High Sierra Front Country Fuel Break Project
State Responsibility Area Implementation
Statement of Work and Request for Proposals
Shaver Lake, California

Background and Statement of Work: The NFF is seeking proposals for the High Sierra Front Country Fuels Break Maintenance and Expansion project on State Responsibility Area (SRA) that will complete up to roughly 405 acres within the Wildland Urban Interface (WUI). The project will include a combination of mechanical mastication, machine felling and piling, (Item 1) and hand cut hand pile (Item 2) throughout the community of Shaver Lake, California. The work will be completed entirely on private parceled land adjacent to National Forest Service Land, West of Shaver Lake, as outlined in the attached Appendix C – Maps. Currently the known acreage of the project is 85. The final total of acres for the project will be contingent on how many Rights of Entry’s (ROE’s) are signed to allow work to be completed on private land and will be amended into the contract as they are received. ROE’s are currently out for signature with landowners. 405 acres is the maximum amount of project acres for this project.

- Pre-bid tour dates will be scheduled for 3:00pm on August 8, 2023, at Vista (“Lookout”) Point to meet with Forest Service and National Forest Foundation Staff.
  (Directions: Off HWY-168 on the right, .5 miles before reaching Cressman’s General Store on the left. Coordinates: 37.059163, -119.36283)

Information Requested
If interested in this project, please provide a bid for the above statement of work for each service item by providing approach, work experience, and cost for each item. Due to the variety of operational needs listed in Appendix E – Schedule of Items and Specifications to meet desired conditions, please clearly define the operational approach and provide a list of planned equipment to accomplish items in bid submission. Please include any previous experience working on Private Land. Please include your capacity for this project and efficiency in mechanical fuel break maintenance and expansion and/or hand thinning and piling in the past, if any.

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

(a) **Description of Work** - This Request for Proposals is for restoration services related to mechanical fuel break maintenance and expansion, hand thinning and piling, including the following:

**Item 1:**
1.1 Machine felling, thinning, and piling
1.2 Mechanical mastication

**Item 2:**
2.0 Hand cut / Hand pile

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

The Contractor shall identify which efforts and materials 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 in the community of Shaver Lake, California (also known as Shaver West) and totals up to 405 acres of work. The Project includes up to roughly 50 private parcels to create a continuous fuel break, contingent on landowner participation, that can be found in Appendix C - Maps. The project area is located to the West of HWY 168, starting near Cressmen’s store, and weaving throughout the edge of the community. APPENDIX C - General Project Map includes the project area on which treatments will occur and their specified units of fuel break maintenance or expansion, as well as parcel boundaries. The elevation of the project area is approximately 3,000–4,500 feet.

(c) **Work Schedule** - Work will commence as early as project and soil and fire conditions allow in 2023 and run year-round (weather permitting) until December 2025. Anticipate potential delays each summer and fall for increase fire danger levels (as noted in Appendix E - Section I.F, Fire Protection), where limited work may be allowed. Snow cover and/or wet ground may prevent hand or machine equipment work during the winter months (November – May) depending on precipitation amount. Some areas may be worked during the winter months. Breaks in operations may be needed and requested by NFF.

All work must be completed by December 31, 2025.
Pricing Schedule

The contractor shall price work according to the schedule below. As stated above, as more ROE’s are finalized, more acres may be amended into project work. They will not exceed a total of 405 acres. Please provide bid cost for both scenarios of current and maximum project acres. Contractors can bid on one, or both service items listed:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit of Measure</th>
<th>Quantity as of 8/4/2023</th>
<th>Quantity Max</th>
<th>Unit Price $</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mechanical Felling, Thinning, Piling, Mastication</td>
<td>Acres</td>
<td>75</td>
<td>373</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Hand Cut/Hand Pile</td>
<td>Acres</td>
<td>10</td>
<td>32</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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. The NFF Representative will assist the contractor in identifying a camping area near the project site if spiking is the desired option.

(b) **Specifications** – Project work shall be accomplished in accordance with following:

- APPENDIX A – Definitions
- APPENDIX C – General Project Maps
- APPENDIX E – Schedule of Items and Specifications
- APPENDIX G – Guidelines and Operations
- APPENDIX H – Fire Plan

Contractor Qualifications

(a) **References** – Please provide three references.

(b) **Past Experience** – Please provide a brief explanation of previous work experience working on private land.

Insurance Requirements

Upon selection of the winning bid, the chosen contractor will be asked to affirm that it has and shall maintain State minimum workers' compensation insurance coverage for its employees, if any. The selected contractor shall also maintain 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 documentation evidencing such coverages.

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.

Performance Security

Chosen 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 in the amount of 5% of the amount due to contractor, not to exceed $250,000 dollars, to assure completion of the work required under this 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. As work is completed in integrated component parts, inspected, approved and, if applicable, conveyed to NFF, the Performance Security shall be released in a proportional amount, unless a lesser amount of release is necessary to maintain 5% Performance Security.

Bid Submission

Submit bids via email to svaughan@nationalforests.org by 5pm on September 1, 2023.

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 by September 8, 2023 and will prepare a separate contract document.
Point of Contact
For questions about the details of producing the bid, please contact:

Sara Vaughan
California Program Manager, Southern Sierra National Forest Foundation
530.919.8745
svaughan@nationalforests.org

Evaluation Factors and Relative Importance

Level 3 Criteria
• Price / cost
• Equipment and contractor capability
• Timing of when contractor can begin and/or finish the project
• Past performance and references

Level 2 Criteria
• Technical proposal / proposed approach to project
• 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

Equal Opportunity Provider
In accordance with Federal law the National Forest Foundation is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs, or disability.
APPENDIX A

DEFINITIONS

The High Sierra Front Country Fuel Break

State Responsibility Area Land

Maintenance & Expansion Project

Control line: area of land adjacent to and surrounding a burn pile cleared to bare mineral soil for the purpose of containing the fire.

DBH: Diameter at breast height, measured 4.5 feet above ground on the uphill side of the tree.

Dripline: The line extending from the edge of the crown straight down to the ground.

Durable surface: any surface that is not likely to erode or degrade under runoff in the amounts typically discharged from waterbreaks. Durable surfaces include rock outcrops, rocky deposits, divergent slopes, and areas of sufficient ground cover.

EEZ: Equipment Exclusion Zone. Protective buffer around certain waters, geological features, or other resources in which heavy equipment operation is prohibited.

Erosion control measures: installation of structures or materials for the purpose of preventing or mitigating erosion. Erosion control measures include waterbars, waterbreaks, straw or mulch, or other measures deemed necessary or appropriate by the RPF or contract administrator.

Leave trees: trees which are to be left untreated for the purposes of providing shade to reduce growth of surface fuels at a spacing that reduces the potential for sustained crown fire.

Snag: a standing dead tree that is 16" inches or greater in DBH and at least 20 feet tall.

STZ: Special Treatment Zone. Protective buffer around sensitive areas that carries certain restrictions.

Tree: Any conifer or hardwood generally recognized as a tree species that is 8" DBH or greater.

WLPZ: Watercourse and Lake Protection Zone. Protective buffer around watercourses, springs, or other hydrologic features that carries certain restrictions.
Shaver West Fuel Break Maintenance and Expansion Project

Treatment Type

- Fuel Break Maintenance
- Fuel Break Expansion

APPENDIX C
APPENDIX E
SCHEDULE OF SERVICE ITEMS
AND
SPECIFICATIONS

The High Sierra Front Country Fuel Break
State Responsibility Area Land
Maintenance & Expansion Project

Project Location & Description

Location: The project is located on Private Land in the community of Shaver Lake, California (also known as Shaver West) and totals up to 405 acres of work. The Project will include up to roughly 50 private parcels to create a continuous fuel break, contingent on landowner participation, that can be found in Appendix C – Maps. The project area is located to the West of HWY 168, starting near Cressmen’s store, and weaving throughout the community. APPENDIX C – General Project Maps include the project area on which treatments will occur and their specified units. The elevation of the project area is approximately 3,000-4,500 feet.

Currently the known acreage of the project is ~85 acres. With pending ROE’s project total acreages may increase, but not to exceed 405, and may be amended to the project and final contract to the successful bidder.

Description: The NFF is seeking proposals for the High Sierra Front Country Fuels Break Maintenance and Expansion project on State Responsibility Area that will complete up to 405 acres within the Wildland Urban Interface (WUI). The project will include a combination of mechanical felling, piling, and mastication (Item 1) and hand cut hand pile (Item 2) throughout the project area. The work will be completed entirely on private parceled land adjacent to National Forest Service Land, West of Shaver Lake, as outlined in the attached Appendix C – Maps. Please note the total number of acres for the project is contingent upon completed signed Right of Entries.

SCHEDULE OF SERVICE ITEMS:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit of Measure</th>
<th>Quantity Max</th>
<th>Quantity as of 8/4/2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mechanical Felling, Piling, and Mastication</td>
<td>Acres</td>
<td>373</td>
<td>85</td>
</tr>
<tr>
<td>2</td>
<td>Hand Cut/Hand Pile</td>
<td>Acres</td>
<td>32</td>
<td>-</td>
</tr>
</tbody>
</table>

Background:
A fuel break is generally a wide strip of land on which vegetation has been modified to regulate fire behavior. The intent of a fuel break is to reduce fire line intensity, improve access for firefighters, and enhance fire line production rates. Modified fuel loading within fuel breaks also provides opportunities for indirect fire line construction through backfire or burn-out operations to consume fuel ahead of an uncontrolled fire. By
including the fuel break into state responsibility area on private land, it not only enhances fire resilience, but increases community resilience to wildfire.

Projects are designed to take maximum advantage of roads, topographic features, and vegetation types. The construction of a fuel break is intended to accomplish the following:

1. Provide a location for fire suppression tactical advantage by aircraft and or ground operations.
2. Slow fire spread and reduce the potential for sustained crown fire and provide overstory shading to reduce the growth of surface fuels.
3. Allow for the timely deployment of tactical firefighting forces to suppress oncoming wildland fires.
4. Allow for the efficient construction of an emergency fire line when needed.

WORK SPECIFICATIONS AND STANDARDS

I. General Provisions for Heavy Equipment
A. Heavy equipment shall not operate:
   a. In any WLPZ, STZ, or EEZ;
      i. Excavators, heel-boom loaders, feller bunchers, or any equipment with a boom may reach into the above restricted areas.
         1. If using this exception, material may not be dragged out of the restricted area.
   b. On unstable areas, as identified by the RPF
   c. On any paved or chip-sealed surface, with the exception that heavy equipment with rubber tracks or excavators with street pads may operate on such surfaces;
      i. The contractor shall be responsible for damage to surfaced roads resulting from heavy equipment use.
      ii. The contractor shall be responsible for watering and grading dirt or rocked roads that have been impacted by the contractor's actions. Such roads shall be returned to their original condition.
   d. On saturated soils:
      “Saturated Soil Conditions means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during Timber Operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.”
   e. Outside of the project boundary;
   f. In any other area identified for heavy equipment exclusion by the RPF.
B. Leaking equipment shall not be allowed into the project area. If, during the course of operations, a leak is discovered, the machine shall stop and the leak shall be contained and fixed immediately. Operations shall not resume until the leak has been fixed. The contractor shall remove and dispose of any contaminated soil.
C. Care shall be taken to avoid damage to leave trees. It is acceptable for some areas to remain untreated if treatment is likely to result in excessive damage to leave trees but will be determined by the RPF.

D. Erosion Control
   a. On linear areas of bare soil that have been exposed by operations, and that may concentrate and redirect runoff, waterbars or other appropriate erosion control structures (waterbreaks) shall be installed to the following specifications:
      i. The spacing of waterbreaks shall comply with the standards specified in the following table. The Erosion Hazard Rating for the project area is Moderate.
      
<table>
<thead>
<tr>
<th>EHR</th>
<th>Grade (%)</th>
<th>Spacing (feet)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>&lt;10</td>
<td>11-25</td>
</tr>
<tr>
<td>Extreme</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>High</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>Moderate</td>
<td>200</td>
<td>150</td>
</tr>
<tr>
<td>Low</td>
<td>300</td>
<td>200</td>
</tr>
</tbody>
</table>

   ii. Waterbars shall be cut at least 6" deep and the berm shall be at least 6" high, at an angle of approximately 35°.
   iii. Waterbreaks shall be constructed such that water will discharge onto durable surfaces that will disperse runoff or dissipate the energy of the runoff. If a conflict arises between waterbreak spacing guidelines and discharge placement, discharge placement shall take priority.
   iv. Any waterbreak that will not function appropriately, as determined by the contract administrator, shall be reconstructed at no additional cost to NFF.

   b. Additional erosion control measures may be implemented as determined by the RPF or NFF contract administrator.
   c. Erosion control measures shall be implemented between October 15th and May 1st, prior to sunset if the National Weather Service forecast predicts a 30% or greater chance of rain within the next 24 hours.

E. Heavy equipment operation shall cease if the activity generates a significant amount of dust that impedes visibility or air quality outside of the project area.

F. Fire Protection
   a. The contractor shall provide and maintain fire suppression related tools and devices.
   b. When fuels and weather conditions are such that continued operations pose an elevated risk of starting a fire, operations may be suspended at the discretion of the NFF contract administrator.

II. Mastication
A. Equipment
   a. Any machine that falls under the general category of "masticators" and is capable of completing the work as specified is acceptable, including but not limited to skid-steer masticators, boom-mounted masticating heads, and tracked machines.
   b. Boom-mounted masticating heads may be used to remove trees where such application is feasible, provided the end result meets the minimum standard described under "Mechanical Falling" below.

B. Standards
   a. Mulch residue shall be no more than 4" deep.
   b. Minimum dimensions of residual material shall be as follows:
i. No less than 100% of residual material shall be less than 36” in any dimension.
ii. No less than 90% of residual material shall be less than 18” in any dimension.
iii. No less than 60% of residual material shall be less than 12” in any dimension.
iv. No less than 40% of residual material shall be less than 8” in any dimension.
c. Brush stobs shall be less than 2” in height.

C. Provisions
   a. Mastication shall be suspended during red flag warnings or any other time where the operation of the machine presents an elevated risk of starting a fire.

III. General Provisions for Piling on Private Land
   A. 90% of all slash and organic debris exceeding 24” in length and 3” in diameter shall be piled for burning.
   B. 90% of live or dead brush shall be cut or uprooted, crushed, and piled for burning.
   C. 90% of trees smaller than 8” DBH shall be cut or uprooted and piled for burning.
   D. Material longer than will safely or prudently fit into a pile shall be cut to such a length that it may be piled and burned safely.
   E. Piles shall be constructed in such a manner as to avoid damaging leave trees during burning, and in such a location that the nearest edge of the pile is no less than 15’ from the dripline of the nearest leave tree, and no less than 15’ from the nearest drainage, WLPZ, STZ, or project boundary, and no less than 30’ from any snag.
      a. Any pile that will result in damage to leave trees upon burning, as judged by the contract administrator, shall be dismantled and masticated or chipped.
   F. Piles shall be 90% free of soil. Piles that contain excessive soil, as determined by the contract administrator, shall be dismantled and re-piled. Excess soil shall be dispersed over the area adjacent to the pile.
   G. Piles shall be approximately equal in length and width, and the height shall be at least half of the diameter.
   H. Material that hangs out of the edge of the pile greater than 6’ shall be cut off and added to the pile.
   I. Piles shall be constructed such that logs or any other material will not roll downhill during pile construction and pile burning.
   J. Control lines shall be established around each pile. Control lines shall be no less than 6’ wide and cleared down to bare mineral soil.
   K. The contractor shall create the smallest number of piles while maintaining compliance with the provisions described above.
   L. Reasonable care shall be taken to retain as much ground cover as feasible for the purpose of preventing erosion.

IV. Mechanical Piling
   A. Equipment
      a. Bladed equipment that will be used to push material into a pile shall be equipped with a brush rake, the teeth of which shall extend no less than 6 inches below the lowest portion of the blade.
      b. Excavators shall be equipped with a bucket (with teeth) and a thumb, or a brush grapple.
      c. Skid steers, excavators, bulldozers, heel-boom loaders, or any other machine capable of completing the work to the specifications described under “General Provisions for Piling” will be acceptable for mechanical piling.
V. **General Provisions for Falling**

A. Trees that are 8” DBH or smaller and dead or dying trees are targeted for removal.

B. Where dying trees are targeted for removal, they shall be marked by a Registered Professional Forester prior to the start of operations in that area.

   a. The RPF and Contractor shall have an on-site meeting to review the mark prior to operations.

C. Stumps shall be less than 6” high measured on the uphill side.

   a. Stump heights between 6” and 8” are acceptable where conditions preclude a stump height of less than 6”. In no case shall more than 10% of stumps be 6” or taller.

D. No tree shall be felled into any protective zone, including, but not limited to, Watercourse and Lake Protection Zones, Special Treatment Zones, any watercourse channel, or felled in such a manner as to endanger property. Trees shall be felled in such a manner as to minimize damage to leave trees. Zones will be determined by the RPF.

E. Any tree that has "hung up" shall be immediately addressed and made safe by the contractor. “Hung up” means that, after the cut, the bole of the tree is not on the ground. If there is any delay in mitigating a hang-up, the contractor shall notify all crews and personnel working in the area and flag off the area with their choice of color flagging which will be communicated and known to the contractor.

VI. **Mechanical Falling**

A. In areas where heavy equipment is allowed to operate, feller-bunchers or other machines capable of falling trees to the specifications above may be used.

B. Mechanical falling shall be suspended during red flag warnings or any other time where the operation of the machine presents an elevated risk of starting a fire.
APPENDIX G

Operation Guidelines for State Land

Front Country Fuel Break Maintenance and Expansion
State Responsibility Area

Public Resources Code, Division 4, Chapter 6.

4428. Use of hydrocarbon powered engines near forest, brush or grass covered lands without maintaining firefighting tools.

No person, except any member of an emergency crew or except the driver or owner of any service vehicle owned or operated by or for, or operated under contract with, a publicly or privately owned utility, which is used in the construction, operation, removal, or repair of the property or facilities of such utility when engaged in emergency operations, shall use or operate any vehicle, machine, tool or equipment powered by an internal combustion engine operated on hydrocarbon fuels, in any industrial operation located on or near any forest, brush, or grass-covered land between April 1 and December 1 of any year, or at any other time when ground litter and vegetation will sustain combustion permitting the spread of fire, without providing and maintaining, for firefighting purposes only, suitable and serviceable tools in the amounts, manner and location prescribed in this section.

(a) On any such operation a sealed box of tools shall be located, within the operating area, at a point accessible in the event of fire. This fire toolbox shall contain: one backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and a sufficient number of shovels so that each employee at the operation can be equipped to fight fire.

(b) One or more serviceable chainsaws of three and one-half or more horsepower with a cutting bar 20 inches in length or longer shall be immediately available within the operating area, or, in the alternative, a full set of timber-felling tools shall be located in the fire toolbox, including one crosscut falling saw six feet in length, one double-bit ax with a 36-inch handle, one sledge hammer or maul with a head weight of six, or more, pounds and handle length of 32 inches, or more, and not less than two falling wedges.

(c) Each rail speeder and passenger vehicle, used on such operation shall be equipped with one shovel and one ax, and any other vehicle used on the operation shall be equipped with one shovel. Each tractor used in such operation shall be equipped with one shovel.

(d) As used in this section:

(1) "Vehicle" means a device by which any person or property may be propelled, moved, or drawn over any land surface, excepting a device moved by human power or used exclusively upon stationary rails or tracks.

(2) "Passenger vehicle" means a vehicle which is self-propelled and which is designed for carrying not more than 10 persons including the driver, and which is used or maintained for the transportation of persons, but does not include any motor truck or truck tractor.
PROTECTION OF FOREST, RANGE AND FORAGE LANDS; PROHIBITED ACTIVITIES

4429. Camps or local headquarters, firefighting equipment.

During any time of the year when burning permits are required in an area pursuant to this article, at any camp maintained in such area for the residence of employees, or at any local headquarters in such area of any industrial, agricultural, or other operations on or near any forest-covered land or brush-covered land, there shall be provided and maintained at all times, in a specific location, for firefighting purposes only, a sufficient supply of serviceable tools to equip 50 percent of the able-bodied, personnel, resident of such camp, or working out of such headquarters, for fighting fires. Among these tools shall be included shovels, axes, saws, backpack pumps, and scraping tools. With such tools there shall also be one serviceable headlight adaptable for attachment to at least one-half of the tractor-bulldozers used on the operation, and a sufficient number of canteens and flashlights to equip a third of the able-bodied personnel.

4431. Gasoline powered saws, etc.; firefighting equipment.

During any time of the year when burning permits are required in an area pursuant to this article, no person shall use or operate or cause to be operated in the area any portable saw, auger, drill, tamper, or other portable tool powered by a gasoline-fueled internal combustion engine on or near any forest-covered land, brush-covered land, or grass-covered land, within 25 feet of any flammable material, without providing and maintaining at the immediate locations of use or operation of the saw or tool, for firefighting purposes one serviceable round point shovel, with an overall length of not less than 46 inches, or one serviceable fire extinguisher. The Director of Forestry and Fire Protection shall by administrative regulation specify the type and size of fire extinguisher necessary to provide at least minimum assurance of controlling fire caused by use of portable power tools under various climatic and fuel conditions.

The required fire tools shall at no time be farther from the point of operation of the power saw or tool than 25 feet with unrestricted access for the operator from the point of operation.

4442. Spark arresters or fire prevention measures; requirement; exemptions.

(a) Except as otherwise provided in this section, no person shall use, operate, or allow to be used or operated, any internal combustion engine which uses hydrocarbon fuels on any forest-covered land, brush-covered land, or grass-covered land unless the engine is equipped with a spark arrester, as defined in subdivision (c), maintained in effective working order or the engine is constructed, equipped, and maintained for the prevention of fire pursuant to Section 4443.

(b) Spark arresters affixed to the exhaust system of engines or vehicles subject to this section shall not be placed or mounted in such a manner as to allow flames or heat from the exhaust system to ignite any flammable material.
(c) A spark arrester is a device constructed of nonflammable materials specifically for the purpose of removing and retaining carbon and other flammable particles over 0.0232 of an inch in size from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the United States Forest Service.

(d) Engines used to provide motive power for trucks, truck tractors, buses, and passenger vehicles, except motorcycles, are not subject to this section if the exhaust system is equipped with a muffler as defined in the Vehicle Code.

(e) Turbocharged engines are not subject to this section if all exhausted gases pass through the rotating turbine wheel, there is no exhaust bypass to the atmosphere, and the turbocharger is in effective mechanical condition.

(f) Motor vehicles when being operated in an organized racing or competitive event upon a closed course are not subject to this section if the event is conducted under the auspices of a recognized sanctioning body and by permit issued by the fire protection authority having jurisdiction.