

Request for Quotes
**Tahoe Basin Caldor Hazard Tree Hand Cut Project – Forestry
Oversight**
Lake Tahoe Basin Management Unit, California

Background and Statement of Work: On August 14, 2021, the Caldor Fire started on the Eldorado National Forest. The fire burned east, eventually spreading to lands managed by the Lake Tahoe Basin Management Unit (LTBMU), burning nearly 10,000 acres within the Tahoe Basin.

The National Forest Foundation and LTBMU have partnered to implement the Tahoe Basin Caldor Hazard Tree - Hand Cut Project. The intent of this project is to address standing hazard trees and excess ground fuel caused by the Caldor Fire. The project will treat up to 463 acres of relatively steep ground within 200 feet of National Forest System trails roads and private property, between Echo Summit and South Lake Tahoe, California.

The National Forest Foundation is seeking a Registered Professional Forester (RPF) to conduct project oversight and limited project layout services. The contractor will be expected to provide an average of 30-40 hours of oversight per week while implementation is occurring.

Information Requested

If interested in submitting a bid for this project, please provide a quote for the above statement of work by providing:

- technical approach
- work experience
- cost
- capacity for this project
- experience in similar projects

Specific requirements are detailed below.

I. PROJECT OVERVIEW AND REQUIREMENTS

General Specifications

- (a) Description of Work – This Request for Quotes is for implementing oversight services related to the Tahoe Basin Caldor Hazard Tree Hand Cut Project (Caldor Hand Project), including the following:

1. Implementation Oversight – Item 5 in Appendix E. The Caldor Hand Thin Project will include hand cutting and hand piling predominantly dead and dying hazard trees on up to 463 acres. The oversight contractor will provide implementation oversight services for all implementation work on the project in accordance with Appendix 1 and Appendix E and G.
2. Flagging and layout updates – The contractor will update SEZ, mechanical avoidance, and boundary flagging as needed and in accordance with Appendix 1. Additional site prep may be added if the need arises during the project.

Additional forestry services as described in Appendix 1 may be requested at NFF's discretion.

The Contractor shall identify what they can supply in terms of materials, labor, equipment, supplies, supervision, quality control, and incidentals required to complete the work described. The Contractor shall perform all work in a safe and conscientious manner.

- (b) Project Location – The project is located outside the town of South Lake Tahoe in El Dorado County, California. Specific project locations exist roughly along Hwy 50 between Echo Summit in the west and Forest Service Road 1201 in the east.
- (c) Work Schedule – Work will commence as soon as Contract is awarded and run as long as conditions allow. LTBMU's typical Annual Operating Season runs from May – October, though work may be conducted outside this period weather permitting. Anticipate delays each summer and fall for LOPs and Project Activity Level (PAL) days where limited work is allowed due to fire restrictions. All work must be completed by December 15, 2025. The contractor will be expected to provide an average of 30-40 hours of oversight per week while implementation is occurring.

Other Project Requirements and Specifications

- (a) Utilities – In many locations there will be no or limited sanitation, water, electrical or housing services available. The Contractor shall make its own arrangements for temporary facilities if needed.
- (b) Specifications – Project work shall be accomplished in accordance with the following:
 - APPENDIX C – Sale Area Map
 - APPENDIX E – Schedule of Items and Specifications (Service Work)
 - APPENDIX G – Guidelines for Operations
 - APPENDIX H – Fire Plan

Insurance Requirements

Upon selection of the winning bid, the Contractor agrees that it has and shall maintain the following insurance coverage indicated below. The effective date of all coverage shall precede the start of any work.

- a. State minimum workers' compensation insurance coverage for its employees, if any.
- b. Broad form general liability, property damage, and automotive liability insurance in

the minimum amount of \$1,000,000 for bodily injury, death, or damage to property of any person and \$2,000,000 for bodily injury, death, or damage to property of more than one person. The Contractor shall name NFF an Additional Named Insured and provide NFF with a certificate of insurance evidencing such coverages, prior to the initiation of the Scope of Services.

- c. If the Scope of Services includes professional services as identified herein, Contractor shall also provide professional errors and omissions liability insurance. Professional services for purposes of this section include, but are not limited to performing architecture, engineering, landscape architecture, land surveying or planning, preparation and signing or stamping of drawings, maps, surveys or construction specifications, or design and development of computer software, programs or websites by the Contractor or by subcontractors on behalf of the Contractor, for which professional liability insurance would typically be required. The minimum coverage limits required are \$1,000,000 for each claim and \$1,000,000 annual aggregate.

Prohibited Telecommunications Services and Equipment

If applicable, Contractor is responsible for compliance with the prohibition on certain telecommunications and video surveillance services or equipment identified in 2 CFR 200.216.

Payment/Performance Security

Contractor shall post cash, a letter of credit, bond, or other financial security that is easily convertible into cash in a form acceptable to the NFF, in its sole determination, to assure completion of the work required under any subsequent agreement and payment of all amounts lawfully due to all persons supplying or furnishing to the Contractor or Contractor's subcontractors with labor, laborers, materials, rental machinery, tools or equipment used or to perform the work. Contractor may incorporate required associated costs into mobilization costs or other approved expenses.

- a. Work that is classified as construction in accordance with the Miller Act or Little Miller Act or if required per conditions of the funding source, payment and performance bonding will be required in the full amount of any Agreement. For the purposes of this Request for Quote, construction is defined as "any contract greater than \$100,000 for the construction, alteration, or repair of any public building or public work where the federal government is the owner", or
- b. If Contractor is not self-performing at least 85% of the total contract value or if the cost of materials is in excess of the larger of \$100,000 or 50% of the contract total, payment and performance bonding will be required in the full amount of the agreement, or
- c. If the value of the agreement is in excess of \$250,000, Contractor will be required to post financial security in a form acceptable to the NFF in the amount of 5% of the total agreement value up to \$250,000 in total financial security.

Federal Exclusion Verification

The selected Contractor will be required to affirm that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

Federal Flowdown Provisions

Flowdown Requirements: Any Agreement associated with this RFQ may be subject to flowdown requirements under associated federal or state funding agreements, which are included and made part of by this reference.

II. REQUIRED COMPONENTS

Technical Quote

Please provide a detailed technical approach to the work.

Contractor Qualifications

- (a) Past Experience – Please provide a brief explanation of previous work experience with land management agencies.
- (b) References – Please provide three professional references that can speak to past performance.

Pricing Schedule

Contractor shall price work according to the schedule below.

	Task/Item	Units	Unit Cost	Extended Cost
(a)	Registered Professional Forester	Hour		
(b)	Associate Forester	Hour		
(c)	Forestry Technician	Hour		
(d)	Other Staff as needed	Hour		
			Total Bid	

III. SUBMISSION, EVALUATION, AND CONTACTS

Contractor Selection Process

The NFF will use the Evaluation Factors below to review each submitted bid. Based on the outcomes of that selection process, the NFF will notify successful and unsuccessful bidders within 10 business days of the submission deadline and will prepare a separate contract document.

- Price
- Previous Work History
- References
- Contractor availability / Project timeline

Point of Contact

Please submit any questions about the project in writing to the Point of Contact.

Mila Bock
National Forest Foundation California Program Coordinator, Tahoe Area
mbock@nationalforests.org

Responses will be shared with known interested parties by email or otherwise posted at <https://www.nationalforests.org/rfp>.

Bid Submission

Submit bids via email to mbock@nationalforests.org by August 9, 2024.

Equal Opportunity Provider

In accordance with Federal law and U.S. Department of Agriculture policy, the National Forest Foundation is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs, or disability.

APPENDIX 1 – Statement of Work

Description of Work:

The National Forest Foundation (NFF) is seeking the services of a Registered Professional Forester (RPF). The Contractor will work collaboratively with the NFF and the USDA Forest Service (USFS) to perform fuels and timber sale preparation and design for the Tahoe Basin Caldor Hazard Tree Hand Cut Project on the Lake Tahoe Basin Management Unit beginning in 2024. Project work will require approximately 30 – 40 hours per week. See RFP for specific duties pertaining to this contract.

1. Fuels Preparation and Design

Contractor duties will include, but are not limited to; project design and treatment designation, unit layout, unit boundary designation, area determination, creation of GIS shapefiles of unit boundaries, flagging of sensitive resources, treatment designation all while abiding by the management requirements supplied by the NFF for the Liberty Leaf and Liberty Rubicon portions of the LRC Project. Once the Contractor has supplied the NFF with the project design and unit layout information, they will work with the NFF and the USFS to develop a contract and supporting documents.

1.1. Unit Layout

1.1.1. The Contractor will locate and flag treatment unit boundaries as identified on Project area planning maps using Avenza and GPS.

1.2. Unit Boundary and Area Designation

1.2.1. The Contractor will collaborate with the USFS and NFF to determine where virtual boundaries can be used in place of flagged boundaries.

1.2.2. The Contractor will identify any areas within existing units that need to be excluded and map the updated treatment unit boundary with a global positioning system device (GPS). GPS data will be shared with the NFF and the USFS.

1.3. Resource Flagging

1.3.1. The Contractor will locate and flag sensitive resources such as invasive plants, wildlife LOPs, riparian buffers, and noxious weeds.

1.4. Treatment Designation

1.4.1. The Contractor will identify treatment recommendations for each unit. The Contractor will use slope, terrain, and other field conditions to ensure that analyzed treatments are operationally feasible for each unit. If an analyzed treatment is not operationally feasible, the Contractor will provide an alternate recommendation and coordinate with NFF with any scope changes.

2. Timber Sale Preparation and Design

The Contractor will review with USFS and NFF all project information such as the USFS planning decision document and all paperwork necessary for a timber sale. This may include the project appendices, preliminary logging plan, USFS appraisal documents, the road package, harvest cards, route of haul map, etc. The Contractor determines that all prerequisites to contract work are taken care of, such as, but not limited to, environmental protection measures, delegations of authority, operating schedules, road maintenance/erosion control, advance deposits, improvement locations, logging plan preparations, and scaling arrangements.

- 2.1. Sawtimber Cruising
 - 2.1.1. The Contractor will design and implement a sawtimber cruise which will provide an accurate cruise report and files to facilitate the timber appraisal process. Upon completion, the cruise will be evaluated by the USFS check cruiser and must meet the USFS cruising standards.
- 2.2. Marking of Cut/Leave Trees
 - 2.2.1. The Contractor will mark trees in accordance with the provided silvicultural prescriptions and/or marking guidelines. All marking shall meet the provided USFS standards and guidelines.
- 2.3. Treatment Polygons
 - 2.3.1. Using the guidelines provided by the USFS, the Contractor will identify and delineate locations of treatment polygons within units. This may include leave areas, openings, or other special treatment areas. The contractor will hang tags or flags to delineate these treatment polygons.
- 2.4. Unit Boundaries
 - 2.4.1. The Contractor will mark all timber sale unit boundaries. Unit boundaries shall be designated with marking paint and flags. Virtual boundaries will be used where appropriate. The contractor will follow all unit layout guidelines provided by the USFS.

3. Implementation Oversight

The Contractor will coordinate with USFS and NFF before the project start, at the project start, throughout the project and at the end of the project to ensure quality control and administration of the Liberty Leaf and Liberty Rubicon portions of the LRC Project. The Contract shall abide by the roles and responsibilities outlined in Appendix B.

- 3.1. Before Project Implementation Start
 - 3.1.1. The Contractor will review with the NFF and the USFS all project information such as the USFS planning decision document and all paperwork necessary for the implementation contract. This may include the project appendices, project maps, etc. The Contractor determines that all prerequisites to contract work are taken care of, such as, but not limited to, environmental protection measures, delegations of authority, operating schedules, etc.
 - 3.1.2. The Contractor will attend pre-operations meeting(s) and identify when the implementation contractor will start operations. The Contractor will review plans and schedules with implementation contractors to assure a common understanding of conditions and responsibilities.
- 3.2. At Project Start:
 - 3.2.1. As necessary, the Contractor will conduct an inspection of the implementation contractor's equipment to ensure that it is weed-free.
 - 3.2.2. The Contractor will conduct a fire inspection of the implementation contractor's equipment in coordination with the USFS.
 - 3.2.3. The Contractor will ensure that they have a regular presence on-site during the first week of operations.
 - 3.2.4. The Contractor will inspect falling and skidding at project start to ensure specifications are met.
- 3.3. Throughout Project:
 - 3.3.1. The Contractor will ensure the implementation contractor adheres to the requirements in the Liberty Leaf and Liberty Rubicon portions of the LRC Project APPENDICES and relevant USFS planning decision documents.
 - 3.3.2. The Contractor will document all findings for the project record in "Daily Journal" forms to be provided by NFF. They consult with USFS and NFF personnel regularly to report progress and any deficiencies. The Contractor will work with the implementation contractor to identify upcoming work that will be occurring over the next five business days. The Contractor will document this upcoming work plan in the "Upcoming Work Schedule" section of the "Daily Journal" form.

- 3.3.3. The Contractor will advise implementation contractor's field representatives of adequacy or inadequacy of operations and achieve compliance with contract terms, including safety and employment requirements. They take appropriate action to correct deficiencies, and will advise NFF to implement a "Stop Work Order," if needed.
- 3.3.4. Contractor duties include but are not limited to administering sale of timber. The Contractor will check loads and ensure that logs are painted/branded, and ensure load tickets are accounted for are properly filled out, punched, and attached.
- 3.3.5. The Contractor is responsible for continuing field inspection and control of contractor's operations such as service work items, timber falling, skidding and yarding, decking, loading, hauling, and all log accountability requirements. They will determine if utilization, slash disposal, and road maintenance/erosion control are adequate. In coordination with the USFS, the Contractor will identify, inspect, and approve potential landing sites, skid trails, and temporary roads, and mark add volume and hazard trees as necessary.
- 3.3.6. The Contractor is responsible for conducting formal field inspections at time of implementation contractor invoice. The Contractor will ensure that all contractual obligations are met on a per-unit basis in coordination with USFS and NFF before payment is provided to implementation contractor.

3.4. End of Project:

- 3.4.1. The Contractor will pay special attention to landing clean up and that all roads are left to specification. The Contractor will ensure project winterization procedures have been completed prior to the end of each field season. At formal end of project, the Contractor will ensure that all contractual obligations are met before making a final inspection in coordination with USFS. The Contractor will return any borrowed equipment (paint, flagging, etc.) at the end of each field season and upon project completion.

Tahoe Basin Caldor Hazard Tree - Hand Contract Vicinity Map

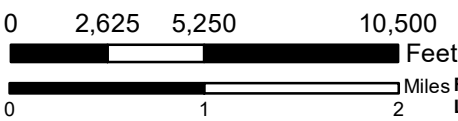
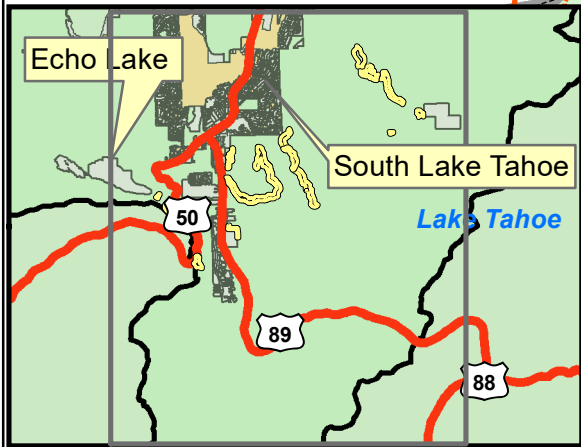
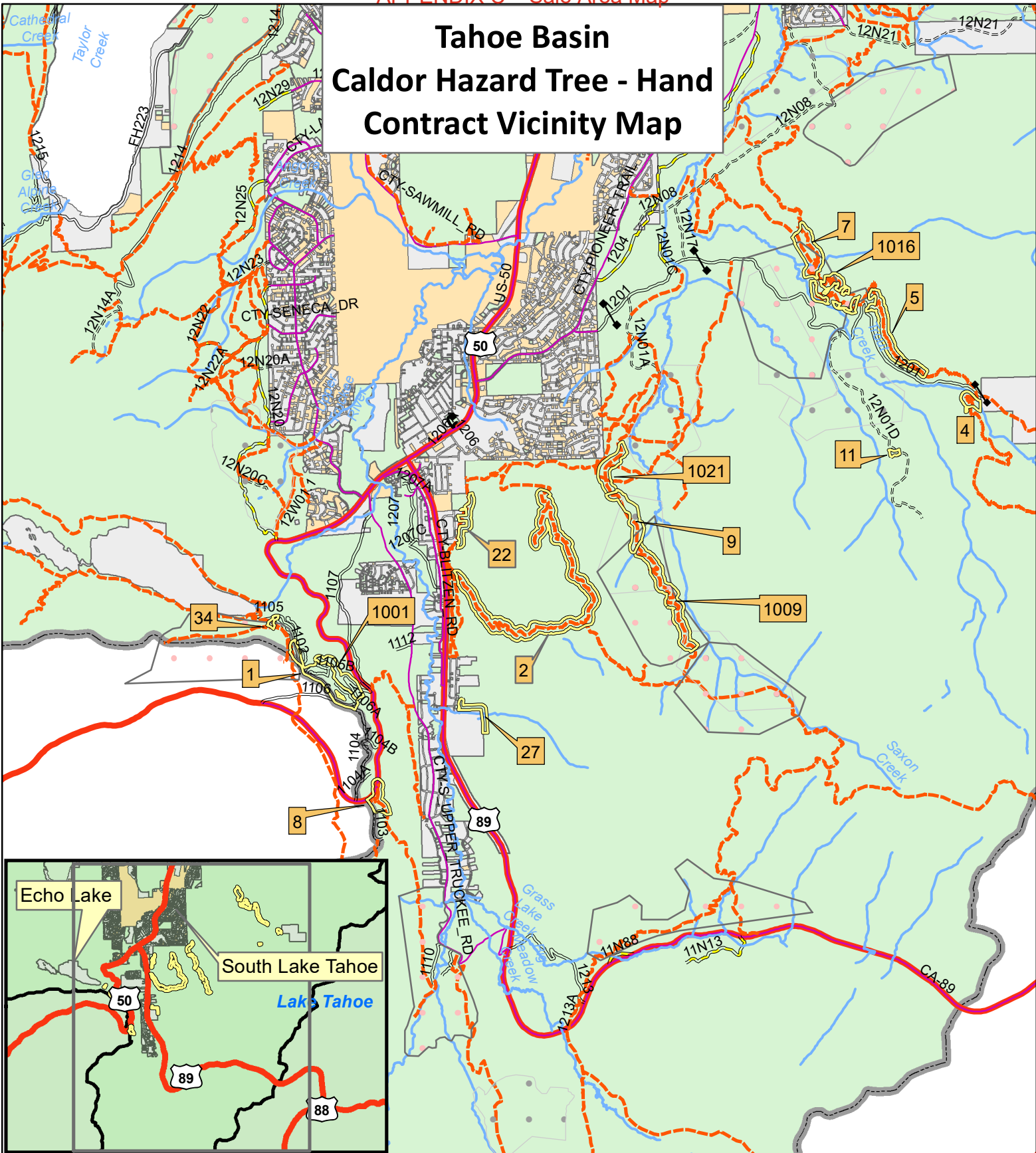


Exhibit A

Miles Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate



The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy; accurate only at certain scales; based on modeling or interpretation; incomplete while being created or revised; etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify or replace GIS products without notification.

For more information, contact: Lake Tahoe Basin Management Unit
35 College Drive, South Lake Tahoe CA 96150
(530) 543.2600 (530) 541.4036 TTY

- Project Area
- PAC LOP Area
- National Forest
- Other Ownership
- State
- Perennial
- Trail
- Highways
- NFS Road - paved
- NFS Road
- Gates

Caldor Hazard Tree Unit 34

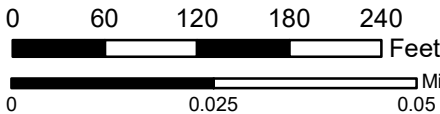
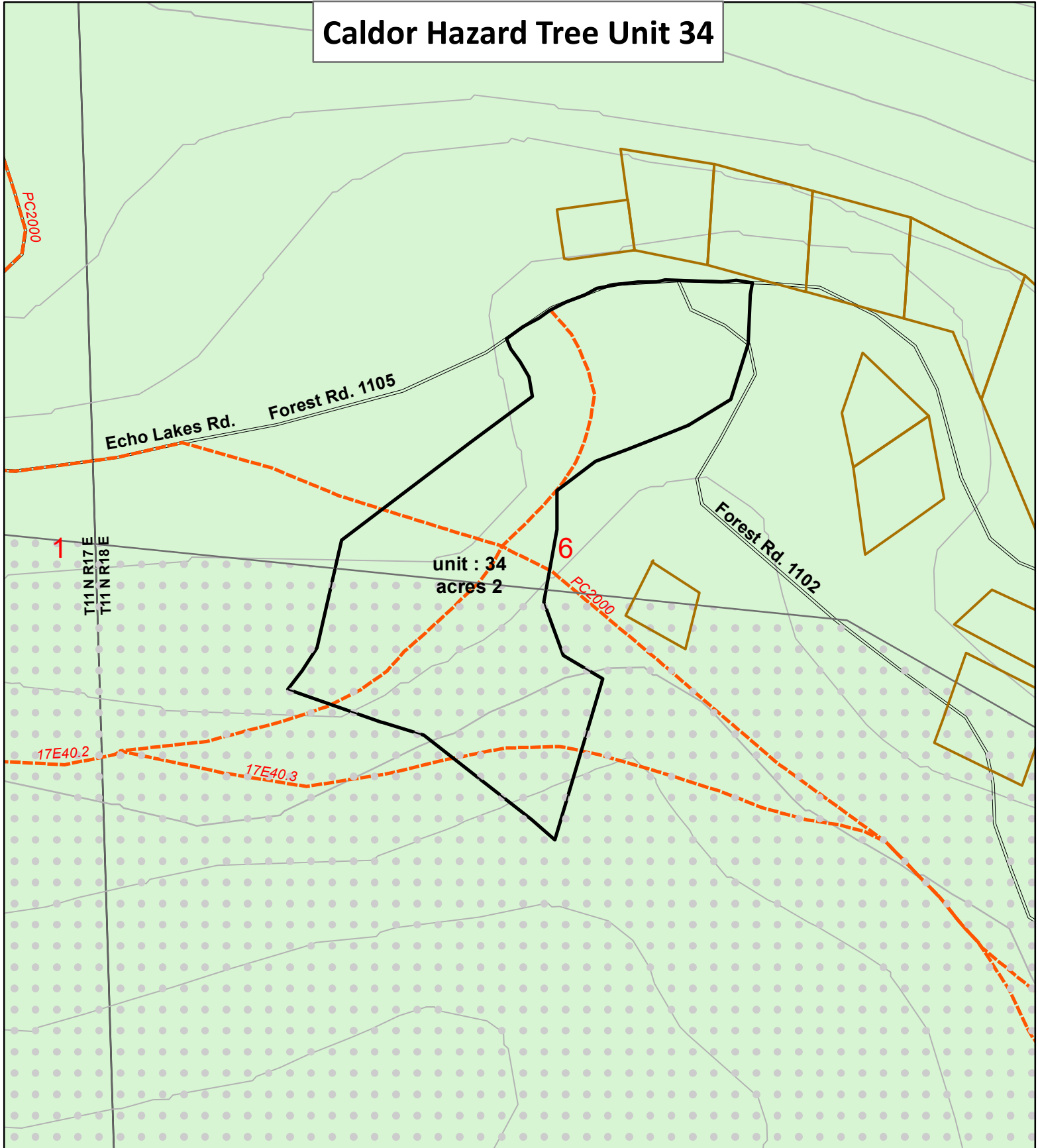


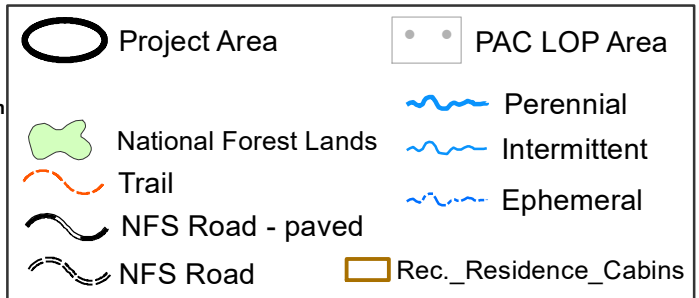
Exhibit A-1

Fuel Model: G. Weather Station: Lake Baron
 Landlines are approximate



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Caldor Hazard Tree Unit 1

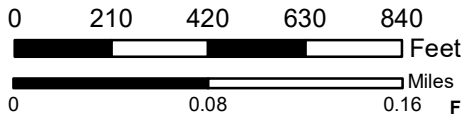
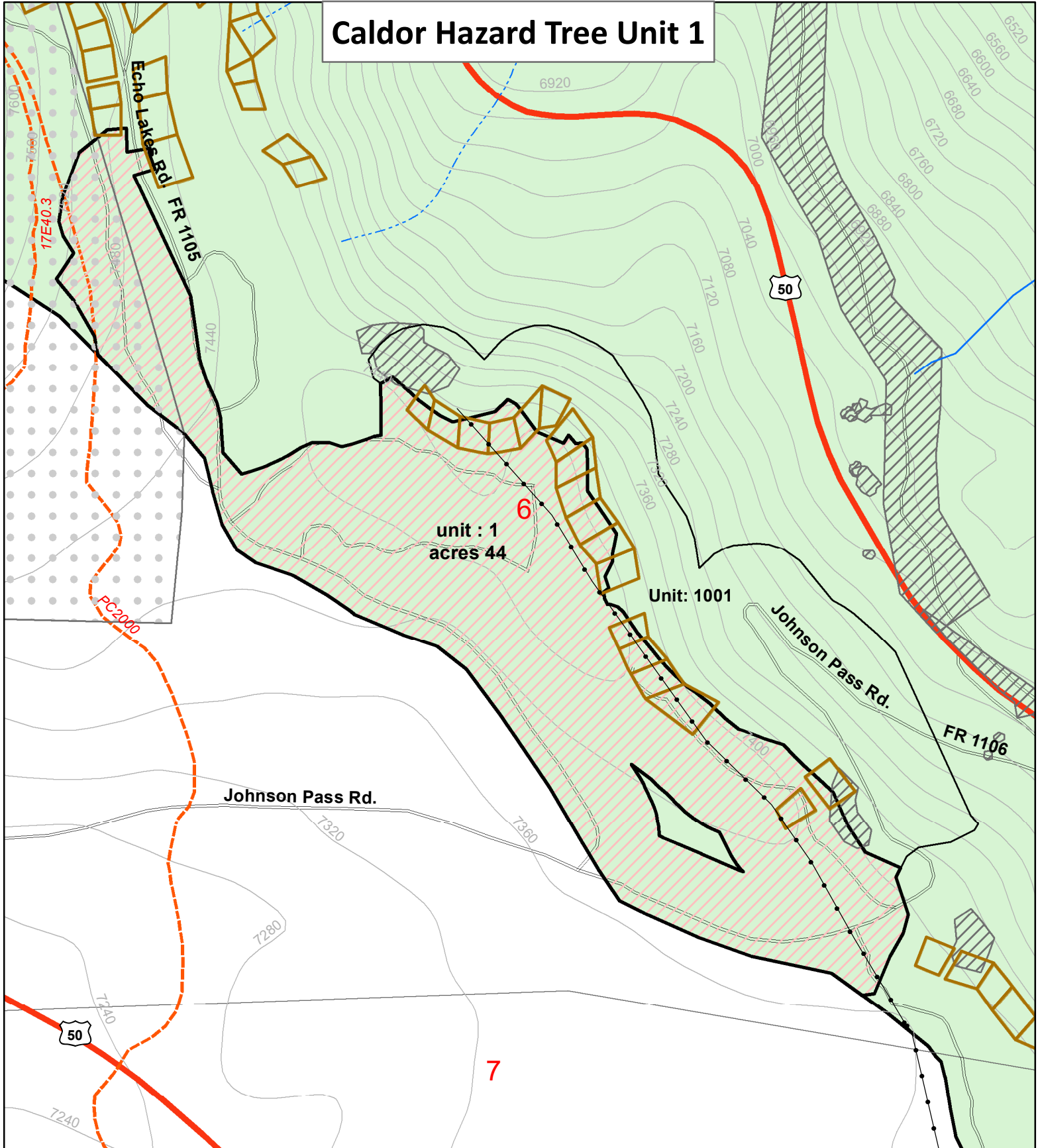


Exhibit A-2a

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate



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	Project Area		PAC LOP Area
	National Forest Lands		Perennial
	Water Pipeline		Intermittent
	Rec_Residence_Cabins		Ephemeral
	No_Pile_Zone		Trail
			NFS Road - paved
			NFS Road

Caldor Hazard Tree Unit 1001

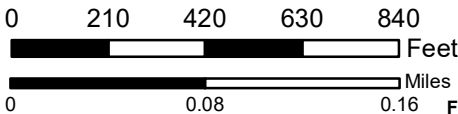
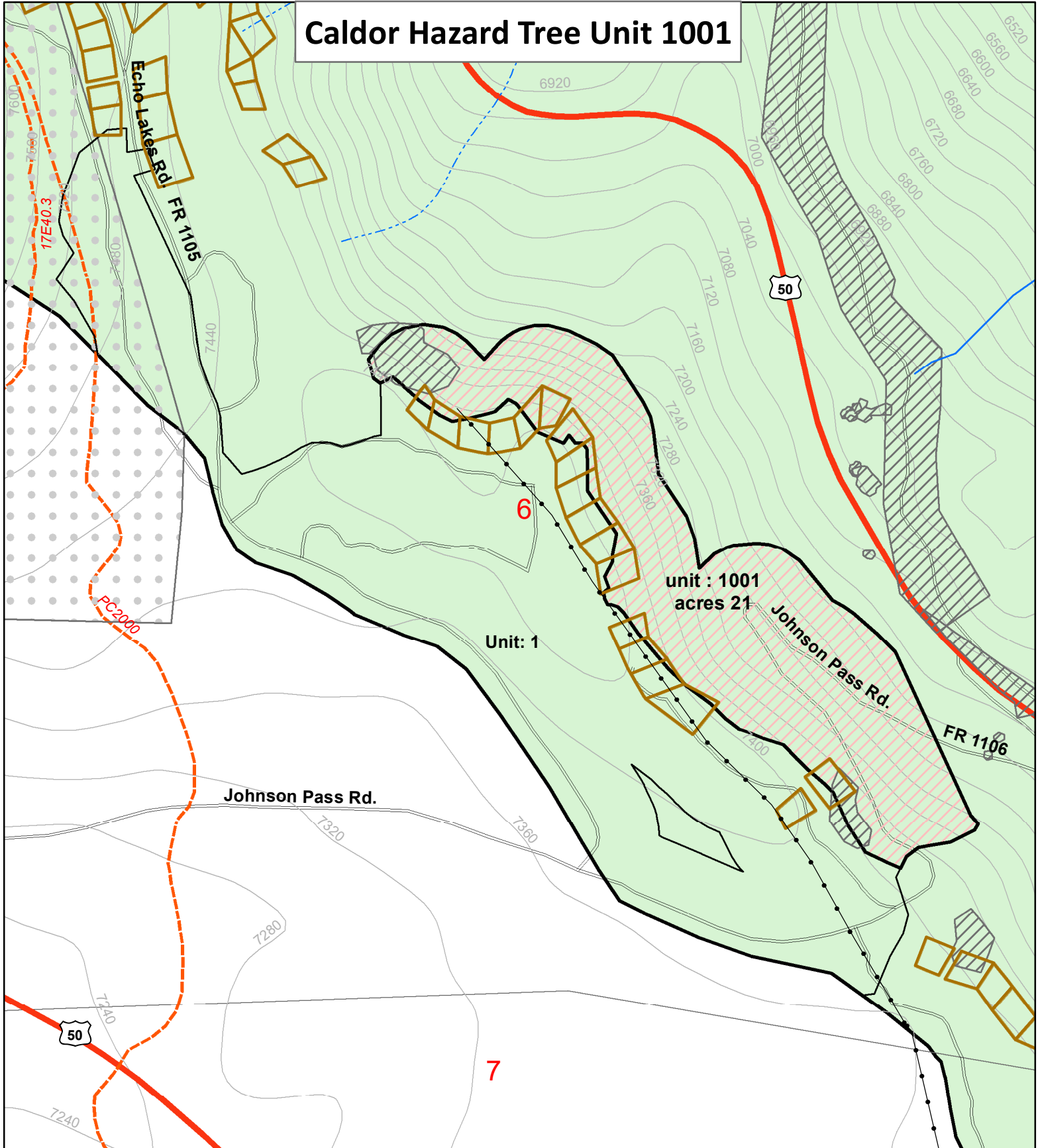


Exhibit A-2b

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate



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	Project Area		PAC LOP Area
	National Forest Lands		Perennial
	Water Pipeline		Intermittent
	Rec_Residence_Cabins		Ephemeral
	No_Pile_Zone		Trail
			NFS Road - paved
			NFS Road

Caldor Hazard Tree Unit 8

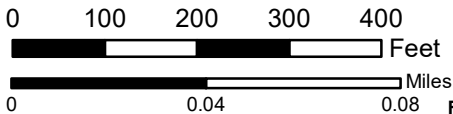
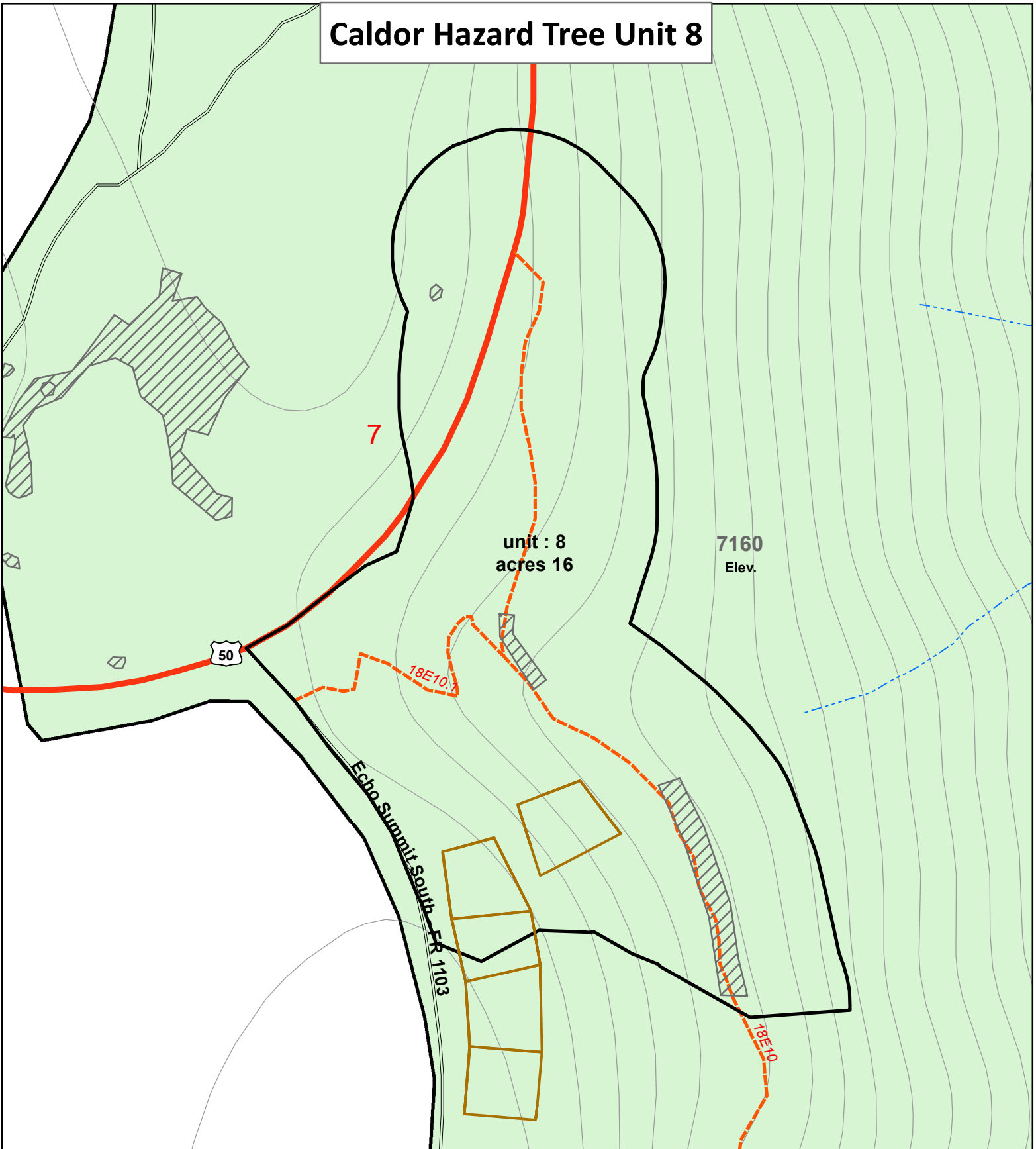


Exhibit A-3

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate

- Project Area
- National Forest Lands
- Trail
- NFS Road - paved
- NFS Road
- Perennial
- Intermittent
- Ephemeral
- Rec. Residence Cabins
- No_Pile_Zone



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Caldor Hazard Tree Unit 27

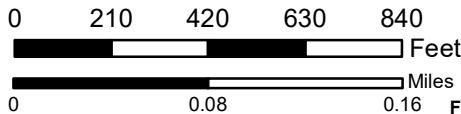
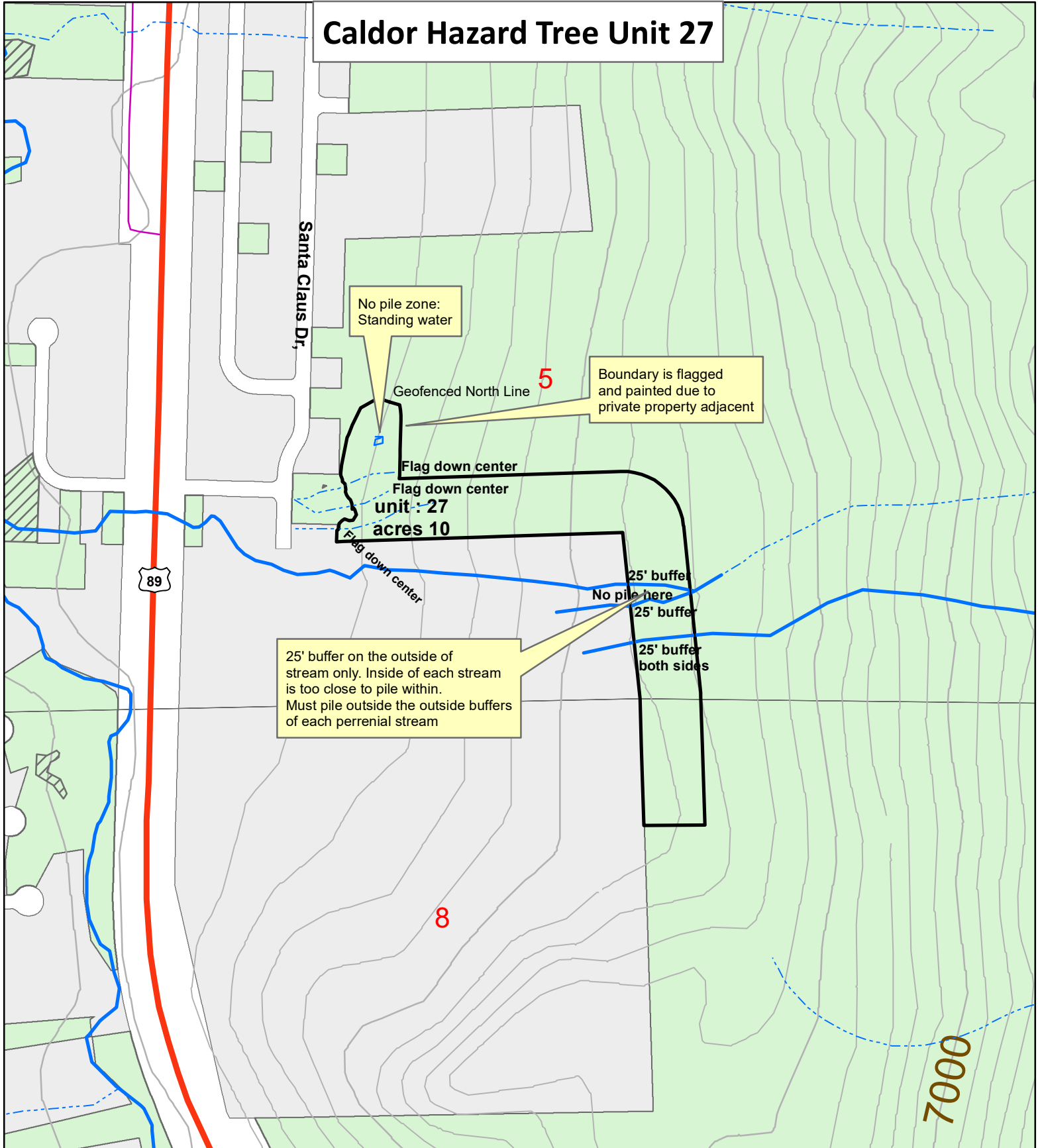


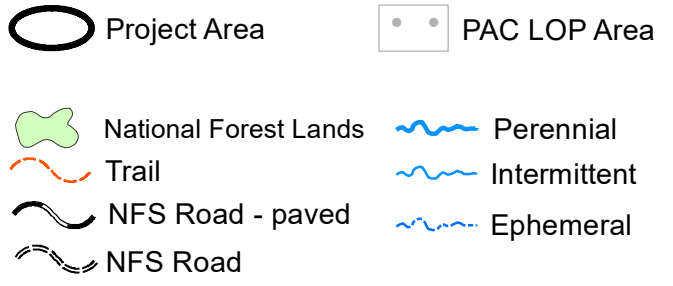
Exhibit A-4

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate



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Caldor Hazard Tree Unit 22

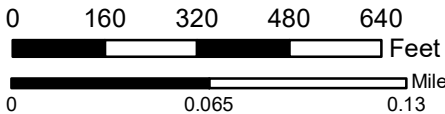
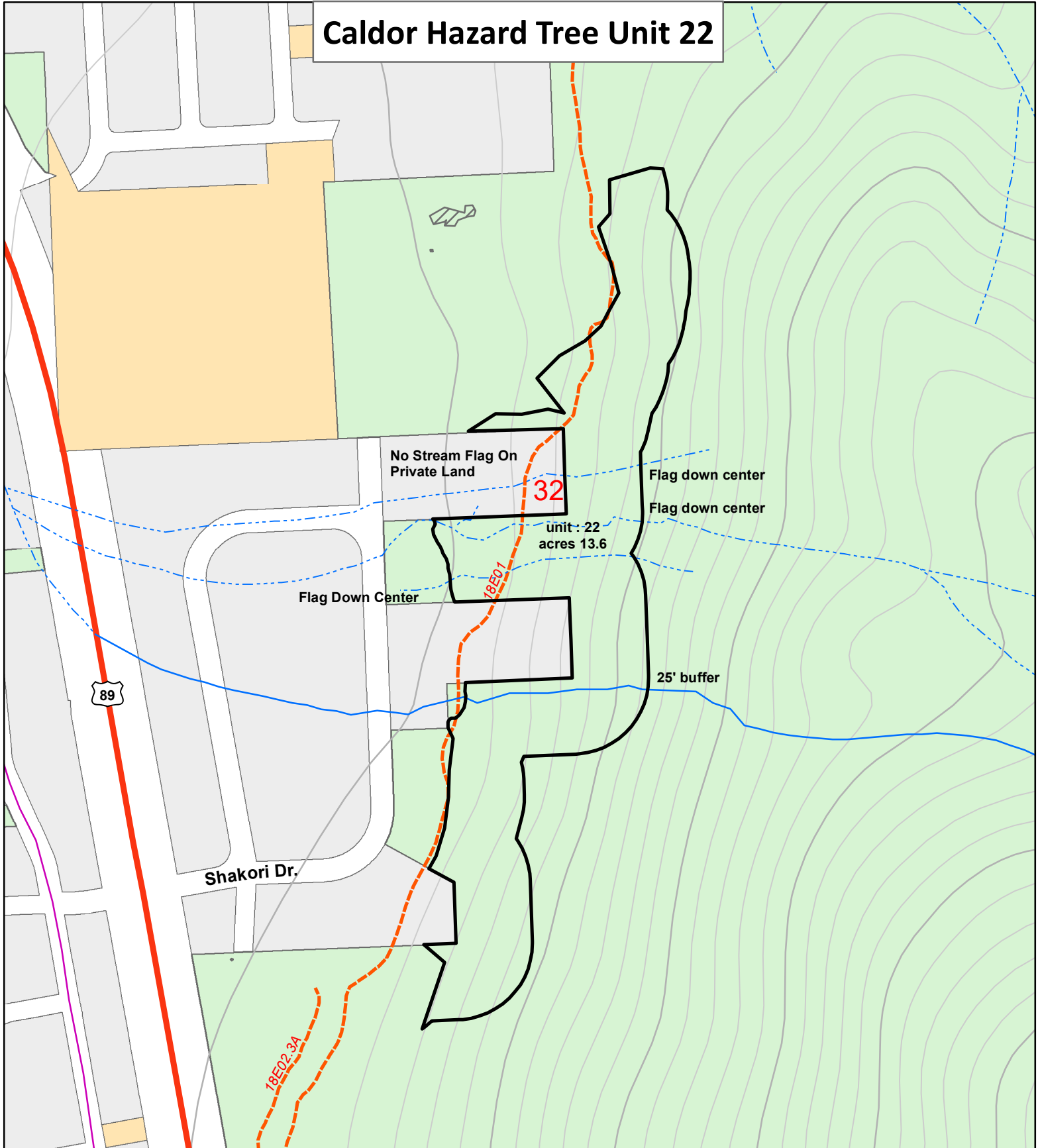
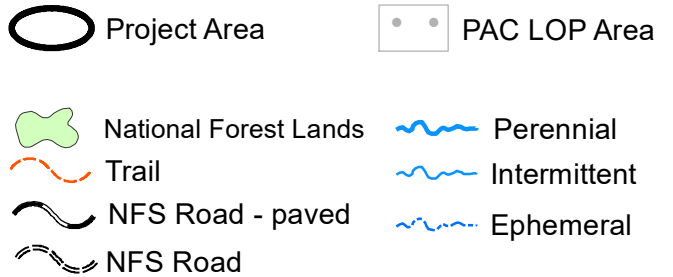


Exhibit A-5

Fuel Model: G. Weather Station: Lake Baron
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Caldor Hazard Tree Unit 2

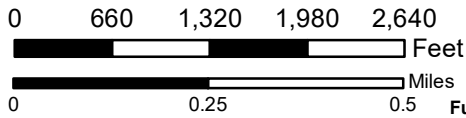
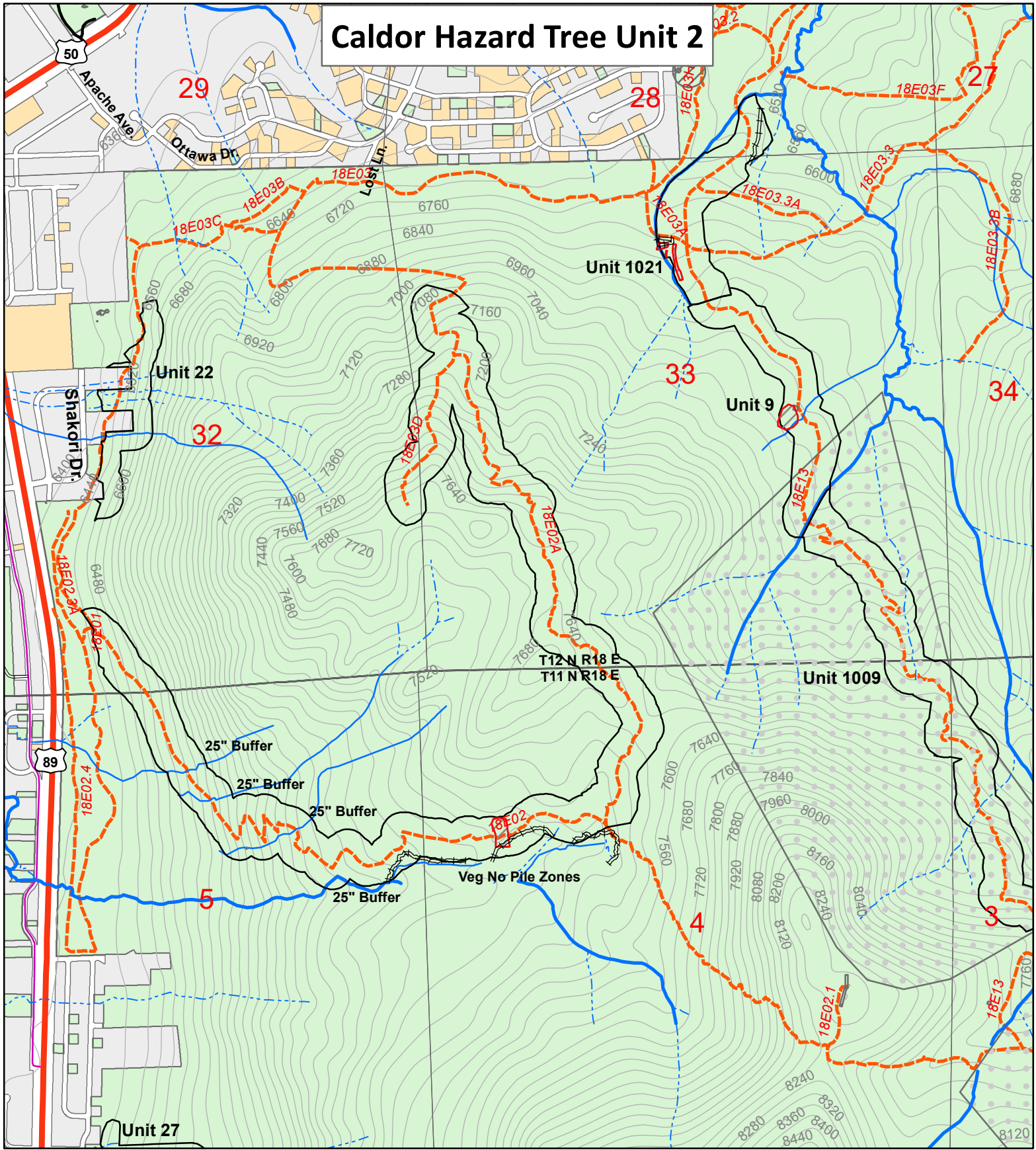


Exhibit A-6

Fuel Model: G. Weather Station: Lake Baron
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	Project Area		Perennial
	PAC LOP Area		Intermittent
	National Forest Lands		Ephemeral
	Trail		Hydro
	NFS Road - paved		Avoidance_Zone
	NFS Road		No_Pile_Zone

Caldor Hazard Tree Unit 9

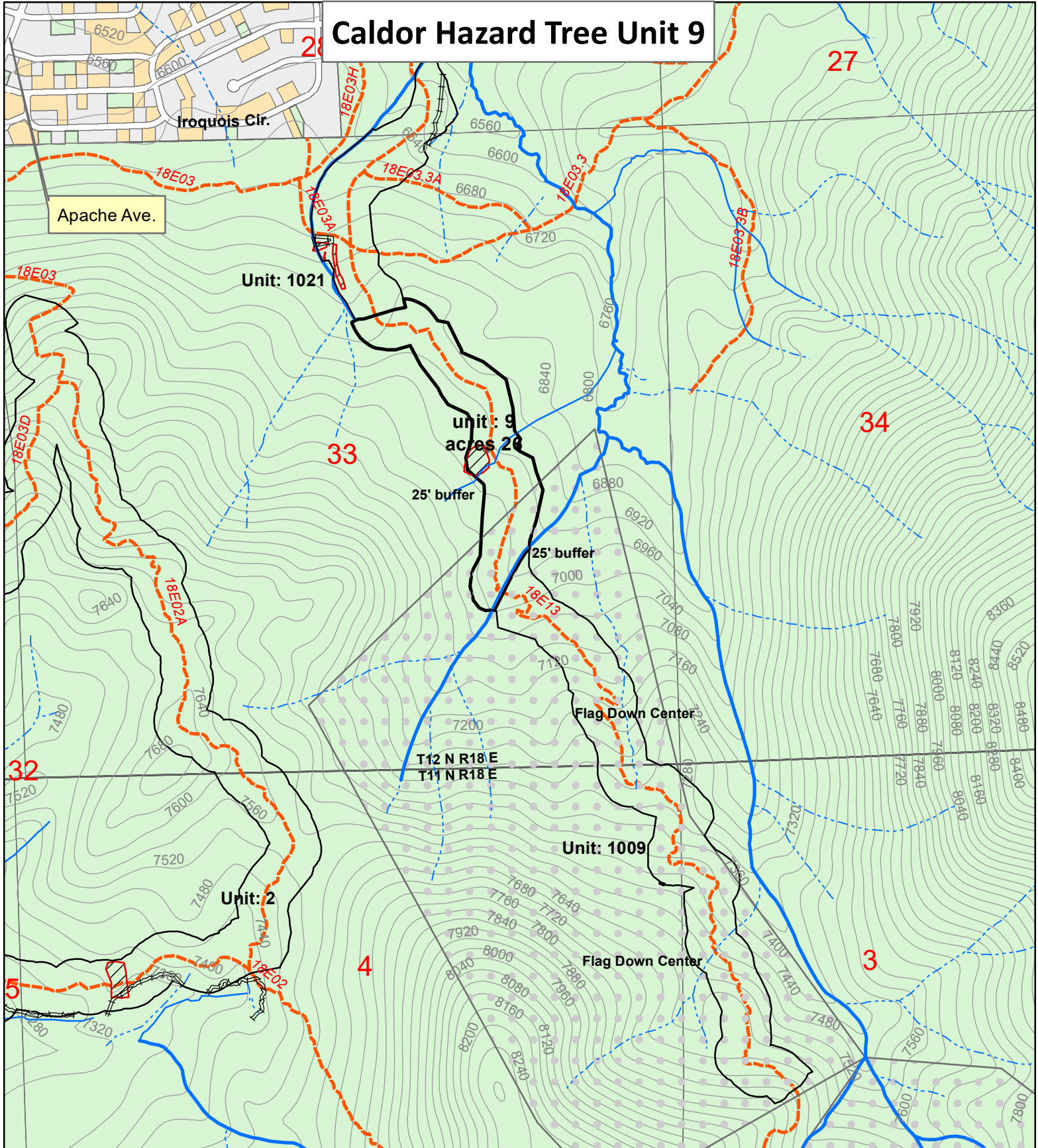


Exhibit A-7a

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate



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	Project Area		Perennial
	PAC LOP Area		Intermittent
	National Forest Lands		Ephemeral
	Trail		Veg No Pile Zone: Hydro
	NFS Road - paved		Avoidance_Zone
	NFS Road		No_Pile_Zone

Caldor Hazard Tree Unit 1009

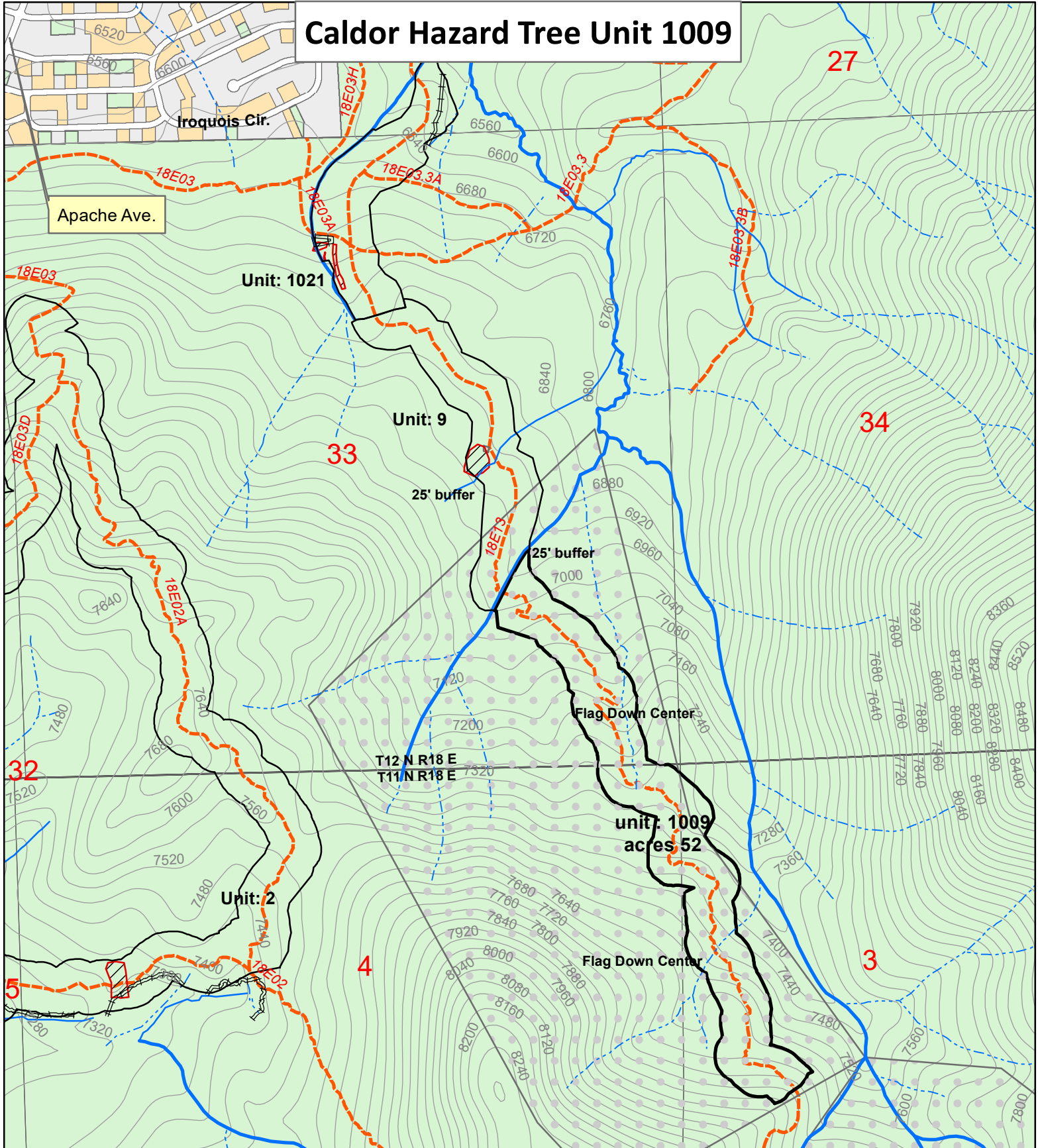


Exhibit A-7b

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate

	Project Area		Perennial
	PAC LOP Area		Intermittent
	National Forest Lands		Ephemeral
	Trail		Hydro
	NFS Road - paved		Avoidance_Zone
	NFS Road		No_Pile_Zone

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Caldor Hazard Tree Unit 1021

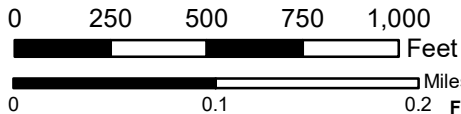
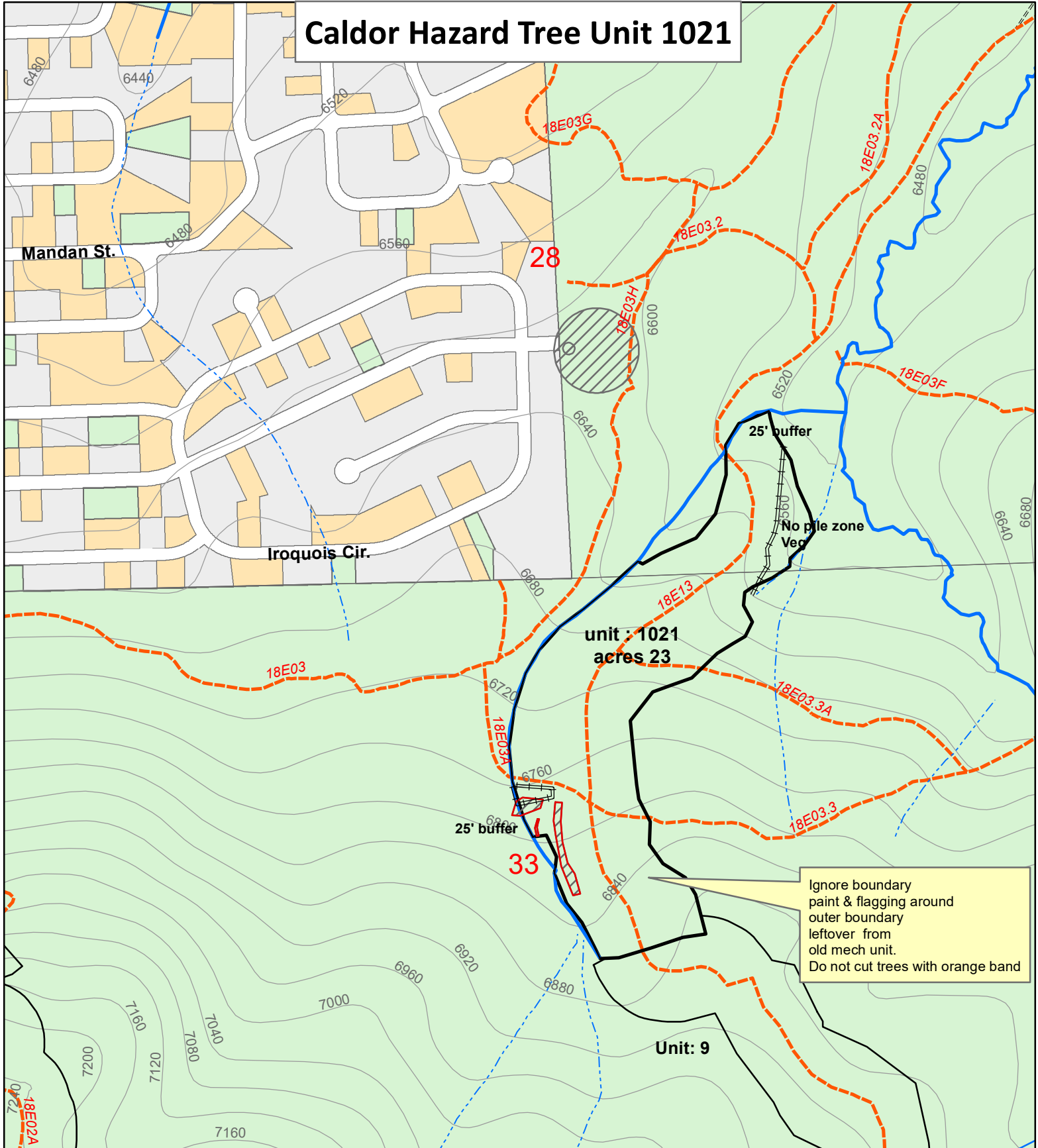


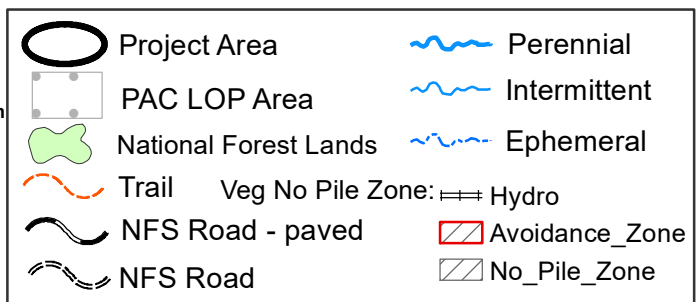
Exhibit A-8

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate



The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy; accurate only at certain scales; based on modeling or interpretation; incomplete while being created or revised; etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify or replace GIS products without notification.

For more information, contact: Lake Tahoe Basin Management Unit
35 College Drive, South Lake Tahoe CA 96150
(530) 543.2600 (530) 541.4036 TTY



Caldor Hazard Tree Unit 7

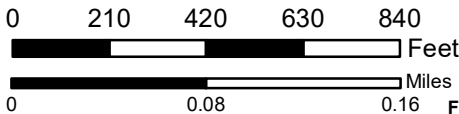
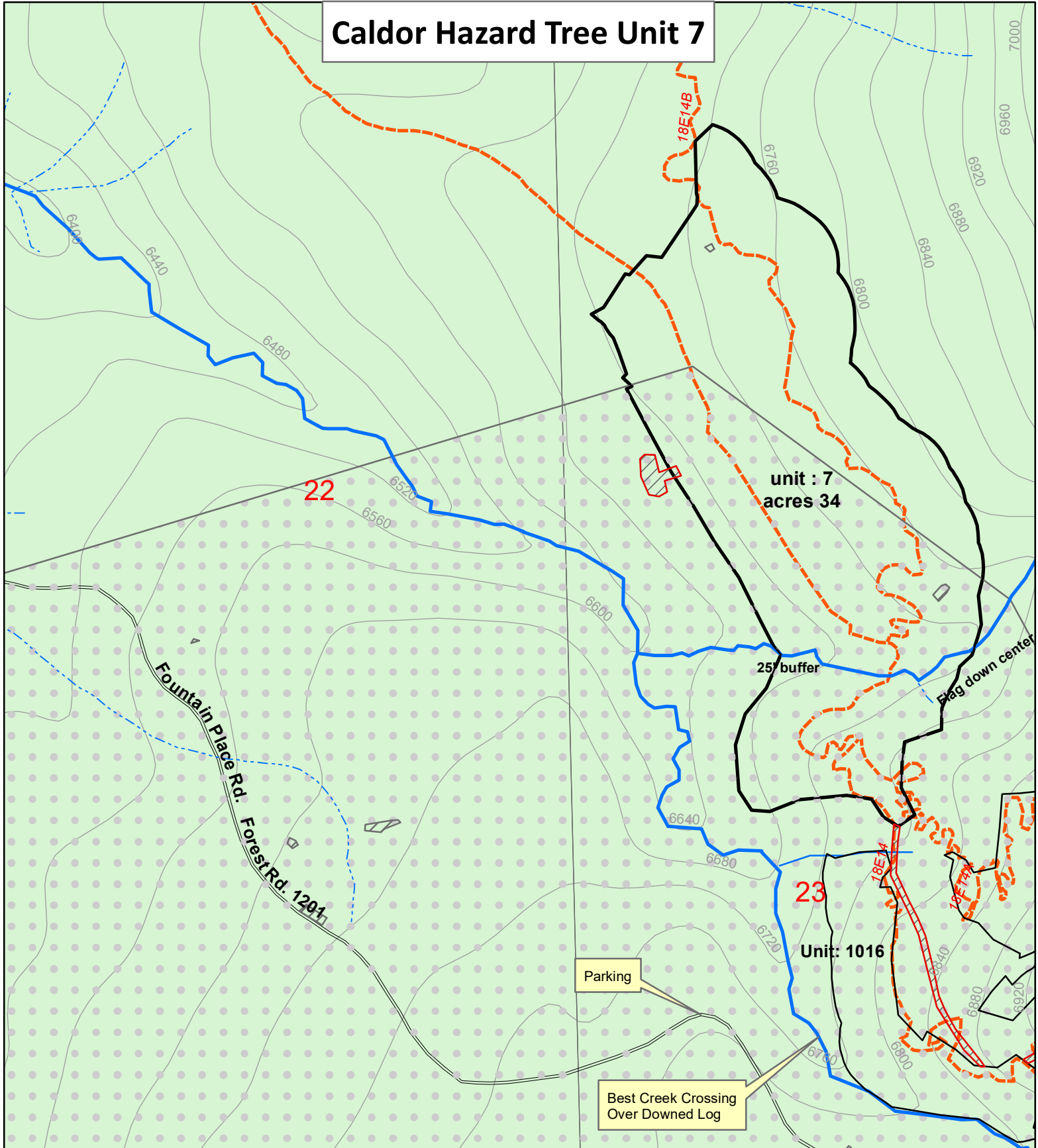
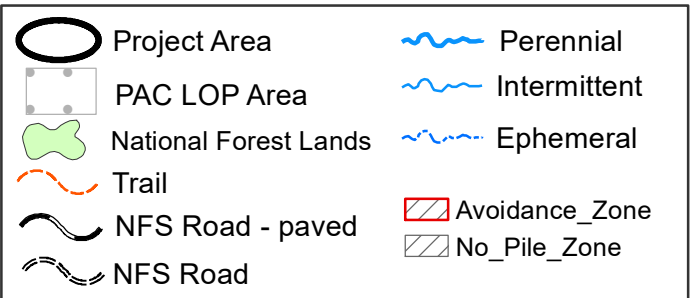


Exhibit A-9

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate

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Caldor Hazard Tree Unit 1016

Unit: 7

18E14B

6720

unit : 1016
acres 23

23

25' buffer

Parking

Fountain Place Rd. FR 1201

unit : 1016
acres 23

25' buffer

Best Creek Crossing
Over Downed Log

18E14A

unit :
1016
acres 23

18E09A

26

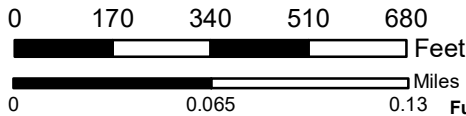


Exhibit A-10

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate



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	Project Area		PAC LOP Area
	National Forest Lands		Perennial
	Trail		Intermittent
	NFS Road - paved		Ephemeral
	NFS Road		No_Pile_Zone

Caldor Hazard Tree Unit 5

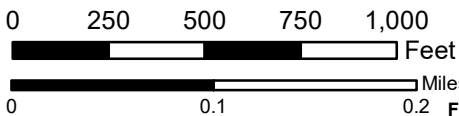
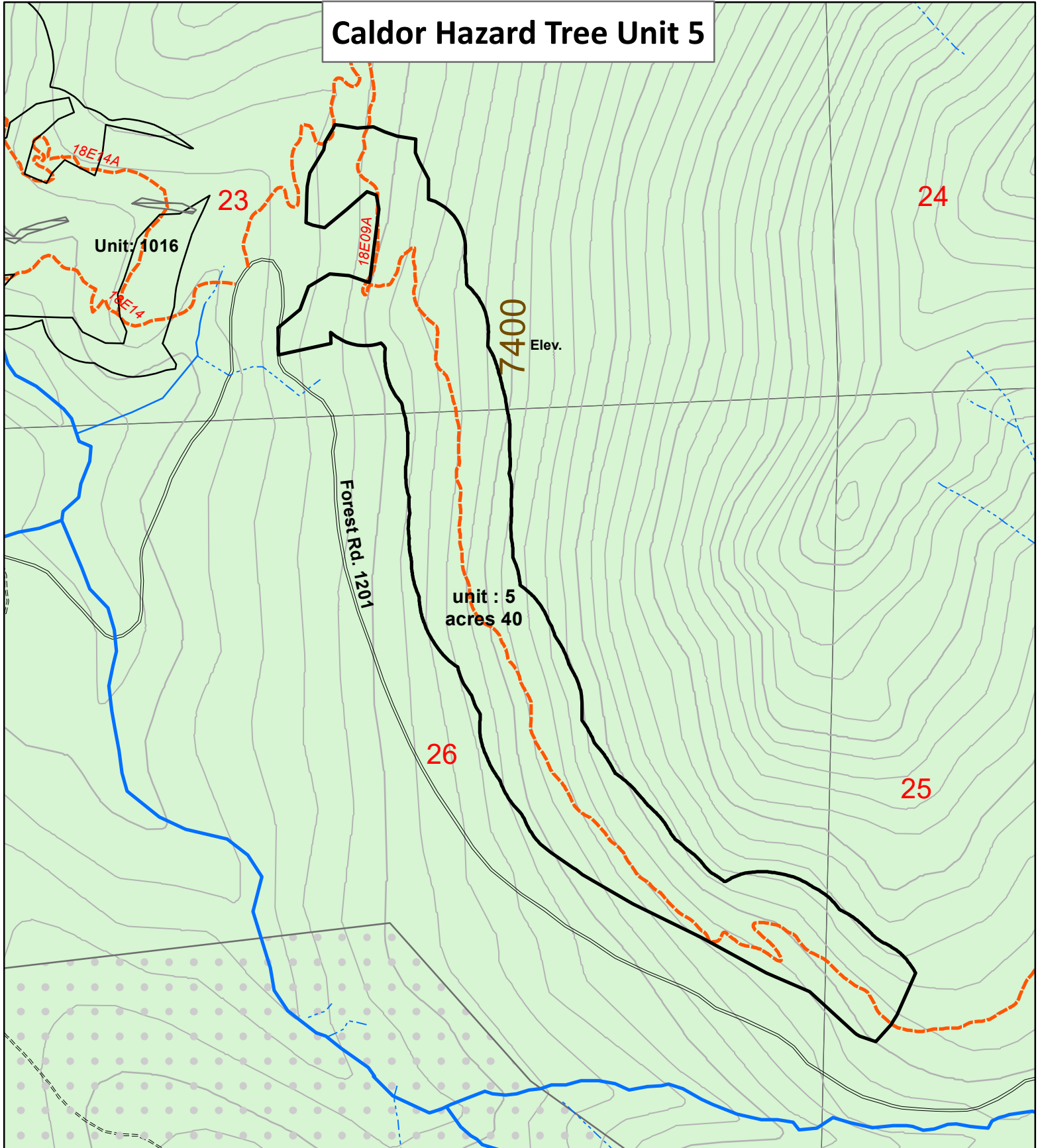
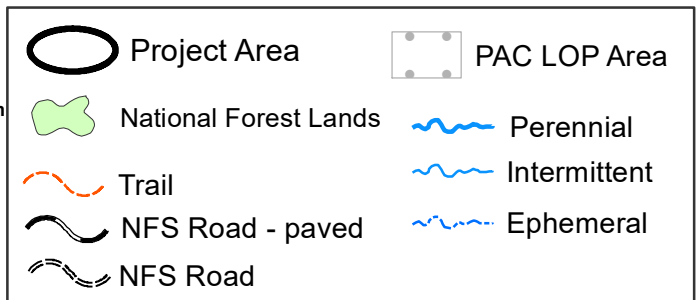


Exhibit A-11

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate

The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy; accurate only at certain scales; based on modeling or interpretation; incomplete while being created or revised; etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify or replace GIS products without notification.

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(530) 543.2600 (530) 541.4036 TTY



Caldor Hazard Tree Unit 4

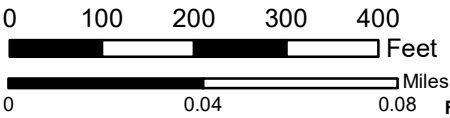
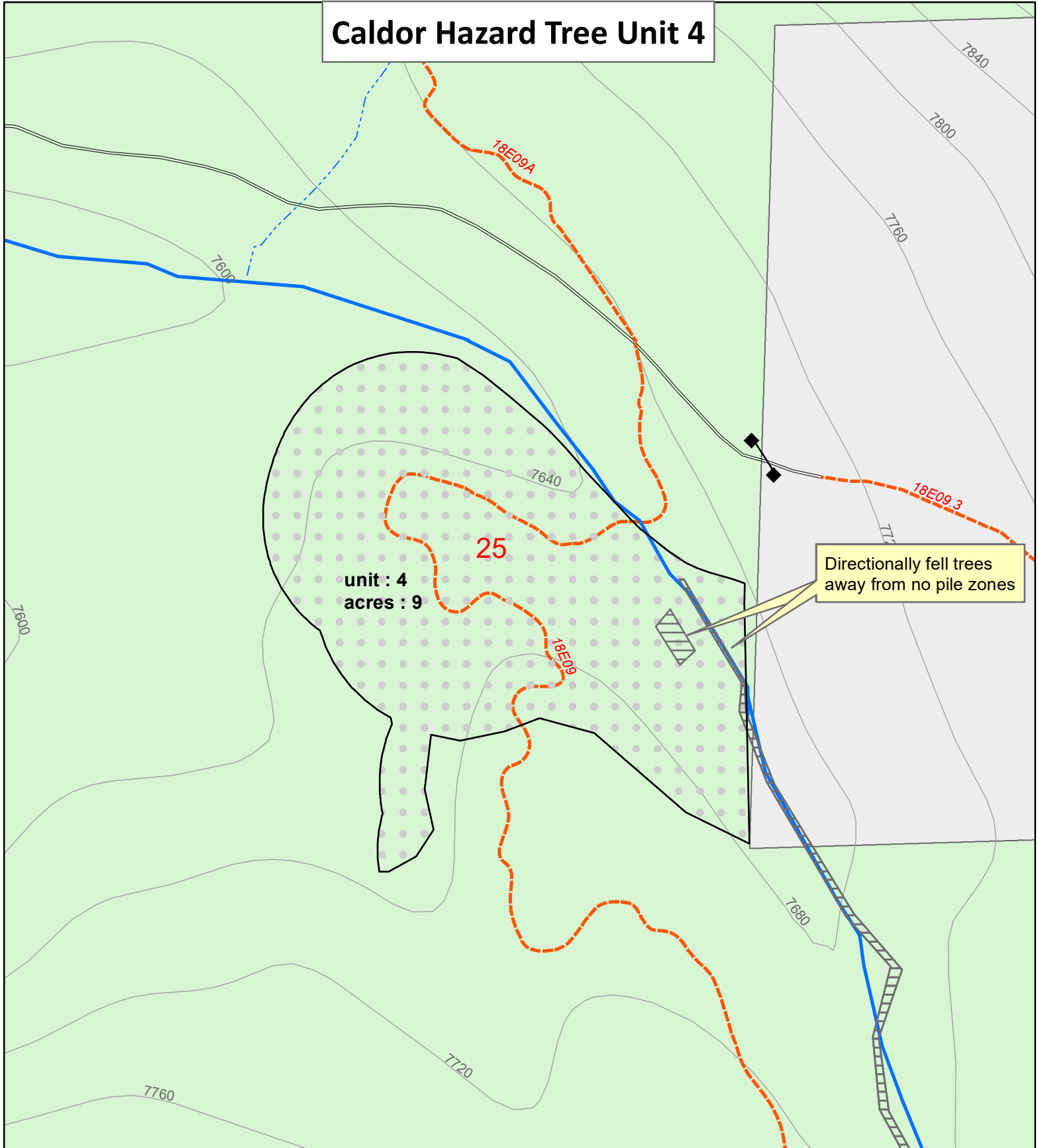


Exhibit A-12

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate



The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy; accurate only at certain scales; based on modeling or interpretation; incomplete while being created or revised; etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify or replace GIS products without notification.

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(530) 543.2600 (530) 541.4036 TTY

	Project Area		PAC LOP Area
	National Forest Lands		No_Pile_Zone
	Trail		Perennial
	NFS Road - paved		Intermittent
	NFS Road		Ephemeral
			Gates

Caldor Hazard Tree Unit 11

26

Forest Rd. 12N01D

7560
Elev.

Unit : 11
acres : 2

35



Exhibit A-13

Fuel Model: G. Weather Station: Lake Baron
Landlines are approximate

- Project Area
- National Forest Lands
- Trail
- NFS Road - paved
- NFS Road
- PAC LOP Area
- Perennial
- Intermittent
- Ephemeral



The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy; accurate only at certain scales; based on modeling or interpretation; incomplete while being created or revised; etc. Using GIS products for purposes other than those for which they were created, may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify or replace GIS products without notification.

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**APPENDIX E
SCHEDULE OF ITEMS
AND
SPECIFICATION**

Schedule of Items
(Complete table to include the project items)

SCHEDULE OF ITEMS:

Mandatory Work Items	Description	Unit of Measure	Quantity	Unit Price \$	Total \$
1	Tahoe Basin Caldor Hazard Tree-Hand Units: 1, 1001, 8, 22, 27, 34. <u>Thinning Treatment</u> - Hand thin tree removal – cutting of hazardous conifer of any size.	acres	107.4	N/A	N/A
2	Tahoe Basin Caldor Hazard Tree-Hand Units: 2, 4, 5, 7, 9, 11, 1016, 1021. <u>Thinning Treatment</u> -Hand thin tree removal – cutting of any hazardous conifer up to 20” diameter.	acres	304.2	N/A	N/A
3	Tahoe Basin Caldor Hazard Tree-Hand Units: 1001, 2, 4, 5, 7, 8, 9, 11, 1016, 1021, 22, 27, 34. <u>Fuels Treatment</u> - Buck, pile, and paper cover piles. Cut up to 10” bole wood material, slash, and concentrations of downed fuels. Lop and scatter where fuel concentration is low.	acres	368.1	N/A	N/A
4	Tahoe Basin Caldor Hazard Tree-Hand Unit: 1. <u>Fuels Treatment</u> – Chip and Broadcast: Chip bole wood material up to 10”, and all slash within 100’ of any area accessible by a chipper. Lop and scatter slash outside of 100’ of areas accessible by a chipper. Broadcast chip material on site, not to exceed 6” in depth.	acres	43.5	N/A	N/A
5	RPF Services – Quality Control, Contract Oversight and Project Implementation Administration	Project	1.0		

Optional Work Items	Description	Unit of Measure	Quantity	Unit Price \$	Total \$
6	Tahoe Basin Caldor Hazard Tree-Hand Unit: 1009. <u>Thinning Treatment</u> - Hand thin tree removal – cutting of any hazardous conifer up to 20” diameter.	acres	51.7	N/A	N/A
7	Tahoe Basin Caldor Hazard Tree-Hand – Unit: 1009. <u>Fuels Treatment</u> - Buck, pile, and paper cover piles; up to 10” bole wood material, slash, and concentrations of downed fuels. Lop & scatter where fuel concentration is low.	acres	51.7	N/A	N/A
8	Tahoe Basin Caldor Hazard Tree-Hand – Unit: 1. <u>Fuels Treatment</u> – Chipping and Haul: Chip bole wood material up to 10”, and all slash within 100’ of chipper. Lop and scatter slash outside of 100’ of areas accessible by a chipper. Haul chipped material off-site.	acres	43.5	N/A	N/A

Cutting Unit Boundaries: the boundaries of cutting units, or portions of cutting units, are identified as shown on the Cutting Unit Boundary Designation Table below and the Sale Area Map.

Unit Boundary Designation Table. The boundaries of units are designated as shown in the following table. The trees used for boundary designation are not to be cut.

Unit	Paint Color	Designation Method	Description
22, 27	Orange	Marked & Pink and Blue Flagging	Boundary trees are marked with 3 dots on 3 sides of the tree. 1 dot faces direction of adjacent boundary marked trees at approximately eye level in height. Another dot sits above the directional dots in the center of tree and faces into the cutting area.
2, 4, 5, 9, 1021	N/A	Virtual	See description below
1, 1001, 2, 7, 8, 1009, 1016, 11, 22, 27, 34,	N/A	Geo-fence	See description below

Virtual boundaries using planned polygons were created using Arc Map GIS technology. Compliance checks were conducted on the ground. No editing of the boundary was necessary.

All Geo-Fence boundaries were determined with use of TwoTrails application using Samsung Active 3 Galaxy Tablets. Juniper Geode 2019 external receiver chart was used for accuracy rates. Geo-fence was used only in the case Forest Service edited a planned polygon and cut a portion of the unit out for reasons of no treatment necessary.

A Geo-Fence is a location on the ground corresponding to the boundary location shown on a mobile mapping device using a Global Positioning System (GPS) Receiver using the digital vector file/shapefile named __Working_CaldorHazTree_HandThin_20230531.gdb_ and dated __5/31/2023_. The digital vector file/shapefile will be provided to the Contractor by the National Forest Foundation. A digital list of the coordinates can be provided upon request.

Included treatment unit acres are located within and not past the boundary as shown on the mobile mapping device using the digital vector file/shapefile listed above. Contractor is **not** required to obtain a GPS receiver(s) capable of determining the location of the true Geo-Fence within the contract tolerance. Contract tolerance is up to 15 feet or 2.33 meters. If cutting occurs outside the boundary as shown in mobile mapping device, it will not be compensated.

Forest Service inspection of service work is within allowable contract tolerance, shall use the digital vector file/shapefile named and dated above using a GPS Receiver with a minimum, tested accuracy in a light/medium canopy of 15 feet or 2.33 meters.

National Technology Development Program GPS Receiver accuracy reports by GPS manufacturer and model are available at:

<https://www.fs.usda.gov/database/gps/mtdcrept/accuracy/index.htm>

Service determination of boundary location will be final.

SPECIFICATIONS:

Tahoe Basin Caldor Hazard Tree

Mandatory Work Items:

Item 1: Tahoe Basin Caldor Hazard Tree – Hand Units 1, 1001, 8, 22, 27, 34. Thinning Treatment - Hand Thin; cutting of hazardous conifer of any size.

Hand Thin Tree Specifications: Tree removal will occur in areas up to 200 feet from a National Forest System Road, trail, or developed recreation site and private property, within the treatment unit boundary. Remove snags and dying trees that may fall and accumulate as fuels in the future. Maintain non-hazardous trees and snags for aesthetic purposes (do not create clear-cut within entire boundary area). Cut trees shall be felled away from unit boundaries, roads, power lines, established trails, driveways, fence lines, established land corners, no pile zones, avoidance zones, stream channels, and stream environment zones (SEZ). Any trees falling on such areas

shall be removed immediately and damage shall be repaired to pre-damage condition at the expense of the contractor.

Work activity includes cutting of hazard trees (dead and dying trees or hazardous green trees) of any size that are within 1 ½ times their height of roads, trails, powerlines, structures, or other targets. Cutting of dead trees that are not hazards is required where concentrations of dead trees present a future fuels hazard.

Cut the most hazardous trees first. After hazard trees are cut, if piling space remains, cut non-hazard dead trees to meet fuels objectives which shall remain at less than 10 tons per acre. Limit cutting of non-hazard dead trees when necessary to allow for adequate space to pile cut trees. Leave at least 1 non-hazardous dead tree every 20-25 feet when available. Leaving small clumps of non-hazardous dead trees is acceptable. Do not cut live (green) trees unless they are identified as a hazard tree. Live (green) trees must be designated for removal by the Contract Administrator before they are cut.

Stump heights for all cut trees shall not exceed six inches above ground level or four inches above natural obstacles.

Individual Unit Acres:

Unit	Acres	Remarks
1	43.5	Chipping Unit - Cabins present
1001	21.2	Pile Unit - Cabins present
8	16.5	Pile Unit - Cabins present
22	13.6	Pile Unit - Orange boundary paint present; adjacent to private property
27	10.3	Pile Unit - SEZ unit: see pile specifications in Item 3. Orange boundary paint; adjacent to private property
34	2.3	Pile Unit - Cabins present
Item 1 Total Acres: 107.4		

Item 2: Tahoe Basin Caldor Hazard Tree – Hand Units 2, 4, 5, 7, 9, 11, 1016, 1021. Thinning Treatment - Hand Thin; cutting of hazardous conifer up to 20” dbh.

Hand Thin Tree Specifications: Tree removal will occur in areas up to 200 feet from a National Forest System Road, trail, or developed recreation site and private property, within the treatment unit boundary. Remove snags and dying trees that may fall and accumulate as fuels in the future. Maintain non-hazardous trees and snags for aesthetic purposes (do not create clear-cut within entire boundary area). Cut trees shall be felled away from unit boundaries, roads, power lines, established trails, driveways, fence lines, established land corners, no pile zones, avoidance zones, and stream environment zones (SEZ). Any trees falling on such areas shall be removed immediately and damage shall be repaired to pre-damage condition at the expense of the Contractor.

Work activity includes cutting of hazard trees (dead and dying trees or hazardous green trees) less than 20” dbh that are within 1 ½ times their height of roads and trails. Cutting of trees that are not hazards is required where concentrations of dead trees present a future fuels hazard.

Cut the most hazardous trees first. After hazard trees are cut, if piling space remains, cut non-hazard dead trees to meet fuels objectives which shall remain at less than 10 tons per acre. Limit cutting of non-hazard dead trees when necessary to allow for adequate space to pile cut trees. Leave at least 1 non-hazardous dead tree every 20-25 feet when available. Leaving small clumps of non-hazardous dead trees is acceptable. Do not cut non-hazardous dead trees >20” dbh. Do not cut live (green) trees unless they are identified as a hazard tree. Live (green) trees must be designated for removal by the Contract Administrator before they are cut.

Stump heights for all cut trees shall not exceed six inches above ground level or four inches above natural obstacles.

Individual Unit Acres:

Unit	Acres	Remarks
2	147.6	Pile Unit - 2 access points. See map.
4	8.9	Pile Unit - From Forest Road 1201, take trail 18E09 to access pedestrian bridge crossing over perennial creek.
5	39.6	Pile Unit - Access from Forest Road 1201.
7	34	Pile Unit - Perennial creek crossing required for access to unit.
9	26.4	Pile Unit - Access from neighborhood road and through unit 1021. See map.
11	2	Pile Unit - Forest Road access: 4x4 vehicle suggested.
1016	22.8	Pile Unit - Perennial creek crossing required for access to unit.
1021	22.9	Pile Unit - Orange leave tree bands painted on trees from previous mechanical work. Do not cut orange-painted trees unless they pose a hazard.
Item 2 Total Acres: 304.2		

Item 3: Tahoe Basin Caldor Hazard Tree-Hand – Units: 1001, 2, 4, 5, 7, 8, 9, 11, 1016, 1021, 22, 27, 34. Fuels Treatment - Buck, pile, and paper cover piles.

All cut trees shall be limbed and top bucked to 10” bole diameter. All slash and bucked bole wood must be piled for burning, unless post-thinning fuel loads are light (less than 10 tons/acre). In areas of light post-thinning fuels, slash can be lopped and scattered not to exceed 18” in height and bucking of downed trees is not required, unless necessary to put bole wood in contact with the ground.

Piles shall be constructed by hand to facilitate full consumption when burned. All piles shall be built and compacted by laying limbs, stems, and other slash, when it exists, so there are minimal

air pockets. Pile height and width should be proportionate; for example: a 4-foot-tall pile should be 4-feet wide. Minimum pile size shall be four (4) feet in diameter. There is no maximum pile size. All piles shall be covered with a piece of wax pile paper. Paper shall cover at least 60% of the pile surface area and be secured with cut material. Piles shall be located a minimum of 10 feet from residual trees and improvements such as fences, poles, signs, or any other value at risk.

Buck felled trees so bole wood is in contact with the ground surface. Bole wood of felled trees must not be suspended in the air, on other downed logs, or leaning on uncut trees. Logs shall be positioned so they will not roll.

Lop and Scatter is not allowed in no pile zones identified on maps.

No piling in flagged no pile zones and stream zones. No piling within 25 feet of any road or trail, unless agreed upon by USFS/NFF. No piling within 100 feet from structures, except by agreement by USFS/NFF. All flagged no pile zones will be identified as "No Pile Zone" on project maps or will have a stream label. See Tables 1, 3, 5, and 6 in Appendix G for flagging types.

In Unit 27 - Stream Environment Zone (SEZ) vegetation exists throughout entire unit, piles shall be spaced a minimum of 10 feet apart from another pile. See Table 6 in Appendix G.

Item 4: Tahoe Basin Caldor Hazard Tree- Hand – Unit: 1. Fuels Treatment – Chip and Broadcast.

Small trees, limbs, tops, shall be chipped or lopped and scattered by the Contractor. Chip all slash, small trees and bole wood <10" diameter within 100 feet of any area accessible by a chipper. Broadcast chip material on site, not to exceed an average of 6" in depth. Where bole wood is too large to chip, leave on ground and do not stack, pile, or jackpot bole material >10" diameter. Lop and scatter slash in areas further than 100 feet of areas accessible by a chipper. Lop and scattered slash cannot exceed 18" depth. Chipping broadcast may not be broadcast into any avoidance/no pile zones.

Item 5. RPF Services – Quality Control, Contract Oversight and Project Implementation Administration.

The NFF will supply a Registered Professional Forester (RPF) by the State of California to supply the quality control for the implementation and administration of the project. The RPF duties will include but are not limited to; conducting quality control for service work being implemented by NFF Contractors, act as the NFF Project Representative during operations, work with Forest Service Sale Administration staff to take corrective actions as needed to ensure projects are completed to an acceptable standard and that resource protection measures are implemented as designed. RFP will utilize the standards set forth below in the Acceptable Quality Level of Contractor Work to determine work acceptance.

The US Forest Service Sale Administration reserves the right to suspend operations for imminent natural resources damage or safety.

RPF - Specific Duties:

Quality Control of project: RPF functions as inspection and quality control on a daily basis for all service items and product removal items within the agreement.

RPF will review the contract and related pre-sale data such as environment assessment, appraisal, etc. Determines that all prerequisites to contract work are taken care of such as, but not limited to, delegations of authority, cutting coordination, improvement locations, operating schedules, and environmental protection measures. Reviews plans and schedules with contractors to assure common understanding of conditions and responsibilities.

Throughout the life of the project, the RPF is responsible for continuing field inspection and control of contractor's operations such as falling, piling and appropriate use of paper coverings. Determines whether cutting specifications are implemented to standard, slash disposal requirements are met, and resource measures are followed and adequate. Documents all findings for the project record. Takes appropriate action to correct deficiencies, and assesses penalties when needed. Ensures that stream courses and other land features are protected.

Advises Contractor's field representative of adequacy or inadequacy of operations and achieves compliance with contract terms, including safety and employment requirements.

Ensures that all contractual obligations are met before making final inspection in coordination with Forest Service. See Acceptable Quality of Contractor Work clause below.

Acceptable Quality Level of Contractor Work outlined in the above Items.

- A. The NFF inspection records shall be provided to the Forest Service based on the schedule proposed by the NFF and agreed to by the Forest Service for quality assurance assessment.
- B. The NFF shall provide written inspection data by unit in a format that meets the agreement requirements and a sketch map with plot locations. The NFF may choose to use the Government Inspection Sheet (R4-2400-4 (2/99) which would be provided by the Forest Service. The Forest Service may observe or re-inspect the NFF's plots at any time.
- C. The NFF inspection records shall be provided to the Forest Service based on the schedule proposed by the NFF and agreed to by the Forest Service for quality assurance assessment.
- D. Pile, papering of piles, lop and scatter, and chip broadcast treatment quality shall reflect compliance with requirements.
- E. The NFF's quality control inspections for thinning shall meet Forest Service quality assurance to be considered acceptable.
- F. When the NFF's inspection results are below the expected quality based on the NFF's quality control inspection and verified by the Forest Service monitoring, and excess trees or slash contribute to the deficiency, acceptance will not be made until the deficiency has been corrected

unless the Forest Service determines the deficiency to be minor or an isolated situation that will not result in any material differences in meeting the objectives for the unit. The NFF may improve quality by re-working an area if they desire. However, the NFF shall not modify the quality of an area for the purpose of improving an area identified or anticipated as an inspection plot.

G. Specific Inspection Procedures:

Sampling

Plots. At least one percent of each treatment area will be sampled by a random series of plots distributed over the entire area. Plot size will be: 1/50 acre.

Work will be accepted for payment on the basis of a final inspection and passage of specifications described in Appendix E – Work Item Specifications. NFF RPF will inspect for compliance of specifications. Plots will be located throughout the sub-items so as to obtain a representative sample of the area. Sub-items will be inspected separately and not combined for the purpose of determining percent of satisfactory work.

A series of 1/50-acre plots (16.7 foot plot radius) distributed over the entire unit sufficient to yield at least a one-half of one percent sample (0.5%) will be taken. Plot centers will be marked.

Quality of Work: On each plot NFF's RPF will record the plot number, whether the plot is satisfactory or un-satisfactory and the reason if un-satisfactory. Each plot will be examined to record findings on the items in "1" through "5" listed below. To be considered satisfactory these items must meet the following criteria:

1. Number of leave trees that should have been left per specifications.
2. Total number of trees that were left.
3. Number of missing leave trees (#1 minus #2).
4. Number of excess trees (#2 minus #1).
5. Plot result - pass or fail and reason.

Upon inspection of all plots per sub-item, the quality of thinning spacing shall be calculated as follows:

$$1.00 - \frac{(\# \text{ of missing leave trees}) + (\# \text{ of excess trees})}{(\# \text{ of leave trees that should have been left})} \times 100 = \% \text{ Quality}$$

Pass/Fail Criteria:

No green trees (unless designated by RPF or Forest Service) shall be cut; if one or more are cut within a plot, the plot will fail.

All contractor generated slash has been bucked and piled according to Appendix E - Specifications. Unpiled contract generated slash will fail the plot. No piled thinning slash will be allowed within piling exclusions. Any thinning slash that is piled within an exclusion area will fail the plot.

Inspection calculations.

Quality of Work will be calculated over the entire sub-item. An 85% or greater must be achieved utilizing the formula to be considered acceptable.

Pass/Fail Criteria will be calculated at each plot and assessed as a pass or fail. At the end of the inspection, these will be calculated into a percentage representing the number of passing plots as compared to the number of plots taken. The plots must show 80% or greater to be considered acceptable.

The final calculation to determine the overall acceptance will be computed by taking the average of the percentage of Quality of Work and the percentage in Pass/Fail.

Acceptance

Work on this contract will be deemed acceptable when work meets the 85% criteria. If overall percentage is greater than or equal to 80%, payment will be made according to the Payments criteria with no rework.

Payments

Payment will be made in full if inspection results are 85 percent or higher. If inspection results are below 85 percent, a deduction will be made equal to 2 percent for every 1 percent below 85. For example, if inspection results were 83 percent, the bid price would be reduced by 4 percent. No payment will be made if results are less than 80 percent.

Optional Work Items:

Item 6: Tahoe Basin Caldor Hazard Tree- Hand – Unit: 1009. Thinning Treatment- Hand thin tree removal – cutting of hazardous conifer up to 20” dbh.

Hand Thin Tree Specifications: Tree removal will occur in areas up to 200 feet from a National Forest System Road, trail, or developed recreation site and property, within the Caldor Fire perimeter. Remove snags and dying trees that may fall and accumulate as fuels in the future. Maintain non-hazardous trees and snags for aesthetic purposes (do not create clear-cut within entire boundary area). Cut trees shall be felled away from unit boundaries, roads, power lines, established trails, driveways, fence lines, established land corners, archeology sites and stream

environment zones. Any trees falling on such areas shall be removed immediately and damage shall be repaired to pre-damage condition at the expense of the Contractor.

Work activity includes cutting of hazard trees (dead and dying trees or hazardous green trees) less than 20" dbh that are within 1 ½ times their height of roads and trails. Cutting of trees that are not hazards is required where concentrations of dead trees present a future fuels hazard.

Cut the most hazardous trees first. After hazard trees are cut, if piling space remains, cut non-hazard dead trees to meet fuels objectives which shall remain at less than 10 tons per acre. Limit cutting of non-hazard dead trees when necessary to allow for adequate space to pile cut trees. Leave at least 1 non-hazardous dead tree every 20-25 feet when available. Leaving small clumps of non-hazardous dead trees is acceptable. Do not cut non-hazardous dead trees >20" dbh. Do not cut live (green) trees unless they are identified as a hazard tree. Live (green) trees must be designated for removal by the Contract Administrator before they are cut.

Stump heights for all cut trees shall not exceed six inches above ground level or four inches above natural obstacles.

Item 7: Tahoe Basin Caldor Hazard Tree-Hand – Unit: 1009. Fuels Treatment- Buck, pile, and paper cover piles.

All cut trees shall be limbed and top bucked to 10" bole diameter. All slash and bucked bole wood must be piled for burning unless post-thinning fuel loads are light (less than 10 tons p/acre). In areas of light post-thinning fuels, slash can be lopped and scattered not to exceed 18" in height and bucking of downed trees is not required, unless necessary to put bole wood in contact with the ground.

Piles shall be constructed by hand to facilitate full consumption when burned. All piles shall be built and compacted by laying limbs, stems, and other slash, when it exists, so there are minimal air pockets. Pile height and width should be proportionate; for example: a 4-foot-tall pile should be 4-feet wide. Minimum pile size shall be four (4) feet in diameter. There is no maximum pile size. All piles shall be covered with a piece of wax pile paper. Paper shall cover at least 60% of the pile surface area and be secured with cut material. Piles shall be located a minimum of 10 feet from residual trees and improvements such as fences, poles, signs, or any other value at risk.

Buck felled trees so bole wood is in contact with the ground surface. Bole wood of felled trees must not be suspended in the air, on other downed logs, or leaning in uncut trees. Logs shall be positioned so they will not roll.

Lop and scatter is not allowed in no pile zones identified on maps.

No piling in flagged no pile zones and stream zones. No piling within 25 feet of any road or trail, unless agreed upon by USFS/NFF. No piling within 100 feet from structures, except by agreement by USFS/NFF. All flagged no pile zones will be identified as "No Pile Zone" on project maps or will have a stream label. See Tables 1, 3, 5, and 6 in Appendix G for flagging types.

Item 8: Tahoe Basin Caldor Hazard Tree- Hand – Unit: 1. Fuels Treatment – Chipping and Haul:

Treatment criteria for Optional Work Item 8 is the same criteria described in Mandatory Work Item 4. This Optional Work Item requires all chipped material to be removed off site, rather than broadcasting chipped material on-site. If this Optional Work Item is awarded, broadcasting of chipped material will not be allowed, unless agreed upon in writing by the Forest Service.

APPENDIX G GUIDELINES FOR OPERATIONS

The following Guidelines for Operations apply to activities under this Stewardship Agreement, when relevant to the project. These guidelines are intended to clarify the expectations of the parties related to these specific areas of operations.

1. **Contract Area Map (Map).** This is the boundary of the Contract Area as shown in Appendix C and designated on the ground by the Forest Service to meet the anticipated needs of the parties. The following are identified on the Map:
 - a) Identified patented claims.
 - b) Boundaries of all stewardship treatment units.
 - c) Areas where leave trees are marked to be left uncut.
 - d) Specified roads.
 - e) Roads and trails to be kept open.
 - f) Improvements to be protected.
 - g) Locations of known wildlife or plant habitat to be protected.
 - h) Locations of areas known to be infested with specific invasive species of concern.
 - i) Streamcourses to be protected.
 - j) Locations of wetlands requiring protection.
2. **Use of Roads by the Contractor.** Contractor is authorized to use existing National Forest system roads and specified roads. The Parties will determine that such use will not cause damage to the roads or National Forest resources.
3. **Protection of Residual Trees.** Contractor's operations shall not unnecessarily damage young growth or other trees to be reserved.
4. **Safety.** Contractor's operations shall facilitate the Forest Service's safe and practical inspection of **Error! Reference source not found.**'s operations and conduct of other official duties on the Contract Area. **Error! Reference source not found.** has/have all responsibility for compliance with safety requirements for **Error! Reference source not found.**'s employees.

When operations are in progress adjacent or on Forest Service controlled roads and trails open to public travel, **Error! Reference source not found.** shall furnish, install, and maintain all temporary traffic controls that provide the user with adequate warning of hazardous or potentially hazardous conditions associated with operations occurring in the area. The parties shall agree to a specific traffic control plan prior to commencement of work. Devices shall be appropriate to current conditions and shall be covered or removed when not needed.

During periods of general recreation activity within Contract Area or vicinity, the Forest Service may restrict cutting operations to days other than Saturdays, Sundays, and holidays.

OPERATIONS SIGNING STANDARDS

All signs must be manufactured & installed as specified in the FHWA "**Manual on Uniform Traffic Control Devices**" (MUTCD) & FS publication "**Standards for Forest Service Signs & Posters**"(EM 7100-15).

SIGN STANDARDS

SHAPE & COLOR: Generally, signs for maintenance operations are either diamond-shaped or rectangular. All signs are *reflective orange background with black legend and border* unless shown otherwise. Hand painted, homemade signs are not legal. Fluorescent paint is not reflectorized.

SUBSTRATE: Sign substrate material may be High Density Overlay (HDO) Plywood, Aluminum, Fiberglass Reinforced Plastic, Corrugated Plastic or Roll-up Fabrics.

SIGN SIZE: Sign size is a factor of speed and MUTCD & FS standards. Where conditions of speed, volume, or special hazard require greater visibility or emphasis, larger signs should be used. Minimum sizes for the most common signs can be found in Figure 4. Refer to the EM-7100-15 for additional sign sizes.

LEGEND: All lettering shall be Series "C" alphabet, conforming to Standard Alphabets for Highway Signs. Letter size is also a function of speed - use letter size and word messages as specified in MUTCD and EM-7100-15.

SIGN PLACEMENT

Signs are to be installed in locations as agreed to in the traffic control plan. All signs are to be removed, covered, or folded when operations are not in progress or the sign message is not applicable. Signs should generally be located on the right-hand side of the roadway. When special emphasis is needed, signs may be placed on both the left and right sides of the road. Sign message shall be clearly visible to road users, mounted on posts or portable sign stands.

LATERAL CLEARANCE

From the edge of the road - 2 foot minimum, where slope limits to less than 6 feet. 6-12 foot preferred.

HEIGHT

Minimum of 7 feet, measured from the bottom of the sign to the near edge of the travelway. The height to the bottom of a supplemental sign mounted below the primary sign will be 6 feet.

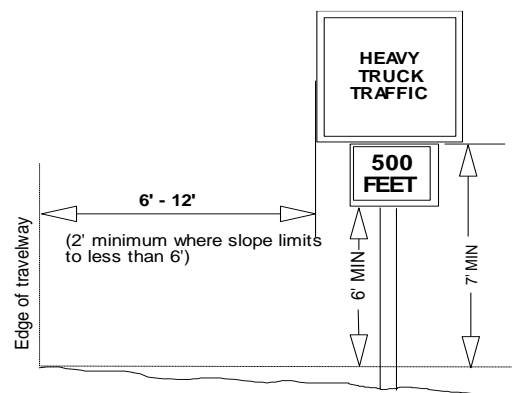


Figure 1: Sign Placement Dimensions

PLACEMENT DISTANCE

Signs must be located 100-500 feet prior to the activity, (both ends if a through road) and maintained at that distance. This distance is based on speed. Refer to Figure 2, Table II-1, MUTCD, a portion of which is reproduced here, to determine correct placement distance.

Posted or 85 percentile speed MPH	Deceleration to listed advisory speed MPH				
	10	20	30	40	50
20	NA				
25	100				
30	150	100			
35	200	175			
40	275	250	175		
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

Figure 2: A Portion of MUTCD TABLE II-I

SIGN SUPPORTS

POSTS: Signs are to be mounted on separate posts. Supplemental signs such as Speed Advisory plates are to be mounted on the same post as the primary sign. *Do not mount signs on trees or other signs.* Posts may be wood, metal, carsonite or similar material. Where sign supports cannot be sufficiently offset from the road edge, supports will meet breakaway standards. Single wood posts with less than 24 square inches do not require breakaway design.

TEMPORARY/PORTABLE SUPPORTS: Portable supports may be used for short-term, short-duration, and mobile conditions. MUTCD defines this time period as one work shift, 12 hours or less. All portable supports must meet MUTCD standards, including breakaway. These must be a minimum of 1 foot above the road surface or more if visibility requires it

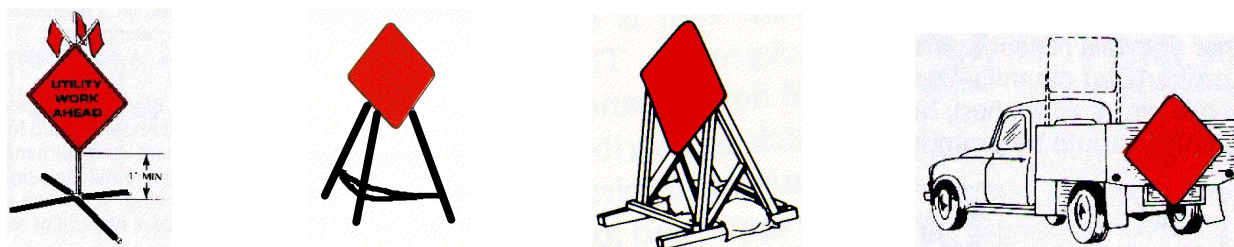


Figure 3: Examples of Temporary/Portable Supports

- Accident and Injury Notification. Error! Reference source not found.** shall notify Forest Service of any lost time personal injury accident or any accident or vandalism resulting in personal property damage over \$400 in value that occurs as a result of or is associated with **Error! Reference source not found.**'s Operations.

Error! Reference source not found. shall notify Forest Service within 8 hours of any personal injury accident. For vandalism and personal property accidents, **Error! Reference source not found.** shall notify Forest Service at the same time notification is given to the state and local law enforcement authorities.

Error! Reference source not found. shall take all reasonable measures after an accident or vandalism event to preserve the scene of the incident and provide information to facilitate a Forest Service investigation.

6. **Sanitation and Servicing. Error! Reference source not found.** shall take all reasonable precautions to prevent pollution of air, soil, and water by **Error! Reference source not found.**'s operations. Precautions shall include if facilities for employees are established on the Contract Area, they shall be operated in a sanitary manner. The parties shall agree to the cleanup and restoration of a polluted site. **Error! Reference source not found.** shall maintain all equipment operating on Contract Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. **Error! Reference source not found.** shall not service tractors, trucks, or other equipment on National Forest lands where servicing is likely to result in pollution to soil or water. **Error! Reference source not found.** shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources. **Error! Reference source not found.** shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of free-flowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.
7. **Prevention of Oil Spills.** If **Error! Reference source not found.** maintain(s) storage facilities for oil or oil products on the Contract Area, **Error! Reference source not found.** shall take appropriate preventive measures to ensure that any spill of such oil or oil products does not enter any stream or other waters of the United States or any of the individual States. If the total oil or oil products storage exceeds 1,320 gallons in containers of 55 gallons or greater, **Error! Reference source not found.** shall prepare a Spill Prevention Control and Countermeasures Plan. Such plan shall meet applicable EPA requirements (40 CFR 112), including certification by a registered professional engineer. **Error! Reference source not found.** shall notify the Forest Service and appropriate agencies of all reportable (40 CFR 110) spills of oil or oil products on or in the vicinity of the Contract Area that are caused by **Error! Reference source not found.**'s employees, agents, contractors or their employees or agents, directly or indirectly, as a result of **Error! Reference source not found.**'s operations. **Error! Reference source not found.** will take whatever initial action may be safely accomplished to contain all spills.
8. **Hazardous Substances. Error! Reference source not found.** shall notify the National Response Center and Forest Service principal contact of all releases of reportable quantities of hazardous substances on or in the vicinity of the Contract Area that are caused by **Error! Reference source not found.**'s employees, agents, contractors or their employees or agents, directly or indirectly, as a result of **Error! Reference source not found.**'s operations, in accordance with 40 CFR 302.

PROTECTION MEASURES NEEDED FOR PLANTS, ANIMALS, AND RESOURCES:

Locations of known areas needing special measures for the protection of plants, animals, cultural resources, and/or cave resources are shown on Contract Area Map and/or identified on the ground. Special protection measures needed to protect such known areas are identified in this section.

In addition to any special protection measures noted, CONTRACTOR has a general duty to protect all known and identified resources referenced in this Subsection from damage or removal during Contractor's operations. Discovery of additional areas, resources, or members of species

needing special protection shall be promptly reported to the other party, and operations shall be delayed or interrupted at that location, if Contracting Officer determines there is risk of damage to such areas, resources, or species from continued operations.

CONTRACTOR shall immediately notify Forest Service if disturbance occurs to any area identified as needing special protection measures and shall immediately halt operations in the vicinity of the disturbance until Forest Service authorizes Contractor to proceed. Contractor shall bear costs of resource evaluation and restoration to identified sites. Such payment shall not relieve Contractor from civil or criminal remedies otherwise provided by law.

Forest Service has exercised due diligence and followed established protocols in identifying known areas needing special protection measures. Nevertheless, nothing in this provision shall be interpreted as creating any warranty that all locations and special measures for the protection of plants, animals, other resources have been described herein, elsewhere in the contract, or designated on the ground.

Table 1:

PROTECTION MEASURE	
Label on Contract Area Map	RESTRICTIONS
Avoidance Zone	No cutting or other project activities permitted. Avoidance zones are flagged in blue and florescent orange <u>with</u> "noxious weed" written on the flagging.
No Pile Zone	No piling on linear features, and in areas of sensitive resources that are marked on the ground with either blue/black striped flag, and/or blue/fluorescent orange flags. Piles must be built outside flagged area. Directionally fell trees for removal outside of flagged area. Hand-carry all contractor generated slash and pile outside of flagged areas.
Wildlife Protected Activity Center "PAC"	All American Goshawk PAC'S displayed on map. See Table G.4 for units with active PAC Limited Operating Period. Not all PAC'S on maps are active. Notify USFS/NFF prior to implementation. Avoid cutting wildlife trees with plaques mounted on trees. No cutting between February 15 th -September 15 th in active PAC's only.
Wildlife Protected Activity Center "PAC"	Spotted Owl PAC displayed on map. See Table G.4 for active PAC Limited Operating Period. Notify USFS/NFF prior to implementation. Avoid cutting trees with wildlife plaques mounted on trees. No cutting between March 1 st - July 9 th .
Stream channels and Stream Environment Zones "SEZ"	No piling permitted in stream/sensitive vegetation zones. Streams and sensitive vegetation zones are identified on Contract Maps. These areas are marked on the ground with red/black striped flagging. Directionally fell trees required to be cut in these zones to avoid stream disturbance and reduce amount of material required to be hand carried to piling locations.

PROTECTION OF IMPROVEMENTS

So far as practicable, CONTRACTOR shall protect all physical improvements including, but not limited to, roads, trails, ditches, fences, waterlines, and other improvements, existing in the contract area, determined to have continuing need or use, and designated on the Contract Area Map and/or as listed in Table G.2 below.

CONTRACTOR shall keep all roads and trails needed for fire protection or other purposes and designated on the Contract Area Map reasonably free of equipment and products, slash, and debris resulting from CONTRACTOR operations. CONTRACTOR shall make timely restoration of any such improvements damaged by CONTRACTOR operations and, when directed (because of such operations) shall move such improvements if and as specified by the Forest Service.

All protected improvements will be protected from damage by CONTRACTOR. If any protected improvements are disturbed, CONTRACTOR shall immediately contact the USFS/NFF and will be liable for the cost of repairs. CONTRACTOR shall notify Forest Service at least 5 days prior to any operations in the vicinity of improvements identified on Contract Area Map or in Table G.2, below.

Table 2:

PROTECTED IMPROVEMENTS		
IMPROVEMENT	DESCRIPTION	LOCATION
Roads	All paved roads: Units 1, 22, 34 (including associated features)	As identified on Contract Area Map
Trails	All USFS Trails in and adjacent to All Units (including associated features).	As identified on Contract Area Map
Powerlines	All Powerlines and utility lines in and adjacent to Units 1, 1001, 8, 34	Not mapped
Water Pipes/Lines	Water Pipes/Lines in and adjacent to Units 1, 1001, 8, 34 near Recreation Residence Tracts.	Not identified on Contract Area Map (consult with USFS/NFF)
Gates	All USFS and Eldorado County gates (including associated features)	As identified on Contract Area Map
Cabins, Out Buildings, other structures	In and adjacent to Units 1, 1001, 8, 34	As identified on Contract Area Map

- Felling, Bucking, Piling, and Lop & Scatter:** See Appendix E Items 1-3 for specifications. Trees shall not be cut in avoidance areas. For avoidance and no pile zone locations, see Table G.3 below. Felling shall be done to minimize damage to residual green trees within the project area.

Piles shall not be built in no pile zones. Unless agreed otherwise, trees shall be felled away from such areas. Buck trees to ensure boles are in contact with the ground to provide stability and prevent jackpotting of downed fuels.

Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in Appendix E, except that occasional stumps of greater heights are acceptable when **Error! Reference source not found.** determine(s) they are necessary for safe and efficient conduct of cutting operations. Unless otherwise agreed, **Error! Reference source not found.** shall re-cut high stumps so they will not exceed heights specified in Appendix E and shall dispose of severed portions in the same manner as other logging debris.

To the extent feasible, trees shall be felled so that their tops do not extend outside treatment units. Any material felled outside of treatment units shall be bucked and moved back into treatment unit boundaries, unless it is unsafe to do so and agreement to leave in place is approved by the Forest Service and NFF.

10. **Chipping:** Broadcast chip material on site in designated units only, not to exceed an average of 6” in depth. No chipping permitted in SEZ’s.

Table 3:

PROTECTED CUTTING AND PILE MEASURES		
UNIT	DESCRIPTION	LOCATION
2, 7, 1021	Avoidance areas present: Avoid all cutting and piling activities within Avoidance areas.	As identified on Contract Area Map
1, 1001, 4, 7, 8, 9, 1016	No pile zones present: Cutting ok. Hand carry activity fuels outside of no pile zone in dense areas. See Appendix E Item 3.	As identified on Contract Area Map
2, 27, 1021	SEZ vegetation No Pile Zones present. See Appendix E Item 3.	As identified on Contract Area Map
All units	Directionally fell trees away from streams.	As identified on Contract Area Map

11. **Trails:** Provide a minimum of 7 days of notice of intent to start operations in each unit to allow for the NFF and the Forest Service to provide advanced notice to the public to ensure that the public is aware of project activities. Signs and trail guards will be required during felling operations near roads and trails. Minimize dragging slash across managed trails. Buck and hand carry material over or across trail infrastructure. Repair and rehabilitate any incidental damage caused to trails. Repairs and/or rehabilitation shall be inspected and approved by the Forest Service. Remove slash and do not pile within the immediate foreground, 25 feet, unless agreed upon by USFS/NFF, of recreation improvements and facilities, classified roads, and trails. Retain large diameter woody material adjacent to trails to define trail corridor and limited off-trail travel or creation of alternate trail lines. No slash or chip material shall be placed on trails.

Wildlife and Recreation Habitat Limiting Operating periods:

12. **Federally listed, or species of concern,** for american goshawk, bald eagle, California spotted owl, pallid bat, Townsend’s big eared bat, Pacific marten, finged myotis, or western

bumble bee, may require limited operating periods (LOP's). See Table G.4 for active LOP's.

13. Recreation Limited Operating Period:

Mountain Bike events held on trails in project area: Meyers Mountain Bike Festival - weekend in mid-June; Rose to Toads – first weekend of September; Corral Night Ride mid-October. Coordinate with USFS to get exact dates for halting operations prior to events. All events are on weekends only. Consult with USFS for specific dates each calendar year as dates sometimes shift. See Table G.4.

Table 4:

ACTIVE LOP'S		
Wildlife Limited Operating Period Units	DESCRIPTION	LOCATION
4, 11	Wildlife PAC no cutting period between February 15 th – September 15 th	As identified on Contract Area Map
9, 1009	Wildlife PAC no cutting period between February 15 th - July 9 th	As identified on Contract Area Map
Recreation Limited Operating Period Units:	DESCRIPTION	LOCATION
4, 5, 7, 1016, 1021	Weekend in mid-June. First weekend of September. Weekend in mid-October.	Associated trails identified on Contract Area Map

14. Protection of Streamcourses and Sensitive Vegetation/Soils: Streamcourses that are subject to provisions of this Section are shown on Contract Area Map. No pile zones include the area within 25 feet for perennial or intermittent streams, a linear flag line in center of ephemeral streams, and flag and avoid around standing water as well as sensitive vegetation zones. All no pile zones are flagged in red/black candy stripe within treatment units and identified as either “Veg Pile Zone” or labeled as a streamcourse buffer type on project maps. Do not alter riparian vegetation within 5 feet of stream bank edge. Unless otherwise agreed, the following measures shall be observed to protect streamcourses:

- (a) Contractor’s Operations shall be conducted to prevent debris from entering streamcourse. In the event Contractor causes debris to enter a streamcourse in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, Contractor shall remove such debris as soon as practicable, but not to exceed 48 hours, and in an agreed manner that will cause the least disturbance to streamcourse.
- (b) Flow in streamcourse may be temporarily diverted only if such diversion is necessary for Contractor’s planned construction and Forest Service gives written authorization. Such flow shall be restored to the natural course as soon as practicable and, in any event, prior to a major storm runoff period or runoff season.

Table 5:

PROTECTION OF STREAMCOURSES	
Label on Contract Area Map	Restrictions
Ephemeral	No piles shall be placed inside ephemeral stream channels. Ephemeral channels are marked on the ground with red/black stripe flagging. Flagging is located in the center line of ephemeral channels.
Intermittent and Perennial	No piles shall be placed within 25 feet of an intermittent or perennial streamchannel. Either side of channel is flagged on the ground with red/black stripe flagging.

Table 6:

SEZ NO PILE ZONES		
UNIT	DESCRIPTION	LOCATION
2, 1021	Cutting ok. No piling. Hand carry activity fuels outside of no pile zone with red/black stripe flagging. See Appendix E Items 1-3.	Associated streamcourses identified on Contract Area Map
27	Stream Environment Zone Unit Pile spacing must be 10x10 feet. See Appendix E Item 3 for piling specifications.	Unit 27

15 Fire Precautions and Control.

- a) **Plans.** Prior to initiating **Error! Reference source not found.**'s operations during Fire Precautionary Period, **Error! Reference source not found.** shall file with Forest Service a Fire Prevention and Control Plan providing for the prevention and control of fires on the Contract Area and other areas of **Error! Reference source not found.**'s Operations. Such plan shall include a detailed list of personnel and equipment at **Error! Reference source not found.** disposal for implementing the plan. This requirement may be met by preparing a single plan for more than one contract.
- b) **Fire Precautions.** Specific fire precautionary measures listed in this Appendix shall be applicable during **Error! Reference source not found.**'s Operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire-fighting at all times during **Error! Reference source not found.**'s operations in Fire Precautionary Period.
- c) **Substitute Precautions.** The Forest Service may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection or some of the required measures and equipment are unnecessary.

- d) **Emergency Precautions.** The Forest Service may require the necessary shutting down of equipment on portions of **Error! Reference source not found.**'s Operations, as specified by the emergency fire precautions schedule. Under such conditions, after **Error! Reference source not found.** cease(s) active operations, **Error! Reference source not found.** shall release for hire by Forest Service, if needed, **Error! Reference source not found.**'s shutdown equipment for fire standby on the Contract Area or other areas of **Error! Reference source not found.**'s Operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by **Error! Reference source not found.** for other fire-fighting or protection from fire. Equipment shall be paid for at fire-fighting equipment rates common in the area or at prior agreed rates and, if **Error! Reference source not found.** request(s), shall be operated only by personnel approved by the **Error! Reference source not found.**. Personnel so hired shall be subject to direction and control by Forest Service and shall be paid by Forest Service at fire-fighting rates common in the area or at prior agreed rates.
- e) **Fire Precautionary Period and Fire Precautions.** Specific fire precautionary measures are set forth below. Upon request of Forest Service, **Error! Reference source not found.** shall permit and provide an individual to assist in periodic testing and inspection of required fire equipment. **Error! Reference source not found.** shall promptly remedy deficiencies found through such inspecting and testing.

1. **The following requirements shall apply during the period May-October and during other such periods as specified by Forest Service.**

2. *(Appendix_H_Fire_Plan_Tahoe_Basin_Caldor_Hazard_Tree-Hand)*

16 **Fire Control.** **Error! Reference source not found.** shall, both independently and in cooperation with Forest Service, take all reasonable and practicable action to prevent and suppress fires resulting from **Error! Reference source not found.**'s Operations and to suppress any forest fire on Contract Area. **Error! Reference source not found.**'s independent initial fire suppression action on such fires shall be immediate and shall include the use of all necessary personnel and equipment at **Error! Reference source not found.**'s disposal on Contract Area,

- a) **The Partner's Reinforcement Obligations.** Whenever an Operations Fire or Negligent Fire, whether on or off Stewardship Project Area or any other forest fire on Contract Area, has not been suppressed by initial action and appreciable reinforcement strength is required, Forest Service may require further actions by **Error! Reference source not found.** until such fire is controlled and mopped up to a point of safety. Such actions may include any or all of the following as necessary to fight such fire:
- b) **Suspend Operations.** To suspend any or all of **Error! Reference source not found.**'s Operations.
- c) **Personnel.** To release for employment by Forest Service any or all of **Error! Reference source not found.**'s personnel engaged in **Error! Reference source not found.**'s Operations within the Stewardship Project Area. Any organized crew so hired shall include **Error! Reference source not found.**'s supervisor, if any. Personnel so

employed shall be paid at Forest Service standard emergency fire-fighting rates.

APPENDIX H - FIRE PLAN FOR CONSTRUCTION AND STEWARDSHIP CONTRACTS
2/14/2023

1. **SCOPE:**

The provisions set forth below outline the responsibility for fire prevention and suppression activities and establish a suppression plan for fires within the contract area. The contract area is delineated by map in the contract. The provisions set forth below also specify conditions under which contract activities will be curtailed or shut down.

2. **RESPONSIBILITIES:**

A. Contractor

(1) Shall abide by the requirements of this Fire Plan.

(2) Shall take all steps necessary to prevent his/her employees, subcontractors and their employees from setting fires not required in completion of the contract, shall be responsible for preventing the escape of fires set directly or indirectly as a result of contract operations, and shall extinguish all such fires which may escape.

(3) Shall permit and assist in periodic testing and inspection of required fire equipment. Contractor shall certify compliance with specific fire precautionary measures in the fire plan, before beginning operations during Fire Precautionary Period and shall update such certification when operations change.

(4) Shall designate in the Fire Plan and furnish on Contract Area, during operating hours, a qualified fire supervisor authorized to act on behalf of Contractor in fire prevention and suppression matters.

B. Forest Service

The Forest Service may conduct one or more inspections for compliance with the Fire Plan. The number, timing, and scope of such inspections will be at the discretion of agency employees responsible for contract administration. Such inspections do not relieve the Contractor of responsibility for correcting violations of the fire plan or for fire safety in general, as outlined in paragraph 2.A above.

3. **DEFINITIONS:**

The following definitions shall apply:

Active Landing: A location the contractor may be skidding logs into, or performing other operations such as delimiting, log manufacturing, and chipping logs. Except for EV and E days, loading logs or stockpiling chips only, on a cleared landing, does not constitute an Active Landing.

Hot Saw: A harvesting system that employs a high-speed (>1100 rpm) rotating felling head, i.e., full rotation lateral tilt head.

Mechanical Operations: The process of felling, skidding, chipping, shredding, masticating, piling, log processing and/or yarding which requires the use of motorized power which includes, chainsaws, chippers, motorized carriers, masticators, stroke delimiters, skidders, dozers etc.

4. **TOOLS AND EQUIPMENT:**

The Contractor shall comply with the following requirements during the fire precautionary period, as defined by unit administering contracts:

The Fire Precautionary Period is set by the State of California which is April 1 through December 1 of any year.

- This contract requires, does not require, a Fire Box and associated Fire Tools according to CPRC Section 4428.

A. Fire Tools and Equipment: Contractor shall meet minimum requirements of Section 4428 of the California Public Resources Code (C.P.R.C.). Fire tools kept at each operating landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in Contractor's Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. All required fire tools shall be maintained in suitable and serviceable condition for firefighting purposes.

Trucks, tractors, skidders, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.

Where cable yarding is used, Contractor shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump within 25 feet of each tail and corner block.

B. Fire Extinguishers: Contractor shall equip each internal combustion yarder, fuel truck, and loader with a fire extinguisher for oil and grease fires (4-A: 60-B: C).

Skidders and tractors shall be equipped with a minimum 5-BC fire extinguisher.

All Fire Extinguishers shall be mounted, readily accessible, properly maintained and fully charged.

Contractor shall equip each mechanized harvesting machine with hydraulic systems, powered by an internal combustion engine (chipper, feller/buncher, harvester, forwarder, hot saws, stroke delimeter, etc.), except tractors and skidders, with at least two 4-A: 60-B: C fire extinguishers or equivalent.

C. Spark Arresters and Mufflers: Contractor shall equip each operating tractor and any other internal combustion engine with a spark arrester, except for motor vehicles equipped with a maintained muffler as defined in C.P.R.C. Section 4442 or tractors with exhaust-operated turbochargers. Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the National Wildlife Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be maintained in good operating condition. Every motor vehicle subject to registration shall at all times be equipped with an adequate exhaust system meeting the requirements of the California Vehicle Code.

D. Power Saws: Each power saw shall be equipped with a spark arrester approved according to C.P.R.C. Section 4442 or 4443 and shall be maintained in effective working order. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating power saw. In addition, a size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can but not more than 300 feet from each power saw when used off cleared landing areas.

- This contract requires, does not require, Section 4E of the Fire Plan.

E. Tank Truck or Trailer: Contractor shall provide a **water tank truck or trailer** on or in proximity to Contract Area during Contractor's Operations hereunder during Fire Precautionary Period. When Project Activity Level B or higher is in effect, a tank truck or trailer shall be on or immediately adjacent to each active landing, unless otherwise excepted when Hot Saws or Masticators are being used. See Section 6 for specific contract requirements.

The tank shall contain at least 300 gallons of water available for fire suppression. Ample power and hitch shall be readily available for promptly and safely moving tank over roads serving Contract Area. Tank truck or trailer shall be equipped with the following:

- (1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on Contract Area using a 5/16 inch orifice in the Forester One Inch In-Line Gauge test kit. Pump shall meet or exceed the pressure value in the following table for nearest temperature and elevation:

Temp	Sea Level	1000 Feet		2000 Feet		3000 Feet		4000 Feet		5000 Feet		6000 Feet		7000 Feet		8000 Feet		9000 Feet		10000 Feet		
		P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	
55	179	23	174	23	169	23	165	22	161	22	157	22	153	22	150	21	146	21	142	21	139	21
70	175	23	171	23	166	22	162	22	158	22	154	22	150	21	147	21	143	21	139	21	136	20
85	171	23	168	23	163	22	159	22	155	22	151	21	147	21	144	21	140	21	136	20	133	20
100	168	23	164	23	159	22	155	22	152	22	148	21	144	21	141	21	137	20	133	20	131	20
	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G
	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P
	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M

The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.

- (2) 300 feet of 3/4-inch inside diameter rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than approximately 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings, or other failures.
- (3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range
Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

- (4) Sufficient fuel to run the pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

When Contractor is using Hot Saws or Masticators, an additional 250 feet of light weight hose, approved by the Forest Service, shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurtenances in (2) and (3) above.

This equipment and accessories shall be deliverable to a fire in the area of operations and is subject to the requirements for each specific activity level identified in Section 6.

F. Compressed Air Foam System: A Compressed Air Foam System (CAFS) is a fire suppression system where compressed air is added to water and a foaming agent. By agreement, Contractor may substitute a CAFS or functional equivalent in lieu of the tank truck, trailer or fire extinguishers, provided it meets or exceeds the following specifications and requirements:

1. Variable foam expansion ratio – 10:1 to 20:1.
2. Units shall be kept fully charged with air; water and foam concentrate as recommended by the manufacturer and have the appropriate tools to service the system.
3. The unit shall contain enough energy to empty tank and clear hose prior to exhausting propellant.
4. The unit shall be capable of being completely recharged within 10 minutes.
5. When used on cable yarding landings, the unit shall be outfitted for immediate attachment to carriage and transported without damage to the unit.

Fire extinguishers required for Hot Saws, Masticators and similar equipment identified in Section 4 B. above may be substituted with a 3 gallon CAFS.

Tank truck, trailer or equivalent may be substituted with a 30 Gallon CAFS with at least 550 feet of one inch hose and an adjustable nozzle with enough water, air and foam concentrate for at least one recharge.

This equipment and accessories shall also be deliverable to a fire in the area of operations and subject to the requirements for each specific activity level identified in Section 6.

5. **GENERAL**

- A. **State Law:** In addition to the requirements in this Fire Plan, the Contractor shall comply with all applicable laws of the State of California. In particular, see California Public Resource Codes.
- B. **Permits Required:** The Contractor must secure a special written permit from the District Ranger or designated representative before burning, welding or cutting metal or starting any warming fires. If contract requires Blasting and Storing of Explosives and Detonators, an Explosives Permit may be required pursuant to the California Health and Safety Code, Section 12101.
- C. **Blasting:** Contractor shall use electric caps only unless otherwise agreed in writing. When blasting is necessary in slash areas, a Fire Patrolperson equipped with a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump shall remain in the immediate area for an hour after blasting has been completed.
- D. **Smoking:** Smoking shall not be permitted during fire season, except in a barren area or in an area cleared to mineral soil at least three feet in diameter. In areas closed to smoking, the CO may approve special areas to be used for smoking. The Contractor shall sign designated smoking areas. Contractor shall post signs regarding smoking and fire rules in conspicuous places for all employees to see. Contractor's supervisory personnel shall require compliance with these rules. Under no circumstances

shall smoking be permitted during fire season while employees are operating light or heavy equipment, or walking or working in grass and woodlands.

- E. **Storage and Parking Areas.** Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least 10 feet unless otherwise specified by local administrative unit. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least 10 feet from such engine. The COR shall approve such sites in writing.
- F. **Reporting Fires:** As soon as feasible but no later than 15 minutes after initial discovery, Contractor shall notify Forest Service of any fires on Contract Area or along roads used by Contractor. Contractor's employees shall report all fires as soon as possible to any of the following Forest Service facilities and/or personnel listed below, **but not necessarily in the order shown:**

Type	Name	Office Address	Office telephone
Dispatch Center	Camino Dispatch	2840 Mt. Danaher Rd, Camino	530-644-0200
911	Emergency		911
COR	Ariana Vargas	35 College Drive, SLT	530-721-9241
Acting TMO	Robert Guebard	35 College Drive, SLT	530-659-3950

When reporting a fire, provide the following information:

- Your Name
 - Call back telephone number
 - Project Name
 - Location: Legal description (Township, Range, Section); and Descriptive location (Reference point)
 - Fire Information: Including Acres, Rate of Spread and Wind Conditions.
 - **This contract requires, does not require, Section 5G of the Fire Plan.**
- G. **Communications:** Contractor shall furnish a serviceable telephone, radio-telephone or radio system connecting each operating side with Contractor's headquarters. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service may accept a reasonable alternative location. The communication system shall provide prompt and reliable communications between Contractor's headquarters (or agreed to alternative) and Forest Service via commercial or Forest Service telephone.
- **This contract requires, does not require, Section 5H of the Fire Plan.**
- H. **Fire Patrolperson:** Contractor shall furnish a qualified fire patrolperson each operating day when Project Activity Level C or higher is in effect. When on duty, sole responsibility of patrolperson shall be to patrol the operation for prevention and detection of fires, take suppression action where necessary and notify the Forest Service as required. This Fire patrol is required on foot, unless otherwise agreed. By agreement, one patrolperson may provide patrol on this and adjacent projects. No patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.

The Contractor shall, prior to commencing work, furnish the following information relating to key personnel:

<u>Title</u>	<u>Name</u>	<u>Telephone Number</u>
<u>Fire Supervisor</u>		
<u>Fire Patrolperson</u>		

- I. **Clearing of Fuels:** Contractor shall clear away, and keep clear, fuels and logging debris as follows:

Welding equipment and stationary log loaders, yards and other equipment listed in California State Law:	10 feet slope radius
Tail or corner haulback blocks:	All running blocks shall be located in the center of an area cleared to mineral soil at least 15 feet in diameter.
Lines near, between or above blocks:	Sufficient clearing to prevent line from rubbing

	on snags, down logs and other dead woody material.
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6. **EMERGENCY PRECAUTIONS**

Contractor's Operations shall conform to the limitations or requirements in the Project Activity Level (PAL) table below. Project Activity Levels applicable to this project shall be the predicted activity levels for the Fire Danger Rating Area(s), or fire weather station(s) stated in the Contract Area Map Legend on Integrated Resource Service Contracts (IRSC's), and other contracts where applicable.

Fire Danger Rating Area/Fire Weather Station for Project Meyers, CA

The Forest Service, in its sole discretion, may change the predicted activity level if the current fire suppression situation, weather and vegetation conditions warrant an adjustment. If practicable, Forest Service will determine the following day's activity level by 6:00 PM. Contractor shall obtain the predicted Project Activity Level from the appropriate Ranger District Office before starting work each day.

Phone Number or Website to obtain Predicted Activity Levels: 530-295-5699,
www.fs.usda.gov/lbmu

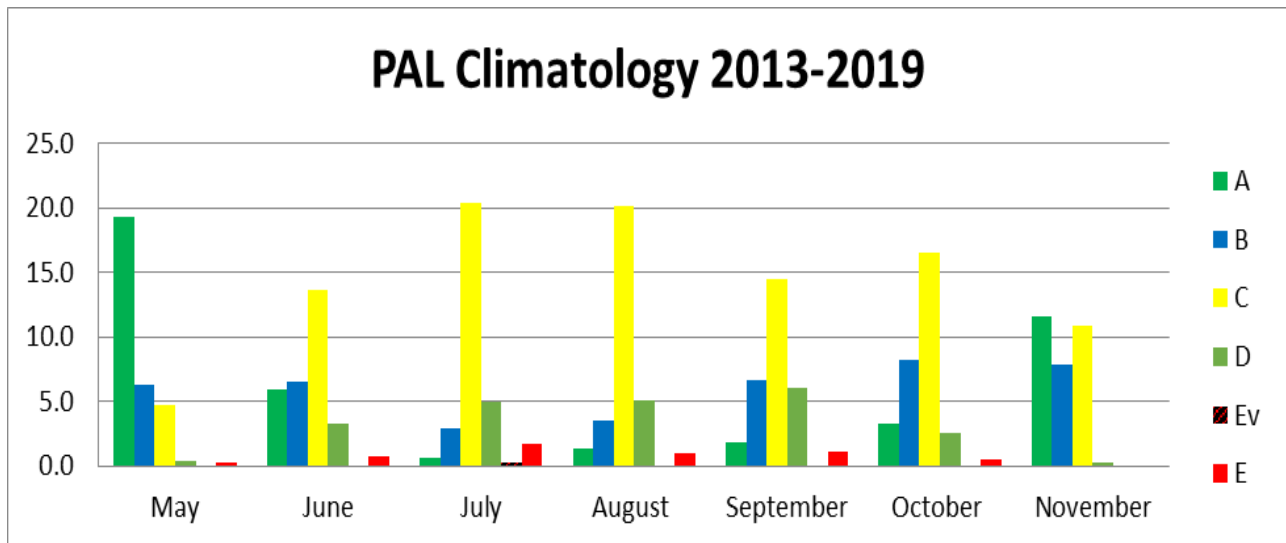
Forest Service may change the Project Activity Level Table to other values upon revision of the National Fire Danger Rating System. When Contractor is notified, the revised Project Activity Levels will supersede the levels in the Project Activity Level Table below.

PROJECT ACTIVITY LEVEL

Level	<i>Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.</i>
A	Minimum requirements noted above in Sections 4 and 5.
B	1. Tank truck, trailer, or approved CAFS substitute shall be on or adjacent to the Active Landing.
C	1. When Hot Saws or Masticators are operating, a tank truck, trailer, or approved CAFS substitute shall be within ¼ mile of these operations. Effective communications shall exist between the operator and the Active Landing. 2. Immediately after Mechanical Operations cease, Fire patrol is required for two hours.
D	1. Immediately after Hot Saw or Masticator operations cease, Fire patrol is required for three hours. 2. No Dead Tree felling after 1:00 PM, except recently dead. 3. No burning, blasting, welding or cutting of metal after 1:00 PM, except by special permit.
Ev	<p>1. The following activities may operate all day:</p> <ul style="list-style-type: none"> a) Loading and hauling logs decked at approved landings. b) Loading and hauling chips stockpiled at approved landings. c) Servicing equipment at approved sites. d) Dust abatement, road maintenance (Chainsaw use prohibited), culvert installation within cleared area, chip sealing, paving, earth moving or rock aggregate stock pile loading and installation (does not include pit or quarry development). e) Chainsaw and log processing operations associated with loading logs or other forest products at approved landings. <p>2. Hot Saws or Masticators may operate until 1:00 PM; provided that:</p> <ul style="list-style-type: none"> a) A tractor with a blade or other equipment capable of constructing fireline is on or adjacent to the active landing or within ¼ mile of the operating equipment. This piece of equipment shall have effective communication with the Hot Saw or Masticator. b) Any additional restrictions specified by the Forest. <p>3. All other conventional Mechanical Operations are permitted until 1:00 PM.</p> <p>4. Some operations may be permitted after 1:00 PM, on a case-by-case basis, under the terms of a PAL Ev Variance Agreement. Activities for which a Variance may be issued are:</p> <ul style="list-style-type: none"> • Rubber Tire Skidding • Chipping on Landings • Helicopter Yarding • Fire Salvage <p>When approved by a Line Officer, a Variance Agreement can be implemented when the criteria specified in the agreement are met and mitigation measures are in place. This approval is good for ten (10) days unless cancelled sooner or extended by the Contracting Officer for an additional ten (10) days. Variance approval can be withdrawn at the sole discretion of the Forest Service. Variance approval is contingent on the 7-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of Contractor's equipment for prevention and suppression readiness, type of operation and social and community considerations etc. (See attached Project Activity Level Variance Agreement).</p>
E	<p>The following activities may operate all day:</p> <ol style="list-style-type: none"> 1. Loading and hauling logs decked at approved landings. 2. Loading and hauling chips stockpiled at approved landings. 3. Servicing Equipment at approved sites. 4. Dust abatement, road maintenance (chainsaw use prohibited) or loading stock piles and rock aggregate installation (does not include pit or quarry development). 5. Chainsaw operation associated with loading at approved landings. <p>All other activities are prohibited.</p>

This Project utilizes “The Project Activity Level” (PAL), an industrial operation’s fire precaution system. The following Climatology Chart indicates the Historic Activity Levels for the Project Fire Danger Rating Area or Fire Weather Station utilized on this Project. This is only a historical average of the Activity Levels for the identified Fire Danger Rating Area or Weather Station.

Project Activity Level Climatology							
Station/SIG/Unit:	MEYERS/BARON				Years Analyzed	2013 - 2019	
	Expected Days per Month at each PAL Value						Days Analyzed
Month	A	B	C	D	Ev	E	
May	19.3	6.2	4.7	0.4	0.0	0.3	209
June	5.9	6.5	13.7	3.2	0.0	0.8	204
July	0.6	2.9	20.4	5.0	0.3	1.8	211
August	1.3	3.5	20.1	5.1	0.0	1.0	214
September	1.8	6.7	14.5	6.1	0.0	1.1	203
October	3.3	8.2	16.5	2.5	0.0	0.4	207
November	11.6	7.9	10.9	0.3	0.0	0.0	200
Total Per Season	43.7	41.9	100.8	22.7	0.3	5.4	



Project Activity Level (PAL) Ev Variance Application/Agreement

Project Name: _____Tahoe Basin Caldor Hazard Tree – Hand_____

Contract Number: _____

Purchaser/Contractor Name: _____

Request #_____, for period: _____

Units/Subdivisions Affected: _____

Location of operation:

Slope Aspect Elevation	
Fuels on site of work location (immediate work area)	
Fuels in surrounding area	
10 day Forecast	
Short range predictions (Red Flags)	
Fuel Moistures (1hr, 10hr, 100hr)	
Response time of suppression resources	
Potential for ignition	
RAWS location	

Current Fire Situation:

Draw down information	
National Preparedness Level	

Contractual considerations:

Operating Season	
Frequency of recent contract fires in area	
Type of operation	

Purchaser/Contractors past performance	
Other site specific mitigation or precaution (i.e. Purchaser/Contractors proposals)	
Social & Community Considerations:	
Proximity of high value resources	
Sensitivity of location	
Mitigation measures:	

Fire Management Consulted _____
Name

Line Officer Concurred _____
Name

Contracting Officer or Delegated Representative _____
Name

Date: _____

Purchaser/Contractor Rep. _____ Date _____

**Instructions for Determining Variances for Continued Operations within Specific Units
and With a Specific Time Frame**

1. Variances are in addition to the stated requirements for the Predicted Activity Level.
2. The Line Officer in consultation with the Forest Fire Management Officer or his/her representative will evaluate the items in the above check list as they relate to the existing and planned activities, add any mitigation measures as needed and the Line Officer will advise the Contracting Officer to execute the variance. The name of the Fire Management Representative and the Line Officer involved must be filled in but a signature is not required.
3. The delegated authority can be at the FSR/COR level since they would usually have more knowledge of the ground and access to the District Ranger.
4. The project area should be evaluated for differences in potential fire activity if a fire starts. This could necessitate the use of multiple forms. Examples of this would be units on a north slope near riparian areas vs. those on south slopes that would be dryer and expected to have more severe fire conditions or there is a significant difference from the predicted PAL and the actual conditions.
5. The Purchaser/Contractor or their representative should be consulted when determining types of variances that are being considered. They might be able to come up with other options.
6. Examples of written variances are:
 - A. Local assessment determines that existing precautions are adequate
 - B. Use of specialized detection equipment such as an infrared detection device for locating heat sources is required
 - C. Provide additional fire suppression resources (i.e. crews, equipment etc.) to achieve shorter response time.