BIO-2e, BIO-2f, or BIO-2g cannot be implemented and the project proponent determines that additional mitigation is necessary to reduce significant impacts, the project proponent will compensate for such impacts to species or habitat by acquiring and/or protecting land that provides (or will provide in the case of restoration) habitat function for affected species that is at least equivalent to the habitat function removed or degraded as a result of the treatment. ▪ Compensation may include: ▪ 1. Preserving existing habitat outside of the treatment area in perpetuity; this may entail purchasing mitigation credits and/or lands from a CDFW- or USFWS-approved entity in sufficient quantity to offset the residual significant impacts, generally at a ratio of 1:1 for habitat; and ▪ 2. Restoring or enhancing existing habitat within the treatment area or outside of the treatment area (including decommissioning roads, adding perching structures, removing existing perching structures, or removing existing movement barriers or other existing features that are adversely affecting the species). ▪ The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: ▪ 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement),	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
parties responsible for the long-term management of the land, and the legal and funding mechanisms for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. ▪ 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. ▪ Review requirements are as follows: The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. For species listed under ESA or CESA or a California Fully Protected Species, the project proponent will submit the mitigation plan to CDFW and/or USFWS/NOAA Fisheries for review and comment. For other special-status wildlife species the project proponent may consult with CDFW and/or USFWS regarding the availability and applicability of compensatory mitigation and other related technical information. ▪ Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit), if these requirements are equally or more effective than the mitigation identified above.				
▪ Mitigation Measure BIO-2d: Implement Protective Measures for Valley Elderberry Longhorn Beetle (All Treatment Activities) ▪ If elderberry shrubs within the documented range of valley elderberry longhorn beetle are identified during review and surveys for SPR BIO-1, and valley elderberry longhorn beetle or likely occupied suitable elderberry habitat (e.g., within riparian, within historic riparian, containing exit holes) is confirmed to be present during protocol-level surveys following the protocol outlined in USFWS Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS 2017) per SPR BIO-10, the	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
following protective measures will be implemented to avoid and minimize impacts to valley elderberry longhorn beetle: If elderberry shrubs are 165 feet or more from the treatment area, and treatment activities would not encroach within this distance, direct or indirect impacts are not expected and further mitigation is not required. If elderberry shrubs are located within 165 feet of the treatment area, the following measures will be implemented: A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be fenced or flagged and maintained to avoid direct impacts (e.g., damage to root system) that could damage or kill the plant, with the exception of the following activities: Manual trimming of elderberry shrubs will only occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects on valley elderberry longhorn beetle. Manual or mechanical vegetation treatment within the drip-line of any elderberry shrub will be limited to the season when adults are not active (August - February), will be limited to methods that do not cause ground disturbance, and will avoid damaging the elderberry. A qualified RPF, biologist, or biological technician familiar with valley elderberry longhorn beetle and its life history will monitor the work area to verify the avoidance and minimization measures are implemented. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to valley elderberry longhorn beetle. ▪ If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of VELB or degradation of occupied habitat such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.				
▪ Mitigation Measure BIO-2e: Design Treatment to Retain Special-Status Butterfly Host Plants (All Treatment Activities) ▪ If federally listed butterflies are identified as occurring or having potential to occur during review and surveys for SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, then the following measures will be implemented:	Initial Treatment: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Treatment areas within the range of these species will be surveyed for the host plant for each species (Table 3.6-34). Host plants for federally listed butterflies within the occupied habitat will be marked with high-visibility flagging, fencing, or stakes, and no treatment activities will occur within 10 feet of these plants. Because prescribed herbivory could result in the indiscriminate removal of the host plants for federally listed butterflies, this treatment type will not be used within occupied habitat of any federally listed butterfly species, unless it is known that the host plant is unpalatable to the herbivore. Treatment areas that are not occupied but are within the range of the federally listed butterfly will be divided into as many treatment units as feasible such that the entirety of the habitat is not treated within the same year. Treatments will be conducted in a patchy pattern to the extent feasible in areas that are not occupied but are within the range of the federally listed butterfly, such that the entirety of the habitat is not burned or removed and untreated portions of suitable habitat are retained. If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of federally listed butterflies or degradation of occupied habitat (host plants) such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c. ▪ CESA and ESA Listed Species. A qualified RPF or biologist will determine if, after implementation of any feasible impact avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed butterflies or degradation of occupied habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. ▪ Other Special-status Species. A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA, because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals	Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity

would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status butterflies would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status butterflies or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented.

The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status butterfly species would benefit from treatment in the occupied habitat area even though some may be killed, injured or disturbed during treatment activities. For a treatment to be considered beneficial to special-status butterfly species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources). If it is determined that treatment activities would be beneficial to special-status butterflies, no compensatory mitigation will be required.

▸ **Table 3.6-34 Special-status Butterflies and Associated Host Plants**

• Butterfly Species	• Host Plants
▪ bay checkerspot butterfly	▪ dwarf plantain (*Plantago virginica*), purple owl's clover (*Castilleja exserta*)
▪ Behren's silverspot butterfly	▪ blue violet (*Viola adunca*)
▪ callippe silverspot butterfly	▪ California golden violet (*Viola pedunculata*)
▪ Carson wandering skipper	▪ salt grass (*Distichlis spicata*)
▪ El Segundo blue butterfly	▪ seacliff buckwheat (*Eriogonum parvifolium*)

Mitigation Measures		Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ Hermes copper butterfly	▪ spiny redberry (*Rhamnus crocea*)				
▪ Kern primrose sphinx moth	▪ plains evening-primrose (*Camissonia contorta*), field primrose (*Camissonia campestris*)				
▪ Laguna Mountains skipper	▪ Cleveland's horkelia (*Horkelia clevelandii*), sticky cinquefoil (*Drymocallis glandulosa*)				
▪ Lange's metalmark butterfly	▪ naked-stemmed buckwheat (*Eriogonum nudum*)				
▪ lotis blue butterfly	▪ seaside bird's foot trefoil (*Hosackia gracilis*)				
▪ Mission blue butterfly	▪ lupine (*Lupinus* spp.)				
▪ Myrtle's silverspot butterfly	▪ blue violet				
▪ Oregon silverspot butterfly	▪ blue violet				
▪ Palos Verdes blue butterfly	▪ Santa Barbara milkvetch (*Astragalus trichopodus*), common deerweed (*Acmispon glaber*)				
▪ San Bruno elfin butterfly	▪ broadleaf stonecrop (*Sedum spathulifolium*), manzanita (*Arctostaphylos* spp.), huckleberry (*Vaccinuum* spp.)				
▪ Smith's blue butterfly	▪ seacliff buckwheat, seaside buckwheat (*Eriogonum latifolium*)				
▪ Quino checkerspot butterfly	▪ dwarf plantain, purple owl's clover				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ Mitigation Measure BIO-2f: Avoid Habitat for Special-Status Beetles, Flies, Grasshoppers, and Snails (All Treatment Activities) ▪ If treatment activities would occur within the limited range of any state or federally listed beetle, fly, grasshopper, or snail, and these species are identified as occurring or having potential to occur due to the presence of potentially suitable habitat during review and surveys for SPR BIO-1 and surveys for SPR BIO-10, then the following measures will be implemented: To avoid and minimize impacts to Mount Hermon June beetle and Zayante band-winged grasshopper, treatment activities will not occur within "Sandhills" habitat in Santa Cruz County, the only suitable habitat for these species. To avoid and minimize impacts to Casey's June beetle, Delhi Sands flower-loving fly (*Rhaphiomidas terminates abdominalis*), Delta green ground beetle (*Elaphrus virisis*), Morro shoulderband snail, Ohlone tiger beetle (*Cicindela ohlone*), and Trinity bristle snail, treatment activities will not occur within habitat in the range of these species that is deemed suitable by a qualified RPF or biologist with familiarity of the species. If the project proponent cannot implement the measures above to avoid mortality, injury or disturbance to listed beetles, flies, grasshoppers, and snails, or degradation of suitable habitat such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.	Initial Treatment: N Treatment Maintenance: N			
▪ Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees (All Treatment Activities) ▪ If special-status bumble bees are identified as occurring during review and surveys under SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, or if suitable habitat for special-status bumble bees is identified during review and surveys under SPR BIO-1 (e.g., wet meadow, forest meadow, riparian, grassland, or coastal scrub habitat containing sufficient floral resources within the range of the species), then the project proponent will implement the following measures, as feasible: Prescribed burning within occupied or suitable habitat for special-status bumble bees will occur from October through February to avoid the bumble bee flight season. Treatment areas in occupied or suitable habitat will be divided into a sufficient number of treatment units such that the entirety of the habitat is not treated within the same year; the objective of this measure is to provide refuge for	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
special-status bumble bees during treatment activities and temporary retention of suitable floral resources proximate to the treatment area. Treatments will be conducted in a patchy pattern to the extent feasible in occupied or suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of unburned floral resources for special-status bumble bees within the treatment area). Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March through September). ▪ CESA and ESA Listed Species. A qualified RPF or biologist will determine if, after implementation of feasible avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance to the species, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed bumble bees (in the event the Candidate listing is confirmed) or degradation of occupied (or assumed to be occupied) habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. ▪ Other Special-status Species. A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status bumble bees would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status bumble bees or degradation of occupied (or assumed to be occupied) habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status bumble bee species would benefit from treatment in the occupied (or assumed to be occupied) habitat area even though some of the non-listed special-status bumble bees may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to special-status bumble bee species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status bumble bees, no compensatory mitigation will be required.				
▪ Mitigation Measure BIO-2h: Avoid Potential Disease Transmission Between Domestic Livestock and Special-Status Ungulates (Prescribed Herbivory) ▪ The project proponent will implement the following measure if treatment activities are planned within the range of desert bighorn sheep, peninsular bighorn sheep, Sierra Nevada bighorn sheep, or pronghorn: Prescribed herbivory activities will be prohibited within a 14-mile buffer around suitable habitat for any species of bighorn sheep within the range of these species consistent with the more stringent recommendations in the Recovery Plan for Sierra Nevada bighorn sheep (USFWS 2007). Prescribed herbivory activities will be avoided within the range of pronghorn where feasible (where this range does not overlap with the range of any species of bighorn sheep).	Initial Treatment: N Treatment Maintenance: N			
▪ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands ▪ The project proponent will implement the following measures when working in treatment areas that contain sensitive natural communities identified during surveys conducted pursuant to SPR BIO-3: Reference the *Manual of California Vegetation*, Appendix 2, Table A2, *Fire Characteristics* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/) or other best available information to determine the natural fire regime of the specific sensitive natural	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
community type (i.e., alliance) present. The condition class and fire return interval departure of the vegetation alliances present will also be determined. Design treatments in sensitive natural communities and oak woodlands to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function of the affected sensitive natural community. Treatments will be designed to replicate the fire regime attributes for the affected sensitive natural community or oak woodland type including seasonality, fire return interval, fire size, spatial complexity, fireline intensity, severity, and fire type as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/). Treatments will not be implemented in sensitive natural communities that are within their natural fire return interval (i.e., time since last burn is less than the average time required for that vegetation type to recover from fire) or within Condition Class 1. To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled). To the extent feasible, fuel breaks will not remove more than 20 percent of the native vegetation relative cover from a stand of sensitive natural community vegetation in sensitive natural communities with a rarity rank of S3 (vulnerable) or in oak woodlands. In forest and woodland sensitive natural communities with a rarity rank of S3, and in oak woodlands, only shaded fuel breaks will be installed, and they will not be installed in more than 20 percent of the stand of sensitive natural community or oak woodland vegetation (i.e., if the sensitive natural community covers 100 acres, no more than 20 acres will be converted to create the fuel break). Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/). Time prescribed herbivory to occur when non-target vegetation is not susceptible to damage (e.g. non-target vegetation is dormant or has completed its				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
reproductive cycle for the year). For example, use herbivores to control invasive plants growing in sensitive habitats or sensitive natural communities when sensitive vegetation is dormant but invasive plants are growing. Timing of herbivory to avoid non-target vegetation will be determined by a qualified botanist, RPF, or biologist based on the specific vegetation alliance being treated, the life forms and life conditions of its characteristic plant species, and the sensitivity of the non-target vegetation to the effects of herbivory. The feasibility of implementing the avoidance measures will be determined by the project proponent based on whether implementation of this mitigation measure will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. If the avoidance measures are determined by the project proponent to be infeasible, the project proponent will document the reasons implementation of the avoidance strategies are infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). ▪ A qualified RPF or botanist with knowledge of the affected sensitive natural community will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat functions of the sensitive natural community or oak woodland. If the project proponent determines the impact on sensitive natural communities or oak woodlands would be less than significant, no further mitigation will be required. If the project proponent determines that the loss or degradation of sensitive natural communities or oak woodlands would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-3b will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the sensitive natural community or oak woodland would benefit from treatment in the occupied habitat area even though some loss may occur during treatment activities. For a treatment to be considered beneficial to a sensitive natural community or oak woodland, the qualified RPF or botanist will				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the community (or similar community) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to sensitive natural communities or oak woodlands, no compensatory mitigation will be required.				
▪ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands ▪ If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under Mitigation Measure BIO-3a, the project proponent will implement the following actions: Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by: restoring sensitive natural community or oak woodland functions and acreage within the treatment area; restoring degraded sensitive natural communities or oak woodlands outside of the treatment area at a sufficient ratio to offset the loss of acreage and habitat function; or preserving existing sensitive natural communities or oak woodlands of equal or better value to the sensitive natural community lost through a conservation easement at a sufficient ratio to offset the loss of acreage and habitat function. The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on sensitive natural communities or oak woodlands that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: ▪ 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. ▪ 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. ▪ The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan.				
▪ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat ▪ If, after implementation of SPR BIO-4, impacts to riparian habitat remain significant under CEQA, the project proponent will implement the following: Compensate for unavoidable losses of riparian habitat acreage and function by: restoring riparian habitat functions and acreage within the treatment area; restoring degraded riparian habitat outside of the treatment area; purchasing riparian habitat credits at a CDFW-approved mitigation bank; or preserving existing riparian habitat of equal or better value to the riparian habitat lost through a conservation easement at a sufficient ratio to offset the loss of riparian habitat function and value. The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on riparian habitat that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: ▪ 1. For preserving existing riparian habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity. ▪ 2. For restoring or enhancing riparian habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. ▪ The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above.				
▪ Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands ▪ Impacts to wetlands will be avoided using the following measures: The qualified RPF or biologist will delineate the boundaries of federally protected wetlands according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and the appropriate regional supplement for the ecoregion in which the treatment is being implemented. The qualified RPF or biologist will delineate the boundaries of wetlands that may not meet the definition of waters of the United States, but would qualify as waters of the state, according to the state wetland procedures (California Water Boards 2019 or current procedures).	Initial Treatment: N Treatment Maintenance: N			
A qualified RPF or biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified RPF or biologist and will depend on the type of wetland present (e.g., seasonal wetland, wet meadow, freshwater marsh, vernal pool), the timing of	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
treatment (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the treatment activities, environmental conditions and terrain, and the treatment activity being implemented. A qualified RPF or biological technician will periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided. Within this buffer, herbicide application is prohibited. Within this buffer, soil disturbance is prohibited. Accordingly, the following activities are not allowed within the buffer zone: mechanical treatments, prescribed herbivory, equipment and vehicle access or staging. Only prescribed (broadcast) burning may be implemented in wetland habitats if it is determined by a qualified RPF or biologist that: No special-status species are present in the wetland habitat The wetland habitat function would be maintained. The prescribed burn is within the normal fire return interval for the wetland vegetation types present Fire containment lines and pile burning are prohibited within the buffer No fire ignition (nor use of associated accelerants) will occur within the wetland buffer				
▪ Mitigation Measure BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites ▪ The project proponent will implement the following measures while working in treatment areas that contain nursery sites identified in surveys conducted pursuant to SPR BIO-10: Retain Known Nursery Sites. A qualified RPF or biologist will identify the important habitat features of the wildlife nursery and, prior to treatment activities, will mark these features for avoidance and retention during treatment Establish Avoidance Buffers. The project proponent will establish a non-disturbance buffer around the nursery site if activities are required while the nursery site is active/occupied. The appropriate size and shape of the buffer will be determined by a qualified RPF or biologist, based on potential effects of project-related habitat disturbance, noise, visual disturbance, and other factors. No treatment activity will commence within the buffer area until a qualified RPF or	Initial Treatment: N Treatment Maintenance: N			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
biologist confirms that the nursery site is no longer active/occupied. Monitoring of the effectiveness of the non-disturbance buffer around the nursery site by a qualified RPF, biologist, or biological technician during and after treatment activities will be required. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to special-status species.				
Greenhouse Gas Emissions				
▪ Mitigation Measure GHG-2. Implement GHG Emission Reduction Techniques During Prescribed Burns ▪ When planning for and conducting a prescribed burn, project proponents implementing a prescribed burn will incorporate feasible methods for reducing GHG emissions, including the following, which are identified in the National Wildfire Coordinating Group Smoke Management Guide for Prescribed Fire (NWCG 2018): reduce the total area burned by isolating and leaving large fuels (e.g., large logs, snags) unburned; reduce the total area burned through mosaic burning; burn when fuels have a higher fuel moisture content; reduce fuel loading by removing fuels before ignition. Methods to remove fuels include mechanical treatments, manual treatments, prescribed herbivory, and biomass utilization; and schedule burns before new fuels appear. ▪ As the science evolves, other feasible methods or technologies to sequester carbon could be incorporated, such as conservation burning, a technique for burning woody material that reduces the production of smoke particulates and carbon released into the atmosphere and generates more biochar. Biochar is produced from the material left over after the burn and spread with compost to increase soil organic matter and soil carbon sequestration. Technologies to reduce greenhouse gas emissions may also include portable units that perform gasification to produce electricity or pyrolysis that produces biooil that can be used as liquid fuel and/or syngas that can be used to generate electricity.	Initial Treatment: Y Treatment Maintenance: Y	During prescribed burning treatment activities.	Napa Communities Firewise Foundation	Napa County

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▪ The project proponent will document in the Burn Plan required pursuant to SPR AQ-3 which methods for reducing GHG emissions can feasibly be integrated into the treatment design.				
Hazardous Materials, Public Health and Safety				
▪ Mitigation Measure HAZ-3: Identify and Avoid Known Hazardous Waste Sites ▪ Prior to the start of vegetation treatment activities requiring soil disturbance (i.e., mechanical treatments) or prescribed burning, CAL FIRE and other project proponents will make reasonable efforts to check with the landowner or other entity with jurisdiction (e.g., California Department of Parks and Recreation) to determine if there are any sites known to have previously used, stored, or disposed of hazardous materials. If it is determined that hazardous materials sites could be located within the boundary of a treatment site, the project proponent will conduct a DTSC EnviroStor web search (https://www.envirostor.dtsc.ca.gov/public/) and consult DTSC's Cortese List to identify any known contamination sites within the project site. If a proposed mechanical treatment or prescribed burn is located on a site included on the DTSC Cortese List as containing potential soil contamination that has not been cleaned up and deemed closed by DTSC, the area will be marked and no prescribed burning or soil disturbing treatment activities will occur within 100 feet of the site boundaries. If it is determined through coordination with landowners or after review of the Cortese List that no potential or known contamination is located on a project site, the project may proceed as planned.	Initial Treatment: Y Treatment Maintenance: Y	Prior to Mechanical and Prescribed Burning Treatments	Napa Communities Firewise Foundation	Napa County

Attachment B

Hogback Ridge VTP # 2025-19

Biological Resource Assessment

As per SPR BIO-1, a reconnaissance level survey was conducted by the RPF, to determine what habitats were present within the project area. This habitat analysis informed the subsequent listed and non-listed species impact analysis. The biological survey effort conducted by FRM totals 130 hours. During the field reconnaissance, the following non-sensitive animal species were identified either visually or otherwise (i.e. scatt, tracks, etc…):

Black tail deer, tree squirrel, ground squirrel, coyote, crow, raven, blue jay, red tailed hawk and hummingbird.

- ❖ The following are all rare, threatened, endangered, and Species of Special Concern with potential to occur within the project area. Species occurrences listed in the CNDDB within 0.7 miles of the project area were included in this report.

Birds

- A note on birds of prey and the treatments proposed on this project: The treatments proposed will have very little negative effect on the habitat types these species rely on. Most of the treatments are focused on removing dead and down debris, along with understory vegetation. The result will be the creation of better foraging habitat for birds of prey, due to the decrease in places for food sources to hide. A high degree of LWD will be retained throughout the units, as it is infeasible to treat all this material. Also, LWD is not responsible for causing high intensity wildfire. This will ensure habitat is retained for prey species.

  These species usually create nests high off the ground in large old trees. These types of trees are not targeted for removal unless they are a rotten snag near a ridgeline fuel break. These trees will be assessed by an RPF or qualified biologist prior to removal.

Birds

Northern Spotted Owl (*Strix occidentalis caurina*)

Status: FT; ST

Habitat Requirements: Northern spotted owls (NSO) are old growth to second growth forest obligate birds that require permanent water and suitable nesting trees/snags (Zeiner et al. 1990a). Northern spotted owls use dense, old-growth forests, or mid- to late- seral stage forest, with a multi-layered canopy for breeding (Remsen 1978). Northern spotted owl nests are most often found on existing structures (old raptor nest, squirrel nest, red-tree vole nest), or debris piled on a broken topped tree; although, they have been found inside tree cavities.

In evaluating potential NSO habitat, the presence of a nest structure may be more important than the size or species of tree. Successful nest sites have canopy cover immediately above nests exceeding 85%.

The presence of high-quality foraging habitat is also very important. Early seral habitat can provide excellent foraging opportunities for the NSO. Its primary prey in this area is the dusky-footed woodrat (*Neotoma fuscipes*). The NSO breeds from southwestern British Columbia south through western Washington and western Oregon to Marin County, California. The breeding season is between February 1st to July 31st.

Potential for Occurrence: There are 7 documented activity centers within 0.7 miles of the project area. They are NAP0004, NAP0008, NAP0032, NAP0034, NAP0037, NAP0038, and NAP0041. No protocol level NSO surveys have been conducted since these detections were originally made. The project proponent shall assume occupancy at all ACs. There are no activity centers within 500 ft of the project area.

CDFW Consultation Results Regarding NSO Protections:

CDFW was contacted by FRM on 3/27/25 for technical support, regarding protections for these activity centers, as per Mitigation Measure BIO-2a. In the email correspondence, FRM proposed utilizing the U.S Fish and Wildlife document titled "*Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls in Northwestern California*", updated October 10, 2020. After consultation with CDFW, it was determined that the document can be used for guidance to create seasonal buffers for NSO during treatment. The guidance provides information for determining the appropriate nest buffer distance based on activities, and their potential increase to the ambient noise level. Shown in Table One below is disturbance distances by action generated sound and pre-project sound level. The Hogback Ridge CalVTP generally falls in the "Natural Ambient" category for pre project sound level. Table Two references the equipment that will be used during the project. By taking an average of the decibel level created by the equipment, the action generated sound falls within the "High" category. Thereby requiring a buffer distance of 500 feet. A copy of the email correspondence in its entirety is located at the end of Attachment B for reference.

Project Specific Mitigation measures for NSO ACs:

- There are 7 known Activity Centers within 0.7 miles of the project area, but none of these are within 500 ft of the project boundary.

- SPR BIO-2: Require training on identification of NSO to all workers prior to beginning operations. If an NSO is observed during operations, all treatments shall stop within 500 ft of the location and an RPF shall be notified.

- If NSO ACs are discovered within 500 ft of the treatment area, MM BIO-2a will go into effect with the following provisions:

    - Mechanical treatments, manual treatments, and prescribed burning shall require a seasonal no treatment buffer within **500 ft** of the AC, between February 1st and July 31st.

    - Prior to mechanical, manual, or prescribed fire treatments, the project proponent shall have an RPF or their supervised designee flag an STZ around the discovered AC within the proposed treatment area.

    - Prescribed herbivory and herbicide use shall not require a seasonal restriction.

Table 1. Estimated disturbance distance (in feet) due to elevated action-generated sound levels affecting the northern spotted owl and marbled murrelet, by sound level.

Existing (Ambient) Pre-Project Sound Level (dB) [1, 2]	Anticipated Action-Generated Sound Level (dB) [2, 3]			
	Moderate (71-80)	High (81-90)	Very High (91-100)	Extreme (101-110)
"Natural Ambient" [4] (< = 50)	50 (165)[5,6]	150 (500)	400 (1,320)	400 (1,320)
Very Low (51-60)	0	100 (330)	250 (825)	400 (1,320)
Low (61-70)	0	50 (165)	250 (825)	400 (1,320)
Moderate (71-80)	0	50 (165)	100 (330)	400 (1,320)
High (81-90)	0	50 (165)	50 (165)	150 (500)

Table 2

Equipment Type	Typical Noise Level (dB) at 50 Feet[1]
Chain Saw	85
Dozer	85
Wood Chipper	75[2]

Bank swallow (*Riparia riparia*)

Status: ST

Habitat Requirements**:** Bank swallows are a migratory species and can be found in the area in summer months. They are primarily found in riparian and other lowland habitats. They forage predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland.

Potential for Occurrence: There is a low – moderate potential for this species to occur. The closest known occurrence is mapped generally to Sonoma Creek, this creek is over 0.7 miles from the nearest treatment area. According to the CNDDB, an egg set was collected on May 23rd 1893. The record is very old and mapped as best guess by CNDDB. Huichica creek, which falls within the CNDDB mapped polygon, was surveyed for nests, no evidence of current habitation was found. There is a potential for habitat to be found in other class I and class II watercourses throughout the project area.

Potential Project Impact: Due to the potential habitat within the project area, there may be a low to moderate potential for treatments to impact this species if present. However, with the application of the following mitigations and SPRs, this potential impact will be lowered to a level of insignificance.

WLPZ protections prescribed in HYD-4 and BIO-4 will provide refuge for this species, particularly within their optimum foraging habitat. Furthermore, SPR BIO-2 training for workers will ensure operators are trained in the identification of this species. SPR BIO-10, focused surveys were conducted by FRM during preparation of the PSA and this species was not detected. SPR BIO-12 requiring nesting bird surveys between March-July will further reduce potential impact to this species. Overall, with these mitigations and protection measures, there is not expected to be an impact to this species from the proposed treatment activities.

Black swift (*Cypseloides niger*)

Status: SSC

Habitat Requirements: Black swifts nest in moist crevices or caves on sea cliffs above the surf, or on cliffs behind, or adjacent to waterfalls in deep canyons. They forage over a wide variety of habitats and nest in mid-May laying 1 egg per season.

Potential for Occurrence: Per the CNDDB, there is one record of the species which is mapped to an indistinct location around Mt. Veeder. The accuracy of this record is mapped to one mile. During field reconnaissance, no observations of the species nor habitat were found within the treatment area.

Potential Project Impact**:** There will be no impact to this species as there is no potential habitat.

Mammals

Pallid Bat (*Antrozous pallidus*)

Status: SSC

Habitat Requirements: Pallid bats occupy a wide variety of habitats, such as grasslands, shrublands, and forested areas of oak and pine, but prefer rocky outcrops with desert scrub (Zeiner et al. 1990b). The pallid bat roosts in caves, mines, crevices, buildings, under bridges, and occasionally in hollow trees. Day roosts are located at sites that provide protection from the heat of the day; Night roosts are in more open areas such as porches or open buildings (Zeiner et al. 1990b). Pallid bats feed on a wide variety of relatively large ground dwelling or slow flying insects and arachnids (Zeiner et al. 1990b). Colonies of *A. pallidus*, as with most bats, will typically emerge about 1 hour after sunset, return to roost, and then forage again before dawn. This species specializes in foraging on insects on the ground, versus in the air, by listening for the insect footsteps. The pallid bat is found throughout most of the western U. S. and Mexico.

Potential for Occurrence: There is a low-moderate potential for occurrence of this species. Three bats were captured within the Southern Treatment Unit in October 1998. This record is mapped to the Southern Hogback Ridge Treatment Unit operations map as a Bio STZ. In addition, 32 bats were found along Huichia Creek in September of 1939, Huichia creek is located near the Southern Treatment Unit. The final record states a bat was observed within 0.7 miles of the Southern Hogback Treatment unit. During field reconnaissance, no specific habitat was observed within the treatment area, such as trees that contain basal hollows, which are ideal for Bat species. However, much of the treatment area was severely affected by the Nuns fire in 2017. This has caused mortality in Douglas fir stands which have the potential for current Bat habitation.

Potential Project Impact: There is a low potential for impact within the project area. SPR BIO-2 training for workers will ensure crews are trained in the identification of this species. SPR BIO-10 will be conducted prior to snag removal in areas with a greater potential for Bat habitat such as the Douglas – fir high mortality stands which are labeled as bio STZs in the in the Northern Treatment Unit in attachment C. In addition, the CNDDB record of Pallid Bat occurrence is mapped as the bio STZ in the Southern Hogback Ridge Treatment Unit. If roost trees are detected they will be protected. Overall, with these mitigations and protection measures, there is not expected to be an impact to this species from the proposed treatment activities.

Amphibians and Reptiles

California Giant Salamander (*Dicamptodon ensatus*)

Status: SSC

Habitation Requirements: California *Dicamptodon* salamanders are year round residents of California. In 1989, these salamanders were split into two species – California giant salamander (*Dicamptodon ensatus*) occurring south of the Mendocino County line and the coastal giant salamander (*Dicamptodon tenebrosus*) occurring in the north (Thomas et al. 2016). A hybrid zone exists approximately 6 miles north of Gualala; however outside of this area, the two species are known to be distinct (Thomas et al. 2016). This species occurs in wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.

Potential for Occurrence: There is a moderate potential for occurrence within the class I and class II watercourses found within the treatment area. Per the CNDDB, multiple salamanders were collected in Redwood creek. In 2005, one was collected and one was observed upstream of the treatment area. In 1985, ten were collected downstream of the treatment area. The final observation encompasses the northern treatment unit, with one collected along Mount Veeder road near Lokoya, but its exact location is unknown as the accuracy of the record is mapped to one mile.

Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

California Red-Legged Frog (*Rana draytonii*)

Status: FT, SP, SSC

Habitation Requirements: California red-legged frogs (CRLF) primarily inhabit permanent or nearly permanent water sources (quiet streams, marshes, and ponds). Breeding tends to occur primarily in ponds, less likely in streams, and happens from November to April. This ranid frog will also use upland habitats outside of the breeding season and may be discovered under logs, rocks, and other debris during wet conditions. CRLF were historically believed to prefer only habitats and shorelines with extensive vegetation.

Potential for Occurrence: Per the CNDDB, one adult was found in August 2019 in a small pond about half a mile from the northern treatment unit. There is a very low potential for occurrence within class I and class II watercourses.

Potential Project Impact: With the following protection measures and SPRs, the potential for this species to be impacted by treatments will be lowered to a level of insignificance. The WLPZ as outlined in SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

Foothill Yellow-Legged Frog *(Rana boylii)*

Status: SSC; This species became a candidate for listing on July 7th, 2017. In 2019, CDFW published recommendations to list the FYLF based on a geographic Clade. This recommendation provides protection among populations which greatly need it and avoids unnecessary restrictions in areas where populations are healthy. The only Clade not listed is the Northwest/North Coast Clade. The project area falls within this zone, thus the FYLF is not listed under CESA.

Habitation Requirements**:** Foothill Yellow-Legged Frogs (FYLF) are associated with lower elevation streams draining the Pacific slope from west-central Oregon to northwestern Baja California. They have declined from over 50% of their historic range. Foothill yellow-legged frogs occupy a diverse range of ephemeral and permanent streams, rivers, and adjacent moist terrestrial habitats over the course of their complex life history. FYLF reproduce in the spring by depositing egg masses into glide habitats within larger watercourses (typically Class I waters). Egg masses are deposited on the down-stream side of cobble size rocks during April-May. Larval forms (tadpoles) rear in watercourses until early fall. Post-metamorphic frogs tend to stay in close proximity to their water source. Adults can migrate down the drainage network to channels that are broad and more sunlit. Seasonal variation in streamflow has a strong influence on life history and movement. Breeding and rearing typically occur in open sunny portions of class I and II watercourses which are gently flowing and low-gradient.

Potential for Occurrence: Per the CNDDB, there is one record which maps an indistinct location for this species. The habitat consists of a perennial seep, which flows into a small tributary to Dry Creek. The surrounding habitat is chaparral, with patches of mixed evergreen. Dry Creek is over 0.7 miles from the treatment area and the record is mapped to the entirety of the Rutherford quadrant. Given the habitation requirements, there is a moderate potential for occurrence of Foothill yellow legged frog within the treatment area within class I and class II watercourses.

Potential Project Impact: The potential for the project to impact this species is very low. The watercourse protection measures, particularly SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

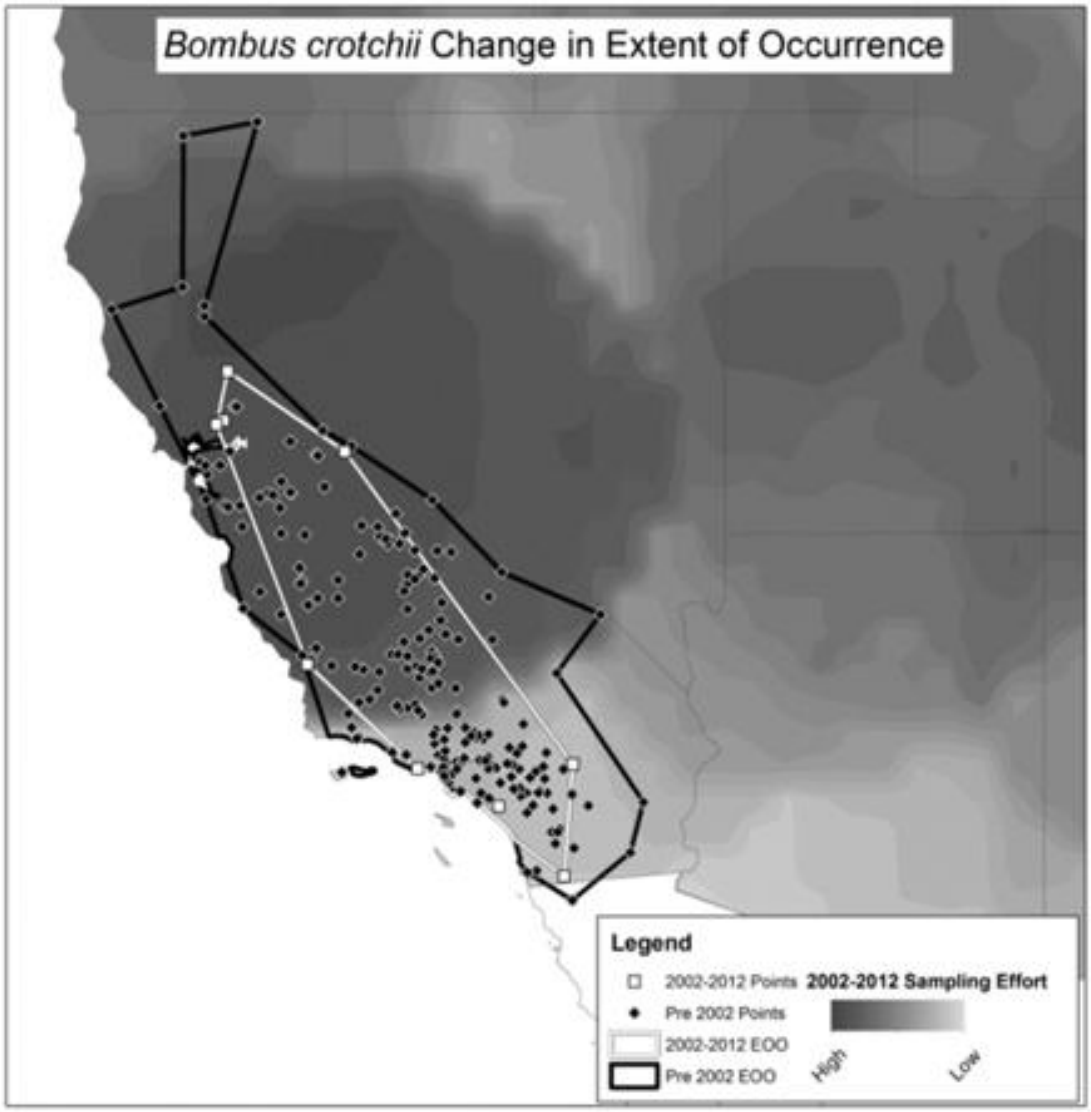
Insects

Crotch Bumblebee

Status: Candidate SE

Habitation Requirements: The crotch bumblebee is native to California, Baja California and has been reported in Nevada. This bee lives in grassland and scrub habitat types. It nests underground and its food plants consist of milkweeds, dusty maidens, lupines, medics, phacelias, and sages. This bee tolerates hotter and drier habitat types than most bumblebees do.

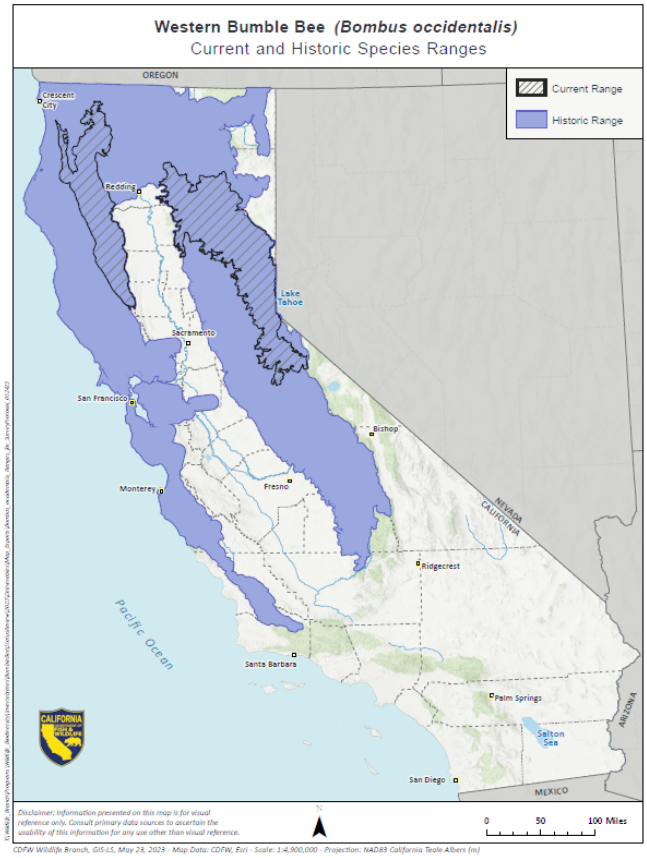
Potential for Occurrence: Although there were no known occurrences within the Biological Assessment Area (BAA), the project area is within the pre 2002 range of the Crotch Bumble bee. However, recent increased survey efforts have suggested a change in the extent of occurrence of this species. See the figure below. This change in extent would indicate a low likelihood of this species occurring within the treatment areas.



Potential Project Impact: Based on the information above, there is low potential for this species to be impacted by the project. Overall, the proposed project is expected to have an increase in potential habitat through the development of early successional forest types, associated with forest thinning. Also, the removal of small conifer trees from oak woodlands will allow for the expansion of grasslands. This is expected to have a net increase in floral resources and habitat creation over the long run.

Western bumblebee (*Bombus occidentalis*)

Status: Candidate SE



Habitation Requirements: The western bumble bee was once very common in the western United States and western Canada. It is mostly currently restricted to high meadows and coastal environments. It requires floral resources, undisturbed nest sites and overwintering sites. Nesting habitat is typically underground, such as in old animal burrows, but also possibly above ground such as in cavities in logs. Overwintering sites are probably under plant litter and debris. The flight period in California is from early February to late November, peaking in late June and late September. Western bumble bees primarily nest in underground cavities such as old squirrel burrows on open west-southwest facing slopes bordered by trees. Colonies can contain as many as 1,685 workers and produce up to 360 new queens.

Potential for Occurrence: Though not observed in the CNDDB database for occurrence in proximity the treatment area, the project area is within the historic range but not the current range of the Western Bumblebee as is shown on the most up to date CDFW "Current and Historic Species Ranges" map. As a result, the potential for this species to occur is low.

Potential Project Impact**:** There is a low potential for project impact due to the potential for occurrence. With treatment in these areas, growing space for floral resources will be created thus improving potential habitat for the species. Overall, a net benefit to this species historical habitat is expected.

Obscure Bumblebee (*Bombus caligninosus)*

Status: SSC

Habitat Requirements**:** The obscure bumble bee is a species of bumblebee native to the west coast of the United States, where its distribution extends from Washington through to Southern California. The workers are most often seen on Fabaceae, the legume family, while queens are most often seen on Ericaceae, the heath family, and males have been observed most often on Asteraceae, the aster family. Common plants visited by the workers include ceanothus, thistles, sweet peas, lupines, rhododendrons, Rubus, willows, and clovers.

Potential for Occurrence: The Hogback Ridge CalVTP is within the current range of the Obscure Bumblebee. A set of collections was made in the 70's with no collections since then. The exact location is unknown and was mapped as best guess by the CNDDB within the vicinity of Mount Veeder, which overlaps with the project area. The accuracy of this record is mapped to one mile. No bumblebee nests were observed during the reconnaissance surveys. In addition, the Nuns fire in 2017 nearly encapsulates the entire polygon mapped by the CNDDB. Any nests that could have occurred in the treatment area were likely destroyed from this fire.

Potential Project Impact: The potential to impact the species is low. With treatment in these areas, growing space for floral resources will be created and fire hazard will be reduced, improving potential habitat for the species.

SPR BIO – 2 will require training for workers to identify this species. If nests are observed, they will be avoided and protected with a 100 ft no disturbance buffer and the RPF will be notified.

Crustaceans

California Freshwater Shrimp (*Syncaris pacifica*)

Status: FT; SE

Habitat Requirements**:** the California Freshwater shrimp can be found in freshwater coastal streams in Marin, Sonoma, and Napa counties. They require low gradients and high water quality along with underwater structure provided by vegetation.

Potential for Occurrence: Data provided by the CNDDB shows a species observation within Huchica creek. There were 87 netted in 1988/89 and 123 Shrimp netted in 1990. Both observations were upstream of Hwy 12. The same record states that 280 Shrimp netted downstream of Hwy 12. The record is mapped within 100 feet of the southern unit and there is potential habitat within the class I watercourses.

Potential Project Impact: There will be no potential impact with the following mitigations. The watercourse protection measures, particularly SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent sedimentation of watercourses. During periods where overland flow may occur, ground disturbing activity will cease.

Fish

Steelhead *(Oncorhynchus mykiss)* [Central California Coast Distinct Population Segment]

Status: FT; SSC.

Habitat Requirements: Inhabits class I watercourses. Adults return to their natal watercourses in the winter and spring to spawn. Juveniles spend from 1 year to their entire lives rearing in freshwater environments before migrating to the ocean. Habitat requirements for steelhead are similar to Coho, and vary depending on temporal, spatial variables and a fishes' life-stage. The major life stages for most anadromous salmonids include the upstream migration of adults, spawning, incubation, juvenile rearing, and seaward migration of smolts. Combined, the generalized habitat requirements for all life stages of the steelhead include suitable stream flow, accessibility to spawning sites, suitable substrate composition for spawning and rearing, fish food production, water temperature and summer refugia areas. (from NCA description)

Potential for Occurrence: There is high potential for occurrence within class I watercourses in the project area. Per the CNDDB, Steelhead was not found during a visual survey in June 1966 within Hooker Creek. However, in 1977 residents indicated a previous presence of trout within the stream, but not within the previous 2 years. The second record states an observation of five juvenile steelhead in 2003 within Huichica creek.

Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4, will ensure protection of individuals and critical habitat from damaging effects of treatments.

There will be no potential impact with the following mitigations and SPRs. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent sedimentation of watercourses. During periods where overland flow may occur, ground disturbing activity will cease. SPR BIO-2 will require training for workers to identify and protect this species.

Botany Report for Hogback CalVTP

The goal of the botanical survey and report is to search for special status plant species within the Hogback Ridge CalVTP. The total project area is 431 acres. However, the area surveyed is approximately 340 acres and is depicted on maps in attachment C. It is located within section 1 T06N R06W, Section 6, 7, 8, 15, 16, 17, 21, 27, 28, 33, 34, T06N R 05W, Section 4, 11, 14, 23 , 24, 25 T05N R05W, Section 36 T07N R06W, within Rutherford, Sonoma, and Napa USGS 7.5 Minute Quadrangles.

The entire project area is included in the Hogback Ridge CalVTP. Shaded fuel breaks and ecological restoration treatment types shall be utilized, both of which have a low potential for impacting special status plant species. This is due to the minimal alterations to the vegetation community through the retention of large trees. Vegetation may be cut, masticated, grazed, and/or treated in accordance with the Standard Project Requirements (SPRs) and treatment specifications outlined in the CalVTP PSA. See the PEIR treatment descriptions for more detail.

Nevertheless, there is potential for special status plant species to be impacted individually, albeit not on a large community wide scale. During the initial reconnaissance surveys, it was thus determined that a seasonally specific, floristic survey was necessary to protect special status species from potential impact. With the implementation of these surveys, the potential for impact will be reduced to a level of insignificance.

Soils & Vegetation Types:

The following are the dominant soil types within the project area. Those comprising less than 5% of the total project area were omitted. Approximately 8.6% of the area contains 102, 100, 100n, 102n – Aiken Loam. This soil type is characterized by clay and clay loam with residuum weathered from volcanic rock. Soil depths range from 40 - 60 inches to lithic bedrock.

Approximately 6.9% of the area contains Boomer Gravelly Loam 109 and 108, which consists of slightly decomposed plant material, gravelly loam, and gravelly clay loam. The parent material is residuum and colluvium weathered from volcanic rock, with soil depths ranging from 40 to 60 inches to paralithic bedrock.

Approximately 5.7% of the project area is comprised of 110 – Boomer Forward Felta Complex, which consists of clay, gravelly clay, and a gravelly loam. The parent material for Boomer is residuum weathered from igneous rock. The parent material for Forward is residuum weathered from rhyolite. Lastly, for Felta, it is Alluvium derived from tuff and/or alluvium derived from metavolcanics. The soil depths for Boomer are 40 – 60 inches to paralithic bedrock. For Forward, it is 20 – 40 inches to paralkithic bedrock. Lastly, for Felta, the depth to a restrictive feature is more than 80 inches.

Approximately 25.1% of the area contains 139, 140, FoE – Forward Silt Loam. This soil type is slightly decomposed plant material with silt and gravelly silt loam. The parent material is rhyolitic residuum weathered from volcanic rock. The Soil depths range from 20 – 40 inches to paralithic bedrock.

Approximately 16.7% of the area contains 141, FrG – Forward - Kidd Complex. The Forward soil type consists of slightly decomposed plant material, silt and gravelly silt loam. The parent material is rhyolitic residuum weathered from volcanic rock. The Kidd soil type is gravelly loam

and loam. The parent material for this complex is residuum weathered from rhyolite with the soil depths for the Forward ranging from 20 – 40 inches to paralithic bedrock. The soil depths for the Kidd soil type are within 5 – 20 inches to lithic bedrock.

Approximately 5.0% of the area contains 156 – Kidd Loam, primarily composed of loam. The parent material is residuum weathered from rhyolite, and soil depths are 14 – 18 inches to paralithic bedrock.

The final dominant soil type, comprising of 5.8% of the area is 152, 151,152n – Hambright Rock Outcrop Complex. The soil profile consists of very stony loam for the Hambright soil type, and bedrock for the Rock Outcrop. The parent material for Hambright is residuum weathered from basic volcanic rock, for Rock Outcrop it is Residuum weathered from igneous, metamorphic and sedimentary rock. The soil depths range from 10 – 20 inches to lithic bedrock for Hambright and zero inches to lithic bedrock for Rock Outcrop.

The remaining 26% of the project area is comprised of 22 various soil types. Detailed descriptions of these soils can be found in the full soil report which is not included here. This report was available for the RPF to review.

The vegetation types present are best characterized as mixed hardwood, regeneration of both mixed hardwood, chapparal, Redwood mixed hardwood and Douglas-fir/ Douglas – fir mixed hardwood forests. The trees present are Pacific madrone (*Arbutus menziesii*), Bay laurel (*Umbellularia californica*), Big-leaf maple (*Acer macrophyllum*), California buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), Coast live oak (*Quercus agrifolia*), Black oak (*Quercus kelloggii*), Valley oak (*Quercus lobata*), Oregon white oak (*Quercus garryana*), Interior live oak (*Quercus wislizeni*), Blue oak (*Quercus douglasii*), Douglas-fir (*Pseudotsuga menziesii*), Redwood (*Sequoia sempervirens*), and Knobcone pine (*Pinus attenuata*).

CNDDB & CNPS Special Status Plants Within The 9 Quads

Scientific Name	Common Name	Federal List	California List	Rare Plant Rank
Navarretia leucocephala ssp. pauciflora	Few-flowered navarretia	Endangered	Threatened	1B.1
Chloropyron molle ssp. molle	Soft salty bird's-beak	Endangered	Rare	1B.2
Trifolium amoenum	Two-fork clover	Endangered	None	1B.1
Lasthenia conjugens	Contra costa goldfields	Endangered	None	1B.1
Alopecurus aequalis var. sonomensis	Sonoma alopecurus	Endangered	None	1B.1
Blennosperma bakeri	Sonoma sunshine	Endangered	Endangered	1B.1
Astragalus claranus	Clara hunt's milk-vetch	Endangered	Endangered	1B.1
Limnanthes vinculans	Sebastopol meadowfoam	Endangered	Endangered	1B.1
Sidalcea oregana ssp. valida	Kenwood marsh checkerbloom	Endangered	Endangered	1B.1
Lilaeopsis masonii	Mason's lilaeopsis	None	Rare	1B.1
Layia septentrionalis	Colusa layia	None	None	1B.2
Brodiaea leptandra	Narrow-anthered brodiaea	None	None	1B.2
Downingia pusilla	Dwarf downingia	None	None	2B.2
Leptosiphon jepsonii	Jepson's leptosiphon	None	None	1B.2
Balsamorhiza macrolepis	Big-scale balsamroot	None	None	1B.2
Viburnum ellipticum	Oval-leaved viburnum	None	None	2B.3
Fritillaria liliacea	Fragrant fritillary	None	None	1B.2
Hemizonia congesta ssp. congesta	Congested-headed hayfield tarplant	None	None	1B.2
Allium peninsulare var. franciscanum	Franciscan onion	None	None	1B.2
Hesperolinon breweri	Brewer's western flax	None	None	1B.2
Eryngium jepsonii	Jepson's coyote-thistle	None	None	1B.2
Ceanothus divergens	Calistoga ceanothus	None	None	1B.2
Erigeron greenei	Greene's narrow-leaved daisy	None	None	1B.2
Penstemon newberryi var. sonomensis	Sonoma beardtongue	None	None	1B.3
Ceanothus sonomensis	Sonoma ceanothus	None	None	1B.2
Ceanothus purpureus	Holly-leaved ceanothus	None	None	1B.2
Amorpha californica var. napensis	Napa false indigo	None	None	1B.2

Ceanothus confusus	Rincon ridge ceanothus	None	None	1B.1
Streptanthus hesperidis	Green jewelflower	None	None	1B.2
Trifolium hydrophilum	Saline clover	None	None	1B.2
Lathyrus jepsonii var. jepsonii	Delta tule pea	None	None	1B.2
Lupinus sericatus	Cobb mountain lupine	None	None	1B.2
Trichostema ruygtii	Napa bluecurls	None	None	1B.2
Symphyotrichum lentum	Suisun marsh aster	None	None	1B.2
Castilleja ambigua var. meadii	Mead's owls-clover	None	None	1B.1
Extriplex joaquinana	San joaquin spearscale	None	None	1B.2
Hesperolinon sharsmithiae	Sharsmith's western flax	None	None	1B.2
Amsinckia lunaris	Bent-flowered fiddleneck	None	None	1B.2
Legenere limosa	Legenere	None	None	1B.1
Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	1B.1
Arctostaphylos stanfordiana ssp. decumbens	Rincon ridge manzanita	None	None	1B.1
Sidalcea hickmanii ssp. napensis	Napa checkerbloom	None	None	1B.1
Polygonum marinense	Marin knotweed	None	None	3.1
Horkelia tenuiloba	Thin-lobed horkelia	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	None	None	1B.2
Carex lyngbyei	Lyngbye's sedge	None	None	2B.2
Rhynchospora californica	California beaked-rush	None	None	1B.1
Astragalus tener var. tener	Alkali milk-vetch	None	None	1B.2
Agrostis hendersonii	Henderson's bent grass	None	None	3.2
Centromadia parryi ssp. parryi	Pappose tarplant	None	None	1B.2

Survey Methods & Pre-field Research

Pre-field research along with reconnaissance surveys were conducted to determine the habitat and soil types present within the project area. Soils data from the USGS Web Soil Survey was analyzed, followed by field observations. See the soil and vegetation assessment above.

Results of this habitat assessment were used to narrow the list of potential special status plants. For instance, plants requiring Ultramafic soils were omitted from the target list because these environments are absent from the study area. Perennial watercourses were noted, however, the CalVTP WLPZ protection measures outlined in SPR HYD-4 and SPR BIO-4 will prevent potential impact to plants within these habitats. Thus, riparian species were not included in the target list. The elevation range and lack of extreme soil pH levels were used to further narrow the list.

The survey dates were chosen based on the overlapping peak blooming periods of the target species list. The project area was surveyed on foot during the 1 seasonally specific blooming period. All plant species encountered during the surveys were identified and are listed at the end of this report.

Special status plants include those which are state/federally listed as rare, threatened, or endangered; or those which have been given a rare plant rank of 1, 2, or 3 by the California Native Plant Society. The CNPS Rare plant rank is as follows:

- 1A: Plants presumed extirpated in California, and either rare or extinct elsewhere
- 1B: Plants rare, threatened or endangered in California and elsewhere.
- 2A: Plants presumed extirpated in California but more common elsewhere
- 2B: Plants rare, threatened, or endangered in California but more common elsewhere.
- 3: Plants on which more information is needed.

California Native Plant Society Threat Codes:

- .1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Botanical Survey Target Species

Common name	Federal Listing	California Listing	Rare Plant Rank	Bloom Period	Habitat
Clara Hunt's milk-vetch	Endangered	Endangered	1B.1	Mar - May	Open grassy areas, thin clay soil
Contra Costa goldfields	Endangered	None	1B.1	Mar - Jun	Vernal pools, wet meadows, valley grasslands
Few-flowered navarretia	Endangered	Threatened	1B.1	May - Jun	Wetlands, vernal pools, chaparral, wetland riparian
Sebastopol meadowfoam	Endangered	Endangered	1B.1	Apr - May	meadows, vernal pools, foothill woodland
Sonoma sunshine	Endangered	Endangered	1B.1	Mar - May	Grassy margins of swales, vernal pools, valley grassland
Two-fork clover	Endangered	None	1B.1	Apr - Jun	Moist, heavy soils, disturbed areas, Valley Grassland, wetland-riparian
Alkali milk-vetch	None	None	1B.2	Mar - Jun	Wetlands, occasionally in non-wetlands, vernal pools
Baker's navarretia	None	None	1B.1	Apr-Jul	Wetlands, meadows, vernal pools. Usually in wetlands but may occur in Meadows.
Bent-flowered fiddleneck	None	None	1B.2	Mar - Jun	Roadsides (sometimes) and serpentine substrates (sometimes) in most forest types, gravelly slopes, grassland, openings in woodland, often serpentine, Foothill Woodland, Valley Grassland
Big-scale balsamroot	None	None	1B.2	Mar - Jun	Open grassy or rocky slopes, valleys
Brewer's western flax	None	None	1B.2	May - Jul	Chaparral or grassland, occasionally on serpentine
Calistoga ceanothus	None	None	1B.2	Feb - Apr	Shady mesic areas in broad-leafed upland forest and chaparral, Volcanic slopes, chaparral, pine/oak woodland
Cobb mountain lupine	None	None	1B.2	Mar - Jun	Yellow Pine Forest, Foothill woodland, chaparral, Open wooded slopes, broadleaf upland forest, chaparral, lower montane conifer forest
Colusa layia	None	None	1B.2	Apr - May	Foothill woodland, valley grassland, Chaparral, Serpentine or sandy soils
Congested-headed	None	None	1B.2	Apr - Nov	Grassy sites, marsh edges

hayfield tarplant					
Franciscan onion	None	None	1B.2	May - Jun	Dry hillsides
Green jewelflower	None	None	1B.2	May - Jul	Serpentine barrens, associated openings in chaparral/oak woodland, cypress woodland
Greene's narrow-leaved daisy	None	None	1B.2	May - Sep	Generally, on serpentine, sometimes rocky alluvium, chaparral, woodland, conifer forest
Henderson's bent grass	None	None	3.2	Apr - Jun	Vernal pools, Wetlands occasionally non wetlands
Holly-leaved ceanothus	None	None	1B.2	Mar - May	Volcanic substrates, slopes, chaparral
Jepson's leptosiphon	None	None	1B.2	Mar - May	Open or partially shaded grassy slopes
Legenere	None	None	1B.1	Apr - Jun	Wet areas, vernal pools, ponds, valley grassland
Napa checkerbloom	None	None	1B.1	Apr - Jun	Chamise chaparral, rocky rhyolitic volcanic soil
Napa false indigo	None	None	1B.2	Apr - July	Chaparral, Occurs usually in non wetlands, occasionally in wetlands
Narrow-anthered brodiaea	None	None	1B.2	May - Jul	Open mixed-evergreen forest, chaparral, gravelly soil
Oval-leaved viburnum	None	None	2B.3	May - Jun	Chaparral, yellow-pine forest, generally north facing slopes;
Pappose tarplant	None	None	1B.2	may - Nov	Grassland, coastal salt marshes, alkaline springs, seep
Rincon Ridge ceanothus	None	None	1B.1	Feb - Jun	Volcanic slopes, chaparral, pine/oak woodland
Rincon Ridge manzanita	None	None	1B.1	Feb - Apr	Chaparral
Saline clover	None	None	1B.2	Apr - Jun	Salt marshes, open areas in alkaline soils
San Joaquin spearscale	None	None	1B.2	Apr - Sept	meadows, Shadscale Scrub, Valley Grassland, Alkaline soils
Sharsmith's western flax	None	None	1B.2	May - Jul	serpentine soils in chaparral
Sonoma beardtongue	None	None	1B.3	Apr - Aug	Outcrops, talus, Chaparral
Sonoma ceanothus	None	None	1B.2	Feb - Apr	Serpentine or volcanic substrates, Chaparral
Thin-lobed horkelia	None	None	1B.2	May - Jul	Sandy soils, open chaparral
Dwarf downingia	None	None	2B.2	Mar - May	Vernal pools, roadside ditches
Napa bluecurls	None	None	1B.2	Jun - Oct	Open areas, generally thin clay soils,

					possibly seasonally saturated
Fragrant fritillary	None	None	1B.2	Feb - Apr	Heavy soil, open hills, fields near coast
Jepson's coyote-thistle	None	None	1B.2	Apr - Aug	Moist clay soil,wetlands
Suisun marsh aster	None	None	1B.2	May-Nov	Freshwater Wetlands, wetland-riparian, freshwater-marsh, brackish-marsh
Lyngbye sedge	None	None	2B.2	Aug-April	Coastal Salt Marsh, wetland-riparian, coastal, salt-marsh, Brackish areas

Survey Results

One mid-season survey was conducted. The survey dates were chosen based on overlapping peak blooming periods for the target species. The survey dates were May 12 – May 16th and May 21st. During these dates the surveyor traversed all areas excluding the non-surveyed areas and identified every species encountered. When an unknown species was confronted, pictures and/or illustrations were obtained to key the individual in the office. Multiple special status species were identified within the Northern Treatment Unit.

Cobb mountain lupine *(Lupinus sericatus)*

CNPS rank 1B.2

Federal: Not listed

State: Not listed

Habitat requirements and description: This species is prevalent in Colusa, Lake, Sonoma and Napa Counties. It can be found on open wooded slopes in broadleaf upland forest, chaparral, and lower montane conifer forest ecosystems. It is a perennial growing 15 – 50 cm. Its leaves are silver to gray green with short appressed hairs, leaves are 30 – 50 mm with 4-7 spoon shaped leaflets and are clustered near the base. Inflorescence is 10 – 30 cm with 12 – 16 mm purple – violet flowers.

Potential for Occurrence: Multiple records of this plant exist within the CNDDB in proximity to the Northern Treatment Unit. One population, towards Trinity Road, was not relocated during field reconnaissance. The second population was found outside of the treatment area adjacent to a winery. However, a population of approximately 82 plants encompassing 0.8 acres were identified in the southernmost forest restoration unit of the Northern Hogback Treatment area. The plants have an average width of 29 inches and an average height of approximately 18 inches. The surrounding vegetation cover type is chapparal and shrubland with Douglas – fir and hardwood snags.

Protection Measures

- These populations will be protected from damaging effects, through the establishment of a 25 ft STZ. See attachment C operations maps for the location of the population. The project proponent shall implement the following protection measures within the STZ:
    - No vegetation debris piles will be left within the STZ.

- The residual Douglas – fir snags should be retained as a wildlife habitat feature and not removed.
- The remaining vegetation and fuels including the hardwood snags and ground fuel will be thinned using hand treatment. These materials will be hand dragged from the STZ, and mechanical treatment is not permitted.
- Workers will be trained in field identification and avoidance measures of the plant under SPR BIO-2.
- The contractor will avoid crushing, cutting, or otherwise harming this plant during treatments.

Redwood lily (*Lilium rubescens*)

CNPS rank 4.2

Federal: Not listed

State: Not listed

Habitat requirements and description:

This species is prevalent throughout Northern California, from the San Francisco Bay Area to the North Coast range. It can be found in plant communities such as Yellow pine and Red fir Forest as well as Chaparral, in gaps or dry soil.. The overall plant is smaller than 2 meters, and its leaves are in whorls with generally wavy margins, providing a unique identifying feature when not in bloom. Its inflorescence is ascending to erect with 1 – 40 flowers per inflorescence. The flower is funnel shaped with a perianth parts 4.2 – 6.6 cm in size.

Potential for Occurrence:

This plant was observed in multiple locations in the southernmost forest restoration unit within the Northern Hogback Ridge treatment unit. Due to its local abundance within the treatment area, it can be assumed that any damage to a small number of individuals will not substantially impact on this species as a community.

Protection Measures

- Workers will be trained for the identification of this plant under SPR BIO-2 and will avoid take where possible.

Napa false indigo (*Amorpha californica Nutt. var. napensis*)

CNPS rank 1B.2

Federal: Not listed

State: Not listed

Habitat requirements and description:

This species is prevalent in Sonoma and Napa Counties. It thrives on cooler sights within mixed conifer and mixed oak woodland ecosystems. Growing to between 1 and 6 ft tall, its leaves are approximately 1 inch long and oppositely arranged. The inflorescence is purple and uniquely arranged vertically from the plant usually between 6 inches to 1 foot long.

Potential for Occurrence:

This plant was identified in the CNDDB as occurring "near Lokoya, 1600 ft." The occurrence was listed as non-specific and needs field work, however, the record intersects the treatment unit. Upon the botanical survey, numerous Napa false indigo were identified utilizing flower and leaf phenology. This plant was found from the northernmost to southernmost end of Northern Hogback treatment unit. Due to its local abundance within the treatment area, it can be assumed that any damage to a small number of individuals will not substantially impact on this species as a community.

Protection Measures:

- Workers will be trained for the identification of this plant under SPR BIO-2 and will avoid take where possible.

Identified Species

Common name	***Scientific name***
Poison oak	*Toxicodendron diversilobum*
Pacific madrone	*Arbutus menziesii*
Bay laurel	*Umbellularia californica*
Douglas - fir	*Pseudotsuga menziesii*
White oak	*Quercus garryana*
Coast live oak	*Quercus agrifolia*
Redwood	*Sequoia sempervirens*
Bigleaf maple	*Acer macrophyllum*
Blackberry	*Rubus ursinus*
California buckeye	*Aesculus californica*
Coastal wood fern	*Dryopteris arguta*
California black oak	*Quercus kelloggii*
French broom	*Genista monspessulana*
Canyon live oak	*Quercus chrysolepis*
Interior live oak	*Quercus wislizeni*
Coyote brush	*Baccharis pilularis*
Napa false indigo	*Amorpha californica var. Napensis*
Licorice fern	*Polypodium calirhiza*
Maiden hair fern	*Adiantum jordanii*
Elderberry	*Sambucus mexicana*
California poppy	*Eschscholzia californica*
Sword fern	*Polystichum munitum*
Knobcone pine	*Pinus attenuata*

Oleander	*Nerium oleander*
Chamise	*Adenostoma fasciculatum*
Blue oak	*Quercus douglasii*
Fennel	*Foeniculum vulgare*
Valley oak	*Quercus lobata*
French lavender	*Lavandula stoechas*
Olive	*Olea europaea*
California sycamore	*Platanus racemosa*
Horsetail	*Equisetum arvens*
Cobb mountain lupine	*Lupinus sericatus*
Blue blossom ceanothus	*Ceanothus thyrsiflorus*
purple owl's clover	*Castilleja exserta ssp. Exserta*
Winecup clarkia	*Clarkia purpurea*
Coyote mint	*Monardella villosa*
Yellow mariposa lily	*Calochortus luteus*
Farewell to spring	*Clarkia amoena*
Woodland clarkia	*Clarkia unguiculata*
Menzies fiddleneck	*Amsinckia menziesii*
Blow wives	*Achyrachaena mollis*
Rusty haired popcorn flower	*Plagiobothrys nothofulvus*
Oregon ash	*Fraxinus latifolia*
Ithuriel's spear	*Triteleia laxa*
Narrow leaved clover	*Trifolium angustifolium*
Harvest brodiaea	*Brodiaea elegans*
Peak rush rose	*Crocanthemum scoparium*
Montana chapparal pea	*Pickeringia montana*
Woodland madia	*Anisocarpus madioides*
Sticky monkey flower	*Diplacus aurantiacus*
Modesty	*Whipplea modesta*
White hawkweed	*Hieracium albiflorum*
Hillside morning glory	*Calystegia collina*
Creeping sage	*Salvia sonomensis*
Bush poppy	*Dendromecon rigida*
Star flower	*Lysimachia latifolia*

Drops of gold	*Prosartes hookeri*
Yellow flag iris	*Iris pseudacorus*
Broadleaf lupine	*Lupinus latifolius*
Purple foxglove	*Digitalis purpurea*
Feathery false lily of the valley	*Maianthemum racemosum*
Rhinotropis californica	*California milkwort*
Broad leaved lotus	*Hosackia crassifolia*
Hypericum perforatum	*Common st. Johnswort*
Northern california black walnut	*Juglans hindsii*
Spreading hedge parsley	*Torilis arvensis*
English walnut	*Juglans regia*
Common cow parsnip	*Heracleum maximum*
Common snowberry	*Symphoricarpos albus*
Hairy vetch	*Vicia villosa*
Hawkbit	*Leontodon saxatilis*
Clustered dock	*Rumex conglomeratus*
Watercress	*Nasturtium officinale*
Cherry plum	*Prunus cerasifera*
Ribwort plaintain	*Plantago lanceolata*
Cotoneaster	*Cotoneaster pannosus*
Century plant	*Agave americana*
Morning glory	*Calystegia purpurata*
Pink honeysuckle	*Lonicera hispidula*
Coffee fern	*Pellaea andromedifolia*
Bigflower agoseris	*Agoseris grandiflora*
Coast man-root	*Marah oregana*
Common wheat	*Triticum aestivum*
Pennroyal	*Mentha pulegium*
Tall flat sedge	*Cyperus eragrostis*
Orchard grass	*Dactylis glomerata*
Bristly ox- tounge	*Helminthotheca echioides*
Mediterranean lineseed	*Bellardia trixago*
Calfornia buttercup	*Ranunculus californicus*

Bulbous canarygrass	*Phalaris aquatica*
Red star thistle	*Centaurea calcitrapa*
Dog rose	*Rosa canina*
Yellow glandweed	*Bellardia viscosa*
Common sow thistle	*Sonchus oleraceus*
Short podded mustard	*Hirschfeldia incana*
Ladies tobacco	*Pseudognaphalium californicum*
Corn poppy	*Papaver rhoeas*
Pride of madeira	*Echium candicans*
Echium candicans	*Centranthus ruber*
Cornflower	*Centaurea cyanus*
Scarlet pimpernel	*Lysimachia arvensis*
Califonria wild rose	*Rosa californica*
Greater periwinkle	*Vinca major*
Cheatgrass	*Bromus tectorum*
Sweet cicely	*Osmorhiza berteroi*
Giant white wakerobin	*Trillium albidum*
Cream bush	*Holodiscus discolor*
Bunchleaf penstemon	*Penstemon heterophyllus*
Spanish clover	*Acmispon americanus*
California rosebay	*Rosa californica*
Yellow star thistle	*Centaurea solstitialis*
Hawksbeard	*Crepis capillaris*
Purple chinese houses	*Collinsia heterophylla*
Seep monkey flower	*Erythranthe guttata*
Tomcat clover	*Trifolium willdenovii*
Wavy leaf soap plant	*Chlorogalum pomeridianum*
Common manzanita	*Arctostaphylos manzanita*
Gumweed madia	*Madia gracilis*
wild radish	*Raphanus sativus*
Spreadung rush	*Juncus patens*
Italian rye grass	*Festuca perennis*
Q tips	*Micropus californicus*
Blue field gilia	*Gilia capitata*

Crimson clover	*Trifolium incarnatum*
Bunchleaf penstemon	*Penstemon heterophyllus*
Western blue eyed grass	*Sisyrinchium bellum*
Nightshade	Solanum xanti
Braken fern	*Pteridium aquilinum*
Golden chinquapin	*Chrysolepis chrysophylla*
Imbricate phacelia	*Phacelia imbricata*
Blue dicks	*Dipterostemon capitatus*
Yerba santa	*Eriodictyon californicum*
Common catchfly	*Silene gallica*
Yarrow	*Achillea millefolium*
Silver bush lupine	Lupinus albifrons
Red larkspur	*Delphinium nudicaule*
California pipe vine	*Aristolochia californica*
French broom	*Genista monspessulana*
Broadleaf forget me not	*Myosotis latifolia*
Crimson columbine	*Aquilegia formosa*
Beaked hazelnut	*Corylus cornuta*
Arroyo willow	Salix lasiolepis
Oxe eye daisy	*Leucanthemum vulgare*
Miners lettuce	*Claytonia perfoliata*
Spiny sowthistle	*Sonchus asper*
Albanian spurge	*Euphorbia characias*
Golden fairy lantern	*Calochortus amabilis*
miniature lupine	*Lupinus bicolor*
Rough hedgenettle	*Stachys rigida*
Mouse barley	*Hordeum murinum*
Cleavers	*Galium aparine*
Calla lily	*Zantedeschia aethiopica*
California goldenbanner	*Thermopsis californica*
Harlequin flower	*Sparaxis tricolor*
Red hot poker	*Kniphofia uvaria*
Slender oat	*Avena barbata*
Narrow leaf mule ears	*Wyethia angustifolia*

Bowl tube iris	*Iris macrosiphon*
American trail plant	*Adenocaulon bicolor*
Bull thistle	*Cirsium vulgare*
California strawberry	*Fragaria vesca*
Cream bush	*Holodiscus discolor*
Poison hemlock	*Conium maculatum*
Eggleaf spurge	*Euphorbia oblongata*
Snooths cats ear	*Hypochaeris glabra*
European plum	*Prunus domestica*
California mugwort	*Artemisia douglasiana*
Checker lily	*Fritillaria affinis*
California angelica	*Angelica californica*
Montana chaparral pea	*Pickeringia montana*
Great hounds tounge	*Adelinia grandis*
Sheep sorrel	*Rumex acetosella*
Great brome	*Bromus diandrus*
White sweet clover	*Melilotus albus*
Ookow	*Dichelostemma congestum*
Big quaking grass	*Briza maxima*
Indian warrior	*Pedicularis densiflora*
Pearly everlasting	*Anaphalis margaritacea*
Herb robert	*Geranium robertianum*
California bedstraw	*Galium californicum*
Common vetch	*Vicia sativa*
Rose clover	*Trifolium hirtum*
Italian thistle	*Carduus pycnocephalus*
Common pacific pea	*Lathyrus vestitus*
Redwood lily	*Lilium rubescens*
Elegant clarkia	*Clarkia unguiculata*
Fiddle dock	*Rumex pulcher*
Common woolly sunflower	*Eriophyllum lanatum*
Small baby blue eyes	*Nemophila heterophylla*
Cranesbill	*Geranium dissectum*
Nightshade	*Solanum xanti*

Silver lupine	*Lupinus albifrons*
Smallflower hawksbeard	*Crepis pulchra*
Canada horseweed	*Erigeron canadensis*
Smooth cat's ear	*Hypochaeris glabra*
Red peavine	*Lathyrus cicera*
Redvein dock	Rumex sanguineus
Spineless yucca	Yucca gloriosa
California brome	Bromus sitchensis var. Carinatus
Gooseberry	Ribes menziesii
Field marigold	Calendula arvensis
Tuna cactus	Opuntia ficus-indica
Chain fern	Woodwardia fimbriata

NSO Consultation

Outlook

RE: NSO Activity Centers Hogback Ridge CalVTP

From Coombes, Julie@Wildlife <Julie.Coombes@wildlife.ca.gov>
Date Thu 3/27/2025 2:21 PM
To Andrew Bagwell <andrew@frmforestry.com>

2 attachments (4 MB)
CDFWOutreachFlyerTCPV3.pdf; LSAAInfo.pdf;

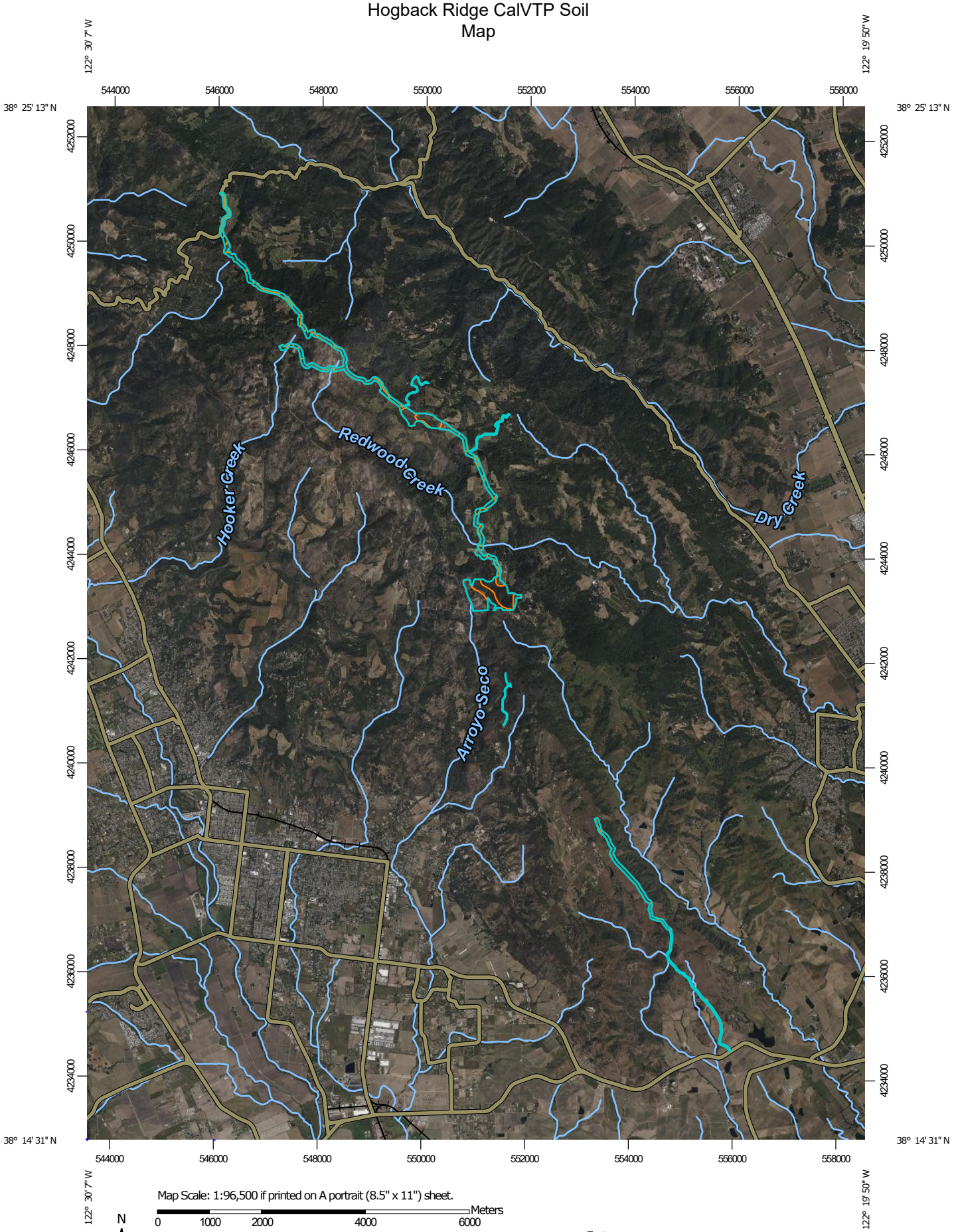
Hi Andrew,

Yes, you can certainly use the 2020 USFWS noise document to create buffers for NSO during treatment. I wanted to let you know I lost my positions that review wildfire resiliency projects, so I have been sending project proponents an email with resources. In case this is helpful for you now and/or in the future, here is the message:

Unfortunately, due to state budget cuts, positions that review wildfire resiliency projects have been eliminated in my region, and we are unable to review projects at this time. Despite this loss, we intend to refill the positions in the future when the budget recovers. Please continue to send me via email any wildfire resiliency project review requests so I can track the work that is impacted and inform you when we have staff capacity restored. Please see below for additional resources and guidance for your project.

Lake and Streambed Alteration Agreement Notification
If the project activities may substantially alter the bed, bank, or channel of a watercourse, substantially divert or obstruct the natural flow of a river, stream, or lake, or substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; a Lake and Streambed Alteration Agreement (LSAA) Notification pursuant to Fish and Game Code Section 1602 is required. The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams and watercourses with subsurface flow. Please see the two attached guidance documents for additional information.
This agreement process can be initiated by visiting https://wildlife.ca.gov/Conservation/Environmental-Review/LSA and registering for an Environmental Permit Information Management System (EPIMS) account https://epims.wildlife.ca.gov/index.do.

Hogback Ridge CalVTP Soil Map



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
100	Aiken loam, 2 to 15 percent slopes	2.6	0.6%
102	Aiken loam, 30 to 50 percent slopes	27.7	6.4%
107	Boomer loam, volcanic bedrock, 2 to 35 percent slopes, MLRA 15	8.3	1.9%
108	Boomer gravelly loam, volcanic bedrock, 11 to 43 percent slopes, MLRA 15	2.6	0.6%
109	Boomer gravelly loam, volcanic bedrock, 14 to 60 percent slopes, MLRA 15	27.1	6.3%
110	Boomer-Forward-Felta complex, 30 to 50 percent slopes	24.7	5.7%
126	Diablo clay, 5 to 9 percent slopes, MLRA 15	11.4	2.6%
139	Forward silt loam, 5 to 39 percent slopes, MLRA 15	21.7	5.0%
140	Forward silt loam, 12 to 57 percent slopes, MLRA 15	82.3	19.1%
141	Forward-Kidd complex, 11 to 60 percent slopes, MLRA 15	35.6	8.3%
142	Guenoc loam, 15 to 50 percent slopes, MLRA 15	0.3	0.1%
151	Hambright-Rock outcrop complex, 2 to 30 percent slopes	21.1	4.9%
152	Hambright rock-Outcrop complex, 30 to 75 percent slopes	0.1	0.0%
154	Henneke gravelly loam, 30 to 75 percent slopes	0.1	0.0%
156	Kidd loam, 30 to 75 percent slopes	21.4	5.0%
177	Rock outcrop-Kidd complex, 50 to 75 percent slopes	10.5	2.4%
178	Sobrante loam, 5 to 30 percent slopes	11.1	2.6%
179	Sobrante loam, 30 to 50 percent slopes	1.2	0.3%
CmEsn	Cohasset gravelly loam, 15 to 30 percent slopes	0.5	0.1%
GgFsn	Goulding clay loam, 30 to 50 percent slopes	3.7	0.9%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RaDsn	Raynor clay, 9 to 15 percent slopes	0.2	0.0%
SkFsn	Spreckels loam, 30 to 50 percent slopes	0.2	0.0%
StEsn	Suther loam, 15 to 30 percent slopes	3.5	0.8%
Subtotals for Soil Survey Area		**317.7**	**73.7%**
Totals for Area of Interest		**431.0**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
100n	Aiken loam, 2 to 15 percent slopes	3.0	0.7%
102n	Aiken loam, 30 to 50 percent slopes	3.7	0.9%
107n	Boomer loam, 2 to 15 percent slopes	0.1	0.0%
152n	Hambright rock-Outcrop complex, 30 to 75 percent slopes	4.1	0.9%
BoF	Boomer loam, 30 to 50 percent slopes	8.6	2.0%
CmE	Cohasset gravelly loam, 15 to 30 percent slopes	5.2	1.2%
FoE	Forward silt loam, 5 to 39 percent slopes, MLRA 15	4.5	1.0%
FrG	Forward-Kidd complex, 11 to 60 percent slopes, MLRA 15	36.3	8.4%
GgF	Goulding clay loam, 30 to 50 percent slopes	9.3	2.2%
GrG	Guenoc gravelly silt loam, 30 to 75 percent slopes	1.3	0.3%
LaF	Laniger loam, 30 to 50 percent slopes	0.9	0.2%
RaD	Raynor clay, 9 to 15 percent slopes	8.6	2.0%
RoG	Rock land	19.1	4.4%
SkF	Spreckels loam, 30 to 50 percent slopes	6.8	1.6%
StE	Suther loam, 15 to 30 percent slopes	1.8	0.4%
Subtotals for Soil Survey Area		**113.3**	**26.3%**
Totals for Area of Interest		**431.0**	**100.0%**

References

1. Cornell lab of ornithology. https://www.birds.cornell.edu/home/

2. National Audubon Society Field Guide to Birds https://www.audubon.org/field-guide/bird/tricolored-blackbird

3. Zeiner, D. C., W. F. Laudenslayer Jr., K. E. Mayer, and M. White. 1990a. California's

4. Wildlife Volume II – Birds. State of California Department of Fish and Game. 732pp.

5. Call, M. W. 1978. Nesting Habits and Survey Techniques for Common Western Raptors.

6. U.S. Department of Interior, Bureau of Land Management, Portland, OR. Technical Note. No. 316. 115pp.

7. Baicich, P. J. and C. J. O. Harrison. 2005. Nests, Eggs, and Nestlings of North American Birds, Second Edition. Princeton University Press, Princeton, NJ. 347pp.

8. California Natural Diversity Database, CNDDB.

9. https://www.calflora.org/

10. California Native Plant Society. https://www.cnps.org/

11. John D. Stewart, John O. Sawyer; illustrated by Andrea J. Pickart. Trees and Shrubs of California. 2001. University of California Press. Berkeley and Los Angeles, CA.

12. Elbert L. Little; Visual key by Susan Rayfield and Olivia Buehl. National Audubon Society Field Guide to Trees, Western Region, North America. Published by Alfred A. Knopf, 1980 Chanticleer Press, Inc.

13. California Department of Fish and Game. 2010. A Status Review of the Fisher (Martes pennanti) in California http://www.dfg.ca.gov/wildlife/nongame/publications/docs/FisherStatusReviewComplete.pdf

14. Hayes, M.P., and M.R. Jennings. 1988. Habitat Correlates of Distribution of the California Red-legged Frog (Rana aurora draytonii) & the Foothill Yellow-Legged Frog (Rana boylii): Implications for Management. p. 144-158 In: Management of Amphibians, Reptiles, and Small Mammals in North America, Gen. Tech. Rep. RM-166 R.C. Szaro, K. E. Severson, and D. R. Patton (Technical Coordinators). USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

15. Kupferberg, S.J. 1996. Hydrologic and Geomorphic Factors Affecting Conservation of a River Breeding Frog (Rana boylii). Ecological Applications 6(4):1322-1344.

16. Nussbaum, R.A., E.D. Brodie, Jr., and R.M. Storm. 1983. Amphibians & Reptiles of the Pacific Northwest. University Press of Idaho, Moscow, ID.

17. CalVTP Programmatic Environmental Impact Report; https://bof.fire.ca.gov/projects-and-programs/calvtp/calvtp-programmatic-eir/

18. NatureServe. 2024. NatureServe Network Biodiversity Location Data accessed through NatureServe Explorer [web application]. NatureServe, Arlington, Virginia. Available https://explorer.natureserve.org/. (Accessed: January 18, 2024).

19. Barbara A. Martin, Michael K. Saiki, Darren Fong, Habitat Requirements of the Endangered California Freshwater Shrimp (Syncaris Pacifica) in Lagunitas and Olema Creeks, Marin County, California, USA, Journal of Crustacean Biology, Volume 29, Issue 4, 1 October 2009, Pages 595–604, https://doi.org/10.1651/08-3134.1

20. Xerces Society. 2018. A petition to the State of California Fish and Game Commission to list The Crotch bumble bee (Bombus crotchii), Franklin's bumble bee (Bombus franklini), Suckley cuckoo bumble bee (Bombus suckleyi), and western bumble bee (Bombus occidentalis occidentalis) as Endangered under the California Endangered Species Act. October 2018.

21. Zielinski, W.J., and S.T. Gellman. 1999. Bat use of remnant old-growth redwood stands. Conservation Biology, 13(1): 160-167.

22. Zielinski, W.J., M.J. Mazurek, and J. Zinck. 2007. Identifying the species of bats roosting in redwood basal hollows using genetic methods. Northwest Science 81(2): 155-162.

23. Sibley, D.A. 2000. The Sibley guide to birds. New York: Alan A. Knopf.

24. Sibley, D.A. 2001. The Sibley guide to bird life and behavior. New York: Alan A. Knopf.

25. Shaffer, H.B., G.M. Fellers, S. Randal Voss, J.C. Oliver, and G.B. Pauly. 2004. Species boundaries, phylogeography, and conservation genetics of the red-legged frog (*Rana aurora/draytonii*) complex. Molecular Ecology 13: 2667-2677.

26. Shaffer, H.B., G.M. Fellers, S. Randal Voss, J.C. Oliver, and G.B. Pauly. 2004. Species boundaries, phylogeography, and conservation genetics of the red-legged frog (Rana aurora/ draytonii) complex. Molecular Ecology 13: 2667-2677.

27. Johnsgard, P.A. 1990. Hawks eagles & falcons of North America. Washington D.C.: Smithsonian Institute Press.

28. Maser, C. 1998. Mammals of the Pacific Northwest: from the coast to the high Cascades. Corvallis (OR): Oregon State University Press.

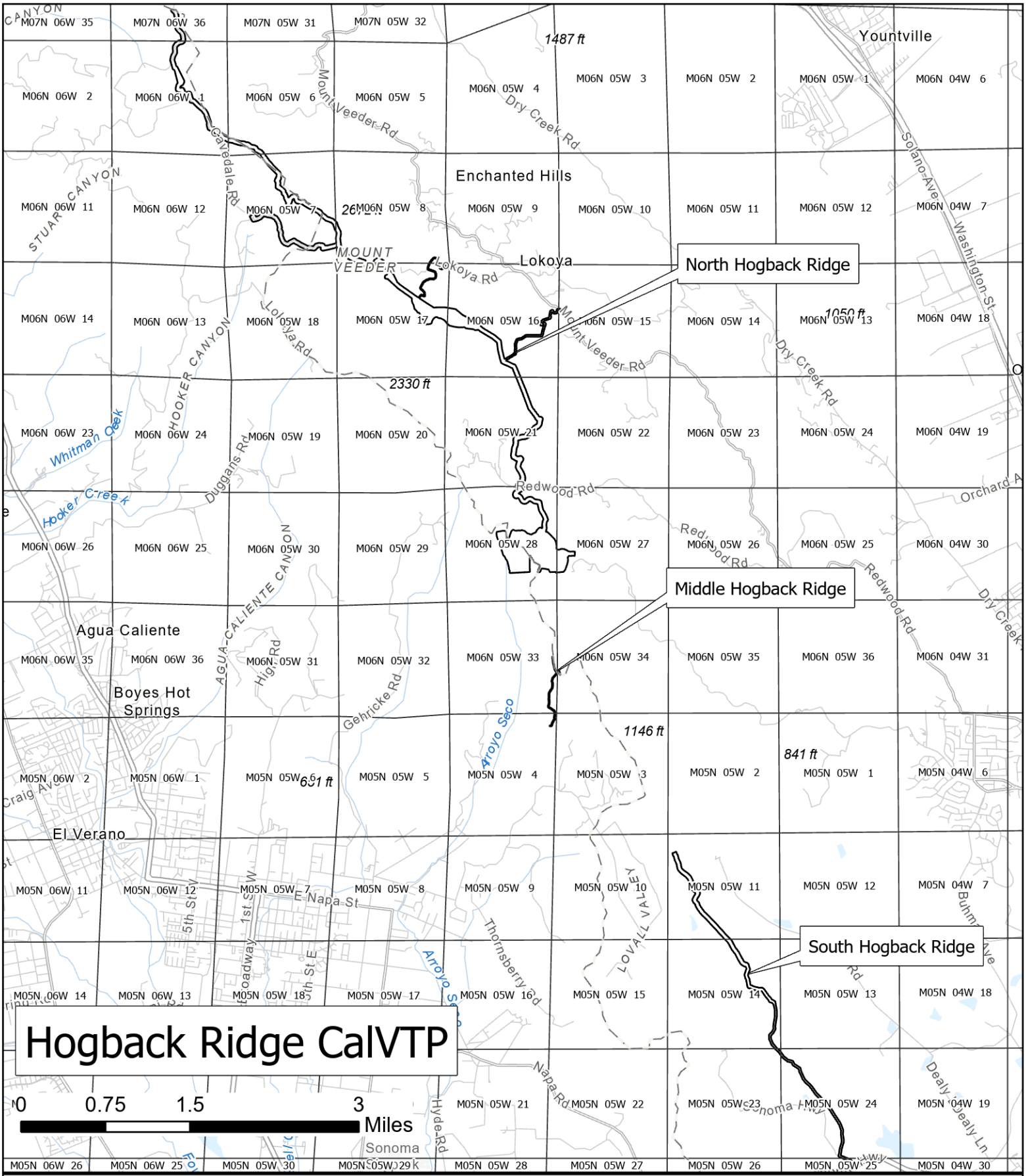
29. Nrcs. Web Soil Survey - Home, websoilsurvey.nrcs.usda.gov/app/. Accessed 28 July 2025. Hogback Ridge CalVTP Soil Report.

Attachment C

Maps Addendum

Hogback Ridge CalVTP # 2025-19

Contents



Hogback Ridge CalVTP Vicinity Map

Project Boundary

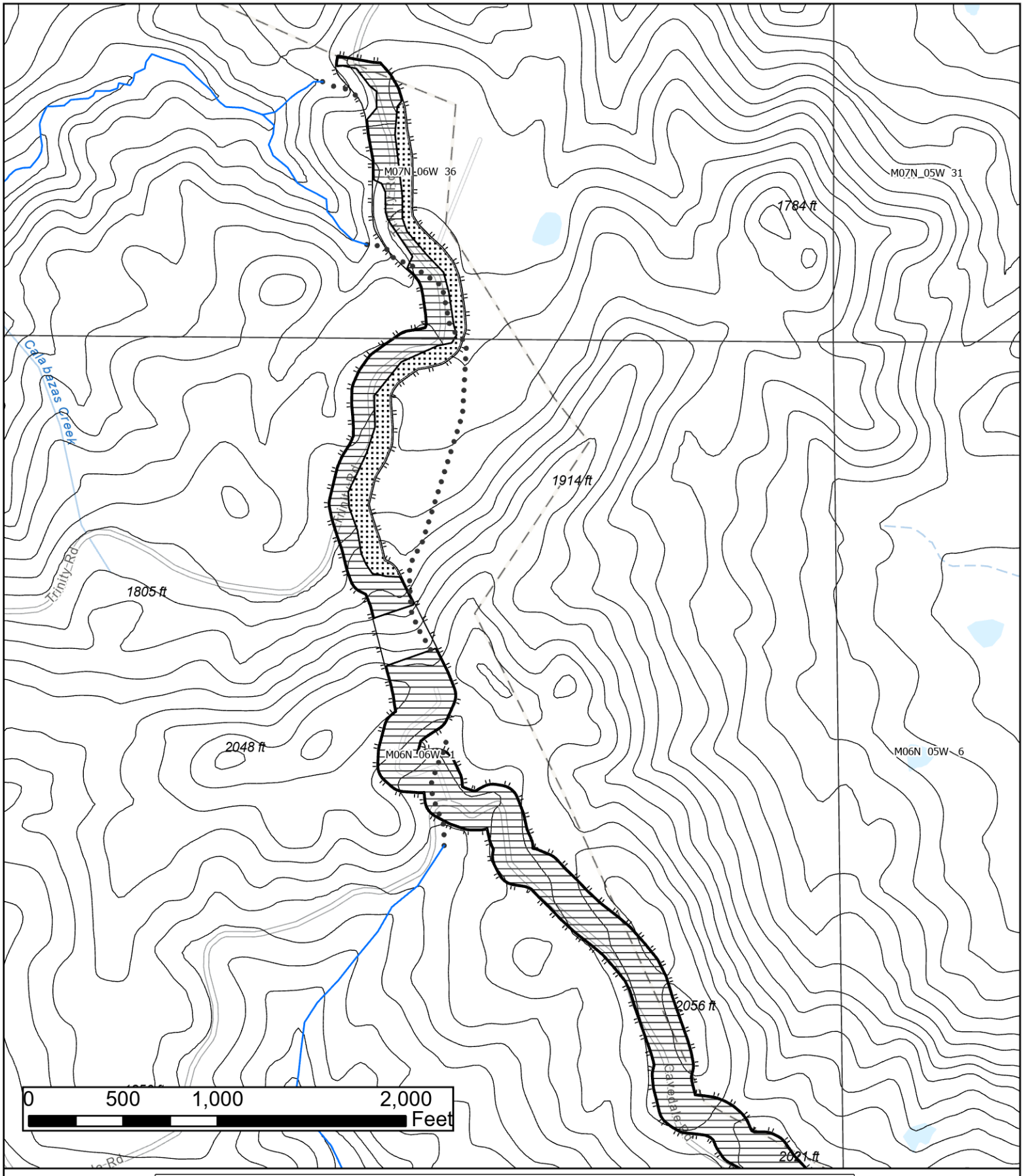
N W E S

FRM

AB 7/23/2025

Scale: 1:71,000

Operations Maps



North Hogback Ridge Treatment Unit Operations Map A

FRM

AB 7/25/2025

Mechanical Treatment Areas

No Treatment Areas

Watercourses

Class 3

Needs Recon

N

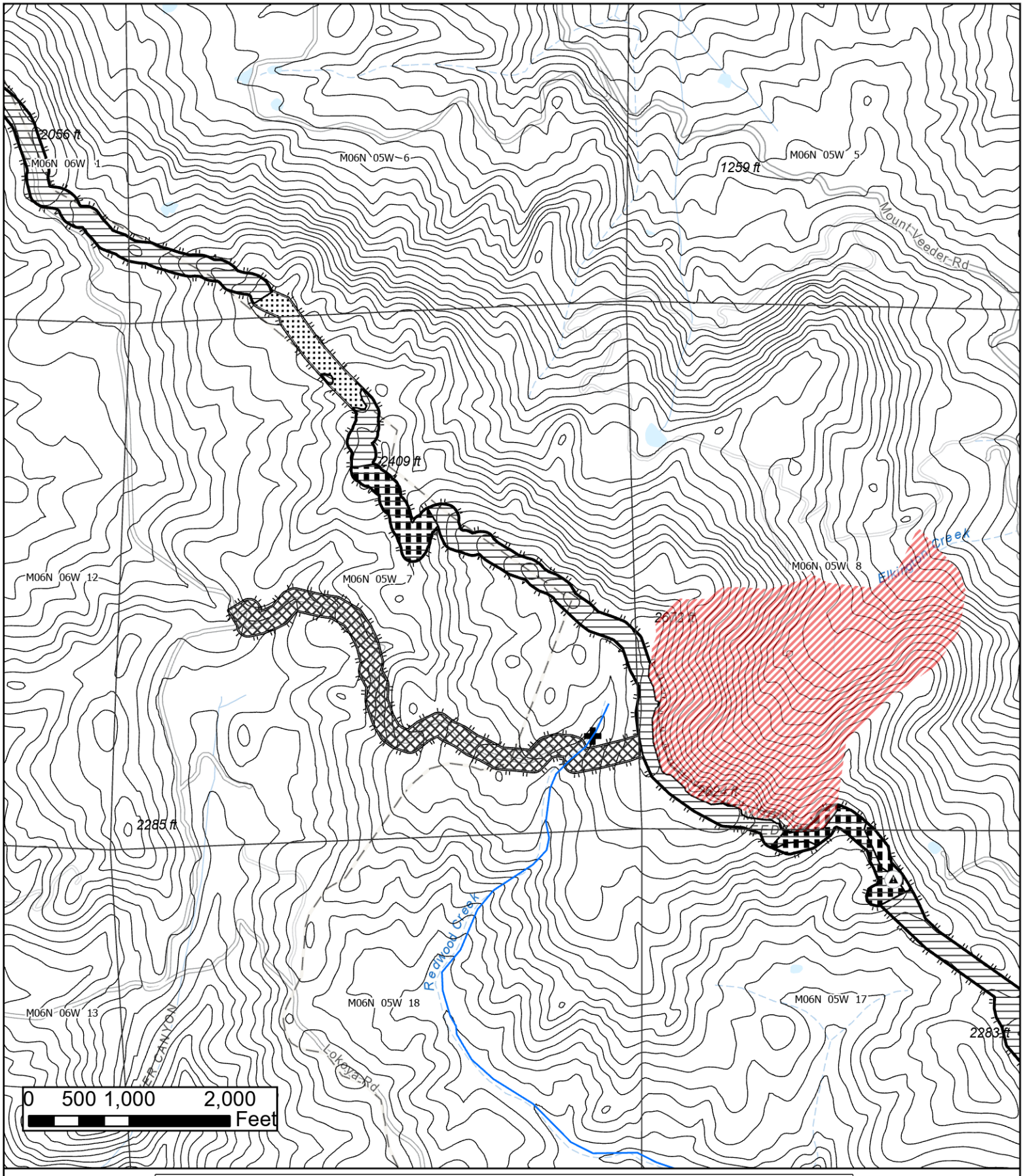
W

E

S

40ft Contour Interval

Scale: 1:8,000



North Hogback Ridge Treatment Unit Operations Map B

FRM

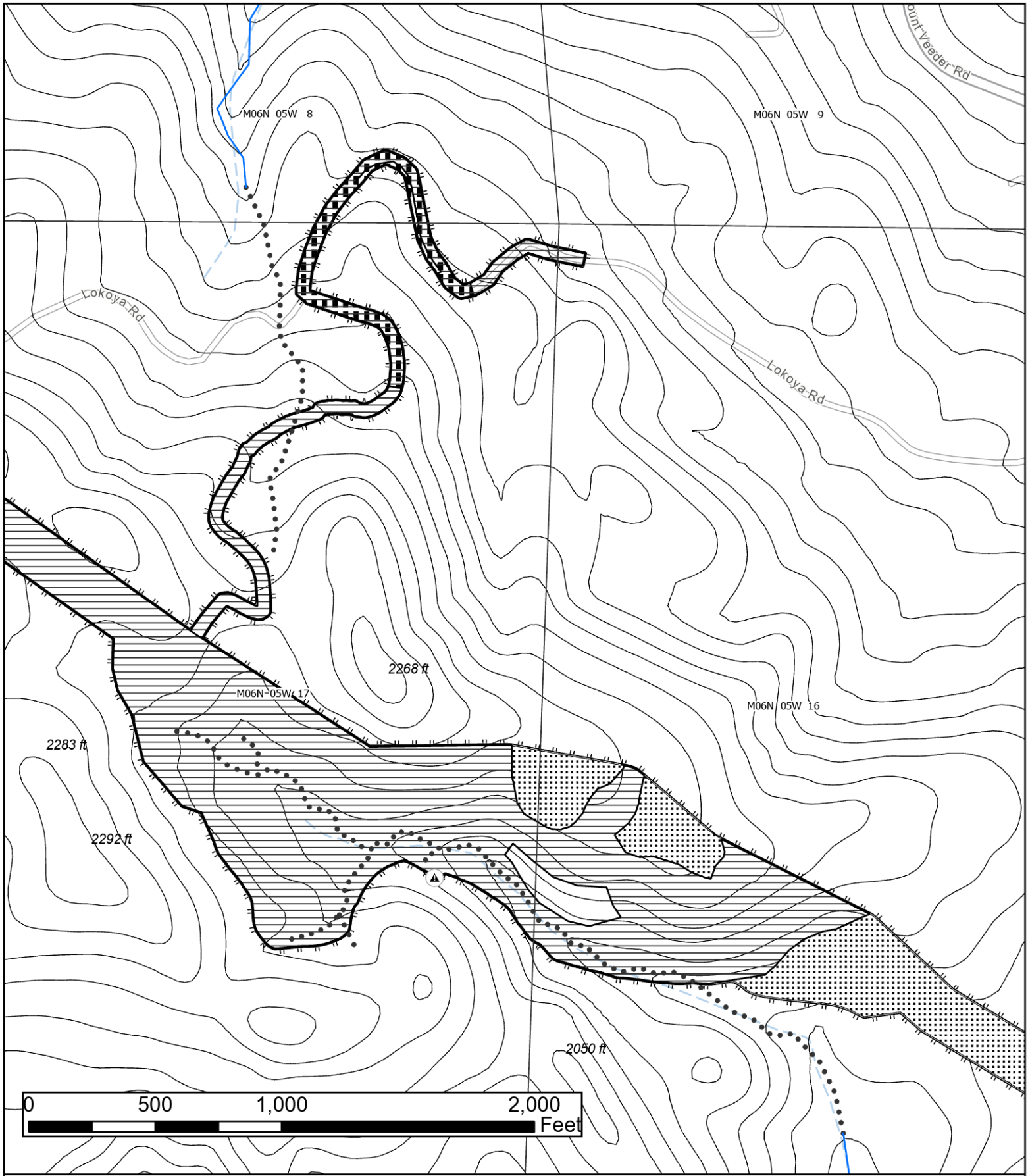
AB 7/25/2025

- Non Surveyed Areas (No Access)
- Small Unstable Areas
- Unstable Areas
- Mechanical Treatment Areas
- No Treatment Areas
- Bio STZ
- Watercourses
  - Class 3
  - Needs Recon
- Waterbodies

N W E S

40ft Contour Interval

Scale: 1:15,000



North Hogback Ridge Treatment Unit Operations Map C

FRM

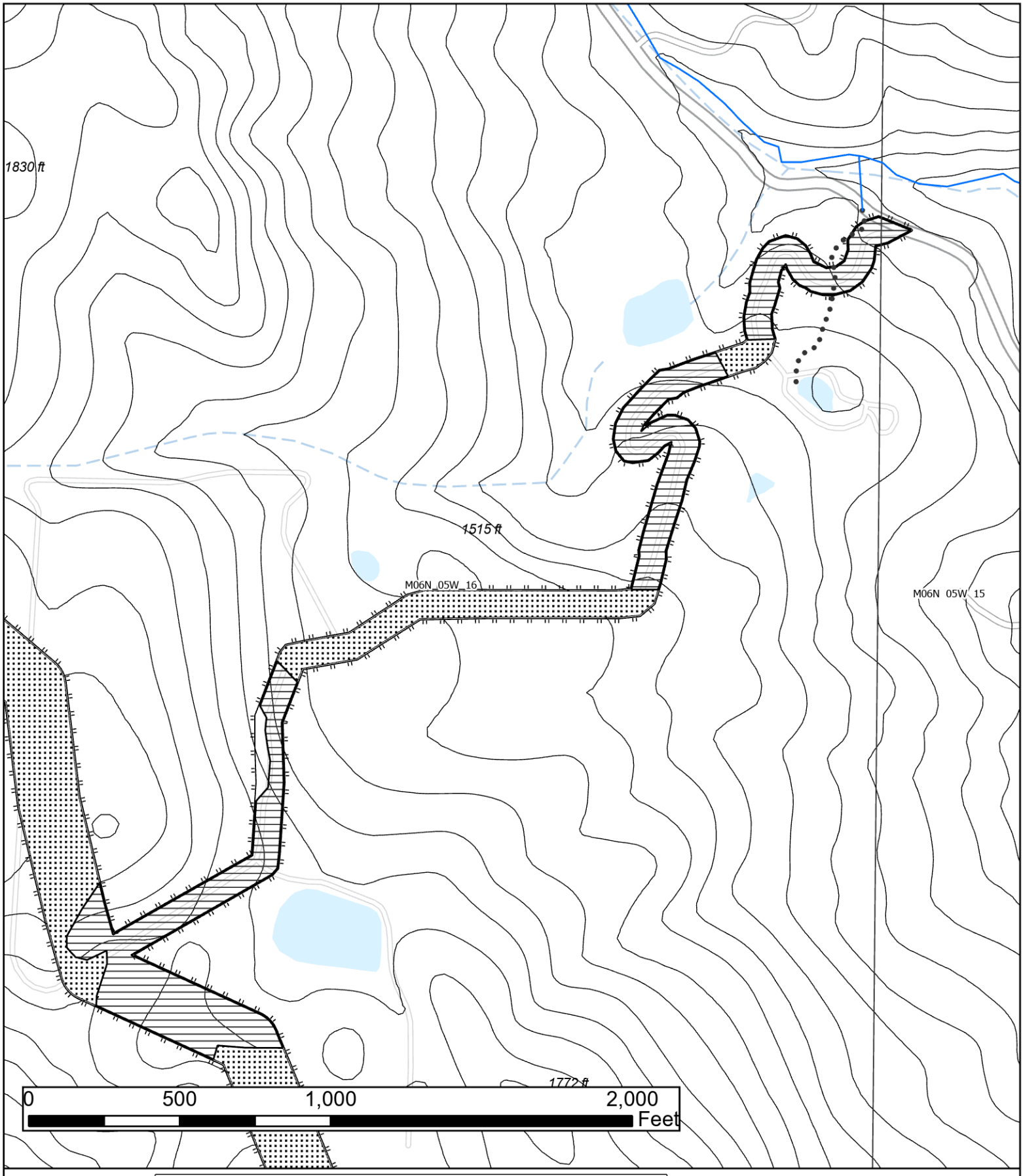
AB 7/25/2025

- Small Unstable Areas
- Mechanical Treatment Areas
- No Treatment Areas
- Bio STZ
- Watercourses
- Class 3
- Needs Recon

N
W E
S

40ft Contour Interval

Scale: 1:6,000



Mt. Veeder School Road Operations Map

FRM

AB 7/25/2025

Mechanical Treatment Areas

No Treatment Areas

Watercourses

Class 3

Needs Recon

N

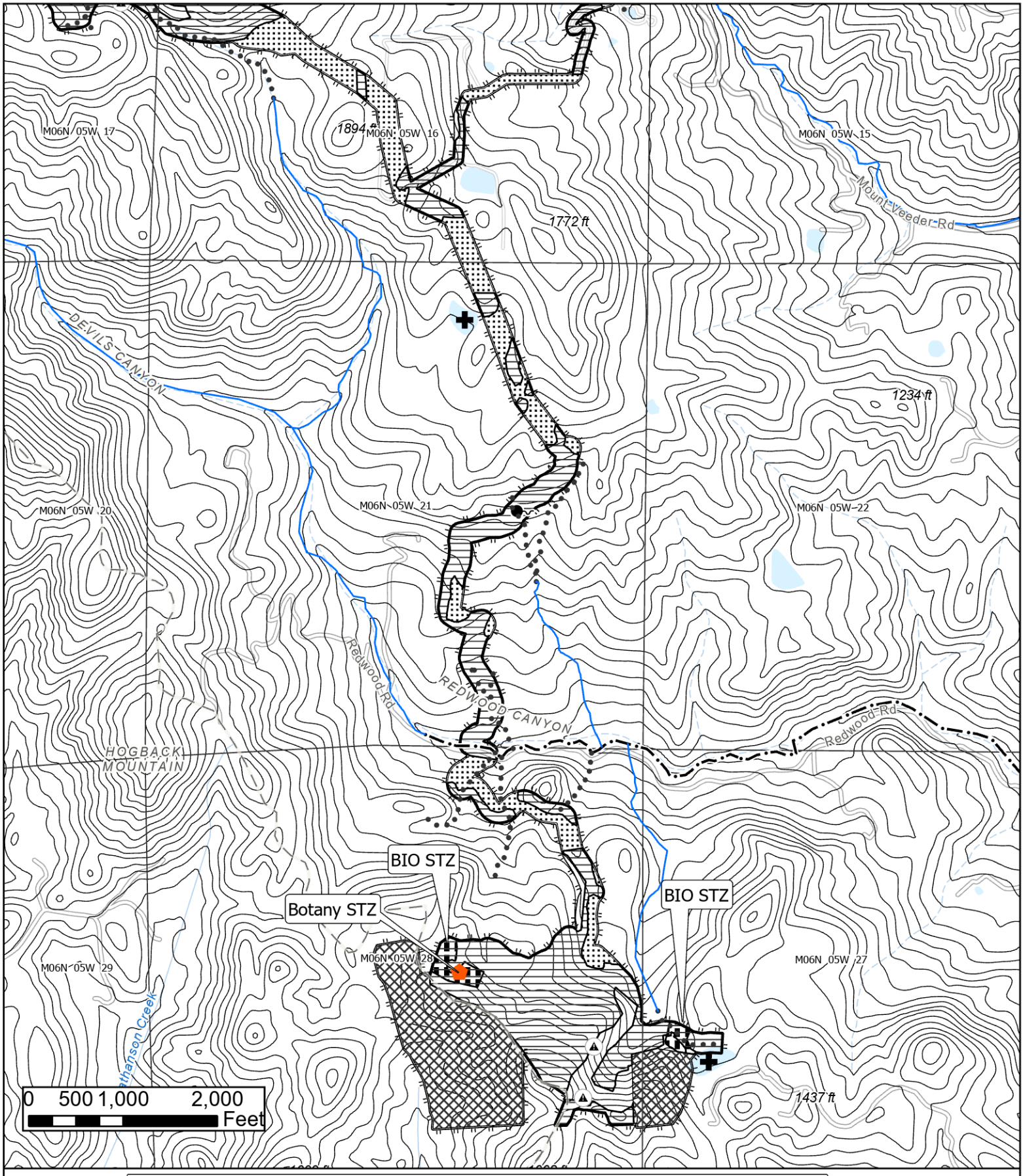
W

E

S

40ft Contour Interval

Scale: 1:5,000



North Hogback Ridge Treatment Unit Operations Map D

FRM

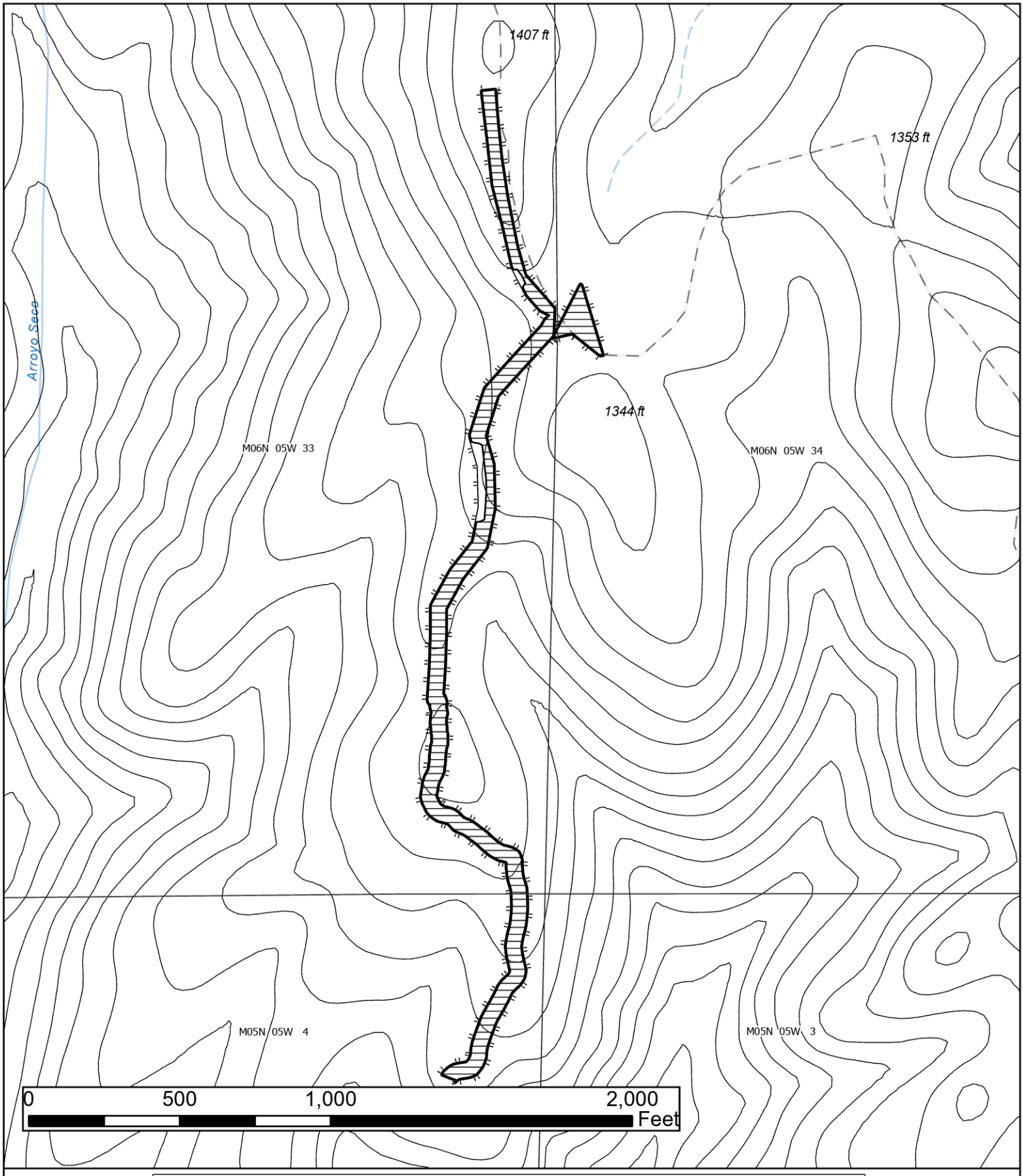
- Non Surveyed Areas (No Access)
- Small Unstable Areas
- Mechanical Treatment Areas
- No Treatment Areas
- Bio STZ
- Botany STZ
- Watercourses
  - Class 1
  - Class 3
- Needs Recon
- Wet Area
- Waterbodies

N W E S

40ft Contour Interval

Scale: 1:16,000

AB 7/25/2025



Admiral Cooke Fire Lane Treatment Unit Operations Map

FRM

Mechanical Treatment Areas

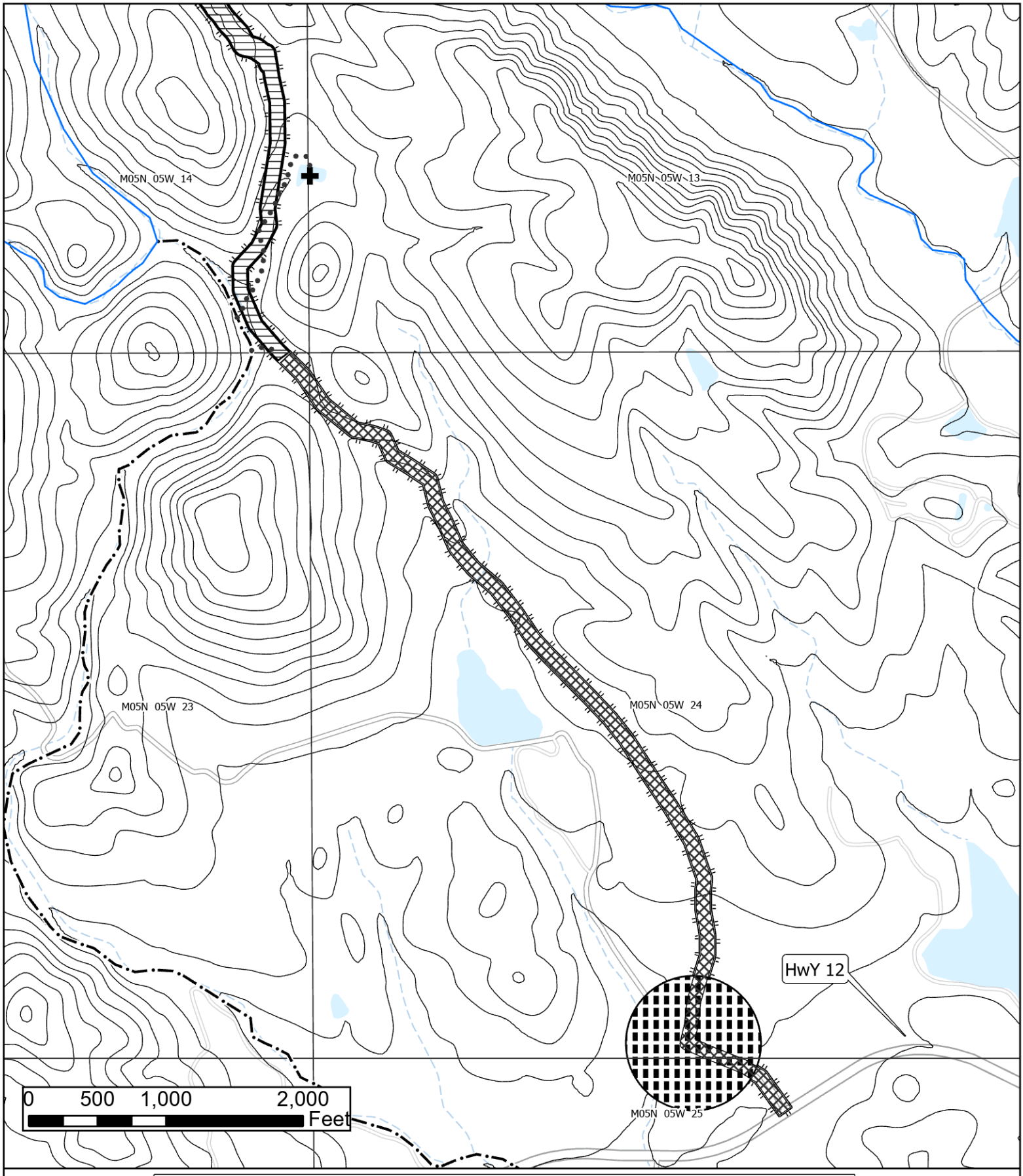
No Treatment Areas

N
W
E
S

40ft Contour Interval

Scale: 1:5,000

AB 7/25/2025



South Hogback Ridge Treatment Unit Operations Map E

FRM

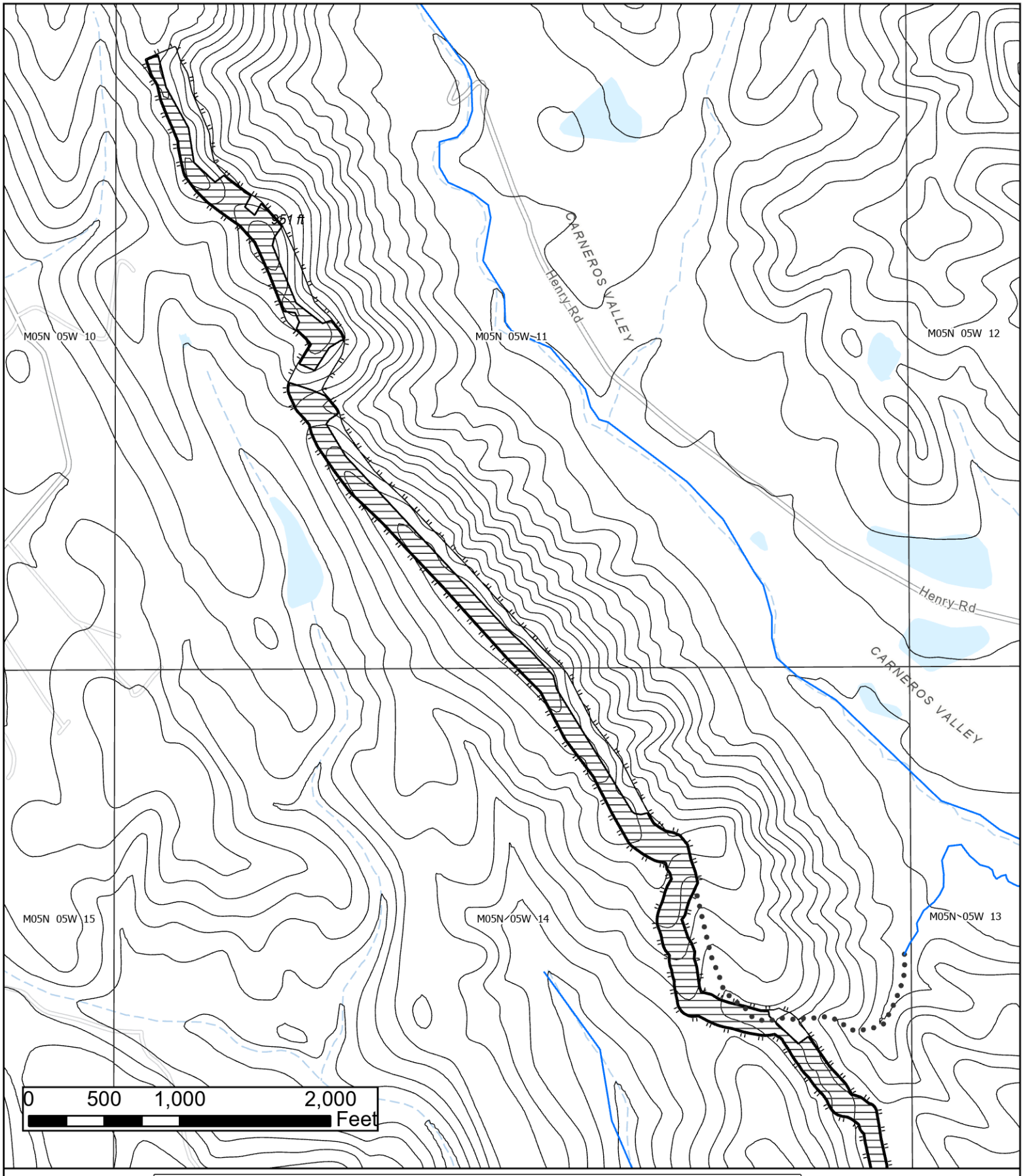
AB 7/25/2025

- Non Surveyed Areas (No Access)
- Mechanical Treatment Areas
- No Treatment Areas
- Bio STZ
- Watercourses
- Class 1
- Class 3
- Needs Recon
- Waterbodies

N
W E
S

40ft Contour Interval

Scale: 1:11,000



South Hogback Ridge Vegetation Operations Map F

Mechanical Treatment Areas

No Treatment Areas

Watercourses

Class 3

Needs Recon

N

W E

S

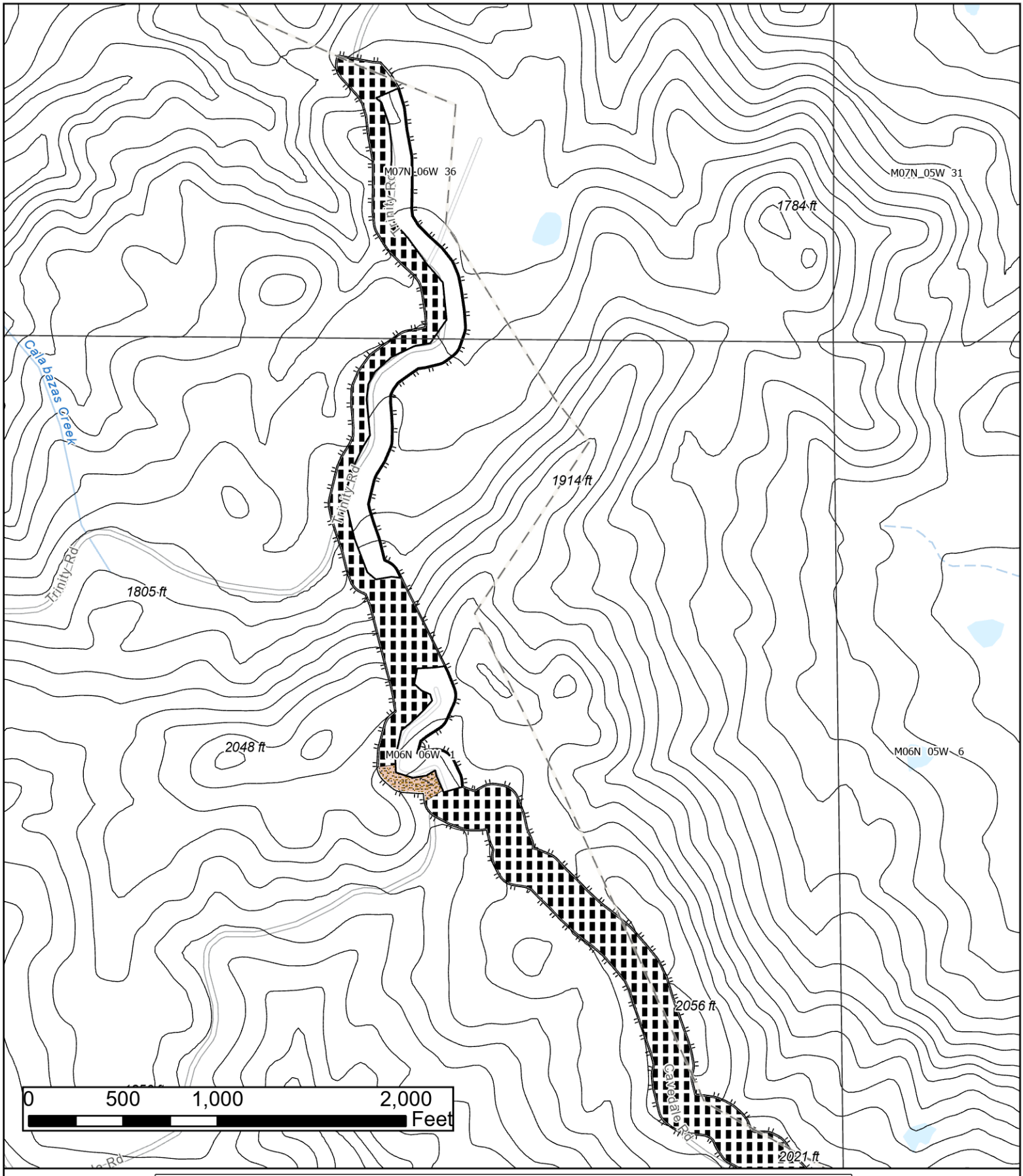
40ft Contour Interval

Scale: 1:10,000

FRM

AB 7/25/2025

Vegetation Maps



North Hogback Ridge Treatment Unit Vegetation Map A

FRM

AB 7/25/2025

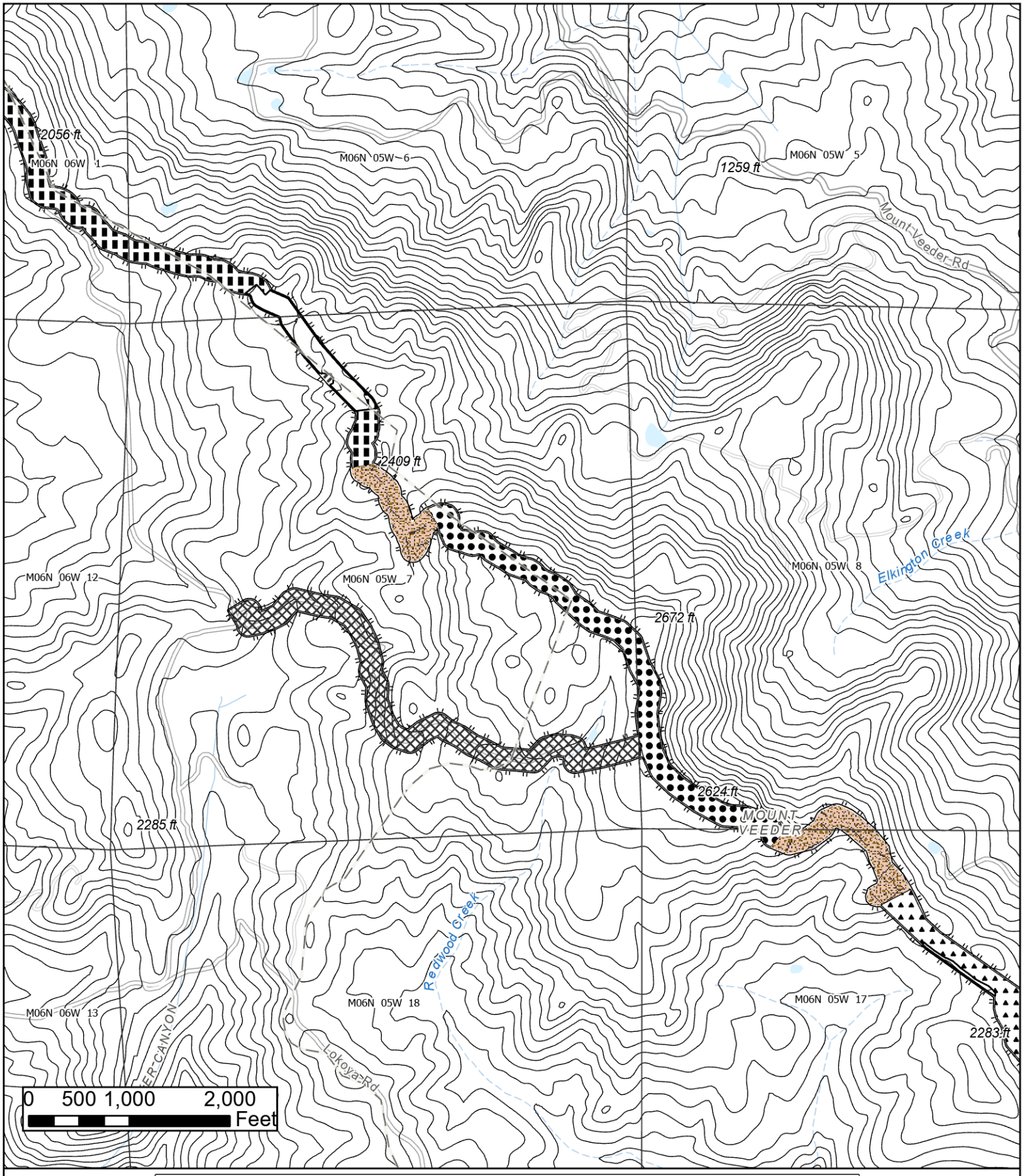
Vegetation Types

- Conifer Mixed Hardwood
- Douglas Fir High Mortality
- Non Forested

N
W
E
S

40ft Contour Interval

Scale: 1:8,000



North Hogback Ridge Treatment Unit Vegetation Map B

FRM

AB 7/25/2025

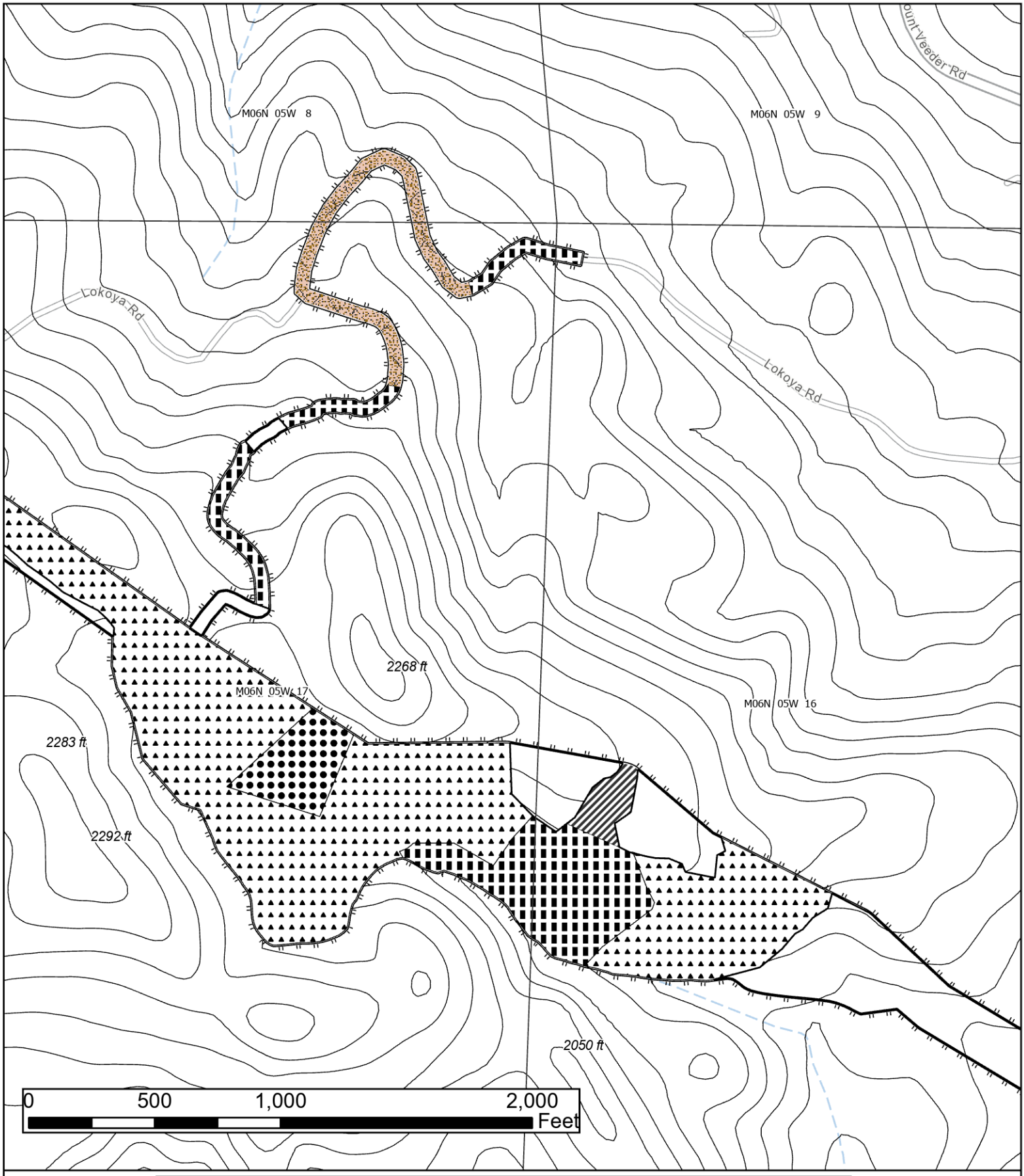
Vegetation Types

- Non Surveyed Areas (No Access)
- Chapparal
- Conifer Mixed Hardwood
- Douglas Fir High Mortality
- Mixed Hardwood
- Regeneration
- Non Forested

N W E S

40ft Contour Interval

Scale: 1:15,000



North Hogback Ridge Treatment Unit Vegetation Map C

FRM

AB 7/25/2025

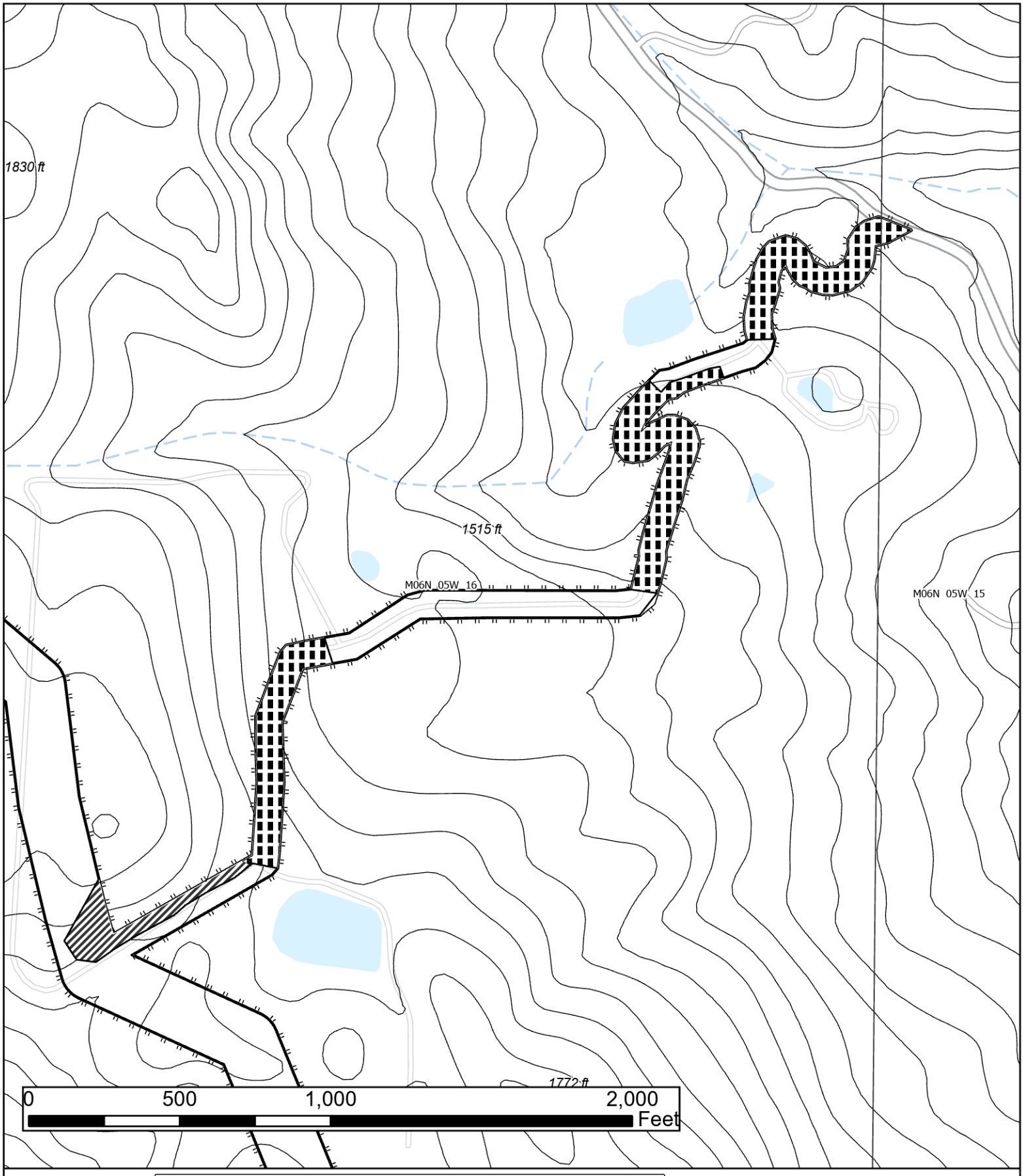
Vegetation Types

- Chapparal
- Conifer Mixed Hardwood
- Douglas Fir High Mortality
- Mixed Hardwood
- Regeneration
- Non Forested

N
W E
S

40ft Contour Interval

Scale: 1:6,000



Mt. Veeder School Road Vegetation Map

Vegetation Types

- Conifer Mixed Hardwood
- Regeneration
- Non Forested

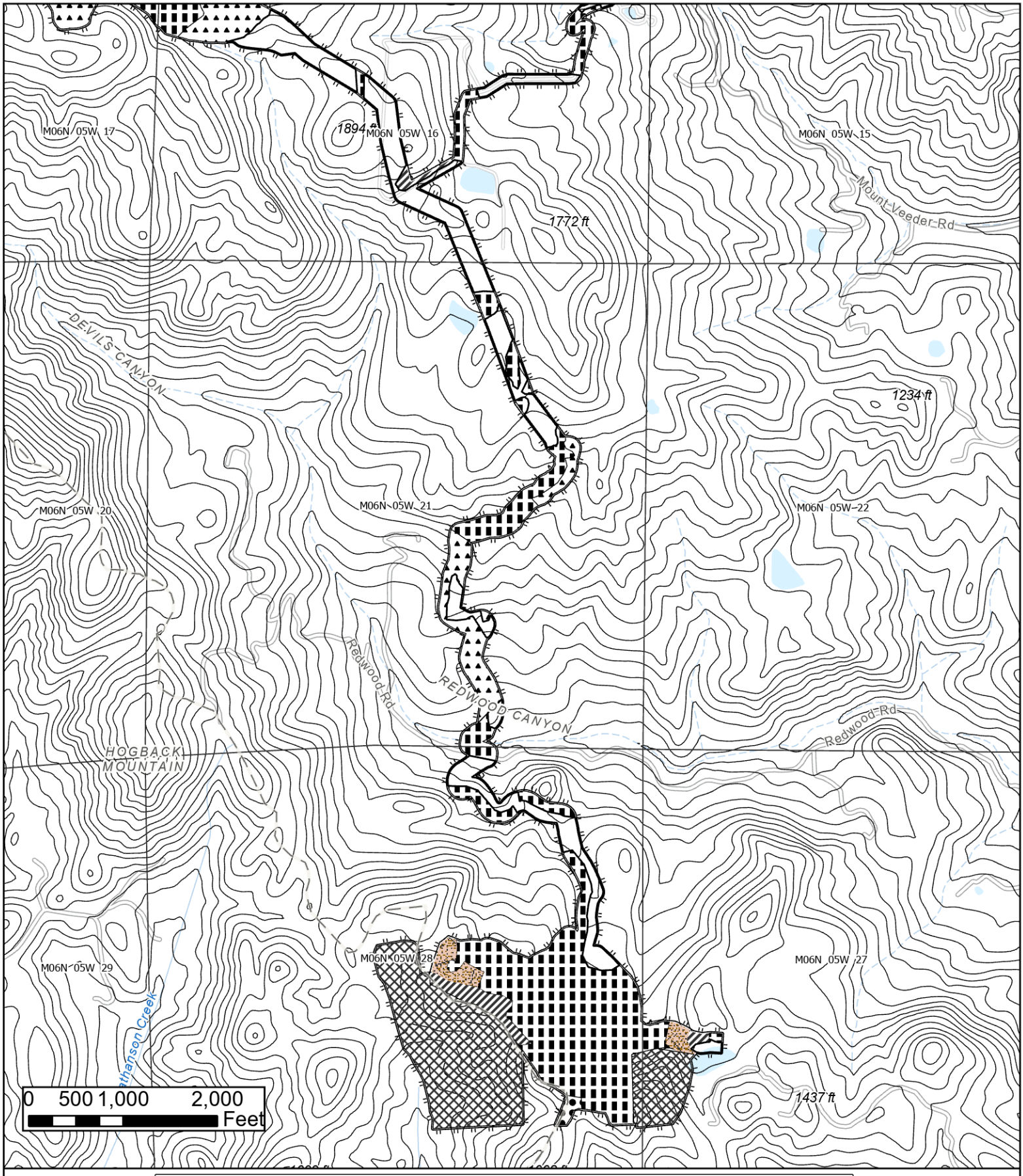
FRM

AB 7/25/2025

N
W
E
S

40ft Contour Interval

Scale: 1:5,000



North Hogback Ridge Treatment Unit Vegetation Map D

FRM

AB 7/25/2025

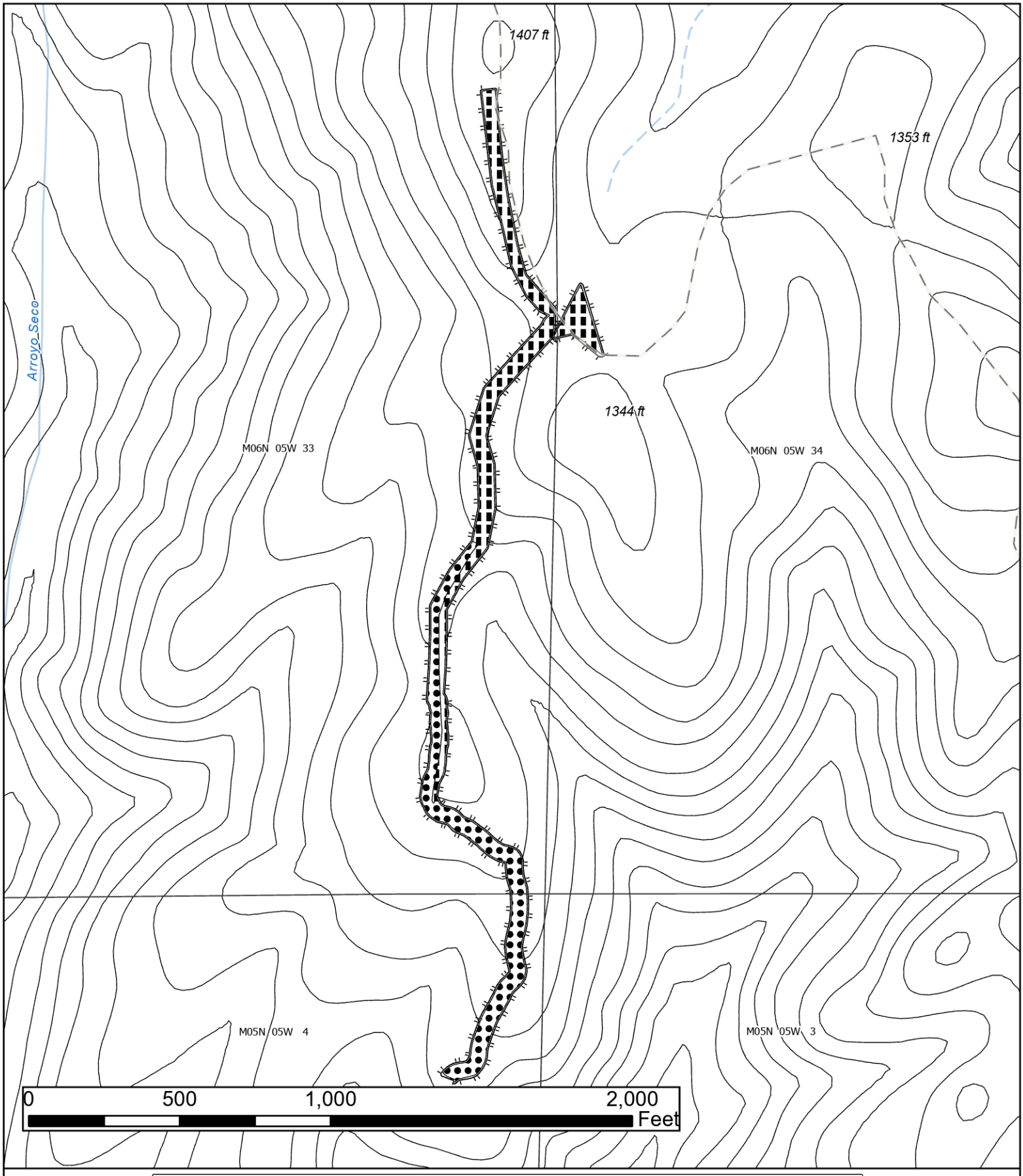
Vegetation Types

- Non Surveyed Areas (No Access)
- Chapparal
- Conifer Mixed Hardwood
- Douglas Fir High Mortality
- Mixed Hardwood
- Regeneration
- Non Forested

N W E S

40ft Contour Interval

Scale: 1:16,000



Admiral Cooke Fire Lane Treatment Unit Vegetation Map

FRM

Vegetation Types

Chapparal

Conifer Mixed Hardwood

N

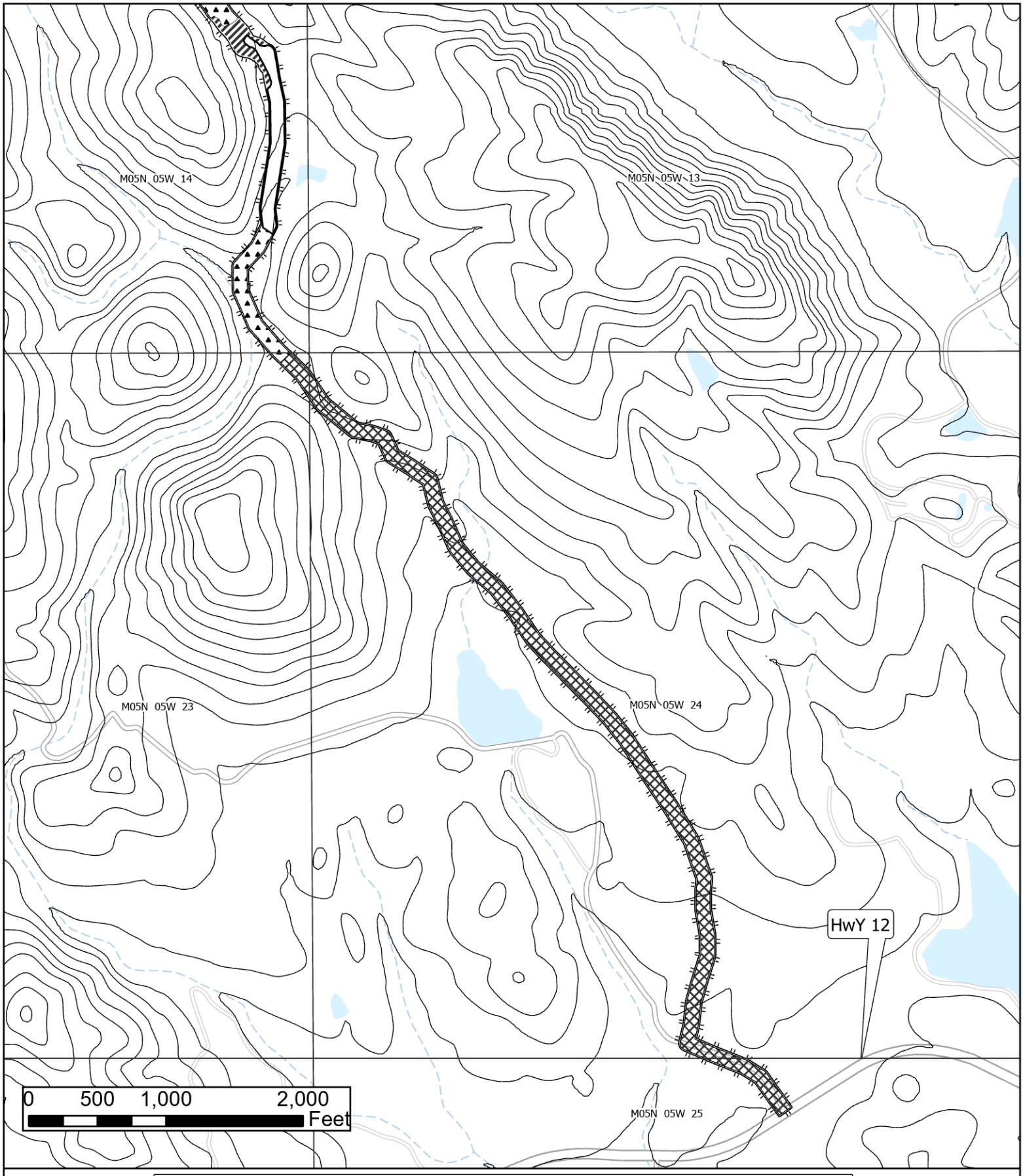
W E

S

40ft Contour Interval

Scale: 1:5,000

AB 7/25/2025



South Hogback Ridge Treatment Unit Vegetation Map E

FRM

AB 7/25/2025

Non Surveyed Areas (No Access)

Regeneration

Non Forested

Vegetation Types

Mixed Hardwood

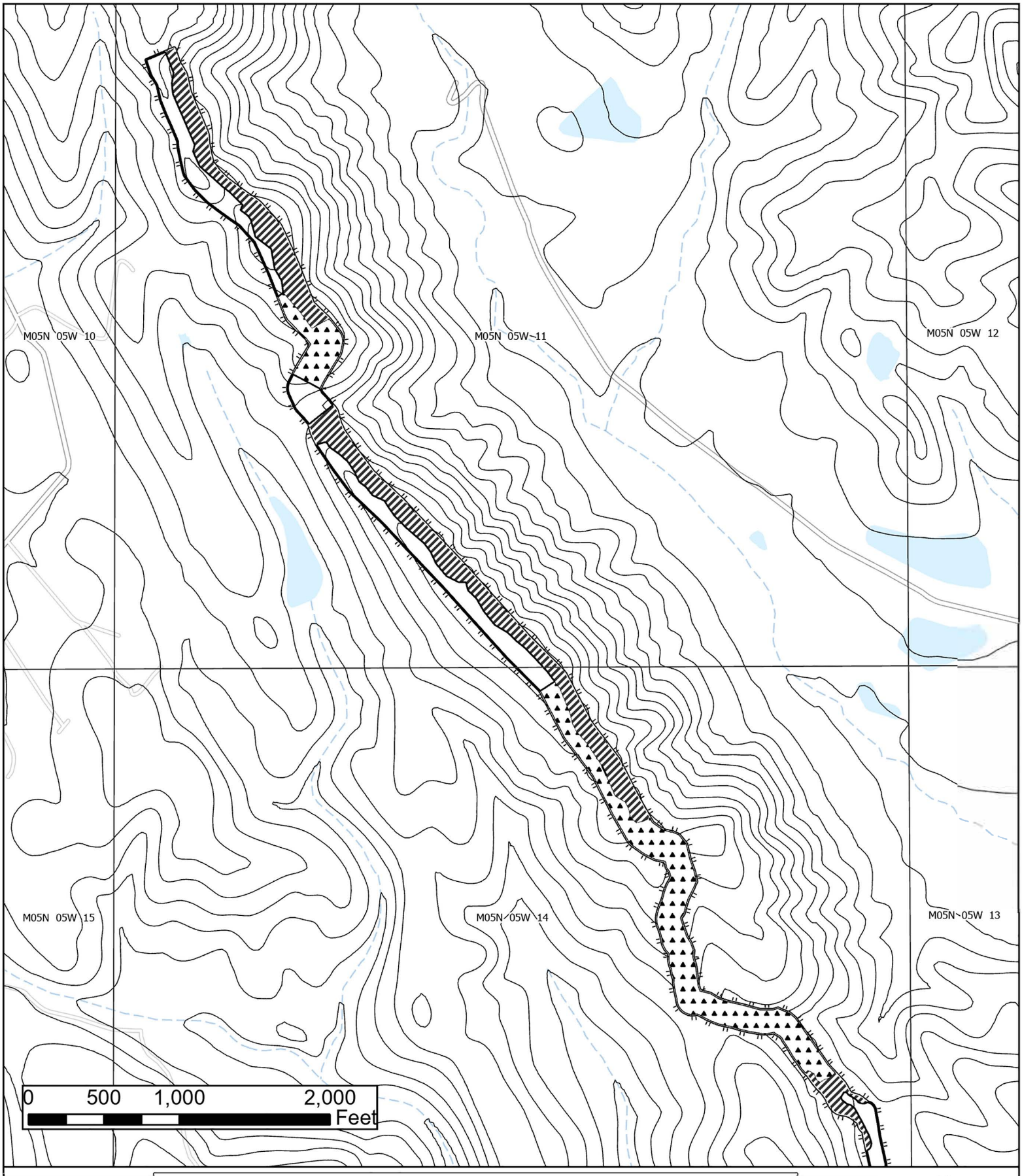
N

W E

S

40ft Contour Interval

Scale: 1:11,000



South Hogback Ridge Vegetation Map F

Vegetation Types

Mixed Hardwood

Regeneration

Non Forested

N

W E

S

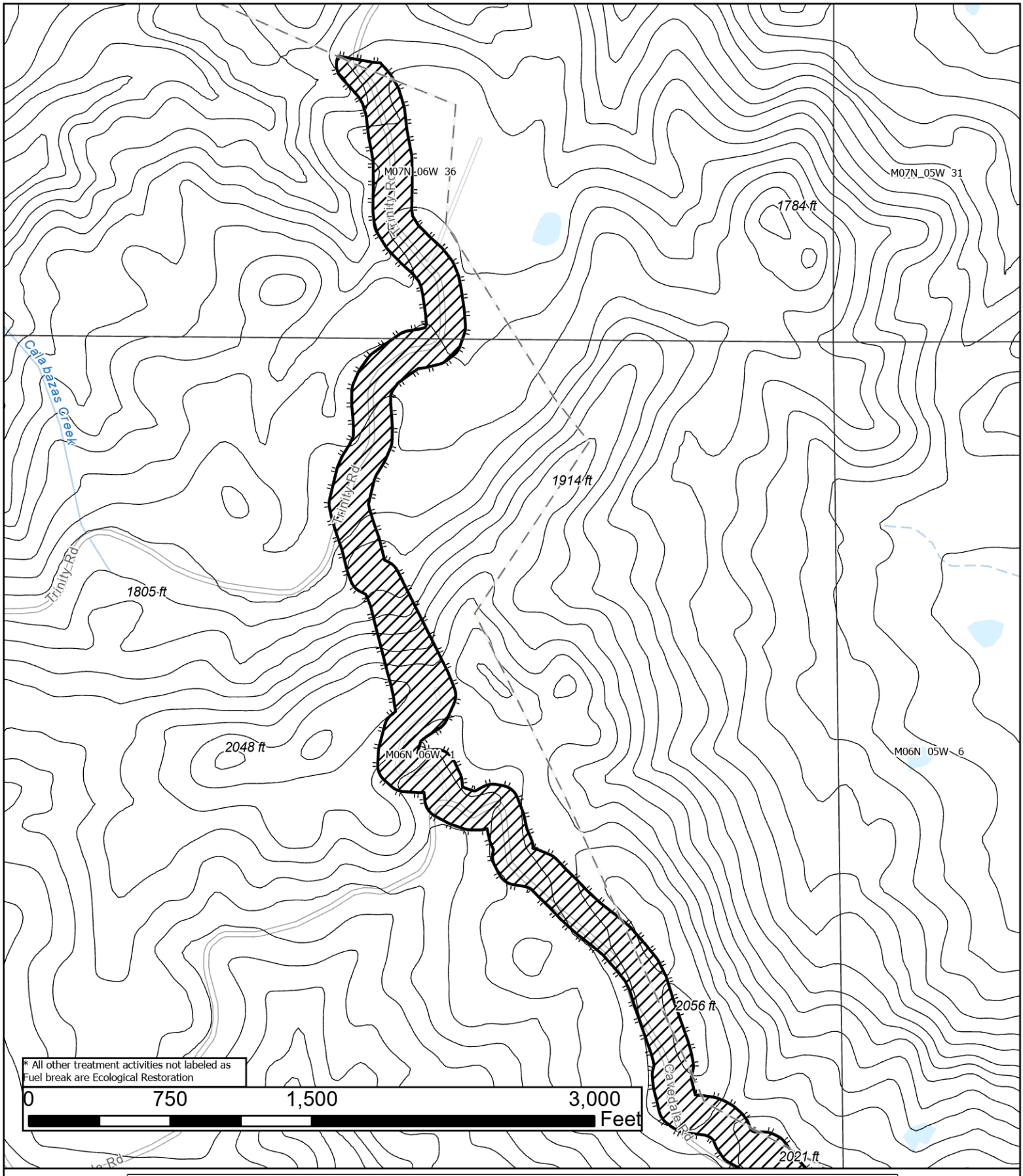
40ft Contour Interval

Scale: 1:10,000

FRM

AB 7/25/2025

Treatment Types Maps



North Hogback Ridge Treatment Unit Treatment Types Map A

FRM

Treatment Type

Fuel Break

N

W

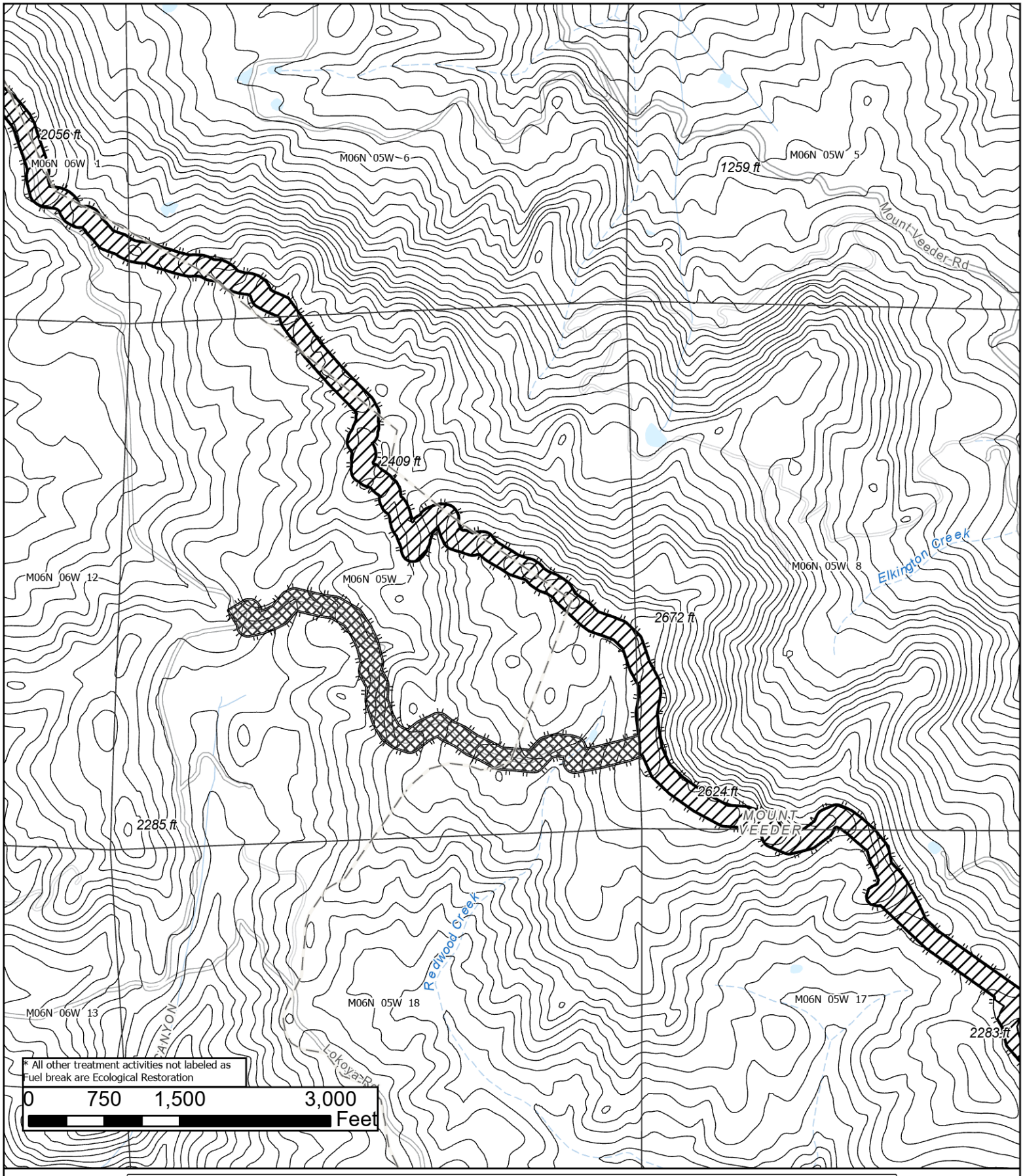
E

S

40ft Contour Interval

Scale: 1:8,000

AB 7/25/2025



North Hogback Ridge Treatment Unit Treatment Types Map B

FRM

Non Surveyed Areas (No Access)

Treatment Type

Fuel Break

N

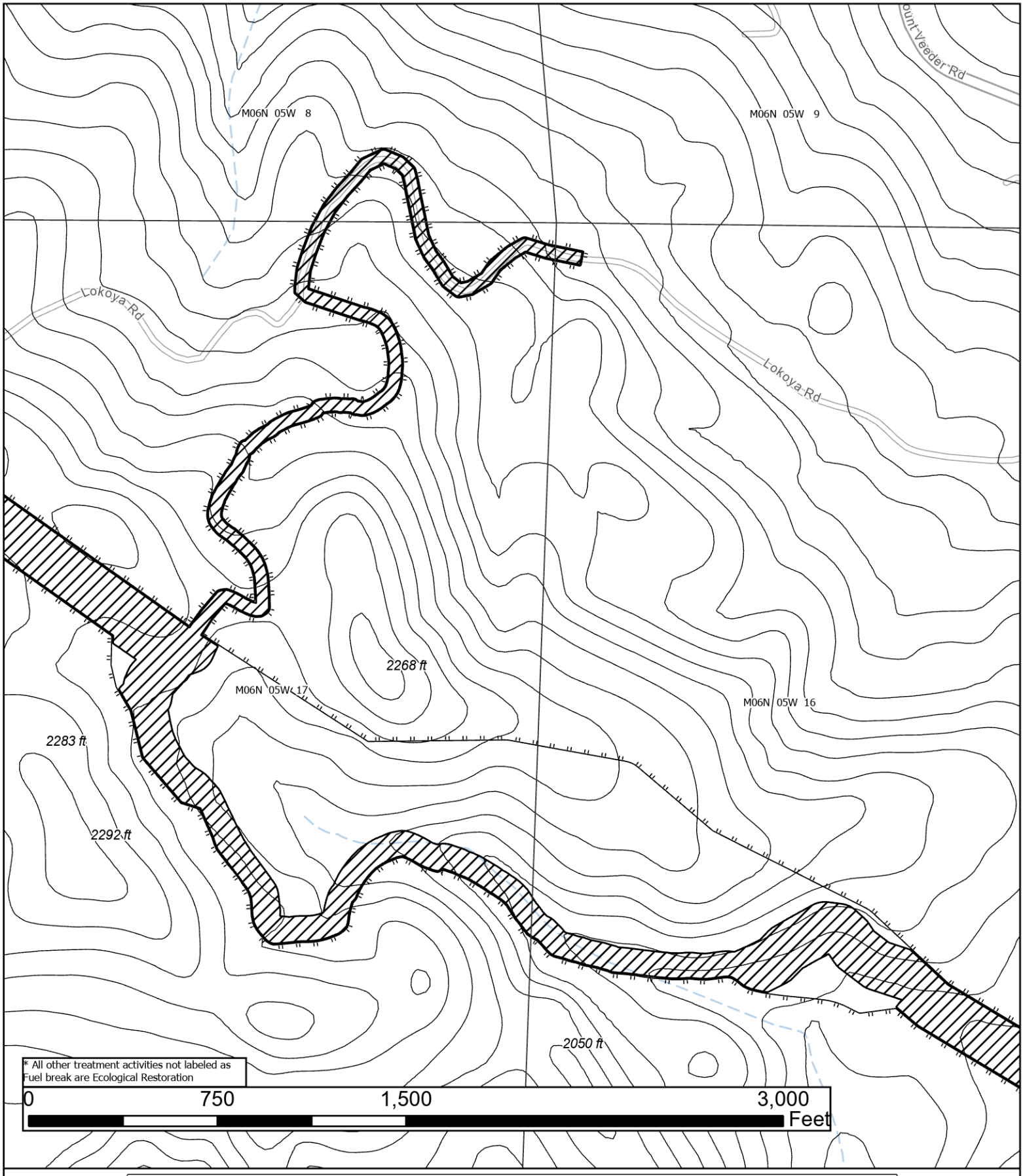
W E

S

40ft Contour Interval

Scale: 1:15,000

AB 7/25/2025



North Hogback Ridge Treatment Unit Treatment Types Map C

FRM

Treatment Type

Fuel Break

N

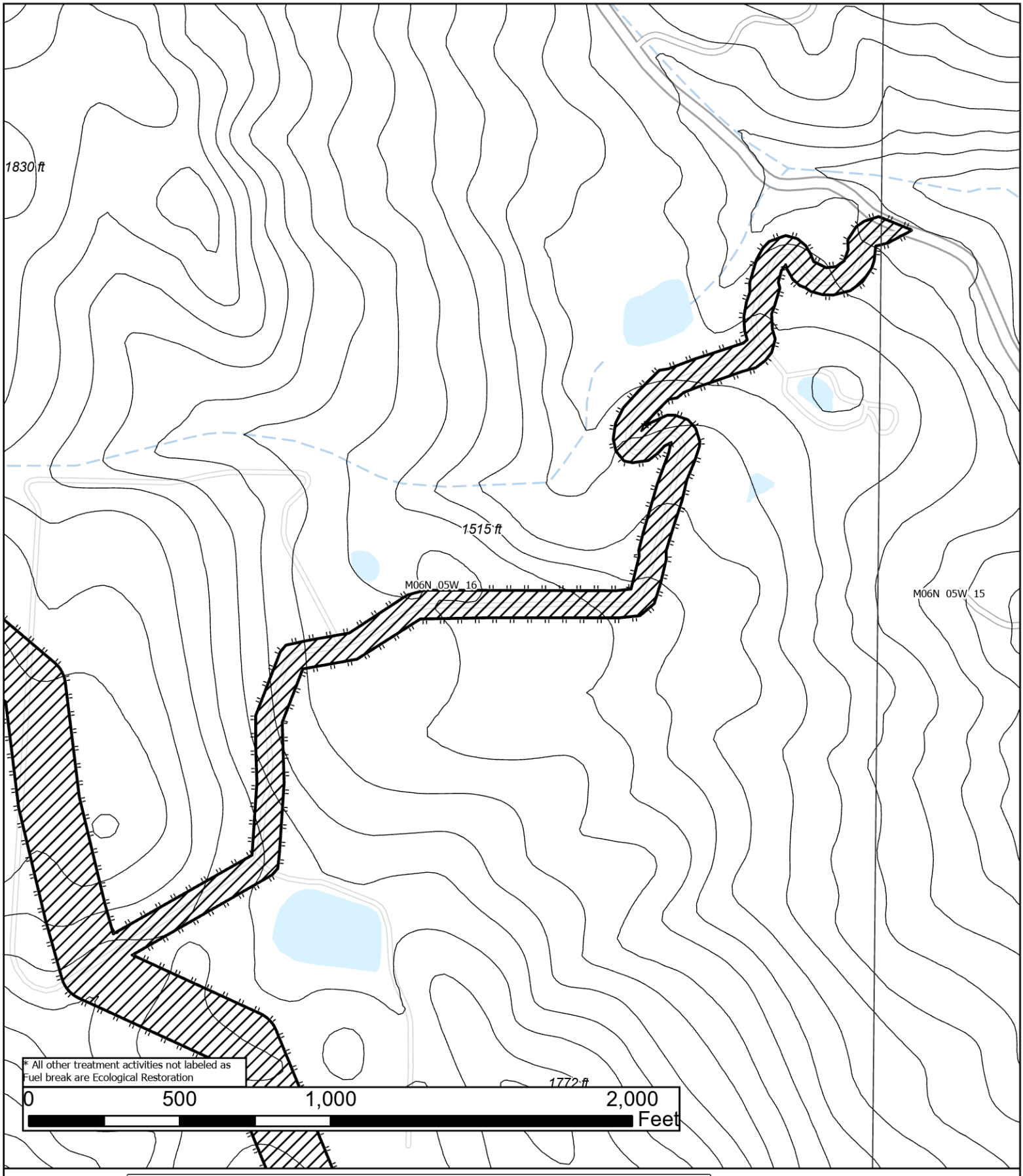
W E

S

40ft Contour Interval

Scale: 1:6,000

AB 7/25/2025



Mt. Veeder School Road Treatment Types Map

Treatment Type

Fuel Break

N

W E

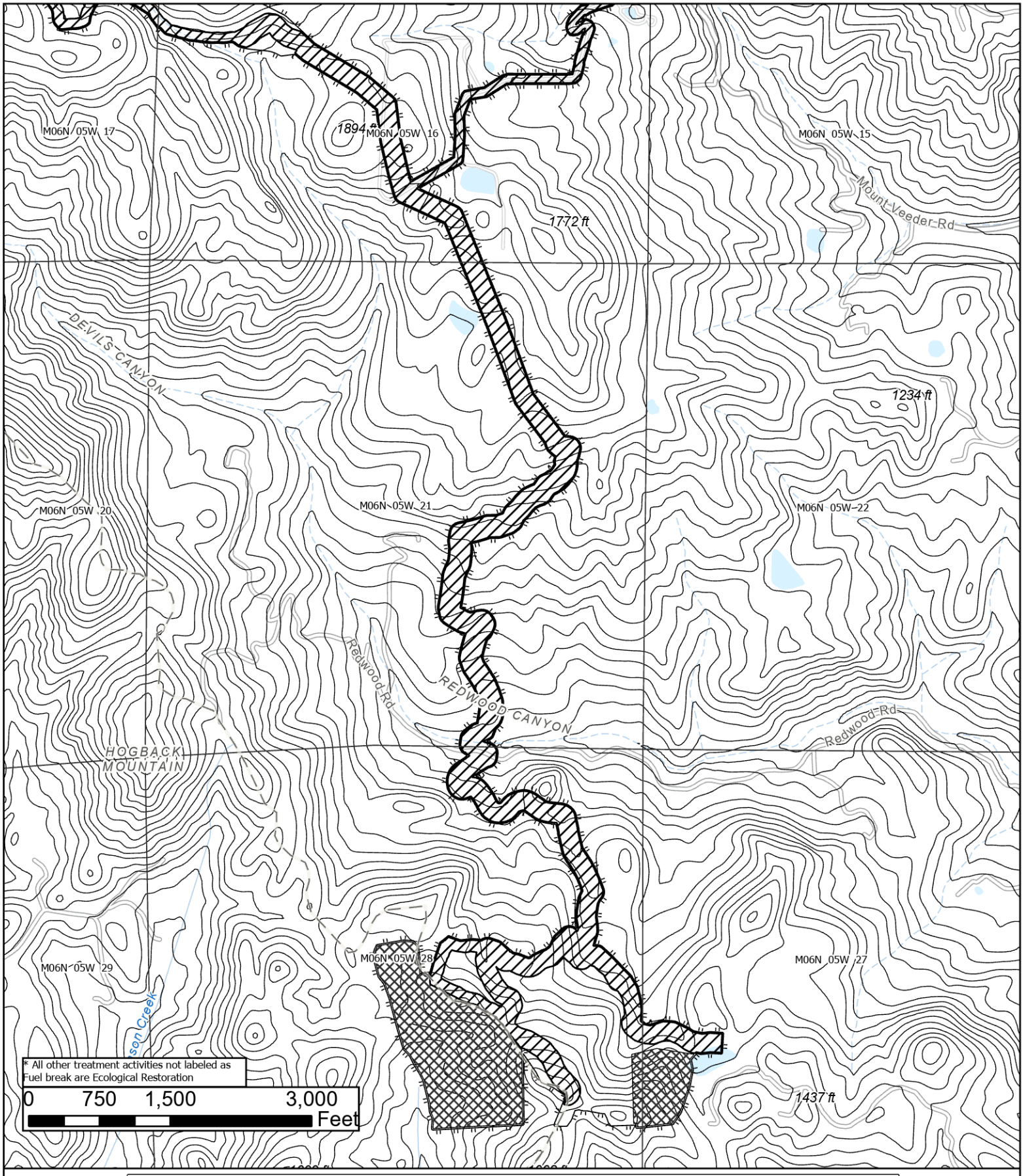
S

40ft Contour Interval

Scale: 1:5,000

FRM

AB 7/25/2025



North Hogback Ridge Treatment Unit Treatment Types Map D

FRM

Non Surveyed Areas (No Access)

Treatment Type

Fuel Break

N

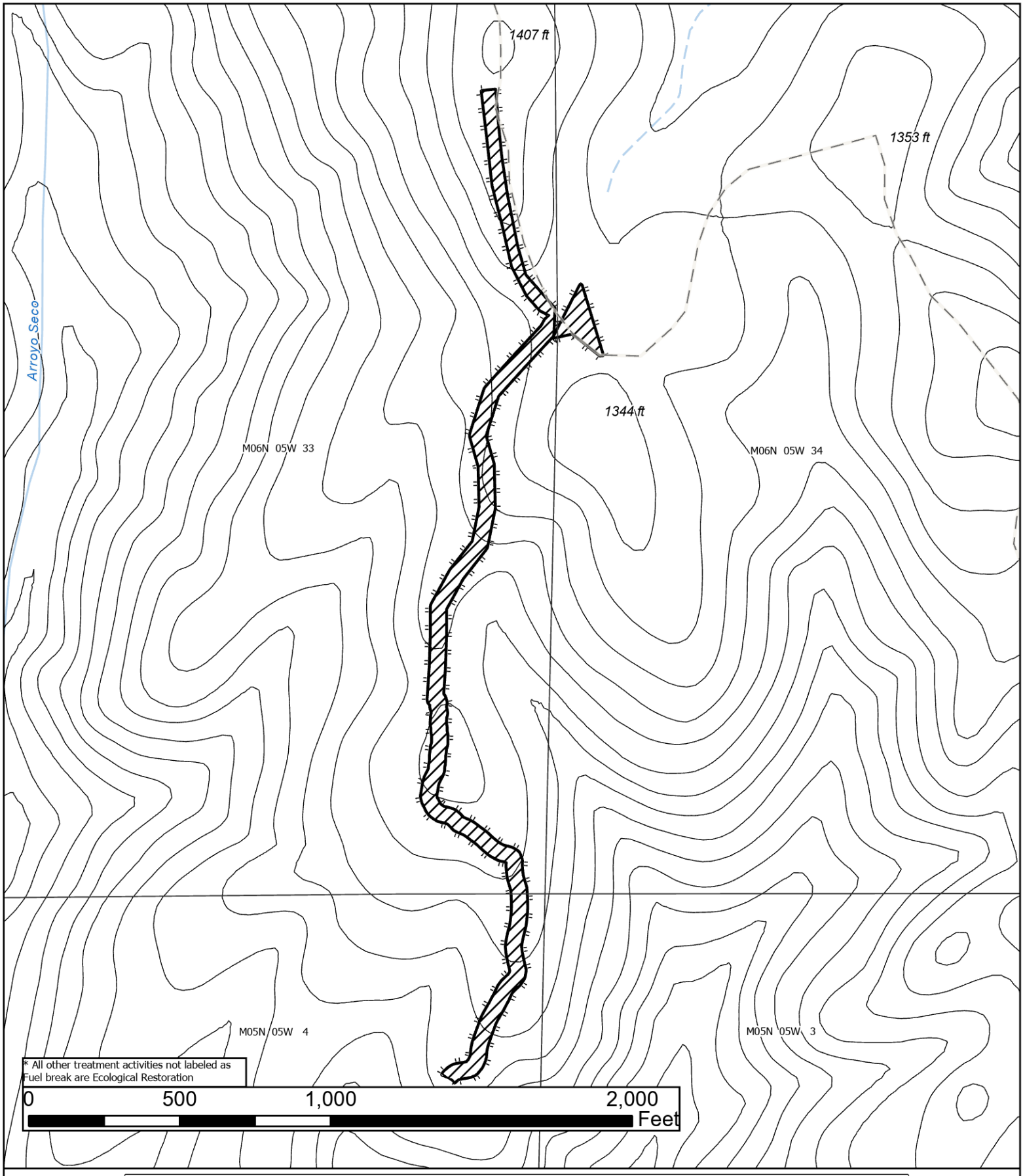
W E

S

40ft Contour Interval

Scale: 1:16,000

AB 7/25/2025



Admiral Cooke Fire Lane Treatment Unit Treatment Types Map

Treatment Type

Fuel Break

N

W E

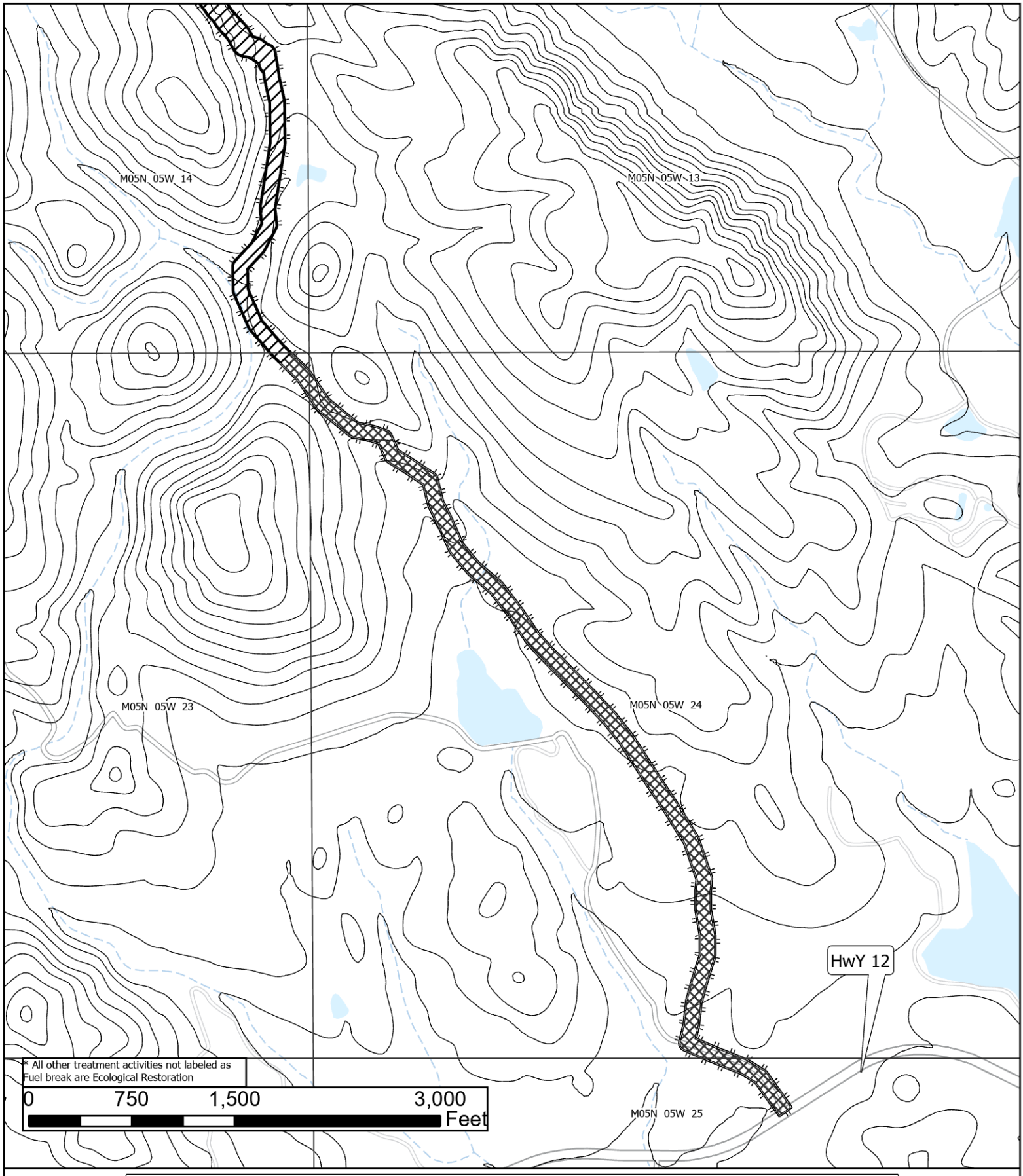
S

40ft Contour Interval

Scale: 1:5,000

FRM

AB 7/25/2025



South Hogback Ridge Treatment Unit Treatment Types Map E

FRM

Non Surveyed Areas (No Access)

Treatment Type

Fuel Break

N

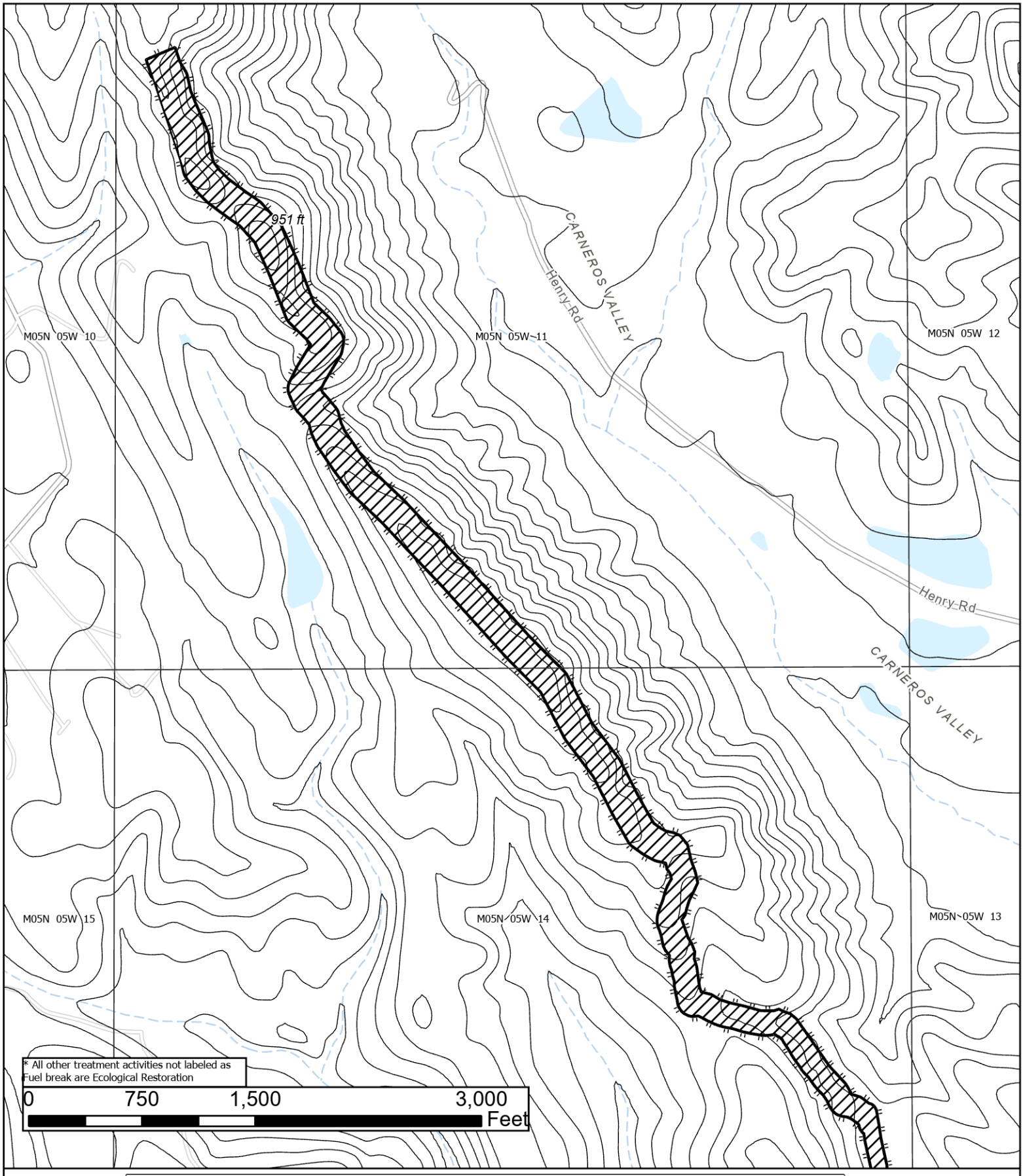
W E

S

40ft Contour Interval

Scale: 1:11,000

AB 7/25/2025



South Hogback Ridge Vegetation Treatment Types Map F

FRM

Treatment Type

Fuel Break

N

W E

S

40ft Contour Interval

Scale: 1:10,000

AB 7/25/2025

Hogback Ridge VTP # 2025-19

Project Specific Analysis and Addendum to the CalVTP PEIR

Prepared for:

Napa Communities Firewise Foundation

Prepared by:

Jacob Harrower | RPF 3070

Frontier Resource Management, LLC

TABLE OF CONTENTS

Common Terms and Acronyms Key:

RPF: Registered Professional Forester.

SPR: Standard Project Requirements

PSA: Project Specific Analysis

PEIR: Program Environmental Impact Report

MMRP: Mitigation monitoring and reporting program (Attachment A)

MM: Mitigation measures

CalVTP: California Vegetation Treatment Program

CNDDB: California Natural Diversity Database

CNPS: California Native Plant Society

NACL: Native American Contact List

DBH: Diameter at Breast Height

SRA: State Responsibility Area

WLPZ: Watercourse and Lake Protection Zone

TPA: Trees per acre

PCA: Pest Control Advisor

QAL: Qualified Applicator's License

LWD: Large Woody Debris. Existing downed logs which are highly valuable to wildlife.

Dead and Down: Vegetation that is dead and either in contact with the forest floor or standing.

% Canopy Cover: An average percentage of the sky that is covered by overstory or understory canopy as measured with a densitometer utilizing random plot survey methods.

% Live Crown = (Height of live crown / Total tree height) X 100

Lop and Scatter: Vegetation treatment technique where removed branches, shrubs, and trees are cut into manageable pieces and scattered around a treatment area to slowly break down into the ground over time.

Introduction

PROJECT OVERVIEW

The California Vegetation Treatment Program (CalVTP) directs implementation of vegetation treatments to reduce wildfire risk, while protecting natural resources and public property from wildfire. The Program Environmental Impact Report (PEIR) for the CalVTP was developed in 2019, under the direction of CEQA lead agency, California Board of Forestry and Fire Protection, in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines. This Project Specific Analysis (PSA) is prepared to assess vegetation treatments for the Hogback Ridge VTP covering approximately 431 acres, located in Sonoma and Napa counties.

CEQA LEAD AGENCY AND PROPOSED PROJECT

Napa County will function as the lead agency and project proponent for this CalVTP. Napa Community Firewise Foundation is the implementing entity and is solely responsible for the prescription of all vegetation treatments proposed and commissioned by them, including the implementation of the vegetation treatments, mitigation measures, and Standard Project Requirements (SPRs) shown in attachment A. The Lead Agency is responsible for making the final determination regarding this proposed projects CEQA compliance and the necessity or lack thereof for further environmental review.

The treatment types being proposed are fuel breaks and ecological restoration. The treatment activities will include manual treatment, mechanical treatment, herbicide treatment, prescribed burning, and prescribed herbivory. Ongoing maintenance will involve the same treatment types as the initial treatments.

Plan preparing RPF responsibilities: The RPF and Frontier Resource Management, LLC (FRM) have been retained by the project proponent (Napa Firewise), for the preparation of this PSA and all supporting documents attached. This includes identifying watercourses, sensitive species habitat, potential unstable slopes, and other sensitive forest resources in accordance with standard forest practices. The boundaries of mechanical treatments and other higher impact treatments have been designed to minimize impacts to these resources, as well as limit the potential for unforeseen impacts to occur. Nevertheless, there are still site-specific instances which will require adaptive management and RPF oversight during treatment implementation. The preparation of this document and plan does not designate the plan preparing RPF as the responsible entity during treatment implementation. The project proponent will retain an RPF to provide professional advice during treatment implementation.

FRM does not make the determination that the proposed treatment activities are within the scope of the PEIR, but rather provides the evaluation, surveys, and documentation required by CEQA for consideration by the lead agency. The Lead Agency is responsible for determining if the proposed treatments are within the scope of the PEIR, based on the information contained in this PSA and supporting attachments.

- *There are many private landowner's within the project area. The project proponent, lead agency, and RPF preparing this plan are not responsible for the conduct of these landowners. The following mitigation measures and SPRs only apply to a project commissioned by the project proponent or lead agency.*

STATEMENT OF PURPOSE

This document serves as the PSA to determine if the project as proposed is within the scope of the CalVTP PEIR and to provide CEQA compliance for the proposed vegetation treatments. Approximately 20% of the project area falls outside of the "treatable landscape" or geographic extent of the PEIR. This area can be classified as non forested areas and intermittent patches of Douglas-fir Mixed Hardwood and Oak Woodland. Excluding Non forested areas from the discussion below, the CalVTP Treatable Landscape boundary was digitally developed at a large scale, which did not allow for high resolution mapping. As a result, areas were dis-included, even though the vegetation is very similar to the surrounding vegetation within the treatable landscapes. These areas need treatment, as they provide fuel ignition and transfer fire to the "treatable landscapes". The invasion of grasses into oak woodlands and oak savannahs has moved these areas into extreme fire danger, furthering the necessity for preventative treatments.

Due to the similarities of the areas outside of the treatable landscape, the environmental analysis in the PEIR is applicable. An addendum to an EIR is appropriate when a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none of the changes or revisions would result in a substantially more severe significant environmental impact, consistent with CEQA section 21166 and CEQA Guidelines Sections 15162, 15163, 15164, and 15168. In this case there are no revisions, only a change to the geographic extent represented by the PEIR.

This document serves as both the PSA and the Addendum to the CalVTP PEIR to provide CEQA compliance for the proposed vegetation treatments.

VEGETATION TREATMENT PLAN

This Vegetation Treatment Plan does not prescribe treatment specifications for each forested area, but rather gives a brief overview of current conditions and general goals. The project proponent & implementing entity shall consult with an RPF for the development of the treatment prescriptions for each forest type. The RPF preparing this document and designing mitigations, is not responsible for the implementation of the project or it's mitigations. The project proponent and lead agency assume full responsibility for following the plan as outlined in this document. Furthermore, the project proponent and lead agency are required to consult with an RPF during implementation as outlined in the California Forest Practice Rules.

Treatment prescriptions and other "forestry services" for all "forested landscapes" must be developed by an RPF as required by Professional Foresters Law; Public Resources Code Sections 750 – 758. Forested landscapes are defined as,

> *"… those tree dominated landscapes and their associated vegetation types on which there is growing a significant stand of tree species, or which are naturally capable of growing a significant stand of native trees in perpetuity, and is not otherwise devoted to non-forestry commercial, urban, or farming uses."*

"Forestry" is defined as,

> *"…the science and practice of managing forested landscapes and includes, among other things, the application of scientific knowledge and forestry principles in the fields of fuels management and forest protection, timber growing, and utilization, forest inventories, forest economics, forest valuation and finance, and the evaluation of mitigation of impacts from forestry activities on watershed and scenic values…"*

PROJECT LOCATION

The 431-acre treatment area is situated roughly 4.5 air miles west of the city of Napa, the project is located in Napa and Sonoma Counties, CA. It has the following legal description: Section 1 T06N R06W, Section 6, 7, 8, 15, 16, 17, 21, 27, 28, 33, 34, T06N R 05W, Section 4, 11, 14, 23 , 24 , 25 T05N

R05W, Section 36 T07N R06W. It spans from Dry Creek Road in the North, to Highway 12 in the South. MDBM within Rutherford, Sonoma, and Napa USGS 7.5 Minute Quadrangles. The elevation of the entire project area ranges from 118 – 2690 ft above sea level.

CURRENT FOREST CONDITIONS

Three planning units within the project area have been developed. The following forest descriptions are based on initial reconnaissance and are not meant to be a comprehensive inventory of these different stand types. A more in-depth forest assessment should be conducted by an RPF prior to designing treatment specifics.

The Northern Hogback Ridge Treatment Unit is a fuel break and forest restoration treatment unit of approximately 365 acres. This unit consists of two forest restoration treatments and a fuel break treatment along the ridgeline. The entire unit was altered by the 2017 nuns fire, and evidence of this significant disturbance is observed throughout. The following five stand types were observed within the surveyed area

The Admiral Cooke treatment unit is four acres in size and like the Northern Treatment Unit, was affected by the Nuns fire.

The Southern Hogback Ridge Treatment Unit is 61 acres in size and was affected by the Nuns fire like the other treatment units. The following vegetation types are found in surveyable area.

Douglas-fir Mixed Hardwood – 76 acres:

Overall stand health and density is variable due to the Nuns fire. Significant regeneration of hardwoods including Pacific madrone and Bay laurel is prevalent. Tree stocking averages 120 sqft of basal area, with an average diameter of 18." The fire hazard is moderate – high, specifically within both forest restoration units in the Northern Treatment Unit, emphasizing the need for treatment. Within the stand, the species found are Coast live oak (*Quercus agrifolia*), Douglas-fir (*Pseudotsuga menziesii*), Black oak (*Quercus kelloggii*), Valley oak (*Quercus lobata*), Bay laurel (*Umbellularia californica*), Pacific madrone (*Arbutus menziesii*), Big-leaf maple (*Acer macrophyllum*), White oak (*Quercus garryana*), and Interior live oak (*Quercus wislizeni*).

Redwood Mixed Hardwood – 48 acres:

The Redwood Mixed Hardwood Forest type exhibits variability in overall stand density and sizing, emphasizing the patchy effects of the Nuns fire. The basal area averages 100 sqft and has an average diameter of 18." Ridgetop stands experienced a much greater degree of mortality and thus regeneration of Redwood, Bay Laurel, and Pacific Madrone. The overall fire hazard is moderate – high. Species found here include Redwood (*Sequoia sempervirens*), White alder (*Alnus rhombifolia*), Bay laurel (*Umbellularia californica*), Big-leaf maple (*Acer macrophyllum*), Interior live oak (*Quercus wislizeni*), Coast live oak (*Quercus agrifolia*), and Douglas-fir (*Pseudotsuga menziesii*).

Douglas-fir Mixed Hardwood High Mortality – 23 acres:

These are Douglas-fir stands which were heavily impacted by the Nuns fire and experienced high mortality. There is 50 sq ft of basal area with an average diameter of 18." The overall fire hazard in this site is high, due to the overstocked regeneration which consists primarily of hardwoods and Knobecone pine. Portions of this stand contain potential Pallid Bat habitat, this is discussed in greater detail in Impact BIO-2. The predominant species are Douglas-fir (*Pseudotsuga menziesii*), Pacific madrone (*Arbutus menziesii*), Bay laurel (*Umbellularia californica*), Redwood (*Sequoia sempervirens*), Black oak (*Quercus kelloggii*) and Knobcone pine (*Pinus attenuata*).

Mixed Hardwood – 17 acres:

There is a total of 75 sq ft of basal area with an average tree diameter of 14." The overall fire hazard is moderate. This forest type experiences variability in overall health, with some locations exhibiting greater regeneration and surface fuels which contribute to a greater density of ladder fuels. The species here include Black oak (*Quercus kelloggii*), Bay laurel (*Umbellularia californica*), Douglas-fir (*Pseudotsuga menziesii*), Coast live oak (*Quercus agrifolia*), Pacific madrone (*Arbutus menziesii*), Oregon white oak (*Quercus garryana*) and Toyon (*Heteromeles arbutifolia*).

Oak Woodland – 45 acres:

There is 50 sqft of basal area, with an average diameter of 18." The overall fire hazard is low due to the lack of ladder fuels and significant ground fuels beyond grass. Species found here are, Coast Live Oak (*Quercus agrifolia*), Bay laurel (*Umbellularia californica*), Valley oak (*Quercus lobata*), Douglas-fir (*Pseudotsuga menziesii*), Black oak (*Quercus kelloggii*), Blue oak (*Quercus douglasii*), and California buckeye (*Aesculus californica*) and Douglas – fir (*Pseudotsuga menziesii*) and White Oak (*Quercus garryana).*

Regeneration – 19 acres:

It is characterized by an extreme regeneration of Hardwoods along with significant overstory mortality. Snag density within this stand averages 40 TPA, and the live overstory basal area averages 40 sqft. The residual overstory trees, specifically in the Southern Treatment Unit, have an average diameter of 20." Regeneration density is consistently within the low thousands of TPA. The significant regeneration and snags within the overstory as well as steep slopes create an extreme fire hazard. Species found are Bay laurel (*Umbellularia californica*), Coast live Oak (*Quercus agrifolia*), Pacific Madrone (*Arbutus menziesii*) and California Buckeye (*Aesculus californica*).

- The remaining acreage is non-forested cover types such as grassland, vineyards, and chapparal.

TREATMENT GOALS AND SPECIFICATIONS

The Hoback Ridge VTP is proposed by Napa County to improve forest health and reduce the risk of wildfire throughout the 431-acre treatment area. The following are general goals and specifications which will be further developed by the project RPF for each treatment conducted under this VTP. The tree density specifications pertain mostly to the ecological restoration treatment types. Fuel breaks will generally remove more understory vegetation and retain less TPA. The long-term objectives for these forests are:

- Increase tree spacing
- Reduce fuel loading and insect/disease infestation
- Improve wildlife habitat and continuity
- Improve tree health
- Increase forest fire and drought resilience
- Reduce and control invasive non-native species
- Create a heterogeneous forest structure
- Increase species diversity
- Create a fuel break for wildfire control lines

<u>General Treatment Specifications for all forest types:</u>

- Select trees for retention that are free from insect and disease infestation and show little to no signs of tree bole instability.
- Damaged trees showing signs of reduced vigor, insect/disease infestation, and/or poor crown health shall be targeted for removal.

- Retention trees may be pruned to a height of 6-12 feet, but the live crown should not be reduced below 50%.
- Limit "high stumps". Cut trees to 6" above the ground.
- When dispersing chips throughout the treatment area, prevent the piling of chips greater than 8" above the ground where feasible.
- Do not allow chips to accumulate at the base of retained trees; make sure there is separation between the tree bole and the chips.
- Constructed burn piles should be less than or equal to 20' diameter and should not be placed close enough to damage retained trees. The acceptable distance of a pile to a tree will depend on: The piles' overall size, the topography, the weather at time of ignition, the retained tree's structural integrity, and the fuel moisture at the time of ignition.
- Treat existing dead and down throughout all treatment types but retain LWD > 16" diameter where feasible. The treatment will be aimed at breaking up the horizontal and vertical continuity of fuel. This may entail chipping, masticating, piling and burning, lop and scattering, broadcast burning or any other feasible method described in the PEIR.
- Trees determined by an RPF or Arborist to die within 5 years, may be removed regardless of DBH, species, or age.
- Snags should be retained where feasible within ecological restoration treatment types. Removal of snags will occur within shaded and non-shaded fuel breaks and were posing a risk to public safety or fuel break infrastructure. Snags shall be inspected by an RPF or Qualified Biologist, for the presence of sensitive species prior to removal.

Treatment Specifications – Chaparral ecosystems:

- Ecological restoration treatments will not be implemented in Chaparral that is within their natural fire return interval.
- Target fire return interval for chaparral ecosystems will be determined based on the results of SPR BIO-5.
- For ecological restoration treatments, a minimum of 35 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density (i.e., if baseline shrub canopy density is 60 percent, post treatment shrub canopy density will be no less than 40 percent).

Watershed Discussion

The treatment area traverses through seven watersheds: Upper Dry Creek, Upper Calabazas, Lower Dry Creek, Lower Calabazas, Redwood Creek, Nathanson Creek, and Carneros Creek. The two receiving watercourses are the Sonoma creek and the Napa River, both of which flow into the San Pablo Bay.

The 303(d) listed watercourses include Dry Creek and Carneros Creek (Napa County, tributary to Napa River-tidal). The creeks that feed into these watercourses are Carneros Creek, Upper Dry Creek, Redwood Creek, and Lower Dry Creek.

The long-term effect of this project on watercourse health will be positive. Although treatment has the potential to create impacts to water quality over the short term, the included SPRs and mitigation measures will lower them to a level of insignificance. The project will reduce fuels in a planned and controlled way, lowering the risk of severe effects from wildfire. High severity fire causes long term changes to the vegetation and ecosystem, often burning not only the vegetation but organic material in the soil. This removal of vegetation causes reduction in rainfall interception which leads to increased peak flow. Damage to the soil – which can result from high severity wildfire - leads to decreases in infiltration, increased erosion, and sedimentation.

High severity fire also has the potential to significantly reduce riparian vegetation, which leads to increased average water temperatures. Water chemistry changes, which are harmful to aquatic life can

also occur. These changes include reduced dissolved oxygen and increased nitrogen, phosphorus, calcium, potassium, and magnesium.

Vegetation treatments, like those proposed in this VTP, reduce the risk of high severity wildfire and their harmful effects to watercourses. With a reduction in fire hazard, fire resilient species will persist and remain vigorous. These species are adapted to low severity/low intensity wildfires. Previous centuries fire exclusion has led to overstocked forests and greater potential for high severity wildfires. Forests that survive a high intensity wildfire are susceptible to beetle infestations afterward, due to their decreased viability and vigor. Preventative treatments aim to reduce initial wildfire hazard to protect these forests from future disturbance.

TREATMENT TYPES

The following treatment types are proposed: Fuel breaks and ecological restoration (see operations maps in attachment C).

Fuel Breaks:

Shaded and non-shaded fuel breaks may be created at a width of 200 feet along the Hogback Ridgeline. These treatments will provide staging areas to support firefighting and will provide control lines during prescribed fire activity. Most of the understory vegetation will be removed, while retaining a high degree of canopy cover to slow understory regeneration. Existing ground fuels, shrubs, and trees < 6" DBH will be chipped, or burned, except where precluded by the SPRs (i.e. within WLPZ or special treatment zone buffers). If the fuel break is comprised of a young stand predominantly under 12" DBH, trees will be retained as prescribed by an RPF. Once cut, all vegetation will be chipped, burned (piled or broadcast), or lopped and scattered. Vegetation that is lopped and scattered shall not be allowed to accumulate greater than 18" above the ground and will be avoided within 300 ft of a structure.

Herbicides may be used within these areas where necessary to prevent invasive and resprouting species. This will ensure the fuel break is maintained. Herbicide use is not permitted within the STZs for sensitive plant species. See attachment C maps and the attached botany report. *Any herbicide use shall comply with SPR HAZ-5, HAZ-6, HAZ-7, HAZ-8, and HAZ-9 as shown in attachment A*. Within fuel breaks, snags may be removed if assessed by an RPF or Qualified Biologist prior to removal. If determined to contain a sensitive species, CDFW will be consulted prior to snag removal in accordance with the applicable mitigation measures listed in attachment A. No more than 10% of the treatment area will utilize a complete fuel break.

Ecological Restoration:

Ecological restoration treatments are designed to restore an ecosystem to a historical state. These conditions vary depending on the degree and extent of disturbance the ecosystem is adapted to. Following the NUNS fire in 2017, the forest restoration units found within the VTP experienced a loss of canopy cover, along with significant regeneration of mixed hardwood and conifer. This has caused unhealthy conditions to persist along with the buildup of surface, ladder, and aerial fuel loading. Restoration activities will focus on reducing densities of trees, shrubs, and invasive species. The treatments will mimic fire by removing non-fire resilient species and ladder fuels. By removing vegetation in this way, forest openings will be allowed to re-establish in areas that have become overstocked.

Prescribed herbivory, manual, mechanical, and prescribed burning treatments will be utilized throughout the project area. Treatments in these areas will be focused on removing enough ground and ladder fuels to allow broadcast burning without threatening the larger trees and overall canopy health.

The main goal being to return the stands to a historical stocking level, allowing a maintenance program to be established. Treatments will vary by forest type and RPF prescription. Snags and LWD will be retained within this treatment area, unless they pose a threat to public safety.

TREATMENT ACTIVITIES

- *For all treatment activities: The project proponent is responsible for implementing these treatment activities including the mitigations and monitoring described in this PSA and Attachment A. Containment of any fire used for vegetation treatment is the responsibility of the project proponent and implementing entity. Frontier Resource Management LLC is not responsible for ensuring that the treatments are implemented in accordance with the listed SPRs and Mitigations as prescribed by the RPF in Attachment A. The project Proponent is responsible for assigning this project to an RPF during treatment operations to ensure all forest resources and sensitive environments are protected adequately.*

Non-surveyed Areas

Approximately 91 acres throughout the Hogback Ridge fuel break could not be surveyed due to lack of access and are shown in attachment C maps. Reconnaissance surveys must be conducted prior to treatment in these locations. During this time, the now "non-surveyed" areas will be assessed in a similar manner as the rest of the project and treatment activity/type will be determined and amended into the plan at that time.

Mechanical Treatments

Approximately 255 acres are proposed to be treated with ground based heavy equipment. See Attachment C maps. During field reconnaissance, the RPF determined which areas would be best suited for mechanical treatment based on environmental conditions. Slope, unstable areas, sensitive species habitat, WLPZs, and vegetation density were among the factors considered during the assessment. Mechanical treatments will occur within these mapped areas as well as along existing roads; vegetation may be mechanically treated outside of mapped areas, if it can be reached with the machine's arm, while the tracks or wheels are within the road surface.

During mechanical treatments 1-2 pieces of heavy equipment (both tracked and/or rubber tired) may be used to cut, uproot, crush/compact, or chop trees and brush. Mostly this will entail utilizing a mastication head to roughly chip target vegetation and disperse onsite. The types of equipment used to complete these treatments will include excavators, skid steers, feller bunchers, etc. Mechanical treatments remain the most effective way to achieve the project goals and will thus be utilized where feasible.

Manual Treatments

Manual treatments may be employed everywhere within the approximately 431-acre treatment area. These treatments may involve between 3-10 laborers utilizing chainsaws, pole saws, tracked, and tow behind chippers. Cut material will be either lopped and scattered, chipped, or piled and burned in accordance with the treatment specifications above. Lop and scatter shall not occur within 150 ft of a habitable structure.

Herbicide Treatments

Herbicides may be applied throughout the entirety of the proposed project, except within identified STZs. See Attachment C, maps. Application of an herbicide, immediately following initial treatments will reduce the extreme regrowth of the understory (particularly within the fuel break treatments).

Without chemical control, brush and other understory species will regrow rapidly and pose a secondary threat to fuel break and WUI infrastructure.

All herbicide use shall comply with SPR HAZ-5 , HAZ-6, HAZ-7, HAZ-8, and HAZ-9 as shown in attachment A.

Prescribed Herbivory

Targeted grazing of brush and understory may occur throughout the entirety of the proposed project, except within specified STZs. See Attachment C, maps. All tree and shrub grazing shall follow the limitations defined in Attachment A SPRs. This treatment activity may entail the use of goats/sheep/cattle.

Prescribed Burning

Prescribed broadcast and pile burning may occur anywhere within the 431 acres, except were precluded by the SPRs, specifically unstable areas, WLPZs, and other STZs.

Broadcast burning may be used throughout the treatment area to reduce the surface and ladder fuel continuity. The intensity of this treatment will vary depending on many factors. Slope, weather, and fuel characteristics will dictate the outcome of the burn and will be utilized to determine the burn window. No broadcast burning shall occur until a burn plan is developed (see Attachment A; SPR AQ-2 and SPR AQ-3). In general, prescribed burning during the initial treatments has the potential to be of higher intensity, as the fuel loads are currently very high throughout the treatment area. It is recommended to utilize other treatment methods to reduce fuels loads.

A loader, excavator, dozer, or skidder may be utilized to establish fire lines where hand lines are not sufficient and where mechanical treatment activities are permitted. The burn plan must outline the equipment utilized in further detail.

CalVTP PROJECT INFORMATION

1. **Project Title:** Hogback Ridge CalVTP
2. **Project Proponent Name and Address:**

   Napa County

   1195 Third Street, Suite 310

   Napa, CA 94559
3. **Contact Person Information and Phone Number:** J.R. Rogers, 707-259-8199
4. **Project Location:** West of Napa CA, within Napa, and Sonoma County.

   The project is proposed on private parcels in Sonoma and Napa Counties, which are within the following Pacific Land Survey description. It has the following legal description: Section 1 T06N R06W, Section 6, 7, 8, 15, 16, 17, 21, 27, 28, 33, 34 T06N R 05W, Section 4, 11, 14 , 23 , 24 , 25 T05N R05W, Section 36 T07N R06W, MDBM within Rutherford, Sonoma, and Napa USGS 7.5 Minute Quadrangles

5. **Total Area to be Treated (acres)** 431
6. **Description of Project**:
   a. **Initial Treatment**

   - *See Vegetation Treatment Plan above.*

Treatment Types

☐ Wildland-Urban Interface Fuel Reduction

☒ Fuel Break

☒ Ecological Restoration

Treatment Activities

☒ Prescribed Burning (Broadcast), **431** acres

☒ Prescribed Burning (Pile Burning) **431** acres

☒ Mechanical Treatment, **255** acres

☒ Manual Treatment **431** acres

☒ Prescribed Herbivory, **431** acres

☒ Herbicide Application, **431** acres

☒ No Treatment (Non Forested) **52** acres

☒ Non-surveyed Area (To be amended post recon) **91** acres

Note: Multiple treatment activities may be applied in the same area

Fuel Type [*see description in CalVTP PEIR Section 2.4.1, check every applicable category; provide detail in description of Initial Treatment*]

☒ Grass Fuel Type

☒ Shrub Fuel Type

☒ Tree Fuel Type

b. <u>Treatment Maintenance</u>

- *Estimated treatment maintenance is based on each initial treatment completed. It is not anticipated that the initial treatment shall be completed on the entire project within 5 years of project approval.*
- *Treatment maintenance timing and scope will vary depending on the level of understory regrowth in response to initial treatments, which is highly dependent on-site quality, water availability, soils, aspect, initial treatment intensity, use of herbicides, etc…*

<u>Fuel Break Maintenance:</u>

Treatments within the Fuel Break areas may recur every 1-10 years depending on the effectiveness of the initial treatments and the level of vegetation regeneration. It is anticipated that understory vegetation will regrow quickly within the fuel breaks due to the greater disturbance associated with these types of treatments. A high canopy closure along with herbicide use will slow understory re-initiation. If herbicides aren't utilized, it is highly likely the fuel breaks will require retreatment after roughly 3 years. Alternatively, if herbicides are applied to target vegetation within the fuel break (i.e. vigorously resprouting and/or invasive species) maintenance treatments may not be necessary for 10 - 15 years.

<u>Ecological Restoration Maintenance:</u>

The goal within these treatment types within the historically forested areas is to maintain a high overall canopy closure, resulting in slow regeneration of the understory. It is estimated that treatment maintenance within these areas shall occur every 10-20 years, focusing mainly on treating dead and down. Again, the maintenance period will depend on the vegetation response to treatment. Canopy closure around grassy openings that were historically meadow areas may be greatly reduced. This will serve as meadow restoration and grassland conservation.

- *<u>For maintenance of all treatment types:</u> An assessment will be made by the project proponent which will determine when maintenance treatments shall occur. This will be based on regenerated vegetation and fuel loading assessments. The project proponent is responsible for maintaining the initial treatment areas.*

Treatment Types *[see description in CalVTP PEIR Section 2.5.1, check every applicable category; provide detail in description of Treatment Maintenance*]

☐ Wildland-Urban Interface Fuel Reduction

☒ Fuel Break

☒ Ecological Restoration

Treatment Activities [*see description in CalVTP PEIR Section 2.5.2, check every applicable category; include number of acres subject to each treatment activity, provide detail in description of Treatment Maintenance*]

☒ Prescribed Burning (Broadcast), **<u>431</u>** acres

☒ Prescribed Burning (Pile Burning) **<u>431</u>** acres

☒ Mechanical Treatment, **255** acres

☒ Manual Treatment, **431** acres

☒ Prescribed Herbivory, **431** acres

☒ Herbicide Application, **431**acres

☒ No Treatment (Non Forested) **52** acres

☒ Non-surveyed Area (To be amended post recon) **91** acres

Fuel Type [*see description in CalVTP PEIR Section 2.4.1, check every applicable category; provide detail in description of Treatment Maintenance*]

☒ Grass Fuel Type

☒ Shrub Fuel Type

☒ Tree Fuel Type

Use of the PSA for Treatment Maintenance

Prior to implementing a maintenance treatment, the project proponent will verify that the expected site conditions as described in the PSA are present in the treatment area. As time passes, the continued relevance of the PSA will be considered by the project proponent in light of potentially changed conditions or circumstances. Where the project proponent determines the PSA is no longer sufficiently relevant, the project proponent will determine whether a new PSA or other environmental analysis is warranted.

In addition to verifying that the PSA continues to provide relevant CEQA coverage for treatment maintenance, the project proponent will update the PSA at the time a maintenance treatment is needed when more than 10 years have passed since the approval of the PSA or the latest PSA update. For example, the project proponent may conduct a reconnaissance survey to verify conditions are substantially similar to those anticipated in the PSA. Updated information will be documented.

7. **Regional Setting and Surrounding Land Uses:** The project area is within Napa and Sonoma counties. The property is a conglomerate of individually owned private parcels. The land uses within and adjacent to this property are Non forested areas and private parcels.

8. **Other Public Agencies Whose Approval is Required**: (e.g., permits)

- Smoke management plan will be prepared for BAAQMD prior to any prescribed broadcast burns. Pile burning may require a smoke management plan depending on the number and size of piles being burned.
- A burn permit will be obtained from CALFIRE when required. See SPRs
- LSA agreement with CDFW may be required if working within the channel zone of a watercourse

Coastal Act Compliance

☒ The proposed project is NOT within the Coastal Zone

☐ The proposed project is within the Coastal Zone (*check one of the following boxes*)

☐ A coastal development permit been applied for or obtained from the local Coastal Commission district office or local government with a certified Local Coastal Plan, as applicable

☐ The local Coastal Commission district office or local government with a certified Local Coastal Plan (in consultation with the local Coastal Commission district office) has determined that a coastal development permit is not required

9. **Native American Consultation**. *For treatment projects that are within the scope of the CalVTP PEIR, AB 52 consultation for AB 52 compliance has been completed. The Board of Forestry and Fire Protection conducted consultation pursuant to Public Resources Code section 21080.3.1 during preparation of the PEIR*. Pursuant to CalVTP SPR CUL-2, the Native American tribes listed on CALFIREs NACL will be contacted by the project proponent or their representative.

DETERMINATION

On the basis of this PSA and the substantial evidence supporting it:

☒ I find that all of the effects of the proposed project (a) have been covered in the CalVTP PEIR, and (b) all applicable Standard Project Requirements and mitigation measures identified in the CalVTP PEIR will be implemented. The proposed project is, therefore, **WITHIN THE SCOPE** of the CalVTP PEIR. NO ADDITIONAL CEQA DOCUMENTATION is required.

☒ I find that treatments in proposed project areas outside the CalVTP treatable landscape do not result in substantial changes in the project, no substantial changes in circumstances have occurred, and no new information of substantial importance has been identified. The inclusion of project areas outside the CalVTP treatable landscape will not result in any new or substantially more severe significant impacts. None of the conditions described in State CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR have occurred; therefore, this **ADDENDUM** is adopted to address the project areas outside geographic extent presented in the PEIR.

☐ I find that the proposed project will have effects that were not covered in the CalVTP PEIR. These effects are less than significant without any mitigation beyond what is already required pursuant to the CalVTP PEIR. A NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project will have effects that were not covered in the CalVTP PEIR or will have effects that are substantially more severe than those covered in the CalVTP PEIR. Although these effects may be significant in the absence of additional mitigation beyond the CalVTP PEIR's measures, revisions to the proposed project or additional mitigation measures have been agreed to by the project proponent that would avoid or reduce the effects so that clearly no significant effects would occur. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project will have significant environmental effects that are (a) new and were not covered in the CalVTP PEIR and/or (b) substantially more severe than those covered in the CalVTP PEIR. Because one or more effects may be significant and cannot be clearly mitigated to less than significant, an ENVIRONMENTAL IMPACT REPORT will be prepared.

_____ _____

Signature Date

_____ _____

Printed Name Title

_____

Agency

PROJECT SPECIFIC ANALYSIS

PD-3.2: AESTHETICS AND VISUAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact AES-1: Result in Short-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from Treatment Activities	LTS	Impact AES-1, pp. 3.2-16 – 3.2-19	Yes	AES-2, AQ-2, AQ-3	NA	LTS	No	Yes
Impact AES-2: Result in Long-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from WUI Fuel Reduction, Ecological Restoration, or Shaded Fuel Break Treatment Types	LTS	Impact AES-2, pp. 3.2-20 – 3.2-25	No	AES-1, AES-3, AD-4	NA	None	No	Yes
Impact AES-3: Result in Long-Term Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from the Non-Shaded Fuel Break Treatment Type	PS	Impact AES-3, pp. 3.2-25 – 3.2-27	No	NA	AES-3	None	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; SU: Significant and unavoidable. PS: Potentially Significant

New Aesthetic and Visual Resource Impacts: Would the treatment result in other impacts to aesthetics and visual resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
	☐	☐	☐

Discussion

Impact AES-1

Relevant to all impacts listed below, the treatments listed will reduce the effects of devastating wildfire. This will enhance the visual character of this project area by preserving mature trees which would otherwise be eliminated from such a fire.

The potential for short-term degradation of visual character resulting from the proposed treatment activities was evaluated in the PEIR. These treatments will occur on privately owned land that is visible to the public. Small segments of the CalVTP may fall within the viewshed of the Archer Taylor Regional Preserve. Short-term impacts to visual character for these preserves were assessed in this PSA. Within the Archer Taylor Preserve viewshed, vegetation treatments will be light due to the existing density of vegetation and are expected to enhance the scenic character both in the short and long term. The area that is within the viewshed is small and the vegetation community is not expected to experience significant changes with treatment. Understory thinning will occur within existing stands, improving growing conditions for the overstory, which is visible to the public.

The potential for the project to result in a short-term impact to this resource area is within the scope of the PEIR because the treatment activities are consistent with those analyzed in the PEIR. Through the inclusion of the SPRs, where feasible, as outlined in the PEIR the impact will be Less than significant.

Because the impact on the visual resource is less than what would occur during a catastrophic wildfire, particularly in the long term, this subject is negligible.

Impact AES-2

The potential for long-term impact to visual resources as a result of the project was assessed in the PEIR and found to not be applicable. The area that is viewable is small and the vegetation community is not expected to experience significant changes with treatment.

Impact AES-3

The potential for long-term impact to visual resources as a result of the project was assessed in the PEIR and found to not be applicable. The area that is viewable is small and the vegetation community is not expected to experience significant changes with treatment.

CalVTP Addendum for Change to Geographic Extent

The project proponent has determined that the inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the viewshed and treatment impacts are consistent with those examined in the PEIR and would therefore not create any new significant impacts.

The inclusion of land that is outside of the treatable landscape presented in the PEIR, is geographically and visually the same as that included in the PEIR, therefore, the impact will be the same and is also within that scope.

PD-3.3: AGRICULTURE AND FORESTRY RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact AG-1: Directly Result in the Loss of Forest Land or Conversion of Forest Land to a Non-Forest Use or Involve Other Changes in the Existing Environment Which, Due to Their Location or Nature, Could Result in Conversion of Forest Land to Non-Forest Use	LTS	Impact AG-1, pp. 3.3-7 – 3.3-8	Yes	NA	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; SU: Significant and unavoidable. PS: Potentially Significant

New Agriculture and Forestry Resource Impacts: Would the treatment result in other impacts to agriculture and forestry resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact AG-1

Initial and maintenance treatments will encourage healthier forest conditions by removing competing vegetation and in some cases scarifying the ground, allowing for desirable tree species to seed in. The project area exists within various forest types such as hardwood forest, chaparral, oak woodland, and conifer forest. The project will focus on removing trees less than 10" DBH, and brush species, which will not have a significant negative effect on the forest structure. Not all trees in this size class will be removed, thus preventing a future conversion, due to lack of regeneration in the understory.

The treatments proposed are intended to protect this forest from a stand replacing wildfire, which would have the potential to convert the forest land into a brush dominated pioneer species structure. This would have the potential to initiate a cycle of high intensity wildfires which could create an adaptation towards chapparal species.

This Vegetation Treatment Plan does not prescribe treatment specifications for each forested area but rather gives a brief overview of current conditions and general goals. The project proponent shall consult with an RPF for the development of the treatment prescriptions for each forest type. Treatment prescriptions and other "forestry services" for all "forested landscapes" must be developed by an RPF as required by Professional Foresters Law; Public Resources Code Sections 750 – 758. Forested landscapes are defined as,

> *"… those tree dominated landscapes and their associated vegetation types on which there is growing a significant stand of tree species, or which are naturally capable of growing a significant stand of native trees in perpetuity, and is not otherwise devoted to non-forestry commercial, urban, or farming uses."*

"Forestry" is defined as,

> *"…the science and practice of managing forested landscapes and includes, among other things, the application of scientific knowledge and forestry principles in the fields of fuels management and forest protection, timber growing, and utilization, forest inventories, forest economics, forest valuation and finance, and the evaluation of mitigation of impacts from forestry activities on watershed and scenic values…"*

After assessing the proposed treatments and their effect on the potential for converting forest land within the project area, the project proponent has determined that the treatments will in fact protect forest resources from conversion, since treatments will be developed by an RPF.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the composition of forestland as defined in public resources code section 12220(g) is essentially the same within and outside the treatable landscapes of this specific project area. The reason for their dis-inclusion is most likely due to low resolution mapping performed on a large scale. This mapping approach failed to include all forestland needing treatment. This includes low density oak woodland and transition zones which still fall within the definition of a forestland according to the California Forest Practice Rules definition listed above. Therefore, there is no change in the impact to forest resources within these areas.

PD-3.4: AIR QUALITY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact AQ-1: Generate Emissions of Criteria Air Pollutants and Precursors During Treatment Activities that would exceed CAAQS or NAAQS	PS	Table 3.4-1; Impact AQ-1, pp. 3.4-26 – 3.4-32; Appendix AQ-1	Yes	AQ-4, AQ-6, AQ-3, AQ-2, AQ-1	AQ-1 See exclusions in discussion	PSU	No	Yes
Impact AQ-2: Expose People to Diesel Particulate Matter Emissions and Related Health Risk	LTS	Table 3.4-6; Impact AQ-2 pp. 3.4-33 – 3.4-34; Appendix AQ-1	Yes	HAZ-1, NOI-4	NA	LTS	No	Yes
Impact AQ-3: Expose People to Fugitive Dust Emissions Containing Naturally Occurring Asbestos and Related Health Risk	LTS	Section 3.4.2; Impact AQ-3, pp. 3.4-34 – 3.4-35	No	AQ-4	NA	LTS	No	Yes
Impact AQ-4: Expose People to Toxic Air Contaminants Emitted by Prescribed Burns and Related Health Risk	PS	Section 3.4.2; Impact AQ-4, pp. 3.4-35 – 3.4-37	Yes	AD-4, AQ-2, AQ-3, AQ-6	NA	PSU	No	Yes
Impact AQ-5: Expose People to Objectionable Odors from Diesel Exhaust	LTS	Impact AQ-5, pp. 3.4-37 – 3.4-38	Yes	HAZ-1, NOI-4	NA	LTS	No	Yes
Impact AQ-6: Expose People to Objectionable Odors from Smoke During Prescribed Burning	PS	Section 2.5.2; Impact AQ-6; pp. 3.4-38	Yes	AD-4, AQ-2, AQ-3, AQ-6	NA	PSU	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; PSU: Potentially Significant and unavoidable. PS: Potentially Significant; SU: significant and unavoidable

New Air Quality Impacts: Would the treatment result in other impacts to air quality that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact AQ-1
Emissions of criteria air pollutants related to the proposed treatment are within the scope of the PEIR because the associated equipment and duration of use are consistent with those analyzed in the PEIR. The applicable SPRs will be implemented during treatments. AQ-5 would not apply to this project because there are no known asbestos areas within the treatment units.

The overall impact was determined to be Potentially significant and un-avoidable by the PEIR. Mitigation measure AQ-1 will be applied where feasible and will, along with the SPRs, reduce the impact. The following mitigation measures listed under AQ-1 will not be applied due to lack in technology and infeasibility at the local level:

- Electric and gasoline-powered equipment will be substituted for diesel-powered equipment.
    - *Currently there are no alternatives available which offer the functional ability to handle the workload required for the treatment activities. Diesel engines are the most efficient and widely available option for completing fuels treatments, particularly with regards to mechanical treatment activities. Furthermore, gasoline engines lack the torque required to complete treatments on steep slopes under extreme loads. This is where diesel engines have an advantage, allowing treatment on areas which would otherwise be untreatable. Diesel powered equipment also has a greater workload ability, allowing work to be completed faster. This has both an economic impact to the project as well as a reduced duration of air quality offense.*

      Lithium-ion batteries lack the range and charging speed to allow "theoretical" electric powered heavy equipment to complete the job within any sort of real-world efficiency. Because the jobs are so far from any charging station, it would be necessary to have a mobile charging source. That charging source would likely require a gas-powered generator to work, thus defeating the purpose of the mitigation measure.

      Ultimately, the technology is lacking, both locally and elsewhere, to include this portion of the mitigation measure.

Impact AQ-2
Use of mechanical equipment during initial and maintenance treatments could expose people to diesel particulate matter emissions. This potential was examined within the PEIR. These types of emissions for the treatment activities are within the scope of the PEIR because they are the same, including types of equipment and potential duration of treatment. With SPRs listed in the table above, this impact is less than significant.

Impact AQ-3
This impact does not apply to the project area. No serpentine rock was identified during field reconnaissance.

Impact AQ-4
Prescribed burning during initial and maintenance treatments could expose people to toxic air contaminants, which was examined in the PEIR. The duration and parameters of prescribed burns are the same as addressed in the PEIR, therefore the potential exposures are within the scope of the PEIR. All feasible SPRs for controlling smoke emissions are included in this PSA as well as the PEIR and no further mitigations are feasible. The impacts remain significant and unavoidable as identified in the PEIR. Nevertheless, these impacts are significantly less than those created during large scale wildfires. The goal of these burns being to prevent devastating large-scale wildfires, and thus large-scale impacts to air quality.

Impact AQ-5
The use of diesel equipment during operations could expose people to objectionable odors. This potential was examined in the PEIR. The potential impact from this project is within the scope because the duration, equipment used, and treatment activities are consistent with those analyzed in the PEIR.

Impact AQ-6
Prescribed burning during initial and maintenance treatments could expose people to objectionable odors. This potential was examined in the PEIR. The potential impact from this project is within the scope because the duration, equipment used, and treatment activities are consistent with those analyzed in the PEIR.

CalVTP Addendum: Change to Geographic Extent
The inclusion of land that is outside of the treatable landscape presented in the PEIR, constitutes a change in the geographic extent presented in the PEIR. The air quality conditions as well as the exposure potential present in these areas are the same as those within the treatable landscape. Consequently, the impact will be the same and is within the scope of this PEIR for all of the above listed impacts.

PD-3.5: ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact CUL-1: Cause a Substantial Adverse Change in the Significance of Built Historical Resources	LTS	Impact CUL-1, pp. 3.5-14 – 3.5-15	Yes	CUL-1, CUL-7, CUL-8	NA	LTS	No	Yes
Impact CUL-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources or Subsurface Historical Resources	PS	Impact CUL-2, pp. 3.5-15 – 3.5-16	Yes	CUL-1 through CUL-5, CUL-8	CUL-2	SU	No	Yes
Impact CUL-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource	LTS	Impact CUL-3, p. 3.5-17	Yes	CUL-1 through CUL-6, CUL-8	NA	LTS	No	Yes
Impact CUL-4: Disturb Human Remains	LTS	Impact CUL-4, p. 3.5-18	Yes	NA	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; LTSM: Less than significant with mitigation; PSU: Potentially Significant and unavoidable; PS: Potentially Significant; SU: significant and unavoidable

New Archaeological, Historical, and Tribal Cultural Resource Impacts: Would the treatment result in other impacts to archaeological, historical, and tribal cultural resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact CUL-1

The proposed treatments have the potential to damage historical resources, and this has been assessed in the PEIR. The impact of this project is within the scope of the PEIR because the treatment activities are the same and the impact was determined to be less than significant with the inclusion of the above listed SPRs.

Impact CUL-2

Vegetation treatments include mechanical treatments that could disturb the ground, potentially resulting in damage to unknown archaeological resources. A survey and NWIC records search will be conducted by a qualified archaeologist prior to treatment activities occurring. The impact of this project was determined to be the same as the PEIR because the treatment activities are the same and the potential resources are the same. As per Mitigation Measure CUL-2, any archaeological resource discovered during treatments will be given 100 ft avoidance, and the site will be reviewed by an archaeologist.

Impact CUL-3
This impact was assessed in the PEIR and with the inclusion of the SPRs listed, the impact will be less than significant. SPRs CUL-1 through CUL-6 and CUL-8 will be implemented to mitigate potential impact. All information received regarding pre-historical resources and Native American cultural resources will remain confidential.

Impact CUL-4
There is a potential for treatment activities to uncover human remains due to the nature of the treatment activities. The potential for treatment activities to uncover human remains was examined in the PEIR. This impact is within the scope of the PEIR because the intensity of ground disturbance, the equipment used, and the duration of their use is the same as those analyzed in the PEIR.

CalVTP Addendum: Change to Geographic Extent
The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent of the PEIR. However, the potential archaeological resources and the environmental conditions are consistent throughout the treatment area, both inside of the treatable landscapes and outside due to the close proximity of these two areas. The boundaries of the treatable landscapes have no bearing on the movement or lives of historical or prehistorical societies. Furthermore, the area outside of the treatable landscape will be included in the archaeological records search, survey, and Native American notification, as well as all other applicable SPRs. There is not expected to be a significant change to the potential impacts or resources to invalidate the PEIR. As a result, the land outside of the treatable landscapes is also within the scope of the PEIR.

PD-3.6: BIOLOGICAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact BIO-1: Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications	PS	Impact BIO-1, pp 3.6-131–3.6.138	Yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-7, BIO-9, AQ-3, AQ-4, GEO-1, GEO-2 GEO-3, GEO-4, GEO-5, GEO-7, HYD-4, HYD-5	BIO-1a; BIO-1b; BIO-1c	LTSM	No	Yes
Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications	PS	Impact BIO-2, pp 3.6-138–3.6-184	Yes	BIO–1 through BIO–5 BIO–10 BIO–11 HAZ-5 HAZ-6 HYD-1 HYD-3 HYD-4 HYD-5	BIO-2a	LTSM	No	Yes
Impact BIO-3: Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation that Leads to Loss of Habitat Function	PS	Impact BIO-3, pp 3.6-186–3.6-191	Yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-9, HYD-4	None	LTSM	No	Yes
Impact BIO-4: Substantially Affect State or Federally Protected Wetlands	PS	Impact BIO-4, pp 3.6-191–3.6-192	No	BIO-1, BIO-2, HYD-4 HYD-1, HYD-3	None	LTSM	No	Yes

Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries	PS	Impact BIO-5, pp 3.6-192–3.6-196	Yes	BIO-1, BIO-2, HYD-4 BIO-4, BIO-5, BIO-11, BIO-10, HYD-1	None	LTSM	No	Yes
Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife	LTS	Impact BIO-6, pp 3.6-197–3.6-198	No	BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-12	NA	LTS	NA	Yes
Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources	No Impact	Impact BIO-7, pp 3.6-198–3.6-199	No	AD-3	NA	NA	NA	NA
Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan	No Impact	Impact BIO-8, pp 3.6-199–3.6-200	No	None	NA	NA	NA	NA

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; LTSM: Less than significant with mitigation; PSU: Potentially Significant and unavoidable; PS: Potentially Significant; SU: Significant and Unavoidable

New Biological Resources Impacts: Would the treatment result in other impacts to biological resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Pursuant to SPR BIO-1, Frontier Resource Management LLC conducted a data review of project-specific biological resources and a reconnaissance-level survey of the treatment areas. The main goal of these surveys being to determine the habitat suitability of the project area for the special status species identified during the data review.

Attachment B includes a comprehensive list of all special status species with the potential to occur within the project area based on the SPR BIO-1 requirement for a data review of biological resources. It includes the results of a 9-quad search of the California Natural Diversity Database (CNDDB) and the

California Native Plant Society Inventory of Rare and Endangered Plants of California. Appendix Bio-3 (Table 13a, Table 13b, and Table 19) of the PEIR (Volume II) was also reviewed for special-status plants and wildlife that could occur within the treatment areas. Species determined to have a high potential for occurrence, based on project specific habitat, were included in the list of potential species.

Reconnaissance-level surveys were conducted within October and November of 2024 and April 2025 to identify and document sensitive resources within the treatment areas. This included aquatic habitat, riparian habitat, and potentially sensitive natural communities. During these surveys, habitat suitability determinations were made for the potential special-status plant and wildlife species listed in Attachment B. Below are the final lists of special-status plant and wildlife species with a moderate to high potential of occurring within the treatment area. Some species included in Attachment B were ruled out due to lack of habitat or lack of threat from project activities.

Impact BIO-1

Initial and maintenance treatments could result in direct or indirect adverse effects to the special status plant species with potential to occur within the treatment areas. See the botany report within Attachment B for the full analysis. Of those species, those listed below have been located during SPR BIO-7 botany surveys. If additional species are located, they will be recorded and protected as specified in the botany report.

A majority of the project area will be treated under the ecological restoration treatment type. As stated in the PEIR, Biological Resources section 3.6 Pg 133,

> *"In the ecological restoration treatment type, the objective is to restore degraded, damaged, or destroyed ecosystems and habitats in fire-adapted vegetation types by returning them to their natural fire regime and returning vegetation in Condition Classes 2 and 3 to Condition Class 1[1]. This would benefit special-status plants associated with these habitats in the long-term by restoring the historic vegetation composition, structure, and habitat values and function under which these species evolved. Removal of overgrown shrubs and thinning tree canopies could benefit special-status plant populations in the short term by allowing more light to reach them and by removing competition for water, light, and nutrients; however, removal of overstory vegetation could alter microhabitat conditions in a way that is detrimental to special-status plant species in the short term if they are adapted to growing in shade or if the loss of overstory vegetation results in adverse changes in soil moisture, or destabilizes soil resulting in erosion that limits sensitive plant establishment and growth or washes away sensitive plants or their seeds and propagules with eroding soil."*

The ecological restoration treatment type proposes to retain the large trees comprising the overstory - except were posing a risk to public safety or where threatening overall ecosystem health (as determined by the RPF), through the spread of insects or disease. As a result, it is anticipated that the removal of overstory vegetation within these treatment types will be minimal and will therefore not have a significant impact to potential sensitive plant species. On the other hand, the fuel break treatment type does have a greater potential to impact sensitive plant populations due to the scope of increased vegetation removal.

Low intensity broadcast burning may be used to treat vegetation to accomplish the ecological restoration goals, by returning a fire-adapted ecosystem to its historical disturbance regime. The following is from "Forest Ecology and Management" B.M. Collins et al, regarding a study around the effects of low intensity prescribed fire on understory vegetation:

> *"This increase in light combined with increased mineral soil exposed in both treatments involving fire, most likely caused by the consumption of litter and duff layers during burning, improved conditions for seed germination and vegetative resprouting on the forest floor. These improved conditions allowed for rapid recovery of understory plants, and most likely explain the lack of significant treatment effects on forb and graminoid cover for any of the three alternatives." …*
>
> *"In fire only units exotic species richness and cover did not change significantly compared to the control"…*
>
> *"The two species that showed the most substantial reduction following the prescribed fire treatments were Goodyera oblongifolia (rattlesnake orchid) and Pyrola picta (white-veined wintergreen). Both of these species are considered late-seral species, meaning they are associated with more closed canopy stands characteristic of later successional stages."*

Because so much of the project area for this VTP is currently overgrown creating a high fuel hazard, a net increase in species richness over the long run is expected. This is due to the creation of more early successional forest types and reduction in understory density during treatment, which is likely to increase overall habitat diversity. The increase of exotic annual species, which may occur, is a concern. Exotics are known to thrive in freshly disturbed sites due to their increased advantage over other early successional native species. SPR BIO-9 will be utilized to reduce this potential negative impact. That coupled with planned herbicide use on populations of invasives during maintenance treatments should reduce this impact to a level of insignificance. Mechanical treatments will occur along existing roads and within some proposed shaded and non-shaded fuel breaks. The mechanical treatment areas have the greatest potential to impact sensitive plant populations.

As a result of the above analysis, the RPF has determined that SPR BIO-7 botanical surveys are only applicable within mechanical treatments and within a portion of the fuel breaks areas. All mechanical treatment areas will be surveyed along with fuel break areas that intersect serpentine soil types. The botany report will outline the methods in more detail and will be amended to Attachment B once completed.

The treatment activities and their potential for adverse effects on special-status species is within the scope of the PEIR. With the included mitigation measures and SPRs, the impacts are anticipated to be reduced to a level of insignificance

Special Status Plant Species known to occur within the project area at this time:

Note for all non-listed special status plant species listed below: As listed in Attachment A Mitigation measure BIO-1b, the RPF has the ability to treat within the STZ of the "non-listed" special status species if it is determined to be a benefit to the overall health of the population.

> *"The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants would benefit from treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required."*

Cobb mountain lupine *(Lupinus sericatus)*

CNPS rank 1B.2

Federal: Not listed

State: Not listed

Habitat requirements and description: This species is prevalent in Colusa, Lake, Sonoma and Napa Counties. It can be found on open wooded slopes in broadleaf upland forest, chaparral, and lower montane conifer forest ecosystems. It is a perennial growing 15 – 50 cm. Its leaves are silver to gray green with short appressed hairs, leaves are 30 – 50 mm with 4-7 spoon shaped leaflets and are clustered near the base. Inflorescence is 10 – 30 cm with 12 – 16 mm purple – violet flowers.

Potential for Occurrence: Multiple records of this plant exist within the CNDDB in proximity to the Northern Treatment Unit. One population, towards Trinity Road, was not relocated during field reconnaissance. The second population was found outside of the treatment area adjacent to a winery. However, a population of approximately 82 plants encompassing 0.8 acres were identified in the southernmost forest restoration unit of the Northern Hogback Treatment area. The plants have an average width of 29 inches and an average height of approximately 18 inches. The surrounding vegetation cover type is chapparal and shrubland with Douglas – fir and hardwood snags.

Protection Measures

- These populations will be protected from damaging effects, through the establishment of a 25 ft STZ. See attachment C operations maps for the location of the population. The project proponent shall implement the following protection measures within the STZ:
    - No vegetation debris piles will be left within the STZ.
    - The residual Douglas – fir snags should be retained as a wildlife habitat feature and not removed.
    - The remaining vegetation and fuels including the hardwood snags and ground fuel will be thinned using hand treatment. These materials will be hand dragged from the STZ, and mechanical treatment is not permitted.
    - Workers will be trained in field identification and avoidance measures of the plant under SPR BIO-2.
    - The contractor will avoid crushing, cutting, or otherwise harming this plant during treatments.

Redwood lily (*Lilium rubescens*)

CNPS rank 4.2

Federal: Not listed

State: Not listed

Habitat requirements and description:

This species is prevalent throughout Northern California, from the San Francisco Bay Area to the North Coast range. It can be found in plant communities such as Yellow pine and Red fir Forest as well as Chaparral, in gaps or dry soil.. The overall plant is smaller than 2 meters, and its leaves are in whorls with generally wavy margins, providing a unique identifying feature when not in bloom. Its inflorescence is ascending to erect with 1 – 40 flowers per inflorescence. The flower is funnel shaped with a perianth parts 4.2 – 6.6 cm in size.

Potential for Occurrence:

This plant was observed in multiple locations in the southernmost forest restoration unit within the Northern Hogback Ridge treatment unit. Due to its local abundance within the treatment area, it can be assumed that any damage to a small number of individuals will not substantially impact on this species as a community.

Protection Measures

- Workers will be trained for the identification of this plant under SPR BIO-2 and will avoid take where possible.

Napa false indigo (*Amorpha californica Nutt. var. napensis*)

CNPS rank 1B.2

Federal: Not listed

State: Not listed

Habitat requirements and description:

This species is prevalent in Sonoma and Napa Counties. It thrives on cooler sights within mixed conifer and mixed oak woodland ecosystems. Growing to between 1 and 6 ft tall, its leaves are approximately 1 inch long and oppositely arranged. The inflorescence is purple and uniquely arranged vertically from the plant usually between 6 inches to 1 foot long.

Potential for Occurrence:

This plant was identified in the CNDDB as occurring “near Lokoya, 1600 ft.” The occurrence was listed as non-specific and needs field work, however, the record intersects the treatment unit. Upon the botanical survey, numerous Napa false indigo were identified utilizing flower and leaf phenology. This plant was found from the northernmost to southernmost end of Northern Hogback treatment unit. Due to its local abundance within the treatment area, it can be assumed that any damage to a small number of individuals will not substantially impact on this species as a community.

Protection Measures:

- Workers will be trained for the identification of this plant under SPR BIO-2 and will avoid take where possible.

Impact BIO-2

Treatment activities could result in direct or indirect adverse effects to special status wildlife species with suitable habitat within the treatment area. See Attachment B for an analysis of all species with the potential to occur Those species with moderate to high potential for occurrence, or which are known to occur within 0.7 miles of the project area, have been included in the list below. With the implementation of the SPR's and mitigation measures listed in the table above, this potential impact will be less than significant. The following species will be included in SPR BIO-2 training for workers. If one of these species is discovered during work activities, the RPF or qualified biologist will be notified and protection measures will be developed depending on the species, and time of year (i.e. nesting or critical breeding season).

Special-Status Wildlife Species with potential to Occur in the Treatment Area

Birds

Northern Spotted Owl (*Strix occidentalis caurina*)

Status: FT; ST

Habitat Requirements: Northern spotted owls (NSO) are old growth to second growth forest obligate birds that require permanent water and suitable nesting trees/snags (Zeiner et al. 1990a). Northern spotted owls use dense, old-growth forests, or mid- to late- seral stage forest, with a multi-layered canopy for breeding (Remsen 1978). Northern spotted owl nests are most often found on existing structures (old raptor nest, squirrel nest, red-tree vole nest), or debris piled on a broken topped tree; although, they have been found inside tree cavities.

In evaluating potential NSO habitat, the presence of a nest structure may be more important than the size or species of tree. Successful nest sites have canopy cover immediately above nests exceeding 85%.

The presence of high-quality foraging habitat is also very important. Early seral habitat can provide excellent foraging opportunities for the NSO. Its primary prey in this area is the dusky-footed woodrat (*Neotoma fuscipes*). The NSO breeds from southwestern British Columbia south through western Washington and western Oregon to Marin County, California. The breeding season is between February 1st to July 31st.

Potential for Occurrence: There are 7 documented activity centers within 0.7 miles of the project area. They are NAP0004, NAP0008, NAP0032, NAP0034, NAP0037, NAP0038, and NAP0041. No protocol level NSO surveys have been conducted since these detections were originally made. The project proponent shall assume occupancy at all ACs. There are no activity centers within 500 ft of the project area.

CDFW Consultation Results Regarding NSO Protections:

CDFW was contacted by FRM on 3/27/25 for technical support, regarding protections for these activity centers, as per Mitigation Measure BIO-2a. In the email correspondence, FRM proposed utilizing the U.S Fish and Wildlife document titled "*Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls in Northwestern California*", updated October 10, 2020. After consultation with CDFW, it was determined that the document can be used for guidance to create seasonal buffers for NSO during treatment. The guidance provides information for determining the appropriate nest

buffer distance based on activities, and their potential increase to the ambient noise level. Shown in Table one below is disturbance distances by action generated sound and pre-project sound level. The Hogback Ridge CalVTP generally falls in the "Natural Ambient" category for pre project sound level. Table two references the equipment that will be used during the project. By taking an average of the decibel level created by the equipment, the action generated sound falls within the "High" category. Thereby requiring a buffer distance of 500 feet. A copy of the email correspondence in its entirety is located at the end of Attachment B for reference.

Project Specific Mitigation measures for NSO ACs:

- There are 7 known Activity Centers within 0.7 miles of the project area, but none of these are within 500 ft of the project boundary.

- SPR BIO-2: Require training on identification of NSO to all workers prior to beginning operations. If an NSO is observed during operations, all treatments shall stop within 500 ft of the location and an RPF shall be notified.

- If NSO ACs are discovered within 500 ft of the treatment area, MM BIO-2a will go into effect with the following provisions:

    - Mechanical treatments, manual treatments, and prescribed burning shall require a seasonal no treatment buffer within **500 ft** of the AC, between February 1st and July 31st.

    - Prior to mechanical, manual, or prescribed fire treatments, the project proponent shall have an RPF or their supervised designee flag an STZ around the discovered AC within the proposed treatment area.

    - Prescribed herbivory and herbicide use shall not require a seasonal restriction.

Table 1. Estimated disturbance distance (in feet) due to elevated action-generated sound levels affecting the northern spotted owl and marbled murrelet, by sound level.

Existing (Ambient) Pre-Project Sound Level (dB) [1, 2]	Anticipated Action-Generated Sound Level (dB) [2, 3]			
	Moderate (71-80)	High (81-90)	Very High (91-100)	Extreme (101-110)
"Natural Ambient" [4] (< = 50)	50 (165)[5,6]	150 (500)	400 (1,320)	400 (1,320)
Very Low (51-60)	0	100 (330)	250 (825)	400 (1,320)
Low (61-70)	0	50 (165)	250 (825)	400 (1,320)
Moderate (71-80)	0	50 (165)	100 (330)	400 (1,320)
High (81-90)	0	50 (165)	50 (165)	150 (500)

Table 2

Equipment Type	Typical Noise Level (dB) at 50 Feet[1]
Chain Saw	85
Dozer	85
Wood Chipper	75[2]

Bank swallow (*Riparia riparia*)

Status: ST

Habitat Requirements**:** Bank swallows are a migratory species and can be found in the area in summer months. They are primarily found in riparian and other lowland habitats. They forage predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland.

Potential for Occurrence: There is a low – moderate potential for this species to occur. The closest known occurrence is mapped generally to Sonoma Creek, this creek is over 0.7 miles from the nearest treatment area. According to the CNDDB, an egg set was collected on May 23rd 1893. The record is very old and mapped as best guess by CNDDB. Huichica creek, which falls within the CNDDB mapped polygon, was surveyed for nests, no evidence of current habitation was found. There is a potential for habitat to be found in other class I and class II watercourses throughout the project area.

Potential Project Impact: Due to the potential habitat within the project area, there may be a low to moderate potential for treatments to impact this species if present. However, with the application of the following mitigations and SPRs, this potential impact will be lowered to a level of insignificance.

WLPZ protections prescribed in HYD-4 and BIO-4 will provide refuge for this species, particularly within their optimum foraging habitat. Furthermore, SPR BIO-2 training for workers will ensure operators are trained in the identification of this species. SPR BIO-10, focused surveys were conducted by FRM during preparation of the PSA and this species was not detected. SPR BIO-12 requiring nesting bird surveys between March-July will further reduce potential impact to this species. Overall, with these mitigations and protection measures, there is not expected to be an impact to this species from the proposed treatment activities.

Mammals

Pallid Bat (*Antrozous pallidus*)

Status: SSC

Habitat Requirements: Pallid bats occupy a wide variety of habitats, such as grasslands, shrublands, and forested areas of oak and pine, but prefer rocky outcrops with desert scrub (Zeiner et al. 1990b). The pallid bat roosts in caves, mines, crevices, buildings, under bridges, and occasionally in hollow trees. Day roosts are located at sites that provide protection from the heat of the day; Night roosts are in more open areas such as porches or open buildings (Zeiner et al. 1990b). Pallid bats feed on a wide variety of relatively large ground dwelling or slow flying insects and arachnids (Zeiner et al. 1990b). Colonies of *A. pallidus*, as with most bats, will typically emerge about 1 hour after sunset, return to roost, and then forage again before dawn. This species specializes in foraging on insects on the ground, versus in the air, by listening for the insect footsteps. The pallid bat is found throughout most of the western U. S. and Mexico.

Potential for Occurrence: There is a low-moderate potential for occurrence of this species. Three bats were captured within the Southern Treatment Unit in October 1998. This record is mapped to the Hogback Ridge CalVTP operations map as a Bio STZ. In addition, 32 bats were found along Huichia Creek in September of 1939, Huichia creek is located near the southern treatment unit. The final record states a bat was observed within 0.7 miles of the Southern Hogback Treatment unit. During field reconnaissance, no specific habitat was observed within the treatment area, such as trees that contain basal hollows, which are ideal for Bat species. However, much of the treatment area was severely affected by the Nuns fire in 2017. This has caused mortality in Douglas fir stands which have the potential for current Bat habitation.

Potential Project Impact: There is a low potential for impact within the project area. SPR BIO-2 training for workers will ensure crews are trained in the identification of this species. SPR BIO-10 will be conducted prior to snag removal in areas with a greater potential for Bat habitat such as the Douglas – fir high mortality stands which are labeled as bio STZs in the in the Northern Treatment Unit in attachment C. In addition, the CNDDB record of Pallid Bat occurrence is mapped as the bio STZ in Southern Hogback Ridge. If roost trees are detected they will be protected. Overall, with these mitigations and protection measures, there is not expected to be an impact to this species from the proposed treatment activities.

Amphibians and Reptiles

California Giant Salamander (*Dicamptodon ensatus*)

Status: SSC

Habitation Requirements: California *Dicamptodon* salamanders are year round residents of California. In 1989, these salamanders were split into two species – California giant salamander (*Dicamptodon ensatus*) occurring south of the Mendocino County line and the coastal giant salamander (*Dicamptodon tenebrosus*) occurring in the north (Thomas et al. 2016). A hybrid zone exists approximately 6 miles north of Gualala; however outside of this area, the two species are known to be distinct (Thomas et al. 2016). This species occurs in wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.

Potential for Occurrence: There is a moderate potential for occurrence within the class I and class II watercourses found within the treatment area. Per the CNDDB, multiple salamanders were collected in Redwood creek. In 2005, one was collected and one was observed upstream of the treatment area. In 1985, ten were collected downstream of the treatment area. The final observation encompasses the northern treatment unit, with one collected along Mount Veeder road near Lokoya, but its exact location is unknown as the accuracy of the record is mapped to one mile.

Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

California Red-Legged Frog (*Rana draytonii*)

Status: FT, SP, SSC

Habitation Requirements: California red-legged frogs (CRLF) primarily inhabit permanent or nearly permanent water sources (quiet streams, marshes, and ponds). Breeding tends to occur primarily in ponds, less likely in streams, and happens from November to April. This ranid frog will also use upland habitats outside of the breeding season and may be discovered under logs, rocks, and other debris during wet conditions. CRLF were historically believed to prefer only habitats and shorelines with extensive vegetation.

Potential for Occurrence: Per the CNDDB, one adult was found in August 2019 in a small pond about half a mile from the northern treatment unit. There is a very low potential for occurrence within class I and class II watercourses.

Potential Project Impact: With the following protection measures and SPRs, the potential for this species to be impacted by treatments will be lowered to a level of insignificance. The WLPZ as outlined in SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

Foothill Yellow-Legged Frog *(Rana boylii)*

Status: SSC; This species became a candidate for listing on July 7th, 2017. In 2019, CDFW published recommendations to list the FYLF based on a geographic Clade. This recommendation provides protection among populations which greatly need it and avoids unnecessary restrictions in areas where populations are healthy. The only Clade not listed is the Northwest/North Coast Clade. The project area falls within this zone, thus the FYLF is not listed under CESA.

Habitation Requirements**:** Foothill Yellow-Legged Frogs (FYLF) are associated with lower elevation streams draining the Pacific slope from west-central Oregon to northwestern Baja California. They have declined from over 50% of their historic range. Foothill yellow-legged frogs occupy a diverse range of ephemeral and permanent streams, rivers, and adjacent moist terrestrial habitats over the course of their complex life history. FYLF reproduce in the spring by depositing egg masses into glide habitats within larger watercourses (typically Class I waters). Egg masses are deposited on the down-stream side of cobble size rocks during April-May. Larval forms (tadpoles) rear in watercourses until early fall. Post-metamorphic frogs tend to stay in close proximity to their water source. Adults can migrate down the drainage network to channels that are broad and more sunlit. Seasonal variation in streamflow has a strong influence on life history and movement. Breeding and rearing typically occur in open sunny portions of class I and II watercourses which are gently flowing and low-gradient.

Potential for Occurrence: Per the CNDDB, there is one record which maps an indistinct location for this species. The habitat consists of a perennial seep, which flows into a small tributary to Dry Creek. The surrounding habitat is chaparral, with patches of mixed evergreen. Dry Creek is over 0.7 miles from the treatment area and the record is mapped to the entirety of the Rutherford quadrant. Given the habitation requirements, there is a moderate potential for occurrence of Foothill yellow legged frog within the treatment area within class I and class II watercourses.

Potential Project Impact: The potential for the project to impact this species is very low. The watercourse protection measures, particularly SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

Conclusion

The potential for treatment activities to result in adverse effects on special status species was examined in the PEIR. The impact is within the scope of the PEIR because the treatment activities and intensity are consistent with those analyzed in the PEIR. See attachment B for the full analysis of potential listed and non-listed species resulting from SPR BIO-1. With the included SPRs and mitigation measures listed above, the potential impact to sensitive species will be less than significant.

Impact BIO-3
There is potential for the treatment activities to impact designated sensitive natural communities. Riparian areas have the potential to be impacted by operations, and this was analyzed in the PEIR. With the inclusion of the SPRs listed above this impact will be less than significant.

All riparian habitats shall be protected with the provisions of HYD-4 and BIO-4, through the establishment of a WLPZ buffer. See BIO-4 regarding treatment specifications for riparian habitats. Treatments within this buffer were designed to protect the biological function of these sensitive communities. All riparian habitats are mapped as springs, wet areas, ponds, and Class I or II watercourses. BIO-4 will be implemented within the slope and class dependent WLPZ buffer. See Attachment A.

Impact BIO-4

This impact is not applicable to the treatment area, as no protected wetlands exist within the project area.

Impact BIO-5
According to the PEIR, the treatment activities could result in direct or indirect adverse effects on "wildlife corridors". In the analysis of the PEIR, wildlife corridors were considered to be uncharacteristically thick chaparral or overgrown forest type, which have been caused by fire suppression over the last 200 years. It is important to note that the vast majority of these overgrown forest types (which are being referred to as "wildlife corridors") are actually not what most of the wildlife species have evolved to thrive in. Although it is important to have a small portion of thick, dense shrub and/or overgrown forest for small mammals, birds, and other species to utilize as refugia, it is important to note that most large-bodied mammals are disadvantaged in this kind of habitat. Essentially, the type of habitat that a deer requires is far different from a squirrel, and so on. Some of the project area is overgrown with thick chaparral which provides cover for deer to hide but makes poor habitat for feeding and movement. This is also true for a variety of bird and other mammal species that rely on open grassy areas for hunting and foraging. The treatments as proposed will increase early successional habitat which is critically imperiled over a large percentage of The surrounding area. See the forest types map in attachment C. Overall, "wildlife corridors" are overabundant here and not at risk from these proposed treatments. This project – and most similar forest thinning projects in northern CA – will improve wildlife corridors by increasing early successional habitat, which is severely lacking.

Nevertheless, these potential impacts to "wildlife corridors" were found to be within the scope of the PEIR. The proposed treatment activities are also within the scope because they are the same as those analyzed in the PEIR. In fact, it is expected that some wildlife corridors for certain species will ultimately be improved by the treatment activities. By protecting the forest ecosystem as a whole, the habitat corridors, will also be protected from high intensity wildfire in the future. This will conserve corridors in the long run and promote a healthy fire resilient ecosystem. Furthermore, with the inclusion of the riparian zone protections, and the fact that not all treatments within this large project area will be able to be completed within a short time frame, there will be areas of intact wildlife corridors which connect multiple treatment areas to untreated landscapes.

Impact BIO-6
There is potential for impact in the interim to habitat and abundance of wildlife during treatments. However, this is not expected to have a substantial impact as listed in the PEIR. There is expected to be an increase in habitat for species throughout the treatment area, due to the removal of dead and down, as well as invasive species and the return of the forests to a historically accurate stocking level. Furthermore, the consequences of a devastating wildfire would be catastrophic to wildlife and their habitat. By taking steps to reduce standing dead and down fuels and improve fire resiliency of existing habitat, the potential for such a wildfire to occur will be greatly reduced. Because of this, the project as proposed will not have a significant negative impact to common wildlife habitat or individuals and a long-term increase and net benefit to habitat and wildlife is expected. See justification for impact BIO-5

above. The treatment activities are consistent with those analyzed in the PEIR and are therefore within the scope of the PEIR. Additionally, complete fuel breaks, which would cause the greatest reduction in habitat, are limited to no more than 10% of the total treatment area.

Impact BIO-7
This impact does not apply to the treatment areas.

Impact BIO-8
This impact does not apply to the treatment areas.

CalVTP Addendum: Change to Geographic Extent
The inclusion of land that is outside of the treatable landscape presented in the PEIR, constitutes a change in the geographic extent presented in the PEIR. The habitat conditions and characteristics as well as the biological resources present in these areas are the same as those within the treatable landscape. This is because the areas which fall outside of the treatable landscape are very close in range to the areas within. Generally, these species do not adhere to the "treatable landscape" as it is mapped, which is imperfect and doesn't contain all forest types or extents. Furthermore, the analysis above and in attachment B looks at all potential species and habitats which are specific to this project as shown on the maps in attachment C. There are no species which are not examined due to the "treatable landscape". Consequently, the impact will be the same and is within the scope of this PEIR for all of the above listed impacts.

PD-3.7: GEOLOGY, SOILS, PALEONTOLOGY, AND MINERAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact GEO-1: Result in Substantial Erosion or Loss of Topsoil	LTS	Impact GEO-1, pp. 3.7-26 – 3.7-29	Yes	GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-6, GEO-7, GEO-8, HYD-3, HYD-4, AQ-3 AQ-4	NA	LTS	No	Yes
Impact GEO-2: Increase Risk of Landslide	LTS	Impact GEO-2, pp. 3.7-29 – 3.7-30	Yes	GEO-1, GEO-4, GEO-7, GEO-8, AQ-3	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; LTSM: Less than significant with mitigation; PSU: Potentially Significant and unavoidable; PS: Potentially Significant; SU: Significant and Unavoidable

New Geology, Soils, Paleontology, and Mineral Resource Impacts: Would the treatment result in other impacts to geology, soils, paleontology, and mineral resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact GEO-1

There is a potential for the treatment activities to cause erosion and loss of topsoil. This impact was examined in the PEIR and determined to be less than significant. The proposed project is within the scope of the PEIR because the treatment activities are the same as those examined in the PEIR. Furthermore, with the inclusion of SPR GEO-1-8, the impact will be reduced to a level of insignificance. By postponing ground disturbing operations during saturated soil conditions and implementing the erosion control measures outlined in the SPRs the project proponent will ensure the topsoil is protected.

- For SPR GEO-3: It is not practicable to treat all exposed soil with mulch after a prescribed fire which exposes more than 50% of the soil surface within a treatment area. First off, this would defeat the purpose of removing flammable material for the health of an ecosystem, which has been identified as having too much fuel. By adding mulch to an area that was just burned, the project proponent would essentially be putting fuel back on the landscape. Next, these forests are highly adapted to fire, meaning they are equipped to restore ground cover quickly in order to prevent catastrophic top soil loss in the long term. Finally, the scale in which fire is used on a landscape, is such that the degree of soil exposed can be up to 100 or more acres. For these reasons, it is unreasonable to assume that mulching or otherwise stabilizing all exposed soils treated with fire. The project proponent will only stabilize disturbed soil as a result of prescribed fire, immediately around road watercourse crossings and potentially unstable areas.

Impact GEO-2

The treatment activities would include vegetation removal from steep slopes. An RPF will assess the treatment areas on slopes over 50% to identify potentially unstable areas and soils prior to a project. Unstable areas that were identified by the RPF during reconnaissance are mapped. If additional UAs are discovered, they will be amended to the maps. See Appendix C for a map of these potential unstable areas. Operations will not occur within these areas unless reviewed by a licensed geologist.

Impact GEO-2 is within the scope of the PEIR because the treatment activities are the same as those assessed in the PEIR.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscape presented in the PEIR, constitutes a change in the geographic extent presented in the PEIR. The geology and soils of the project area not included in the treatable landscape are similar to and will receive the same assessments as areas within the treatable landscape. The reason these areas were not included in the treatable landscapes was an oversight during the PEIR development based on vegetation types and low-resolution mapping. Areas were not dis-included due to soils types in particular. Soil does play a role in the vegetation community structure but is not the sole driver. Things like aspect, slope, and climate also play a major factor in this. For this reason, soil types and geology are represented equally within the treatable and non-treatable landscape and the erosion potential is very similar if not the same. More importantly than the difference between the treatable landscape and non-treatable landscape, is that the treatment activities are the same. These are the main drivers for the potential impacts to soil resources, not the ecosystem or soil types. Consequently, the impact will be the same and is within the scope of this PEIR for all of the above listed impacts within the additional area.

PD-3.8: GREENHOUSE GAS EMISSIONS

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact GHG-1: Conflict with Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs	LTS	Impact GHG-1, pp. 3.8-10 – 3.8-11	Yes	None	NA	LTS	No	yes
Impact GHG-2: Generate GHG Emissions through Treatment Activities	PS	Impact GHG-2, pp. 3.8-11 – 3.8-17	Yes	AQ-3	GHG-2	PSU	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; LTSM: Less than significant with mitigation; PSU: Potentially Significant and unavoidable; PS: Potentially Significant; SU: Significant and unavoidable

New GHG Emissions Impacts: Would the treatment result in other impacts to GHG emissions that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact GHG-1

Use of vehicles/equipment and prescribed burning during treatment activities will result in greenhouse gas emissions. Conflicts with applicable plans, policy, and regulations aimed at reducing GHG emissions may occur due to this project. This was examined in the PEIR. These impacts associated with this project are within the scope of the PEIR because the treatment activities, types of equipment, and duration of use are the same as those analyzed in the PEIR. Furthermore, by carrying out the project in this way, the goal will be to reduce the likelihood of a catastrophic wildfire from occurring. This type of event would create a massive GHG emission at one time. The controlled release of GHG in small amounts during this project is less impactful than the, all at once release which is likely to occur during a catastrophic wildfire. SPR GHG-1 is not applicable to the proposed project because the property is not a registered carbon offset property. As such, the requirement to inform reporting under the Board of Forestry and Fire Protection's assembly bill 1504 Carbon Inventory Process does not apply.

Impact GHG-2

Use of vehicles/equipment and prescribed burning during treatment activities will result in greenhouse gas emissions. This was examined in the PEIR. These impacts associated with this project are within the scope of the PEIR because the treatment activities, types of equipment, and duration of use are the

same as those analyzed in the PEIR. SPR GHG-1 is not applicable to the proposed project because the property is not a registered carbon offset property. As such, the requirement to inform reporting under the Board of Forestry and Fire Protection's assembly bill 1504 Carbon Inventory Process does not apply. Mitigation measure GHG-2 will be applied to reduce the GHG emissions during prescribed fire activity. These measures, such as mosaic burning, low fuel consumption, and retention of LWD/snags will provide for Biochar production, carbon sequestration, and reduced carbon emissions. With the implementation of this mitigation measure, the impact was determined to be potentially significant and unavoidable. This is based on a good faith determination made by the board of forestry and does not necessarily indicate an actual significant impact. In fact, the determination seems to be made based on a lack of data rather than an indication of actual proof of significant impact related to these treatments.

The project proponent expects a net benefit to carbon emissions due to the protection and conservation of forest resources associated with these types of treatments. A healthy growing forest is expected to sequester more carbon than a forest starting from secondary succession after a complete stand replacing fire. Likewise, a decadent overstocked forest which has slowed growth significantly, will sequester less carbon than one which is adapted to intermediate disturbances - such as those treatments proposed by this project. Thus, the project proponent disagrees with the PEIR determination that this impact is significant and unavoidable, even when considering the avoided impact of a catastrophic wildfire. Instead, this project is expected to have a less than significant impact on greenhouse gas emissions through the development of a healthy resilient forest, which has been proven to grow faster – putting on more wood every year (i.e. sequestering more carbon). Furthermore, research has proven that disturbance in a forest ecosystem promotes an increased growth rate than one in which there is a significant lack of disturbance. Nevertheless, the PEIR impact will be listed in the table above and the mitigation measure prescribed will be implemented, where feasible.

<u>CalVTP Addendum: Change to Geographic Extent</u>
The inclusion of land that is outside of the treatable landscape presented in the PEIR, constitutes a change in the geographic extent presented in the PEIR. The wildfire fuel conditions as well as the potential for greenhouse gas released by treatments in these areas is very similar to those within the treatable landscape. The treatment activities will be the same within both areas, which is the main driver for potential impacts to GHG emissions. The areas outside of the treatable landscape which are being added to the project have a lower fuel load over all, since they are generally the grassland/oak woodland forest types. The result will be less treatment of fuel per acre, which would result in a less significant impact than what was assessed in the PEIR. Consequently, the impact will be the same or less and is within the scope of this PEIR for all of the above listed impacts.

PD-3.9: ENERGY RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact ENG-1: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy	LTS	Impact ENG-1, pp. 3.9-7 – 3.9-8	Yes	NA	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

New Energy Resource Impacts: Would the treatment result in other impacts to energy resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact ENG-1

The impact to energy resources because of this project would be the same as described in the PEIR. This impact was determined to be less than significant. The impact is expected to decrease over time as equipment and methods used for vegetation management become more efficient.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent of the PEIR. However, the energy use outside of the treatable landscape is expected to be highly similar, if not the same as within it (for this project). This is because the vegetation types, fuel types, and slopes are mostly consistent throughout. Likewise, the equipment used will not vary.

There are some areas being included which contain a large proportion of grassland in contrast to thick timber and chaparral associated with the treatable landscape. In these areas we would expect to see a net reduction in energy consumption during treatments, due to the lower level of fuel loading per acre, when compared to the conifer and oak woodland forests within the treatable landscapes.

PD-3.10: HAZARDOUS MATERIALS, PUBLIC HEALTH AND SAFETY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact HAZ-1: Create a Significant Health Hazard from the Use of Hazardous Materials	LTS	Impact HAZ-1, pp. 3.10-14 – 3.10-15	Yes	HAZ-1, HYD-4	NA	LTS	No	Yes
Impact HAZ-2: Create a Significant Health Hazard from the Use of Herbicides	LTS	Impact HAZ-2, pp. 3.10-15 – 3.10-18	Yes	HAZ-5, HAZ-6, HAZ-7, HAZ-8, HAZ-9	NA	LTS	No	Yes
Impact HAZ-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites	PS	Impact HAZ-3, pp. 3.10-18 – 3.10-19	Yes	NA	HAZ-3	LTSM	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation; SU: significant and unavoidable

New Hazardous Materials, Public Health and Safety Impacts: Would the treatment result in other impacts related to hazardous materials, public health and safety that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact HAZ-1

The proposed treatment activities would require the use of fuels and related accelerants, which are hazardous materials. The potential for these treatment activities to cause a significant health hazard was examined in the PEIR and determined to be less than significant with the inclusion of the SPRs listed above. This impact is within the scope of the PEIR because the treatment activities, associated equipment, and types of hazardous materials used are the same as those analyzed in the PEIR.

Impact HAZ-2

Herbicide application may be utilized to control invasive non-native plants/trees, as well as reduce the level of resprouting within fuel breaks. Application will be achieved by ground methods only (no aerial spraying will occur). The target plant will be backpack sprayed or cut and stump painted. The potential for treatment activities to cause a significant health hazard was examined in the PEIR. This impact is within the scope of the PEIR because the types of herbicides and the application methods proposed are

the same as those analyzed in the PEIR. With the implementation of SPRs HAZ-5 through HAZ-9, the impacts were determined to be less than significant.

Impact HAZ-3
Soil disturbance during mechanical treatments and prescribed burning have the potential to expose workers, the public and the environment to existing hazardous materials, if present within the treatment areas. This impact was examined in the PEIR and determined to be potentially significant, and less than significant after mitigation. The impact is the same for this project because the treatment types and potential hazardous materials are the same. There is potential for unknown hazardous waste sites within the project area, with the implementation of MM HAZ-3 this impact is reduced to the level of insignificance.

MM HAZ-3 is, as stated in the PEIR, Hazardous Materials, Public Health and Safety section 3.10 Pg 19,

> "Prior to the start of vegetation treatment activities requiring soil disturbance (i.e., mechanical treatments) or prescribed burning, CAL FIRE and other project proponents will make reasonable efforts to check with the landowner or other entity with jurisdiction (e.g., California Department of Parks and Recreation) to determine if there are any sites known to have previously used, stored, or disposed of hazardous materials. If it is determined that hazardous materials sites could be located within the boundary of a treatment site, the project proponent will conduct a DTSC EnviroStor web search (https://www.envirostor.dtsc.ca.gov/public/) and consult DTSC's Cortese List to identify any known contamination sites within the project site. If a proposed mechanical treatment or prescribed burn is located on a site included on the DTSC Cortese List as containing potential soil contamination that has not been cleaned up and deemed closed by DTSC, the area will be marked and no prescribed burning or soil disturbing treatment activities will occur within 100 feet of the site boundaries. If it is determined through coordination with landowners or after review of the Cortese List that no potential or known contamination is located on a project site, the project may proceed as planned."

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the hazardous materials used, the environmental conditions, and the exposure potential is the same as what was analyzed in the PEIR. Furthermore, the regulatory conditions and policies are the same. As a result, the inclusion of land outside of the treatable landscape is within the scope of the PEIR. There is not expected to be a significant change in the potential hazardous impact outside of the treatable landscape.

PD-3.11: HYDROLOGY AND WATER QUALITY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Prescribed Burning	LTS	Impact HYD-1, pp. 3.11-25 – 3.11-27	Yes	HYD-1, HYD-4, GEO-4, GEO-6, AQ-3, BIO-4, BIO-5	NA	LTS	No	Yes
Impact HYD-2: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Manual or Mechanical Treatment Activities	LTS	Impact HYD-2, pp. 3.11-27 – 3.11-29	Yes	HYD-1, HYD-2, HYD-4, HYD-5, HYD-6, GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-7, GEO-8, BIO-1, HAZ-1, HAZ-5	NA	LTS	No	Yes
Impact HYD-3: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through Prescribed Herbivory	LTS	Impact HYD-3, p. 3.11-29	Yes	HYD-3	NA	LTS	No	Yes
Impact HYD-4: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Ground Application of Herbicides	LTS	Impact HYD-4, pp. 3.11-30 – 3.11-31	Yes	HYD-1, HYD-4 HYD-5, BIO-4, HAZ-5, HAZ-6 HAZ-7	NA	LTS	No	Yes

Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact HYD-5: Substantially Alter the Existing Drainage Pattern of a Treatment Site or Area	LTS	Impact HYD-5, p. 3.11-31	Yes	HYD-4, HYD-6, GEO-1, GEO-2, GEO-5	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation; SU: significant and unavoidable

New Hydrology and Water Quality Impacts: Would the treatment result in other impacts to hydrology and water quality that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact HYD-1

Ash and debris from prescribed burning could be washed by runoff into drainages and streams and this potential impact was assessed in the PEIR. To prevent this impact, treatment areas are designed to avoid streams and watercourses, while implementing erosion control measures as described in the SPRs. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from this treatment activity. See HYD-4 in the SPRs in Attachment A. This impact was assessed in the PEIR and found to be less than significant with the implementation of the SPRs listed above. The treatment activity is within the scope of the PEIR because it is designed to be a low intensity prescribed burn, which is the same as what was analyzed in the PEIR. Chaparral is planned to be burned at an appropriate interval to prevent converting this ecotype. Chaparral will be burned in patches to prevent exposing large areas of bare soil within the project area and avoid hydrolyzing the soil. These burn unit designs will be approved by an RPF to ensure this impact remains less than significant.

Impact HYD-2

Vegetation treatments will include mechanical and manual methods. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from this treatment activity. See HYD-4 in the SPRs in Attachment A. This will significantly limit activities within the WLPZs and class IIIs to lower this impact to a level of insignificance. Heavy equipment shall not be used when saturated soil conditions exist, preventing compaction, soil loss, and sedimentation. Waterbars shall be installed where necessary, as outlined in the SPRs, to prevent sedimentation. This includes existing roadway drainage structure protection, as well as areas exposed during mechanical treatments.

Mechanical treatments will most often entail mastication, which provides erosion control innately during treatment. The chips created during this type of treatment will act as a mulch, covering any

freshly exposed soil, preventing soil loss during heavy rain events. Erosion control monitoring shall ensure all facilities are functioning and exposed soil is not at risk of delivering to any class I, II, or III watercourses. Impact HYD-2 was assessed in the PEIR and found to be less than significant with the implementation of the listed SPRs. The treatment activity is within the scope of the PEIR because it is the same as what was analyzed in the PEIR.

Impact HYD-3
Prescribed herbivory does have the potential to violate water quality standards, but with the inclusion of the SPRs listed above, the impact will be less than significant. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from this treatment activity. See HYD-3 in the SPRs in Attachment A. This impact was assessed in the PEIR and found to be less than significant. The treatment activity is within the scope of the PEIR because it is the same as what was analyzed in the PEIR.

Impact HYD-4
The use of herbicide has the potential to violate water quality standards. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from this treatment activity. See SPRs in Attachment A. These SPRs pertinent to this impact were designed to prevent herbicide from entering waterways in amounts deleterious to water quality. SPR HAZ-5 requires the project proponent to prepare a spill prevention and response plan prior to beginning any herbicide treatment activities. This will mitigate potential impacts associated with spilled chemicals reaching waterways. Herbicide use will comply with application regulations as per SPR HAZ-6. Use will be coordinated with the County Agricultural Commissioner, and all required licenses and permits will be obtained prior to herbicide application. All herbicide applications will be implemented consistent with recommendations prepared annually by a licensed PCA.

This impact was assessed in the PEIR and found to be less than significant with the implementation of the SPRs listed above. The treatment activity is within the scope of the PEIR because it is the same as what was analyzed in the PEIR.

Impact HYD-5
Treatment activities could cause ground disturbance and erosion, which could directly or indirectly modify existing drainage patterns. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from these treatment activities. The SPRs listed above will require waterbar placement where erosion and runoff are highly likely, as well as require repair and maintenance of existing drainage and erosion control infrastructure. For instance, all existing drainage structures are required to be marked prior to treatment activities to facilitate re-establishment prior to the first significant rain event. This doesn't mean existing erosion control issues will be fixed, but rather all erosion control devices functioning pre-project implementation shall be maintained.

Impact HYD-5 was assessed in the PEIR and found to be less than significant with the implementation of the listed SPRs. The treatment activities are within the scope of the PEIR because they are the same as those analyzed in the PEIR.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the hydrology, topography, vegetation types and treatment methods are consistent with those analyzed in the PEIR, thus they are also within the scope of the PEIR. Furthermore, the existing environmental and regulatory conditions pertinent to hydrology and water quality are the same. Furthermore, the "treatable landscapes" model does not take into account watersheds and tends to bisect them in many places. This is not a great way to manage forestland since these watersheds should be assessed and treated as a whole. Including these areas will allow the project proponent to positively affect each watershed without artificial boundaries, resulting in an improved function and quality throughout.

PD-3.12: LAND USE AND PLANNING, POPULATION AND HOUSING

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact LU-1: Cause a Significant Environmental Impact Due to a Conflict with a Land Use Plan, Policy, or Regulation	LTS	Impact LU-1, pp. 3.12-13 – 3.12-14	No	NA	NA	NA	NA	NA
Impact LU-2: Induce Substantial Unplanned Population Growth	LTS	Impact LU-2, pp. 3.12-14 – 3.12-15	No	NA	NA	NA	NA	NA

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation; SU: significant and unavoidable

New Land Use and Planning, Population and Housing Impacts: Would the treatment result in other impacts to land use and planning, population and housing that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact LU-1
NA

Impact LU-2
NA

PD-3.13: NOISE

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact NOI-1: Result in a Substantial Short-Term Increase in Exterior Ambient Noise Levels During Treatment Implementation	LTS	Impact NOI-1, pp. 3.13-9 – 3.13-12; Appendix NOI-1	No	NOI-1, AD-3, NOI-2	NA	LTS	No	Yes
Impact NOI-2: Result in a Substantial Short-Term Increase in Truck-Generated SENL's During Treatment Activities	LTS	Impact NOI-2, p. 3.13-12	No	NOI-1	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation; SU: significant and unavoidable

New Noise Impacts: Would the treatment result in other noise-related impacts that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact NOI-1
This impact was examined in the PEIR, and this impact was determined to not be applicable for the treatment. Trinity road is within the treatment area. Along this road there is a low density of homes, any treatment occurring near this land use would not cause a substantial impact due to a lack of overall residential density.

Impact NOI-2
Same as NOI-1

CalVTP Addendum: Change to Geographic Extent

The addition of area that is outside the treatable landscapes will not change the determination that this project is within the scope of the PEIR because there will not be a different level of noise associated with the additional area. Also, the exposure to sensitive receptors is analyzed based on the project boundaries which are independent of the treatable landscape shape.

PD-3.14: RECREATION

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact REC-1: Directly or Indirectly Disrupt Recreational Activities within Designated Recreation Areas	LTS	Impact REC-1 pp. 3.14-6 – 3.14-7	Yes	AES-1, AES-2, AES-3	NA	LTS	NA	NA

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation; SU: significant and unavoidable

New Recreation Impacts: Would the treatment result in other impacts to recreation that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact REC-1

Treatment activities may occur within the viewshed of Archer Taylor Regional Preserve, but this will not affect the recreation occurring at this preserve. The impacts associated with this project are within the scope of the PEIR because the treatment activities and recreational uses are the same as those analyzed in the PEIR.

CalVTP Addendum: Change to Geographic Extent

The addition of areas that are outside the treatable landscapes will not change the determination that this project is within the scope of the PEIR because there will not be a different type of recreational area or use as a result. The treatment types will also be the same, meaning the degree and extent of a potential closure will not change. SPR REC-1 will be applied both within the treatable landscape and outside it.

PD-3.15: TRANSPORTATION

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact TRAN-1: Result in Temporary Traffic Operations Impacts by Conflicting with a Program, Plan, Ordinance, or Policy Addressing Roadway Facilities or Prolonged Road Closures	LTS	Section 3.15.2; Impact TRAN-1 pp. 3.15-9 – 3.15-10	No	NA	NA	NA	NA	NA
Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses	LTS	Impact TRAN-2 pp. 3.15-10 – 3.15-11	Yes	AD-3, HYD-1, HYD-2, TRAN-1	NA	LTS	NA	NA
Impact TRAN-3: Result in a Net Increase in VMT for the Proposed CalVTP	PS	Impact TRAN-3 pp. 3.15-11 – 3.15-13	Yes	NA	AQ-1; *See exclusions in discussion*	PSU	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation; SU: significant and unavoidable

New Transportation Impacts: Would the treatment result in other impacts to transportation that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact TRAN-1

This impact was examined in the PEIR and this impact was determined to not be applicable for the treatment. Any significant road impediment would occur on Trinity Road, which is a lightly trafficked road serving a small community with a low density of houses and non-forested areas. This area is unlikely to be disrupted by temporary traffic operations.

Impact TRAN-2

Smoke generated during prescribed burning operations may necessitate the implementation of a Traffic Management Plan (TMP). The need for this will be assessed during the preparation of the prescribed burn based on weather, location of burn and orientation to local traffic patterns. It is highly unlikely that a TMP will be necessary, due to the light traffic which occurs around the project area. This impact

was assessed in the PEIR. The impact of this project is within the PEIR because the treatment activity is the same as what was covered in the PEIR. A traffic plan for this reason is not anticipated, with this specific project. Burning is often suspended on days when weather conditions prevent smoke from exiting the atmosphere quickly.

Impact TRAN-3
This impact was examined in the PEIR and this project's impact determination is the same because the project utilizes the same treatment methods and equipment.

The overall impact was determined to be Potentially significant and un-avoidable by the PEIR. Mitigation measure AQ-1 will be applied where feasible and will, along with the SPRs, reduce the impact. The following mitigation measures listed under AQ-1 will not be applied due to lack in technology and infeasibility at the local level:

- Electric and gasoline-powered equipment will be substituted for diesel-powered equipment.
    - *Currently there are no alternatives available which offer the functional ability to handle the workload required for the treatment activities. Diesel engines are the most efficient and widely available option for completing fuels treatments, particularly with regards to mechanical treatment activities. Furthermore, gasoline engines lack the torque required to complete treatments on steep slopes under extreme loads. This is where Diesel engines have an advantage, allowing treatment on areas which would otherwise be untreatable. Diesel powered equipment also has a greater workload ability, allowing work to be completed faster. This has both an economic impact to the project as well as a reduced duration of air quality offense.*

      Lithium-ion batteries lack the range and charging speed to allow "theoretical" electric powered heavy equipment to complete the job within any sort of real-world efficiency. Because the jobs are so far from any charging station, it would be necessary to have a mobile charging source. That charging source would likely require a gas-powered generator to work (due to the location of the proposed treatments), thus defeating the purpose of the mitigation measure.

      Ultimately, the technology is lacking, both locally and elsewhere, to include this mitigation measure as a feasible option.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the land included doesn't contain areas which introduce new regulatory environments or change the impact on transportation as analyzed.

PD-3.16: PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact UTIL-1: Result in Physical Impacts Associated with Provision of Sufficient Water Supplies, Including Related Infrastructure Needs	LTS	Section 3.16.1 pp. 3.16-2 – 3.16-3; Impact UTIL-1 p. 3.16-9	Yes	NA	NA	LTS	No	Yes
Impact UTIL-2: Generate Solid Waste in Excess of State Standards or Exceed Local Infrastructure Capacity	PS	Section 3.16.1 pp. 3.16-3 - 3.16-5; Impact UTIL-2 pp. 3.16-10 – 3.16-12	No	NA	None	NA	NA	NA
Impact UTIL-3: Comply with Federal, State, and Local Management and Reduction Goals, Statutes, and Regulations Related to Solid Waste	LTS	Section 3.16.2 pp. 3.16-6 – 3.16-7; Impact UTIL-2 p. 3.16-12	No	NA	NA	NA	NA	NA

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation; SU: significant and unavoidable

New Public Services, Utilities and Service System Impacts: Would the treatment result in other impacts to public services, utilities and service systems that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact UTIL-1

Treatments involve the use of prescribed burning, which may require water usage if the burn goes out of prescription. Also, water may be utilized for dust abatement as described in the SPRs. The potential increased demand for water was examined in the PEIR. The impact is within scope because the

activities scope and duration are the same as those analyzed in the PEIR. The amount of water potentially required was assessed in the PEIR and found to be less than significant.

Impact UTIL-2

Vegetation biomass and other material will not be transported off site during operations. All vegetation shall be burned, chipped, or lopped and scattered on site.

Impact UTIL-3

NA

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the land included doesn't contain new areas which when burned, will require a significant increase in the required water used for prescribed fire mop up. Also, the environmental conditions are the same as those assessed within the treatable landscape. As a result, there are not expected to be any new impacts related to UTIL-1 , 2, or 3. The included areas are within the scope of the PEIR.

PD-3.17: WILDFIRE

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact WIL-1: Substantially Exacerbate Fire Risk and Expose People to Uncontrolled Spread of a Wildfire	LTS	Section 3.17.1; Impact WIL-1 pp. 3.17-14 – 3.17-15	Yes	HAZ-2, HAZ-3, HAZ-4	NA	LTS	No	Yes
Impact WIL-2: Expose People or Structures to Substantial Risks Related to Post-Fire Flooding or Landslides	LTS	Section 3.17.1; Impact WIL-2 pp. 3.17-15 – 3.17-16	Yes	AQ-3, GEO-1 GEO-2, GEO-3, GEO-4, GEO-5, GEO-8	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

New Wildfire Impacts: Would the treatment result in other impacts related to wildfire that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact WIL-1

Treatment activities pose a risk of wildfire ignition as well as prescribed fire escaping its control lines. This potential risk was examined in the PEIR and found to be less than significant with implementation of the SPRs. This impact is within the scope of the PEIR because the treatment activities, types of equipment and duration/intensity are the same as those analyzed in the PEIR. The project proponent and implementing entity is responsible for maintaining control lines during all prescribed burning activities.

Impact WIL-2

Steep slopes occur within the project area. The potential exposure for people or structures to post-fire landslides was examined in the PEIR. This impact is within the scope of the PEIR because the treatment activities, types of equipment and duration/intensity are the same as those analyzed in the PEIR. With the implementation of the above listed SPRs, the impact should be less than significant. Low intensity prescribed fire, if utilized, is not expected to have a significant effect on slope stability.

Low intensity burning does not cause the same issues as a high intensity wildfire and should not be analyzed in the same way in terms of the environmental impacts to soil and slope stability. Mechanical treatments on steep slopes may have the potential to cause slope instability, but with the inclusion of

the above SPRs, this impact will be avoided and lessened. All proposed mechanical treatments shall be reviewed by an RPF prior to project implementation to ensure negative impacts to slope stability will be avoided.

The treatment project will reduce the potential for high intensity wildfire, which has a much greater potential impact on slope stability due to the soil hydrolysis which often occurs. Thus, this project is expected to have a net reduction in this potential impact overall.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the land included doesn't contain new areas which when treated, will cause a significant increase in the impacts listed above. Also, the environmental conditions are the same as those assessed within the treatable landscape. The included areas outside the treatable landscape have the same environmental conditions, vegetation types, erosion hazard ratings, geology, and orientations to the public as within the treatable landscapes. As a result, there are not expected to be any new impacts outside the scope of the PEIR. Consequently, these additional areas are within the scope of the PEIR.

References

- Fire in California's Ecosystems. 2006. Neil G. Sugihara, Jan W. Van Wagtendonk, Keven E Shaffer, Joann Fites-kaufman, Andrea E. Thode. University of California Press, Berkeley and Los Angeles, California.
- CalEPA. California Environmental Protection Agency
- California Department of Fish and Wildlife. https://Wildlife.ca.gov
- California Department of Transportation. List of eligible and officially designated scenic highways. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.
- Inventory of Rare and Endangered Plants of California. California Native Plant Society. (online). https://www.rareplants.cnps.org.
- California Natural Diversity Database. 2021. Results of records search. Sacramento: California Department of Fish and Wildlife, Biogeographic Data. List updated August, 2021.
- Caltrans. California Department of Transportation.
- DTSC. California Department of Toxic Substances Control.
- Natural Resource Conservation Service. Web Soil Survey. https://websoilsurvey.nrcs.usda.gov/app/.
- California Forest Practice Rules 2020. State of California. Department of Forestry and Fire Protection. P.O. Box 944256, Sacramento, CA 94244-2460
- John D. Stuart, John O. Sawyer Trees and Shrubs of California. University of California Press Berkeley and Los Angeles, California. 2001.
- David L. Wood, Thomas W. Koerber, Robert F. Scharpf, Andrew J. Storer. Pests of the Native California Conifers, University of California Press Berkeley and Los Angeles, California. 2003
- National Audubon Society, Field Guide to Trees, Western Region: Elbert L. Little. Chanticleer Press Inc. 1980
- Weaver and Hagans. Handbook For Forest And Ranch Roads , 2015
- Joyce and Nungesser, 2000. Ecosystem Productivity and the Impact of Climate Change: USDA Forest Service Gen. Tech. Rep. RMRS-GTR-59. (pgs. 46-68) 2000.
- North Coast Regional Water Quality Control Board (NCRWQCB) 2006. Desired Salmonid Freshwater Habitat Conditions for Sediment-Related Indices, July 28, 2006. 60 pgs.
- Chamberlin, T. W. et al. 1991. Influences of Forest and Rangeland Management on Salmonid Fishes and Their Habitats. Special Publication 19, American Fisheries Society, Bethesda, Maryland. Pg. 181-205.
- Everest, F. H. and W. R. Meehan. 1981. Some Effects of Debris Torrents on Habitat of Anadromous Salmonids. National Council of the Paper Industry for Air and Stream Improvement, Technical Bulletin No. 353, New York, NY. Pg 23-30.
- Madej, M. A. et al. 2000. Effectiveness of Road Restoration in Reducing Sediment Loads. Unpublished Report, U.S. Geological Survey Redwood Field Station, Arcata, CA.
- McGarigal, K. and W. C. McComb. 1995. Relationships Between Landscape Structure and Breeding Birds in the Oregon Coast Range. Ecological Monographs, Volume 65. pg. 235-260.
- Megahan, W. F. Roads and Forest Site Productivity. U.S. Forest Service, Intermountain Research Station, Ogden UT.
- Murphy, M. L. 1995. Forestry Impacts on Freshwater Habitat of Anadromous Salmonids in the Pacific Northwest and Alaska-- Requirements for Protection & Restoration. NOAA Coastal Ocean Program Decision Analysis Series No. 7. U.S. Dept. of Commerce, National Oceanic & Atmospheric Administration, Coastal Ocean Office, Silver Spring, MD.
- Reeves, G. H., J. D. Hall, T. D. Roelofs, T. L. Hickman, and C. O. Baker. 1991. Rehabilitating and modifying stream habitats. Pages 519-557 *in* W. R. Meehan, ed. Influences of Forest and Rangeland

Management on Salmonid Fishes and Their Habitats. American Fisheries Society, Bethesda, Maryland. Special Publication 19.

- Reeves, G. H. et al. 1995. A Disturbance-Based Ecosystem Approach to Maintaining and Restoring Freshwater Habitats of Evolutionarily Significant Units of Anadromous Salmonids in the Pacific Northwest. American Fisheries Society Symposium 17, Bethesda, MD. Pg 334-349.
- Reid, L.M. 1998. Proceedings of the Conference on Coastal Watersheds: The Caspar Creek Story. Pacific Southwest Research Station, Albany, CA. pg 117-127.
- Rice, R. et al. 1975. Sampling Water Quality to Determine the Impact of Land Use on Small Streams. Paper presented at ASCE Watershed Management Symposium, Utah State University, Utah. August, 1975.
- Sindel, J. E. 1960. Jackson State Forest Pilot Study in Stream Clearance 1952-1959 California Division of Forestry. Sacramento, California.
- Yocom, C. F. and S. W. Harris 1975. Birds of Northwestern California. Humboldt State University, Arcata, CA.
- Ziemer, R.R. 1981. Roots and Stability of Forested Slopes. In proceedings: Symposium on Erosion and Sediment Transport in Pacific Rim Steeplands. Christchurch, New Zealand. January 1991. Pages 343-361.
- Zwieniecki,M. A. and M. Newton. 1999. Influences of Streamside Cover and Stream Features on Temperature Trends in Forested Streams of Western Oregon. Western Journal of Applied Forestry, Volume 14, Issue 2, pg. 106-113.
- Purcell, K. L., A. K. Mazzoni, S.R. Mori & B. B. Boroski. 2009. Resting structures & resting habitat of fishers in the southern Sierra Nevada, Ca. Forest Ecology & Management. 258 (2009) 2696-2706. http://naldc.nal.usda.gov/download/35920/PDF
- Rombough, C.J. 2006. Wintering Habitat Use by Juvenile Foothill Yellow-Legged Frogs (*Rana boylii*): The Importance of Seeps. Northwestern Naturalist 87:159.
- https://ucjeps.berkeley.edu/eflora
- Brandon M. Collins, Jason J. Moghaddas, Scott L. Stephens. 20 November 2006. Forest Ecology and Management. Initial changes in forest structure and understory plant communities following fuel reduction activities in a Sierra Nevada mixed conifer forest.
- Barbara A. Martin, Michael K. Saiki, Darren Fong, Habitat Requirements of the Endangered California Freshwater Shrimp (Syncaris Pacifica) in Lagunitas and Olema Creeks, Marin County, California, USA, Journal of Crustacean Biology, Volume 29, Issue 4, 1 October 2009, Pages 595–604, https://doi.org/10.1651/08-3134.1
- Gelles, Ryleigh V., et al. "Prescribed fire is associated with increased floral richness and promotes short-term increases in bee biodiversity in the Ponderosa Pine Forest of the southern Rocky Mountains." Agricultural and Forest Entomology, vol. 25, no. 3, 6 Mar. 2023, pp. 435–448, https://doi.org/10.1111/afe.12565.
- Sydney I. Glassman, James W.J. Randolph, Sameer S. Saroa, Joia K. Capocchi, Kendra E. Walters, M. Fabiola Pulido-Chavez, Loralee Larios, Prescribed versus wildfire impacts on exotic plants and soil microbes in California grasslands, Applied Soil Ecology, Volume 185, 2023, 104795, ISSN 0929-1393, https://doi.org/10.1016/j.apsoil.2022.104795.
- Paul, M. J., LeDuc, S. D., Lassiter, M. G., Moorhead, L. C., Noyes, P. D., & Leibowitz, S. G. (2022). Wildfire induces changes in receiving waters: A review with considerations for water quality management. Water Resources Research, 58, e2021WR030699. https://doi.org/10.1029/2021WR030699
- Brownsey, R. 2023. 2023 Monitoring of Geysers Panicum Populations at The Geysers. Prepared for Calpine by Environmental Science Associates (ESA). Sacramento, CA.

- NatureServe Explorer 2.0, explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.793598/Trachusa_gummifera. Accessed 18 July 2025.