

Request for Proposals
New Bullards Bar Fuels Reduction Project
Tahoe National Forest, California

Background and Statement of Work: The National Forest Foundation (NFF), Yuba Water Agency (YWA), and the USDA Forest Service (USFS) are working together to protect and restore the Tahoe National Forest through targeted efforts in the North Yuba River watershed. In 2024, the NFF, YWA, and the Yuba River Ranger District (YRRD) of the Tahoe National Forest are collaborating on the 777-acre New Bullards Bar Fuels Reduction Project. The New Bullards Bar Fuels Reduction Project is designed to reduce fuel loads around New Bullards Bar Reservoir and the surrounding rural communities to improve forest health and resilience around critical water infrastructure. The NFF is seeking an implementation contractor who will collaborate with the oversight forester, YRRD and NFF to implement up to 777 acres of fuel reduction operations across the project area.

Information Requested

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

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

Specific requirements are detailed below.

I. PROJECT OVERVIEW AND REQUIREMENTS

General Specifications

1. Description of Work – This Request for Proposals (RFP) is for restoration services related to general fuels reduction including the following:
 1. Mastication treatments
 2. Hand cut, hand pile treatments

The full Scope of Work can be found in APPENDIX E – Schedule of Items and Specifications. The work item is broken out into its own section with further detail pertaining to desired conditions on each treatment unit.

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.

2. Project Location – The project is located in the Yuba River Ranger District of the Tahoe National Forest, in Yuba County, California. The project is located between New Bullards Bar Reservoir to the west, and Highway 49 to the east.
3. Work Schedule – Work will commence as early as October 2024 and run year-round (weather permitting) until December 2026. Anticipate delays each summer and fall for Project Activity Level (PAL) days where limited work is allowed due to fire restrictions. Snow cover and wet ground may prevent hand work during periods in the winter months (November – May). All work must be completed by end-December 2026.

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 – General Project Maps
 - APPENDIX E – Schedule of Items and Specifications
 - 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

The 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 Proposal, 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.

II. REQUIRED COMPONENTS

Technical Proposal

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.

	Item	Unit	Quantity	Unit Cost	Extended Cost
1	Mastication	acres	417		
2	Hand thin/hand pile	acres	360		
				Total Bid	

III. SUBMISSION, EVALUATION, AND CONTACTS

Contractor Selection Process

This is a request for proposals only and bids furnished are not offers from the National Forest Foundation. This request does not commit the National Forest Foundation to pay any costs incurred in the preparation or submission of the proposal or to contract for supplies or services.

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 days of the bid submission due date and will prepare a separate contract document.

Evaluation Factors and Relative Importance

The following criteria will be used in the evaluation of submitted proposals, ordered from highest weighting (level 3) to lowest weighting (level 1).

Level 3 Criteria

- Bid price
- Timeline for when contractor can begin and finish the project
- Past performance, references, and USFS feedback
- Contractor capability and equipment

Level 2 Criteria

- Technical proposal / proposed approach to project, including planned production rates
- Overall strategic benefits to meeting NFF goals and grant needs, requirements, and timelines

Level 1 Criteria

- Benefits to the local community
- Relationship to local community

Point of Contact

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

Maggie Cummings
 National Forest Foundation, Program Coordinator Lake Tahoe – Yuba Area
 mcummings@nationalforests.org

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

Bid Submission

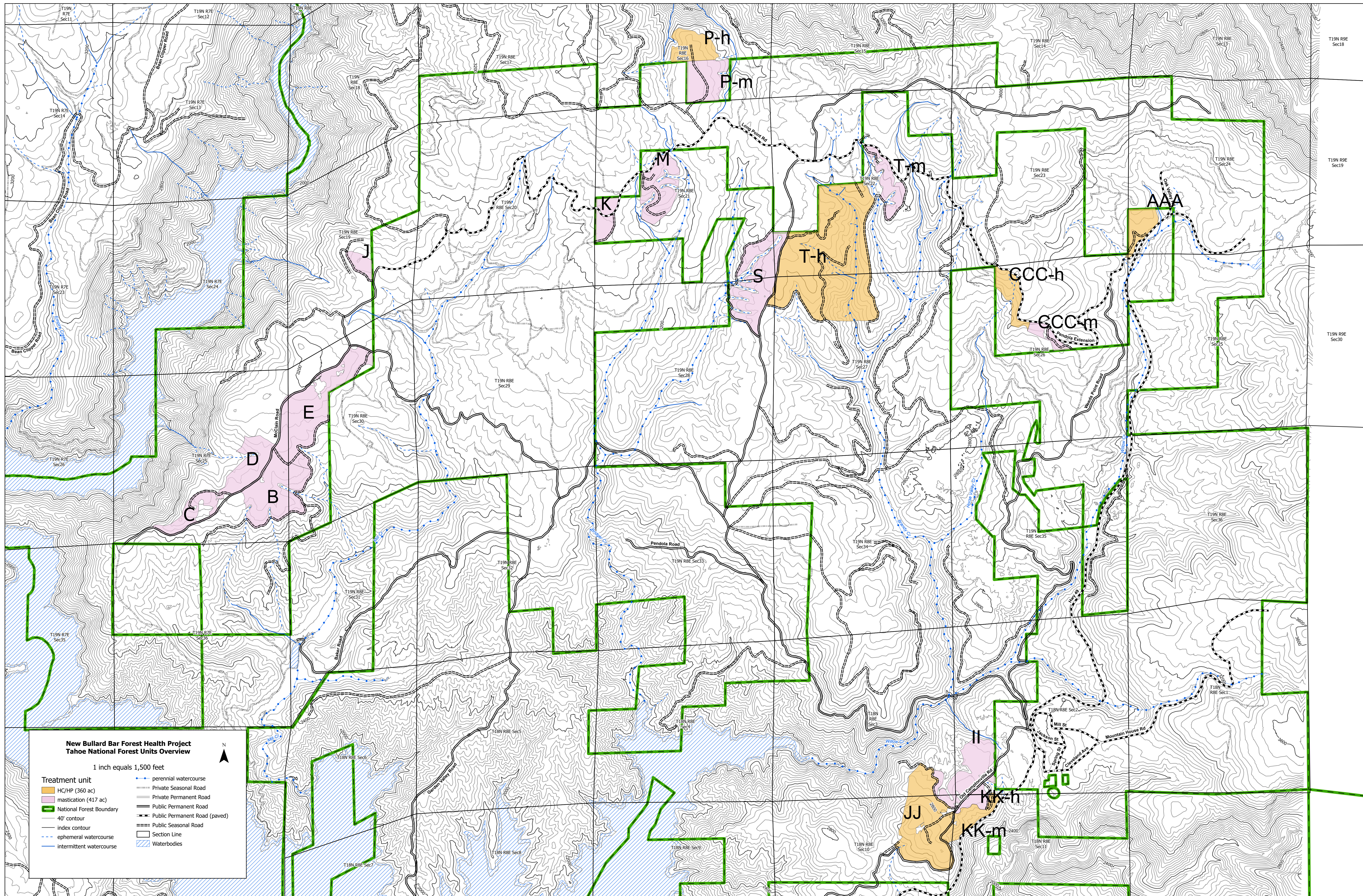
Submit bids via email to mcummings@nationalforests.org by October 11, 2024.

Project Tour

NFF and the USFS will host a project tour to help interested contractors better understand the project and field any questions. This tour is scheduled to be conducted on October 1, 2024, if this date changes, bidders will be notified of the change. Plan to meet at the Yuba River Ranger District (15924 CA-49, Camptonville, CA 95922) at 10am. Please send an email to mcummings@nationalforests.org before September 27, 2024 if you would like to attend the tour. Though not required, attending the tour is strongly recommended if you plan to submit a proposal.

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.

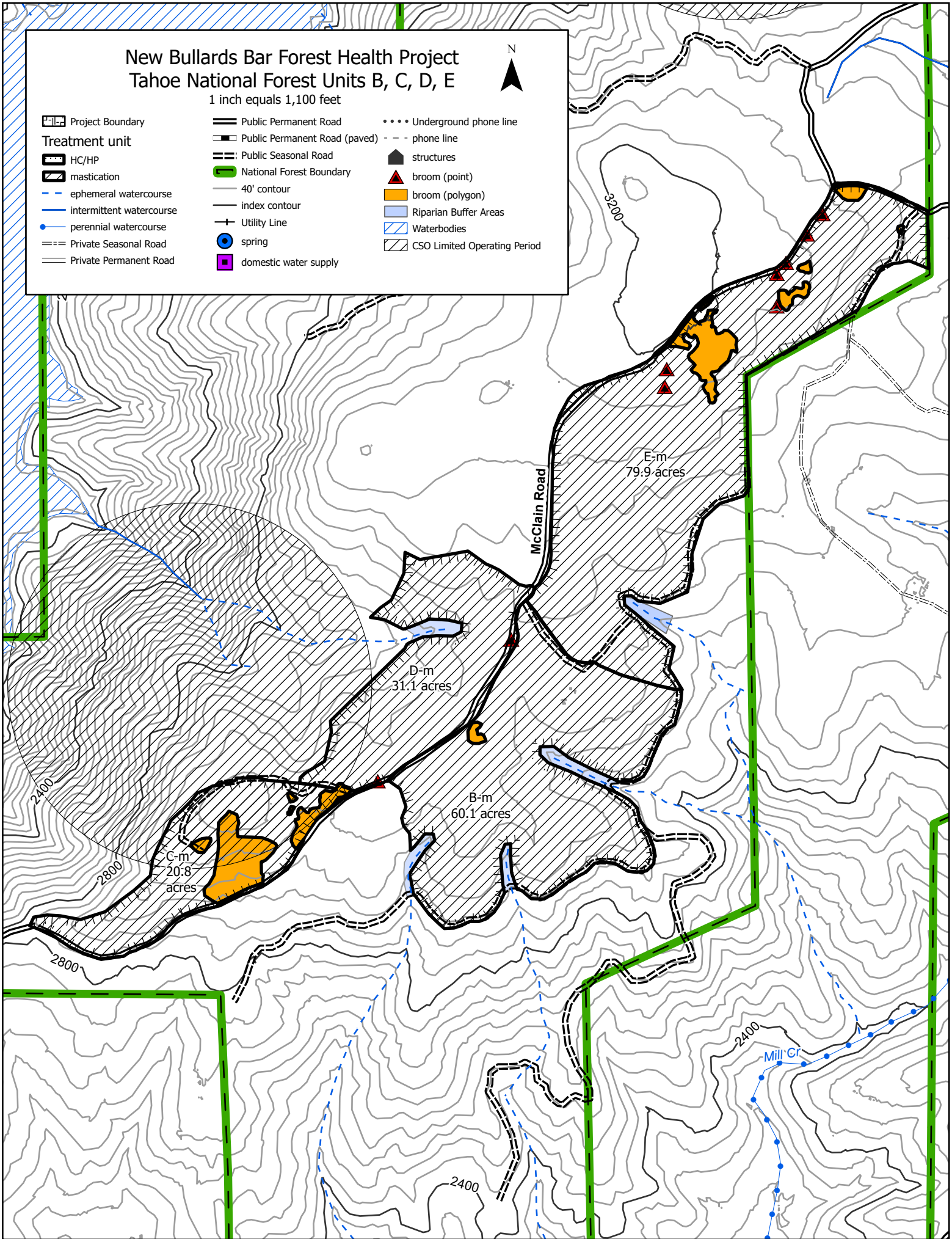


New Bullards Bar Forest Health Project Tahoe National Forest Units B, C, D, E

1 inch equals 1,100 feet



- | | | |
|--------------------------|-------------------------------|------------------------------|
| Project Boundary | Public Permanent Road | Underground phone line |
| Treatment unit | Public Permanent Road (paved) | phone line |
| HC/HP | Public Seasonal Road | structures |
| mastication | National Forest Boundary | broom (point) |
| ephemeral watercourse | 40' contour | broom (polygon) |
| intermittent watercourse | index contour | Riparian Buffer Areas |
| perennial watercourse | Utility Line | Waterbodies |
| Private Seasonal Road | spring | CSO Limited Operating Period |
| Private Permanent Road | domestic water supply | |

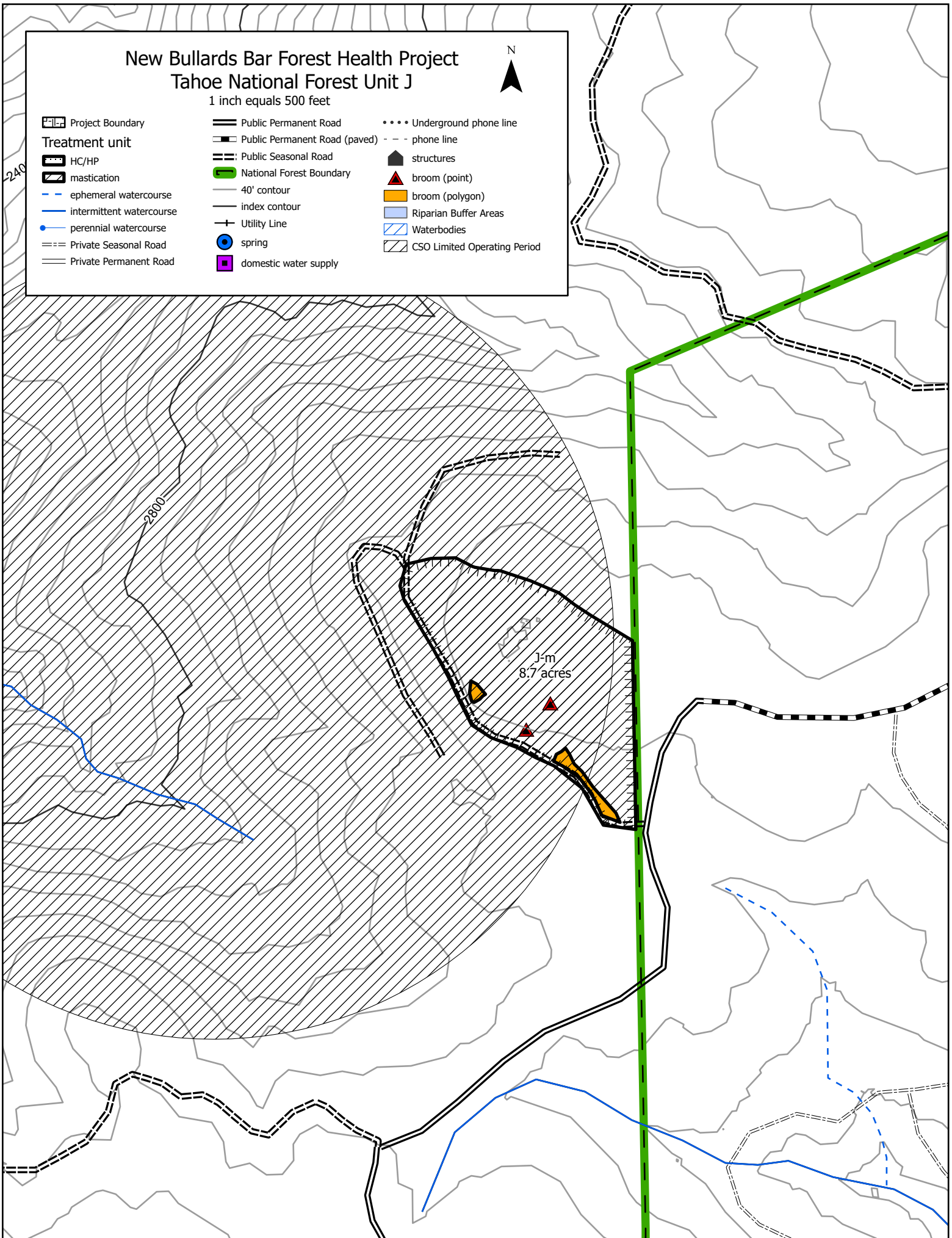


New Bullards Bar Forest Health Project Tahoe National Forest Unit J

1 inch equals 500 feet



- | | | |
|--------------------------|-------------------------------|------------------------------|
| Project Boundary | Public Permanent Road | Underground phone line |
| Treatment unit | Public Permanent Road (paved) | phone line |
| HC/HP | Public Seasonal Road | structures |
| mastication | National Forest Boundary | broom (point) |
| ephemeral watercourse | 40' contour | broom (polygon) |
| intermittent watercourse | index contour | Riparian Buffer Areas |
| perennial watercourse | Utility Line | Waterbodies |
| Private Seasonal Road | spring | CSO Limited Operating Period |
| Private Permanent Road | domestic water supply | |

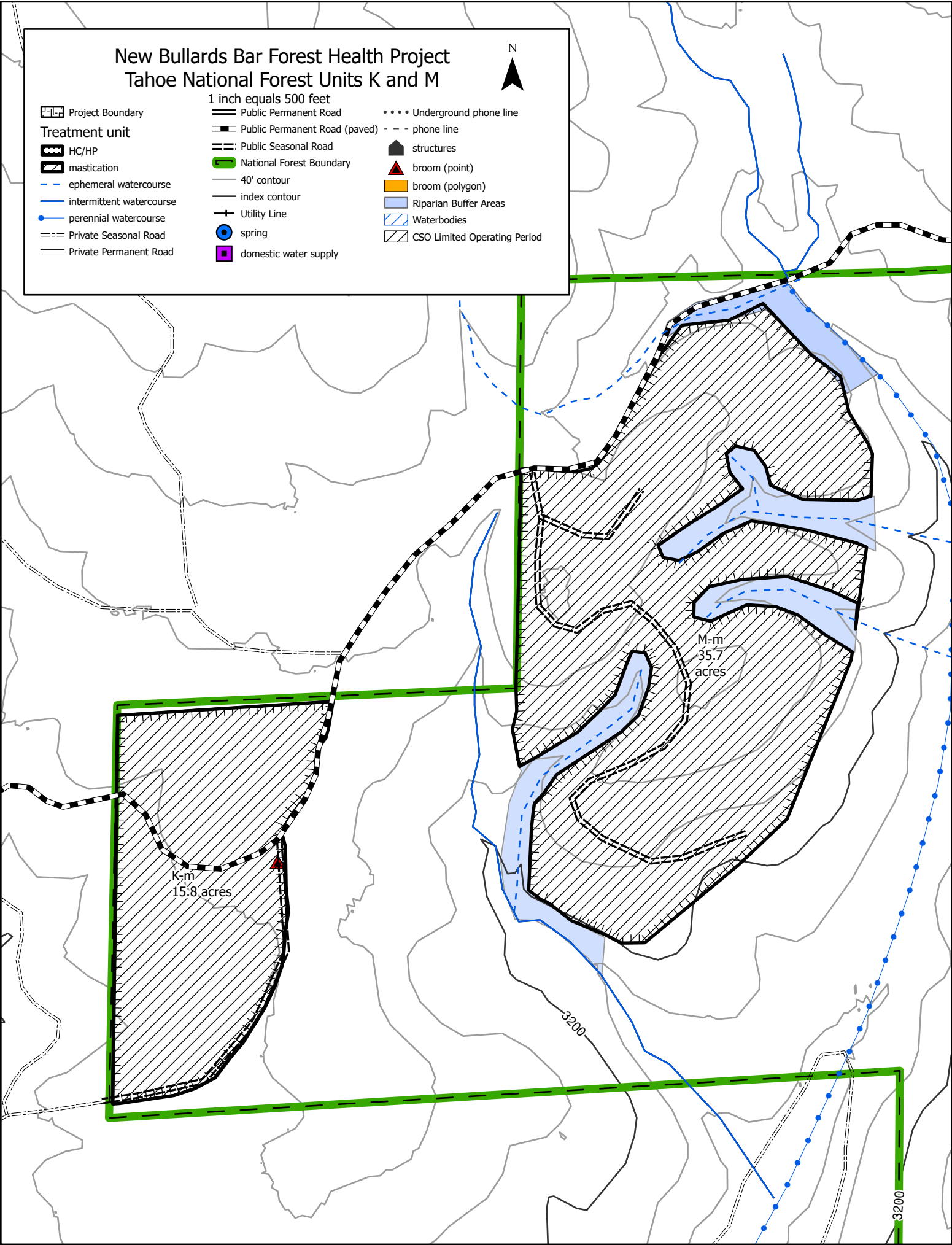


New Bullards Bar Forest Health Project Tahoe National Forest Units K and M



1 inch equals 500 feet

- | | | |
|--------------------------|-------------------------------|------------------------------|
| Project Boundary | Public Permanent Road | Underground phone line |
| Treatment unit | Public Permanent Road (paved) | phone line |
| HC/HP | Public Seasonal Road | structures |
| mastication | National Forest Boundary | broom (point) |
| ephemeral watercourse | 40' contour | broom (polygon) |
| intermittent watercourse | index contour | Riparian Buffer Areas |
| perennial watercourse | Utility Line | Waterbodies |
| Private Seasonal Road | spring | CSO Limited Operating Period |
| Private Permanent Road | domestic water supply | |



K-m
15.8 acres

M-m
35.7
acres

3200

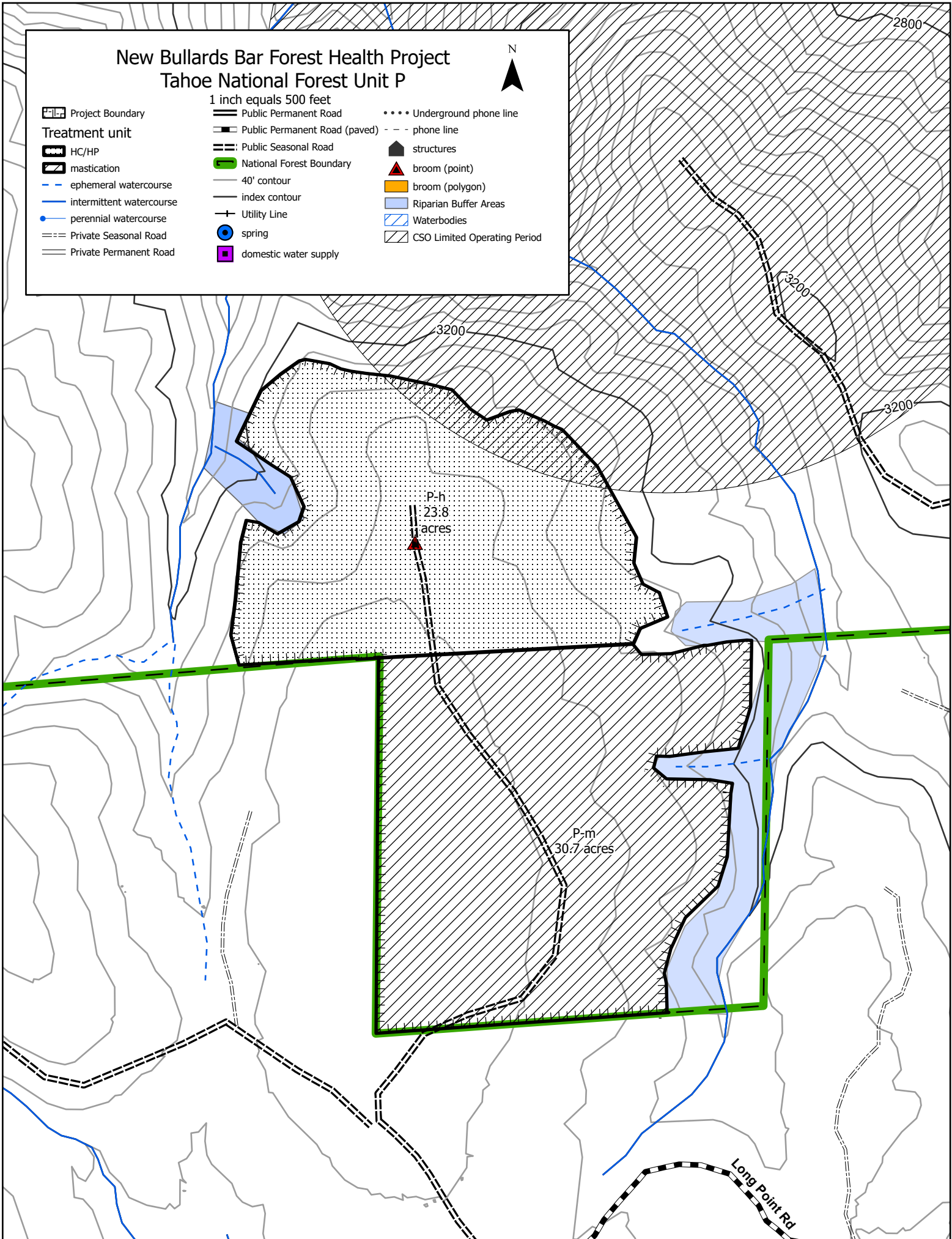
3200

New Bullards Bar Forest Health Project Tahoe National Forest Unit P



1 inch equals 500 feet

- | | | |
|--------------------------|-------------------------------|------------------------------|
| Project Boundary | Public Permanent Road | Underground phone line |
| Treatment unit | Public Permanent Road (paved) | phone line |
| HC/HP | Public Seasonal Road | structures |
| mastication | National Forest Boundary | broom (point) |
| ephemeral watercourse | 40' contour | broom (polygon) |
| intermittent watercourse | index contour | Riparian Buffer Areas |
| perennial watercourse | Utility Line | Waterbodies |
| Private Seasonal Road | spring | CSO Limited Operating Period |
| Private Permanent Road | domestic water supply | |



New Bullards Bar Forest Health Project Tahoe National Forest Unit S



1 inch equals 500 feet

- | | | |
|--------------------------|-------------------------------|------------------------------|
| Project Boundary | Public Permanent Road | Underground phone line |
| Treatment unit | Public Permanent Road (paved) | phone line |
| HC/HP | Public Seasonal Road | structures |
| mastication | National Forest Boundary | broom (point) |
| ephemeral watercourse | 40' contour | broom (polygon) |
| intermittent watercourse | index contour | Riparian Buffer Areas |
| perennial watercourse | Utility Line | Waterbodies |
| Private Seasonal Road | spring | CSO Limited Operating Period |
| Private Permanent Road | domestic water supply | |

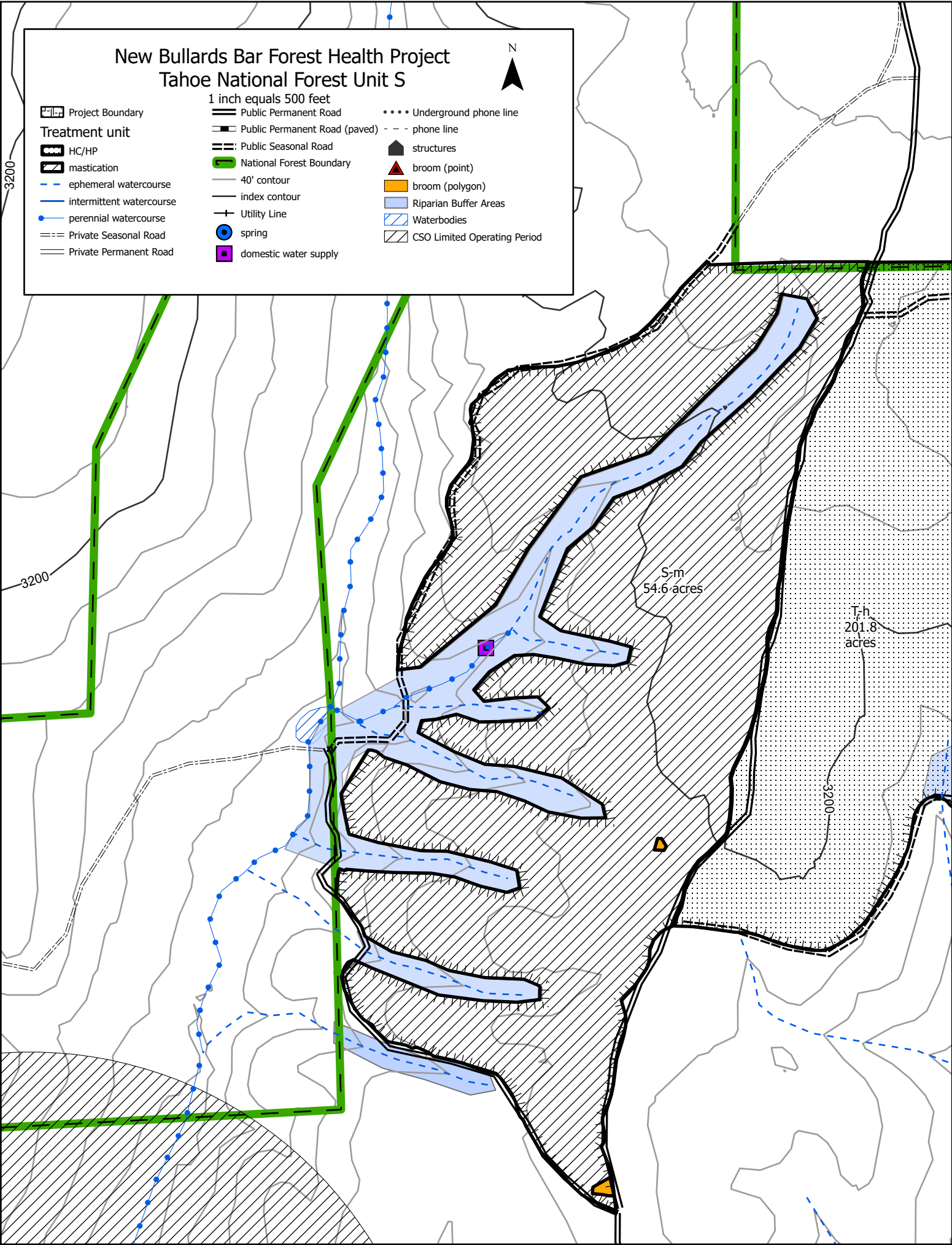
3200

3200

S-m
54.6 acres

T-h
201.8
acres

3200

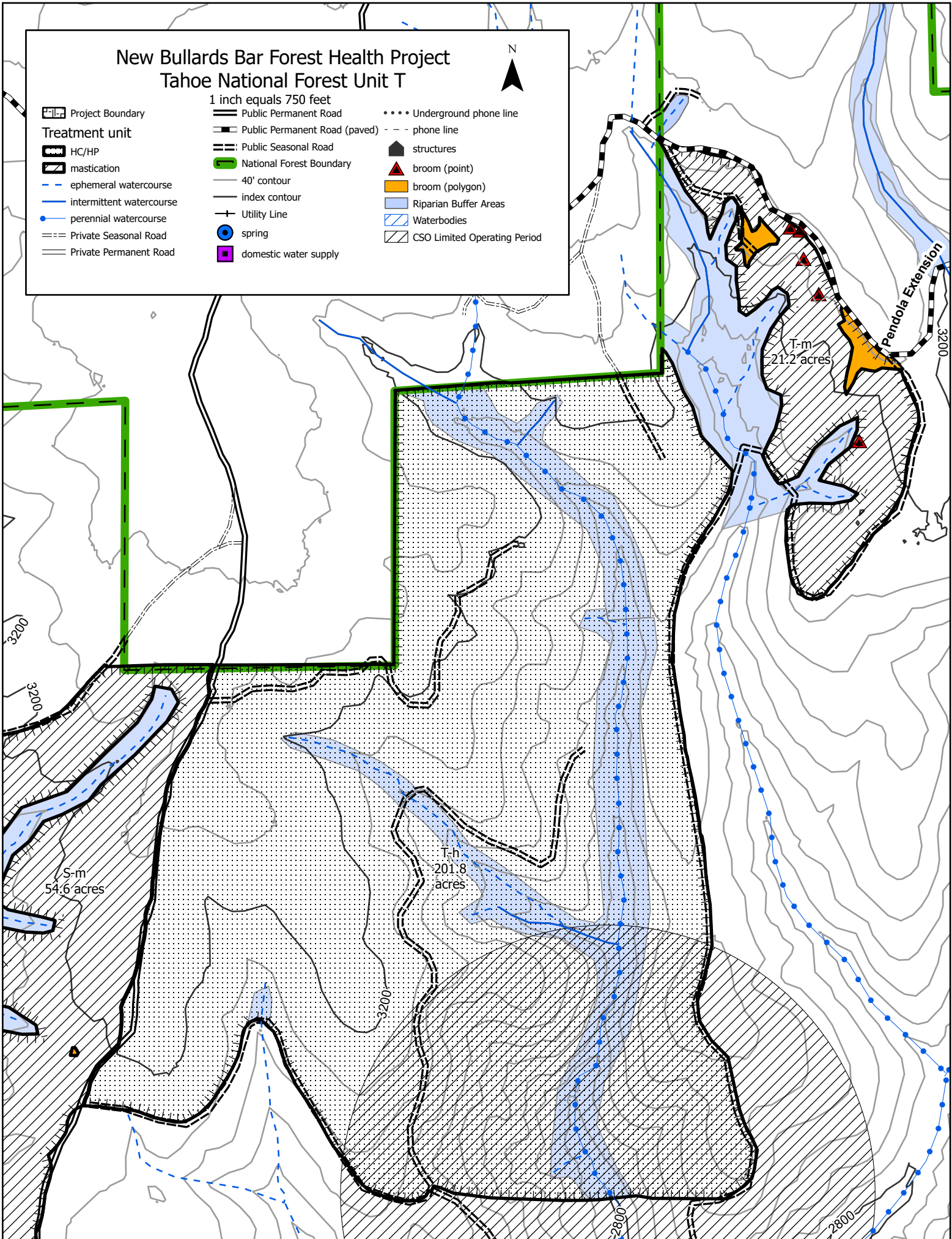


New Bullards Bar Forest Health Project Tahoe National Forest Unit T



1 inch equals 750 feet

- | | | |
|--------------------------|-------------------------------|------------------------------|
| Project Boundary | Public Permanent Road | Underground phone line |
| Treatment unit | Public Permanent Road (paved) | phone line |
| HC/HP | Public Seasonal Road | structures |
| mastication | National Forest Boundary | broom (point) |
| ephemeral watercourse | 40' contour | broom (polygon) |
| intermittent watercourse | index contour | Riparian Buffer Areas |
| perennial watercourse | Utility Line | Waterbodies |
| Private Seasonal Road | spring | CSO Limited Operating Period |
| Private Permanent Road | domestic water supply | |

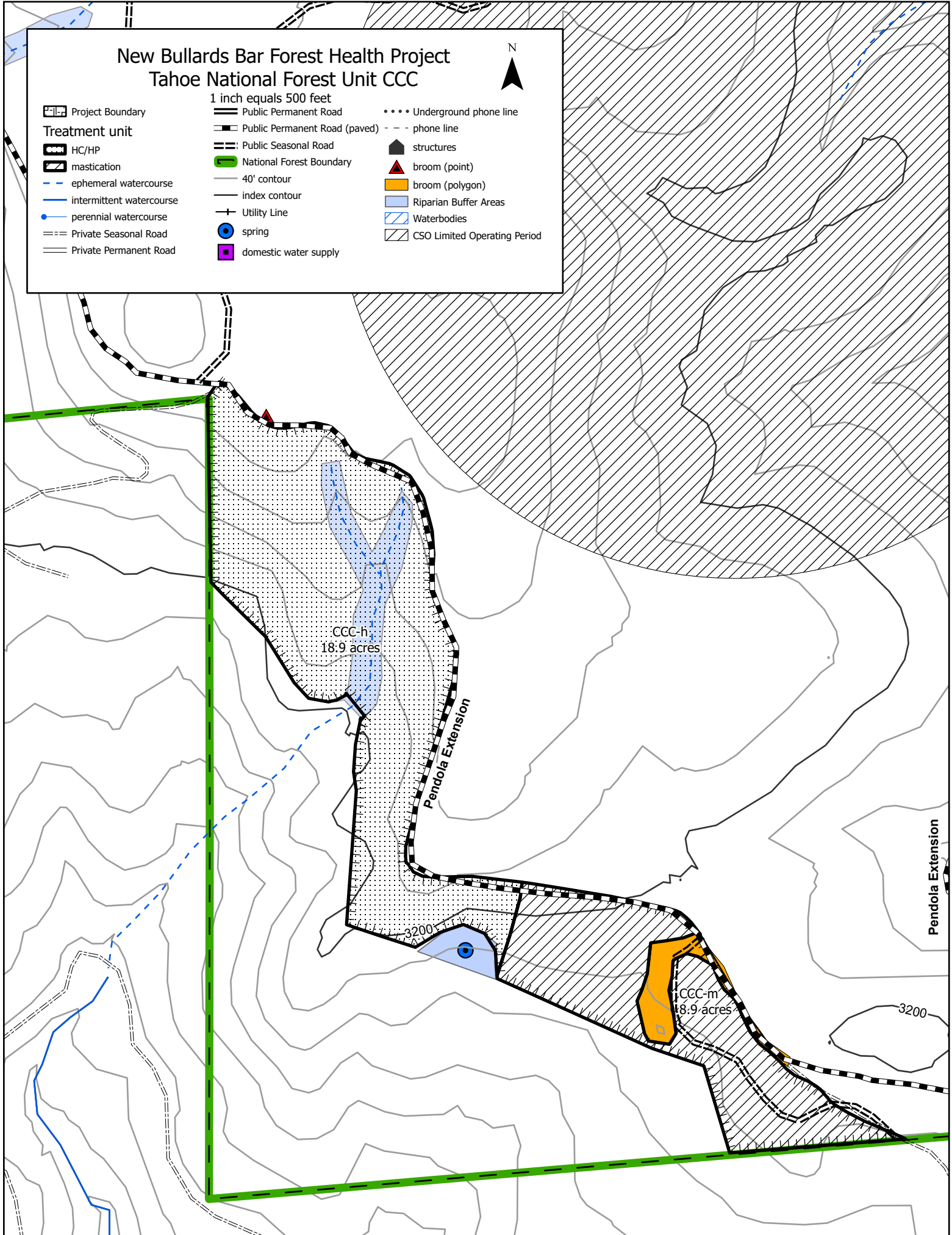


New Bullards Bar Forest Health Project Tahoe National Forest Unit CCC



1 inch equals 500 feet

- | | | |
|--------------------------|-------------------------------|------------------------------|
| Project Boundary | Public Permanent Road | Underground phone line |
| Treatment unit | Public Permanent Road (paved) | phone line |
| HC/HP | Public Seasonal Road | structures |
| mastication | National Forest Boundary | broom (point) |
| ephemeral watercourse | 40' contour | broom (polygon) |
| intermittent watercourse | index contour | Riparian Buffer Areas |
| perennial watercourse | Utility Line | Waterbodies |
| Private Seasonal Road | spring | CSO Limited Operating Period |
| Private Permanent Road | domestic water supply | |



New Bullards Bar Forest Health Project Tahoe National Forest Unit AAA



1 inch equals 375 feet

Project Boundary

Treatment unit

HC/HP

mastication

ephemeral watercourse

intermittent watercourse

perennial watercourse

Private Seasonal Road

Private Permanent Road

Public Permanent Road

Public Permanent Road (paved)

Public Seasonal Road

National Forest Boundary

40' contour

index contour

Utility Line

spring

domestic water supply

Underground phone line

phone line

structures

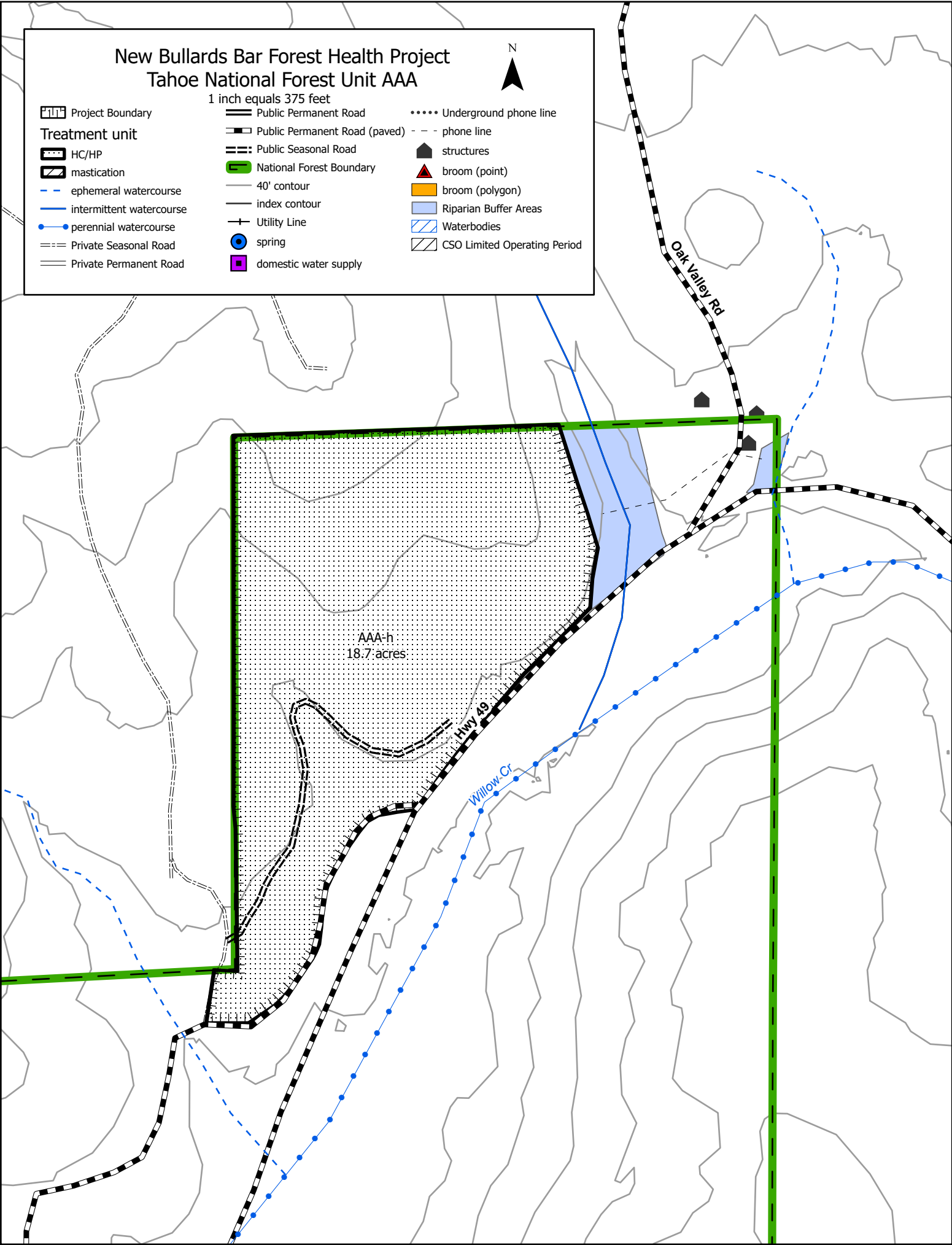
broom (point)

broom (polygon)

Riparian Buffer Areas

Waterbodies

CSO Limited Operating Period



AAA-h
18.7 acres

Hwy 49

Willow Cr

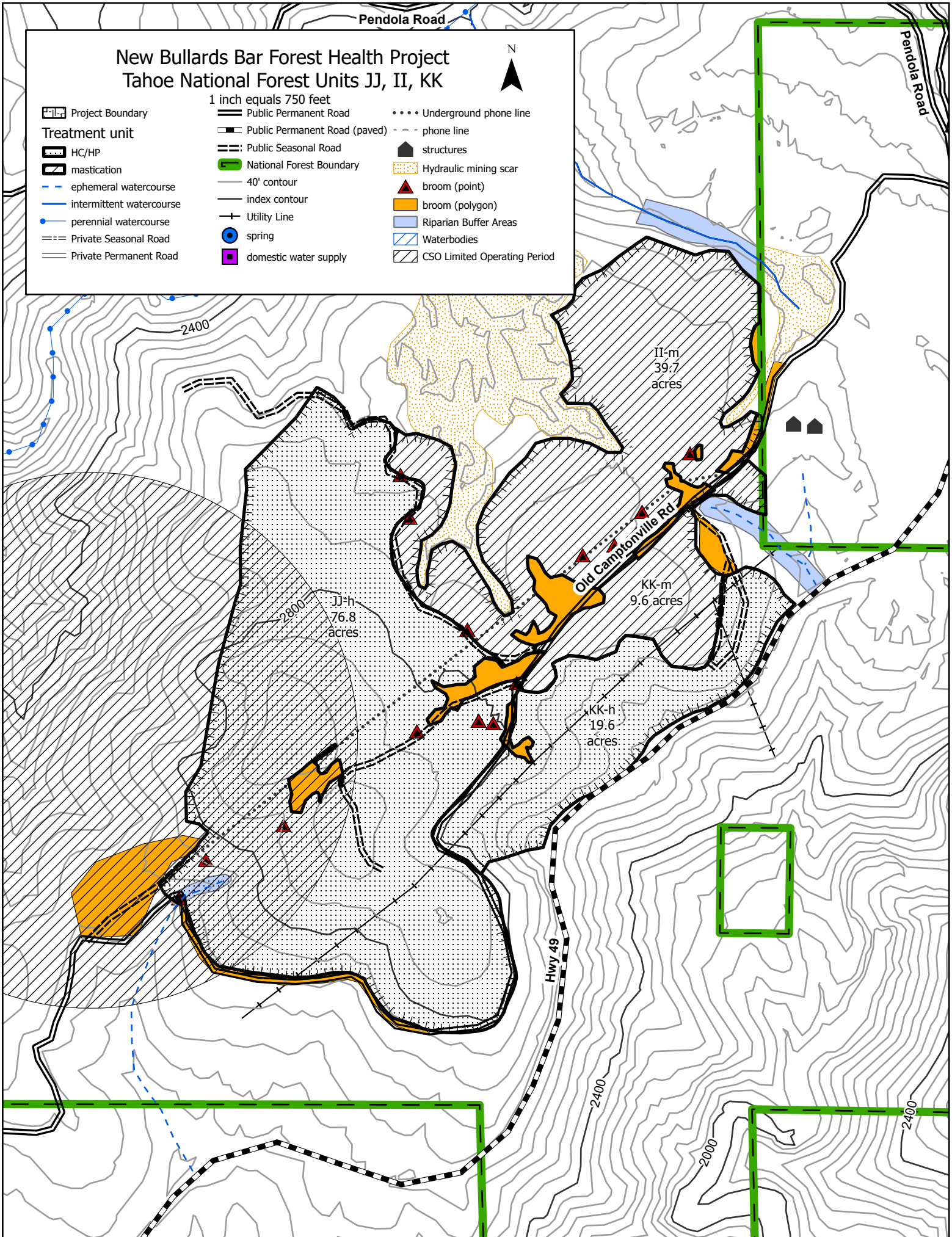
Oak Valley Rd

New Bullards Bar Forest Health Project Tahoe National Forest Units JJ, II, KK



1 inch equals 750 feet

- | | | |
|--------------------------|-------------------------------|------------------------------|
| Project Boundary | Public Permanent Road | Underground phone line |
| Treatment unit | Public Permanent Road (paved) | phone line |
| HC/HP | Public Seasonal Road | structures |
| mastication | National Forest Boundary | Hydraulic mining scar |
| ephemeral watercourse | 40' contour | broom (point) |
| intermittent watercourse | index contour | broom (polygon) |
| perennial watercourse | Utility Line | Riparian Buffer Areas |
| Private Seasonal Road | spring | Waterbodies |
| Private Permanent Road | domestic water supply | CSO Limited Operating Period |



APPENDIX E

SCHEDULE OF ITEMS AND SPECIFICATIONS

Schedule of Items

Item	Description	Unit of Measure	Quantity
1	Mastication	acre	417
2	Hand Cut/Hand Pile	acre	360

Item 1: Mastication

Units: B, C, CCC - m, D, E, II, J, K, KK - m, M, P - m, S, T - m

Masticate conifers less than 10 inches DBH and brush greater than 6 inches in height except for specified leave trees. The Contractor shall select the healthiest and largest least-represented dominant and co-dominant conifer leave trees to retain an average spacing of 20 feet (when in plantations) or 25 feet (when in natural stands). Spacing can vary up to 50% to maintain and promote mixed-conifer species composition. If present, healthy sugar pine, will generally be favored, followed by ponderosa pine, Douglas-fir, and incense cedar over white fir.

1. If an overstory of large healthy conifers and hardwoods exists (trees greater than or equal to 10 inches dbh), the Contractor shall masticate all material less than 10 inches dbh. Within 20 feet of the drip line and up to 35 feet from the south-southwest portion of the drip line of live hardwoods with a dbh greater than or equal to 10 inches, masticate all conifers less than 10 inches dbh. Healthy conifers are those which are free from disease and defect, have the straightest bole, and the fullest crown.
2. Tree stump and brush stob heights shall not exceed 4 inches in height, as measured on the uphill side or 4 inches above natural obstacles (i.e. logs, rocks).
3. Masticated material shall not lean against or be suspended in any leave tree.
4. All masticated material shall be kept within unit boundaries to the extent practicable. Any material at least 3 feet long and 1.0 inch diameter or greater on the large end which falls outside of unit boundaries or into streams, ditches, culverts, roads, roads banks, or trails shall be removed by the end of the day.
5. Masticated material and residual debris shall lie relatively flat on the ground and generally not exceed 4 inches in depth and individual masticated pieces shall not exceed 3 feet in length.
7. Specified vegetation shall be masticated to within 2 feet of leave trees without causing damage to residual stand.

Mastication will be accomplished with a machine which shall meet the following requirements:

1. Ground pressure shall not exceed a maximum of 7.5 psi.
2. Machine width maximum shall not exceed 12 feet.
3. Machine shall be equipped with a masticating or mulching head.

Operations would generally be limited to slopes less than 40%.

Item 2: Hand Cut/Hand Pile

Units: AAA, CCC - h, JJ, KK - h, P - h, T - h

Manual removal of small trees less than 10 inches DBH and hand piling of cut material and surface fuels to reduce surface and ladder fuels. Pruning of trees will occur to increase canopy base heights, reducing risk of fire moving into tree crowns.

- A. Selection of Leave Trees: Leave trees shall generally be those of the tallest height, largest crown, and straightest boles that are free of damage due to insects, disease, physical and mechanical causes. The Contractor shall select leave tree using the following priorities:
 1. Space residual trees 25 feet apart between boles. Select leave trees from healthy, undamaged hardwoods and conifers. Hardwoods will supersede conifers when leaving a healthy leave tree. Spacing will supersede the diameter limit when setting priority of treatment.
 2. Leave all conifers that exceed 10 inches in DBH.
 3. Selected leave trees should be the tallest, best formed, disease free, insect free, and damage free trees available. Leaving slightly damaged trees when these are the best available to meet spacing requirements is acceptable.
 4. Species retention is (in order of preference): sugar pine, Douglas-fir, incense cedar, ponderosa pine, white fir.
 5. Avoid damaging and retain big leaf maple, elderberry, dogwood, Pacific yew, and California Hazelnut.
 6. Avoid damaging and do not cut or remove black oak or madrone greater than 9 inches in DBH. Trees of this species less than 9 inches in DBH can be cut.
 7. Leave all alders and other riparian vegetation within and adjacent to stream beds (wet or dry). Conifer and other brush species (manzanita, whitethorn) will be removed from these areas.
 8. Cut stumps of trees and brush so that they are no more than 4 inches in height on the high side of the stump. Make the residual stand easy to walk through and cut stumps low so they are not a tripping hazard.
- B. Selection of Cut Trees:
 1. Where no overstory trees exist over 10 inches DBH, thin trees to an average 25 foot spacing and cut all remaining vegetation per specifications.
 2. Where an overstory exists, cut all conifer trees less than 10 inches at DBH that do not meet the definition of a leave tree while observing spacing requirements, except those specified to be left within each designated unit. (Leave trees shall generally be those of the tallest height, largest crown, and straightest boles that are free of damage due to insects, disease, physical and mechanical causes. If no tree meets this selection criteria, leave the largest and tallest tree with minimal damage.)
 3. Treatments will retain and recruit snags greater than 15" DBH to meet an average of 4-6 snags (conifers & hardwoods) per acre.
 4. Dead and down material less than 12" will be cut into sections no longer than 4 feet and piled. Do not pile rotten or punky logs.
 5. Leave downed material larger than 12" for wildlife purposes.

C. Treatment of Brush

1. All brush within the work areas shall be cut except for hazelnut and noxious weeds. All brush treated shall be cut within 4 inches of the ground or 4 inches of obstacles (i.e. rocks, down logs) and no leaves shall remain attached to the portion remaining in the ground.

D. Pruning

1. All leave trees shall be pruned of lateral branches to at least 6 feet from the ground or 2/3 the height of the tree (whichever is less).
2. Pruning cuts shall be made no closer than 1/2 inch and no farther than 2 inches from the bole of leave trees.
3. Pruning will be done by first making a cut on the underside of the branch and then severing the branch from above to reduce injury to the branch collar.

Hand Piling:

1. Following conifer cutting, the Contractor shall pile all cut material less than 10 inches in diameter and all dead and downed material less than 12 inches in diameter.
2. Piled material shall be less than 4 feet in length.
3. Piles shall be compact with a maximum diameter of 10 feet and maximum height of 8 feet.
4. Piles should be located outside of the dripline of overstory trees where possible and outside of any riparian buffer. If piles cannot be located outside of dripline, then they must be at least 20 feet from the bole of any leave tree greater than 10 inches DBH. Pile size may be decreased to prevent damage to the residual trees (i.e. scorching). Where openings exist that will accommodate a larger pile, large piles are preferred. Piles size may not decrease to less than 4 feet in diameter. Do not locate piles within 10 feet of existing downed logs greater than 20 inches in diameter without COR/Inspector approval.
5. Each pile shall have an area measuring at least 4 feet in diameter, but not to exceed 10 feet in diameter (measured on the horizontal plane) covered with 6 millimeter thick plastic sheeting and firmly anchored by either piling slash or other debris.
6. Covering with 6 millimeter thick plastic shall be done at the time of hand piling.
7. Plastic will be placed in the upper 2/3 and top of the pile and will cover at least 80% of the surface area of the pile.
8. No material shall extend from the general perimeter of the pile more than 18 inches.
9. No piles should be located within 20 feet of trees to be left untreated (>10 inches DBH).
10. No hand piles will be placed within:
 - 25 feet of private property boundaries.
 - 25 feet of improvements such as but not limited to fences, gates, signs, or water lines or tanks.
 - 25 feet of any power or phone lines and poles.
 - 15 feet uphill of or 25 feet downhill of snags.
 - No piles will be placed upon decaying stumps.
 - No piles within aspen stands (100' of aspen) unless a designated location is approved by COR.
 - No piles will be created in the inner 100-foot perennial and 50- foot intermittent riparian buffer, or within the scour line of ephemeral streams.

Trees, Shrubs, and other Plants to be Left Untreated

1. Avoid and do not treat invasive plants such as Scotch broom.
2. Do not cut any riparian vegetation such as but not limited to willow, dogwood, rushes, sedges, etc.
3. Leave trees shall generally be those of the tallest height, largest crown, and straightest boles that are free of damage due to insects, disease, physical and mechanical causes. If no tree meets this selection criteria, leave the largest and tallest tree with minimal damage.

Resource Restrictions

Hydrology

1. Riparian buffers – no ground disturbance:
 - a. Perennial streams: 100-foot on either side of stream channel
 - b. Intermittent streams: 50-foot on either side of stream channel
 - c. Ephemeral streams: 30-foot on either side of stream channel
2. Riparian Conservation Areas:
 - a. Perennial streams: 300 feet each side, measured from bank full edge
 - b. Intermittent streams: 150 feet each side, measured from bank full edge
 - c. Ephemeral streams: 150 feet each side, measured from bank full edge
3. No piles will be created in the inner 100-foot perennial and 50-foot intermittent riparian buffer, or within the scour line of ephemeral streams.
4. Keep mechanical equipment 10' from edge of channels.
5. Masticators can cross ephemeral and intermittent channels in limited, designated locations. Masticators can NOT cross perennial channels.

Wildlife

Units: B, C, D, II, J, JJ, P – h, S, T – h

1. Units C, D, J, JJ, P – h, T – h: In units with an LOP for California spotted owl, no work shall occur within the LOP from March 1 – August 15.
2. Units B, D, II, S, T – h: Within 300 feet of perennial and intermittent creeks, and 30 feet of ephemeral creeks, limit the operating period for mechanical treatments during the wet season, which is defined as the first frontal rain system depositing a minimum of 0.25 inches of rain after October 15 and ending April 15. The LOP may be lifted only if an aquatic biologist determines that the stream does not meet the definition of suitable Controlled Area red-legged frog habitat (described in guidelines provided by the US Fish & Wildlife Service, California Red Legged Frog Take Avoidance Scenarios March 25, 2008), or that activities will occur further than 300 feet from suitable habitat.

Botany

1. Sensitive plant avoidance areas will be flagged in advance of treatment with orange and white-striped flagging. These areas will not be treated and are to be completely avoided during all activities, including staging of equipment, materials and crew as well as tree felling activities.

2. Noxious weed infestations will be marked with orange flagging with the words "Noxious Weed" in black prior to commencement of work. These areas will not be treated and are to be completely avoided during all activities, including staging of equipment, materials and crew as well as tree felling activities.

Cultural Resources

1. Cultural resource sites within the project area will be flagged by USFS archeologists with blue and black striped flagging and avoided.
2. Coordination with the Registered Professional Forester and/or NFF is required before a new unit is entered to review avoidance areas.

PROJECT INSPECTION AND ACCEPTANCE

Inspection of Services—Fixed-Price

1. Sampling

[X] Plots. At least 0.5% percent of each treatment area will be sampled by a random series of plots distributed over the entire area. Plot size will be:

[] 1/250 acre

[] 1/100 acre

[] 1/50 acre

[X] 1/10 acre

[] other (specify)

1/10 acre plot is a circular plot measured on a horizontal plane having a radius of 37.2 feet.

2. Specific Inspection Procedures

Each plot will be inspected to determine:

- A. The number of trees left uncut per specification in APPENDIX E. If residual trees <10" dbh are left and are closer than an average 25' spacing between boles, or with too high of stump, the plot fails.
- B. The number of brush left uncut per specification in APPENDIX E. If more than 1 shrub is left uncut or left with too high stump the plot will fail.
- C. Pruning will be inspected for adherence to specification in APPENDIX E. If more than 2 branches per this spec is left the plot will fail.
- D. Mastication will be inspected per specifications in APPENDIX E. If chipped material exceeds 4 inches in depth throughout the entire plot and/or chipped material is distributed within the riparian area, the plot will fail.
- E. The nearest hand pile to the plot center will also be inspected (even if it is out of the plot). The hand pile must meet all specifications as stated in APPENDIX E or the hand pile inspection fails.

- F. Any vegetation cut per specification Trees, shrubs, and other Plants to be Left Untreated will be charged under liquidated damages.

Work will be accepted for payment based on final inspection and passing specifications. RPF/NFF or the Forest Service will inspect for compliance of specifications.

A series of 1/10-acre plots (37.2 foot plot radius) distributed over the entire unit sufficient to yield at least a one-half on one percent sample (0.5%) of the unit. Plot centers will be marked with pink flagging.

On each plot the RPF/NFF or the Forest Service will record the plot number, whether the plot is satisfactory or unsatisfactory and the reason if unsatisfactory. Each plot will be examined to record findings on the performance measures listed below. To be considered satisfactory, each item must meet the following criteria:

Performance Measures for Mastication (applies to Item 1)

Each of these gets a rating of 0 to 5 for a total of 35 points possible, with 0 being unacceptable and 5 being acceptable.

1. Selection of leave trees (species priority and dbh)
2. Spacing of residual trees
3. Stumps of trees and brush so that there no more than 4" remaining.
4. Prune branches of all remaining conifers to 6 feet in height
5. Depth of masticated material
6. No damage to residual trees
7. Any treated material that falls outside of unit boundary needs to be removed and hand piled.

Performance Measures for Hand Cutting and Hand Piling (applies to Item 2)

Each of these gets a rating of 0 to 5 for a total of 50 points possible, with 0 being unacceptable and 5 being acceptable.

1. Selection of leave trees (species priority and dbh)
2. Spacing of residual trees
3. Stumps of trees and brush so that there no more than 4" remaining
4. Prune branches of all remaining conifers to 6 feet in height
5. No damage to residual trees
6. Any treated material that falls outside of unit boundary needs to be removed and hand piled.
7. Placement/location of pile near leave trees and snags
8. Spacing of piles
9. Dimension and structure of pile (includes clearing around piles and material in piles is less than 6' in length)
10. Plastic utilization/placement

3. Acceptance

Work on this contract will be deemed acceptable when a score of 91% is achieved. For a score of 80% or more but less than 90%, 2% of the unit price pay will be deducted for that unit for each percentage point below 90%. If the inspection score is less than 80%, then there is no pay. The unit

may be reworked ONCE and then reinspected. This re-inspection score will be the final result for payment on that unit, (see reinspection after rework below).

4. NFF Inspections

NFF inspections are for the purpose of satisfying the NFF that the services are acceptable and do not relieve the Contractor of the responsibility for maintaining quality control. RPF/NFF or the Forest Service will conduct all inspections. The Contractor (or designated representative) is encouraged to be present to observe inspections. Summary results will be made available on request.

Compliance Inspections. Visual compliance inspections will be made on a periodic basis. Such inspections are not final and do not constitute acceptance by the NFF.

Final Inspections. Final (formal) inspections for payment will be made on completed items only. Contractor shall request final inspections in writing and give NFF at least two working days advanced notice. Inspections will be completed within four working days after the notice is received. If the work is not ready for inspection at the time specified by the Contractor, the cost associated with the inspection attempt may be charged to the Contractor.

Disputed Inspection. The Contractor may request re-inspection without rework if the results are unacceptable. Re-inspection must be requested in writing within 48 hours after receiving written notice of the inspection results. Re-inspection will be accomplished within five working days after receipt of the contractor's written request.

The same sampling and inspection procedures will be used, but new samples will be taken. The inspection pattern will be shifted so that new samples will not overlap previously inspected samples. Results will be rounded to the nearest whole percent.

If re-inspection results are within five percentage points of the first inspection, the original inspection result will be used in determining acceptability and payment. If re-inspection results are greater than five percentage points above or below the first inspection, the re-inspection results will be used.

If the re-inspection results are within five percentage points of the first inspection, the Contractor shall pay the actual costs of the re-inspection.

Re-inspection after Rework. Where rework after a failed inspection may improve the inspection results, the Contractor may rework the area and request (in writing) a second inspection. Re-inspection will be accomplished within five working days after the notice is received. The results of the second inspection will be final, and no further rework will be permitted. Areas not ready for re-inspection at the time specified by the Contractor will not be re-inspected, and the results of the first inspection will be final.

APPENDIX G: GUIDELINES FOR OPERATIONS

Contractor Responsibility:

The Contractor shall provide everything--including, but not limited to, all equipment, supplies, transportation, labor, and supervision--necessary to complete the project, except for that which the contract clearly states is to be furnished by NFF.

Accessibility:

Most sub-items are accessible with a 2-wheel drive vehicle after snowmelt. NFF assumes no liability to perform special road maintenance to keep roads open to the project area.

Contractor-Furnished Equipment:

Equipment shall be furnished on a fully operational basis, of modern design, and in good operating condition, with a competent, fully qualified operator. The Contractor shall furnish all fuel, lubricants, and personnel necessary for the operation of the equipment. All repairs, service and replacements are the responsibility of the Contractor and shall be at the Contractor's expense. If, during the contract period, the equipment requires repairs before operations can continue, it shall be the responsibility of the Contractor to complete such repairs. The Contractor shall provide plastic that is at a minimum 6 millimeter thick.

Public Safety

The contractor shall provide for public safety when operating equipment within 200 feet of open roadways and designated trails by posting cautionary signs warning of hazardous work ahead. ***Warning signs (at least two, one for each direction) shall be posted on roads. These shall be located 200' from the intersection of the road and unit boundary at each edge of the unit. Signs shall be posted whenever working to alert oncoming traffic of the safety hazards associated with the operation. Any trails in the project area must also be signed. Signs shall include phrases similar to "Caution, tree falling stay back 200 feet" and be no less than 3 feet X 3 feet in size. Lettering shall be at least 6 inches in height.***

Project Boundary Description:

The perimeters of sub-items will be partially flagged with blue or red flagging and other areas of the sub-items will be identified with a single piece of flagging. In some cases, roads may make up part of the boundary of the unit and therefore these parts of the unit boundary may or may not be marked or flagged. The project maps are intended to show the general shape and location of the work areas. The map is not intended to be accurate as to precise location and dimension. If the map and field boundaries conflict, the field boundaries shall govern. Positions of streams and topographic features, when shown, also may be approximate.

Protected Sites and Exclusions (non-work areas): *The following shall be excluded or protected:*

1. **No** hand piling will be permitted within 10 feet of the banks of **stream channels and waterbodies.**
2. **Cultural resource sites** within the project area will be flagged with blue and black stripe or red and black stripe flagging and avoided.

3. **Sensitive plant avoidance areas** will be flagged in advance of treatment with orange and white-striped flagging. These areas will not be treated and are to be completely avoided during all activities, including staging of equipment, materials and crew as well as tree felling activities.

4. **Noxious weed** infestations will be marked with orange flagging with the words “Noxious Weed” in black prior to commencement of work. These areas will not be treated and are to be completely avoided during all activities, including staging of equipment, materials and crew as well as tree felling activities.

Applicable Management Requirements

1. Avoid damaging and retain elderberry, dogwood, California hazelnut, and Pacific yew.
2. Keep mechanical equipment 10' from edge of channels.
3. Masticators can cross ephemeral and intermittent channels in limited, designated locations. Masticators can NOT cross perennial channels.
4. All equipment and vehicles used for project implementation must be free of invasive plant material before moving into the project area. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material or other such debris. Cleaning shall occur at a vehicle washing station or steam-cleaning facility before the equipment and vehicles enter the project area. Equipment used during emergency work or used exclusively on paved surfaces is exempt from the cleaning requirement. When working in known invasive plant infestations, equipment shall be cleaned before moving to other National Forest Service system lands.
5. Avoid disturbance and do not stage equipment in known invasive plant infestations. Invasive plant infestations will be avoided during equipment traffic and soil-disturbing project activities. Avoidance areas will be identified on project maps.
6. **Survey monuments and bearing trees** shall be protected and not damaged in any way.
7. **All specified roads and recreational trails shown on contract maps** shall be left in the original condition existing prior to the commencement of work on this contract. Any water bars in skid trails disturbed by the Contractor's operations shall be restored to the condition prior to damage at the Contractor's expense. Excessive slash and chips cannot be left in the roadways and recreational trails after end of each work day. **All cut vegetation shall be kept within unit boundaries. If slash is fell onto the roadways, it must be removed by the end of each workday.**
8. Servicing and refueling equipment areas shall be located at a minimum of 300 feet from streams and other wet areas. In case of a HAZMAT spill, the material shall be immediately contained and NFF shall be immediately notified.
9. Avoid piling within the drip line of large trees (conifers & hardwoods), snags, and large downed logs
10. Within the sub-item boundaries, NFF may exclude non-work areas such as: rocky areas, wildlife areas, and other special areas. The Contracting Officer's Representative will designate non-work areas. Such areas exceeding 1/2 acre in size per unit may be excluded from payment.
11. Ground-based mechanical equipment would be restricted to less than 30 percent slope unless the following precautions are taken between 30 to 40 percent slope:

- a. On slopes up to 35 percent, low-pressure (Ie high floatation and/or dual tire) equipment can be used. On slopes up to 40 percent, tracked equipment can be used.
 - b. Rutting during operations should not exceed 6 inches depth.
 - c. Non-tethered uphill or adverse skidding is restricted to less than 25% in RCAs and 30% elsewhere.
 - d. Additional precautions or repairs may be required if excessive disturbance occurs.
 - e. Forest Service may approve steeper pitches less than 100 feet.
12. Ground disturbing activities may occur on up to 50 percent of the riparian buffer but must not exceed Soil Disturbance Class 1 (e.g., faint wheel tracks, forest floor intact, no signs of displacement of increased compaction) according to the Soil Disturbance Field Guide (USDA Forest Service, 2009). Mechanical equipment may enter riparian buffers but not within 20 feet of the edge of the channel, meadow, or other special aquatic feature unless approved by a Forest Service watershed specialist. Any mechanized equipment use within a meadow shall only occur when the meadow is at its driest state (typically August to September) and shall only include low pressure tracked or high floatation/dual tire equipment. Any damage to meadow, fen, or other aquatic features shall be repaired at the direction of the Forest Service watershed specialist. Riparian buffers may be extended situationally to protect floodplain characteristics or riparian vegetation.
 13. Ground disturbing activities in the RCA outside the riparian buffer may not exceed Soil Disturbance Class 1 on more than 10 percent of the treatment area.
 14. Protect cultural resources with posted and/or flagged control areas. Utilize directional felling methods as appropriate to protect resources. Designate sites on the ground prior to work.

Restrictions on Work:

Work may be performed at any time during the period of the contract, except as outlined here.

Restrictions are as follows:

1. In accordance with the fire plan, included in Appendix H.
2. When the Contracting Officer (or designated representative) determines that adverse weather has made access too dangerous or that continued vehicular travel would cause unacceptable road damage.
3. When the Contracting Officer (or designated representative) determines that continued operation may be injurious to leave trees.
4. If any Sierra Nevada yellow-legged frog is found at any time during implementation of this Project, cease operations in the vicinity of the frog, vacate the immediate area and leave the frog alone. If possible, take a photograph of the frog as follows: top looking down, and side view. No activity will occur in that area until such time as the frog has vacated the area on its own volition. With the exception of a U. S. Fish and Wildlife Service approved biologist, do not handle Sierra Nevada yellow-legged frogs. Report the occurrence as soon as possible to the COR or Designated Representative.
5. In units with an LOP for California spotted owl, no work shall occur from March 1 – August 15.
6. Within 300 feet of perennial and intermittent creeks, and 30 feet of ephemeral creeks, limit the operating period for **mechanical treatments** during the wet season, which is

defined as the first frontal rain system depositing a minimum of 0.25 inches of rain after October 15 and ending April 15. The LOP may be lifted only if an aquatic biologist determines that the stream does not meet the definition of suitable Controlled Area red-legged frog habitat (described in guidelines provided by the US Fish & Wildlife Service, California Red Legged Frog Take Avoidance Scenarios March 25, 2008), or that activities will occur further than 300 feet from suitable habitat.

Flagging Identification:

- Boundary: Solid blue or solid red
- Cultural Sites: Blue and black striped, or red and black striped
- LOP: Black and orange striped
- Botany (Sensitive Plants and Noxious Weeds): Orange & white striped with black “Special Treatment” lettering
- Stream and Riparian Buffers: Blue and white striped

Required Training:

Environmental awareness training will be conducted to contract representatives, Contract Officers, project managers, and field personnel prior to the onset of project work. Training will include a briefing on the following: (a) How to recognize Sierra Nevada yellow-legged frogs, (b) The specific measures that are being implemented to conserve the species, (c) The penalties for non-compliance, (d) If a Sierra Nevada yellow-legged frog is encountered in the work area, work activities in that area shall cease until the species has moved from the area on its own volition, or a U. S. Fish and Wildlife Service-approved biologist moves the individual in accordance with Forest Service approved procedures. If any injured or killed Sierra Nevada yellow-legged frogs are found, work activities will immediately cease in the area, and the COR or approved biologist will be notified as soon as possible to take appropriate action, which includes notification within 24 hours to the U. S. Fish and Wildlife Service.

Definitions:

Aggregation – A pocket of densely packed trees distinct from adjacent areas within a project unit. It is characteristic for trees within aggregations to have a higher percent of *phenotypic defects* due to competition for resources in close proximity to others.

Brush – all woody shrub species such as manzanita, whitethorn, deerbrush, dwarf tanoak, silktassel and ribes. For the purposes of this contract bear clover, snowberry, prostrate manzanita and squaw carpet are not considered brush.

Conifer - A cone-bearing tree with needles or leaf scales (e.g. pine, fir, cedar).

Co-dominant Tree - A tree with the crown forming the general level of the crown cover and receiving full light from above, but comparatively little from the sides.

C.O.R. - Contracting Officer's Representative.

Crop Tree (Leave Tree) - Any crop tree without excessive damage, which has a live crown ratio of greater than 30%. The top will not be dead, broken, or forked.

Damaged tree – Any crop tree with one or more of the following injuries:

1. Any true fir that has any bark cut or removed to the cambium regardless of the amount.
2. Any other tree species that has bark cut or removed to the cambium from more than 25% of the circumference of the bole.
3. Any tree that has a broken, forked, or dead top.
4. Any tree that has had 25% or more of the live limbs or branches broken or removed by any operation.
5. Defects, which include sweeps in the bole and crooked boles.

DBH - Diameter at breast height; the diameter of a tree measured at a point 4-1/2 feet above the ground on the uphill side of the tree.

Diseased Trees – Any tree greater than two feet tall with a diameter less than ten inches at DBH with one or more of the following diseases:

1. **Mistletoe:** Trees with one or more visible infections on any part of the live crown or stem.
2. **Gall Rust:** Trees with one or more visible cankers on the bole or multiple cankers on the limbs in the green crown.
3. **Chlorosis:** Trees with off color foliage, weak root system and otherwise exhibiting a general unhealthy appearance.
4. **Damage:** Tree that exhibits insect infestation, severe mechanical, animal, or other damages (i.e. trees leaning severely).
5. **White Pine Blister Rust:** On sugar pine, stem / branch cankers, yellow to red flagging of branches and tops.

Dying Tree – 50% or more of the foliage-bearing crown is recently dead and/or 75% or more of the circumference of the lower bole is girdled by wildlife.

Excess Tree - A tree that is left but should have been cut to meet standards.

Foliage – Tree/plant leaves.

Forked Trees – Trees with one or more forks in the live crown or with old dead or broken-out tops within 13 feet of the ground.

Girdled – A cut through the tree bark or branch all the way around.

Hang-up Tree – A cut tree suspended above the ground by a leave tree.

Hardwood – A tree with broad leaves rather than needles (e.g., oak, madrone, big leaf maple, elderberry, dogwood, etc.)

Insect Infested Tree – A tree pitching sap from the bark in multiple spots on the bole, frass in cracks of bark or at base of tree, dead or fading top.

Limited Operating Period (LOP) – This indicates there is a limited period in which operations may NOT occur for a particular work unit. This period is variable based on the species being protected. See the Schedule of Treatments for the definition of each LOP.

Live Crown Ratio – The percentage of the live limbs in relation to the total tree height.

Invasive plants (Noxious Weeds) - For the purpose of this contract, the following list refers to species on the Tahoe National Forest Invasive Plant List, last updated 05/01/2017, namely:

Scientific Name	Common Name
<i>Acroptilon repens</i>	Russian knapweed
<i>Aegilops triuncialis</i>	barbed goatgrass
<i>Ailanthus altissima</i>	tree-of-heaven
<i>Arundo donax</i>	giant reed
<i>Bromus tectorum</i>	cheatgrass
<i>Berteroa incana</i>	hoary alyssum
<i>Carduus nutans</i>	musk thistle
<i>Carduus pyconocephalus</i>	Italian thistle
<i>Centaurea diffusa</i>	diffuse knapweed
<i>Centaurea melitensis</i>	Maltese starthistle
<i>Centaurea solstitialis</i>	yellow starthistle
<i>Centaurea stoebe</i>	spotted knapweed
<i>Chondrilla juncea</i>	skeletonweed
<i>Cirsium arvense</i>	Canada thistle
<i>Cortaderia selloana</i>	pampasgrass
<i>Cytisus scoparius</i>	scotchbroom
<i>Dittrichia graveolens</i>	stinkwort
<i>Elymus caput-medusae</i>	medusahead
<i>Euphorbia oblongata</i>	oblong spurge

<i>Foeniculum vulgare</i>	fennel
<i>Genista monspessulana</i>	French broom
<i>Hydrilla verticillata</i>	hydrilla
<i>Isatis tinctoria</i>	dyer's woad
<i>Lepidium chalepensis</i>	lenspod whitetop
<i>Lepidium draba</i>	whitetop
<i>Lepidium latifolium</i>	tall whitetop
<i>Linaria dalmatica</i> ssp. <i>dalmatica</i>	Dalmatian toadflax
<i>Lythrum salicaria</i>	purple loosestrife
<i>Myriophyllum spicatum</i>	Eurasian water milfoil
<i>Onopordum acanthium</i>	Scotch thistle
<i>Phalaris arundinacea</i>	reed canary grass
<i>Rubus armeniacus</i>	Himalayan blackberry
<i>Spartium junceum</i>	Spanish broom
<i>Ulex europaeus</i>	gorse

Phenotypic Defects - Referring to inherited defects or deficiencies caused by local environmental conditions. Examples: Trees with flat top shapes having under 4 inches of leader growth (measure of previous year), forked or multiple tops, twisting in the limbs bole and trees with sweeping, leaning or drooping forms.

Riparian Conservation Area (RCA) – Areas adjacent to streams, ponds, and springs protected by limiting treatments in some situations. RCA's are as follows:

- Perennial streams = 300 feet each side of channel
- Seasonal (Intermittent and Ephemeral) = 150 feet each side of channel
- Streams in Inner Gorge = Top of inner gorge
- Special Aquatic Features (meadows, lakes, and springs) = 300 feet from edge of feature or riparian vegetation, whichever is greatest.

Scour Zone – The zone where moving water runs-off and removing any surface cover down to bare mineral soil.

Slash - All debris resulting from operations including stems, limbs and tops of trees, and brush.

Suppressed Tree - Any tree with less than 30% of its total height in live green crown or with less than 4 inches of current leader growth.

Thinning - The cutting of trees to meet the short term desired condition.

True fir – This classification refers to the conifer species red fir & white fir.

Appendix H – Fire Plan
US FOREST SERVICE REGION 5
FIRE PLAN FOR MANUAL SERVICE CONTRACTS
Ver. 01/22/2020

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.

Fire Tools: Shovels, pulaskis McLeods, axes and chainsaws.

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 carriages, 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.) The contractor have sufficient fire tools to supply each contractor employee in the event of a fire. No more than one in four of these tools shall be a chainsaw. All tool heads shall be secure, all handles shall not be cracked or damaged operable and sufficient fuel for three hours of operation shall be on sight.

B. 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.

- **This contract requires, does not require, Section 4C of the Fire Plan**

C. Backpack Pump: When Project Activity Level C or higher is in effect the following shall be required. Each power saw shall have a 5-gallon backpack pump or can with hand pump within 300 feet of the operating power saw when used off cleared landing areas. Each operating wood chipper shall also be equipped with a 5 gallon backpack pump or can with hand pump.

- **This contract requires, does not require, Section 4D of the Fire Plan**

D. Fire Extinguishers: When Project Activity Level C or higher is in effect the following shall be required. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating power saw and a minimum 5-pound fire extinguisher shall be equipped on any operating wood chipper. 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 or wood chipper 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 when Masticators are being used hereunder during Fire Precautionary Period. When Project Activity Level C or higher is in effect, a tank truck or trailer shall be on or immediately adjacent to each active landing, unless otherwise excepted when 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	
	55	70	85	100	179	175	171	168	164	23	23	23	23	169	166	163	159	155	152	22	22	22
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. Pressure type hose clamps should be placed between pump & live reel.
- (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.
- (5) Additional equipment for pump operation: 1 spare spark plug; 1 spark plug wrench; Necessary service accessories to maintain pump operation; 1-quart crank case oil (4-cycle engines); 1 8' crescent wrench; Hose gaskets to fit all couplings; Grease gun or grease for pumps requiring lubing; Assorted screwdrivers to fit pumper; 1 slip joint pliers; 2 starting ropes for pumper (1 on pumper & 1 extra); Necessary service accessories to maintain pump operations; Container for above items.
- (6) Pumper attachable to available, working vehicle for transporting.
- (7) Tires on trailer serviceable with proper PSI.

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:

	Name	Office Address	Office telephone
Dispatch Center	Grass Valley Emergency Command Center (GVECC)	13120 Loma Rica Dr. Grass Valley, CA 95945	911 or 530-477-5853
Nearest FS Station	YRRD Office	15924 Hwy 49 Camptonville, CA 95922	(530) 288-3231
Inspector (s)	Chris McCandless	631 Coyote Street Nevada City, CA 95959	(530) 906-2255
COR	Rita Clipperton	631 Coyote Street Nevada City, CA 95959	(530)587-3558
District Ranger	Tom Parrack	15924 Hwy 49 Camptonville, CA 95922	(530) 478-6242

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:

Title	Name	Telephone Number
Fire Supervisor		
Fire Patrolperson		

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

Welding equipment and stationary log loaders, yarders 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.

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

Tahoe NF Westside PAL Group

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:

530-478-6176

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	Project Activity Minimum Requirements and Restrictions. <i>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. 2hr fire patrol regardless of shutdown time 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. 2hr fire patrol</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: terms of variance</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>

Level	Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.
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:	TNF Eastside Group				Years Analyzed		1979 - 2008		
	A	B	C	D	Ev	E	Days		
Month	Expected Days per Month at each PAL Value						Analyzed		
May	5.6	8.4	11.8	3.9	1.4	0.0	683	31	
June	4.1	7.3	12.9	4.3	1.6	0.0	881	30	
July	0.7	2.7	13.4	8.1	5.8	0.2	896	31	
August	0.7	1.9	10.1	8.9	8.3	1.2	902	31	
September	2.0	3.0	11.6	7.1	5.6	0.5	866	30	
October	4.7	6.6	12.6	5.1	2.0	0.0	775	31	
November	10.3	9.8	9.0	0.8	0.1	0.0	607	30	
	28.0	39.6	81.4	38.2	24.8	1.9	5610		
	A	B	C	D	Ev	E			
Month	Percent of Days per Month at each PAL Value								
May	18.0	27.1	37.9	12.4	4.5	0.0	683	100	
June	13.5	24.2	42.9	14.2	5.2	0.0	881	100	
July	2.1	8.7	43.3	26.2	18.9	0.8	896	100	
August	2.2	6.0	32.5	28.6	26.8	3.9	902	100	
September	6.8	10.2	38.8	23.8	18.8	1.6	866	100	
October	15.1	21.3	40.8	16.5	6.3	0.0	775	100	
November	34.4	32.6	30.0	2.6	0.3	0.0	607	100	
							5610		

Region 5 Project Activity Level (PAL) Ev Variance Application/Agreement

Project Name: _____
 Contract Number: _____
 Contractor Name: _____
 Request #__, for period: _____
 Units/Subdivisions Affected: _____

Location of operation:	
Slope	
Aspect	
Elevation	
Fuels on site	
Fuels in surrounding area	
7 Day PAL Outlook	
Short range predictions (Red Flags)	
Fuel Moistures	
Response time of suppression resources	
Potential for ignition	
RAWS location	
Current Fire Situation:	
Draw down information	
National Readiness Level	
Contractual considerations:	
Normal Operating Season	
Frequency of recent contract fires in area	
Type of operation	
Contractors past/current performance & equipment readiness	
Other site specific mitigation or precaution (i.e. Contractors proposals)	
Social & Community Considerations:	
Proximity of high value resources	
Sensitivity of location	

Proposed Actions:

Description of Mitigation Measures:

Remarks:

Fire Management Officer Concurrence

Date

Line Officer Approval

Date

I have considered the above request and determined the specified mitigation measures or actions must be implemented to continue operations in Project Activity Level Ev. Unless extended, the approval remains in effect for ten (10) calendar days unless cancelled sooner or extended by the Forest Service for an additional ten (10) days. At the sole discretion of the Forest Service, this variance can be modified and/or cancelled at no cost to the government.

Contracting Officer

Date

Contractor Representative

Date