GREAT BASIN INSTITUTE
REQUEST FOR BID (RFB) ELDO - SA - 05

SCOTTIAGO FOREST HEALTH AND FUELS REDUCTION PROJECT

Contact Person:

Jerry Keir
Phone Number: 775.846.9310
jkeir@gbinstitute.org

RESPONSE DUE:

June 27th, 2023 at 5pm

Email Bid response:

Subject Title: Scottiago Forest Health and Fuels Reduction Project

To: jkeir@gbinstitute.org

GREAT BASIN INSTITUTE
RFB ELDO SA-05
for
SCOTTIAGO FOREST HEALTH AND FUELS REDUCTION PROJECT
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I. STATEMENT OF WORK

A.BIDDER QUALIFICATIONS

1. Bidder Minimum Qualifications:
   a. Bidder, Bidder's principal, or Bidder's staff shall have been regularly engaged in the business of logging, chipping/grinding or mechanical thinning within forest environments for at least 3 years.

   b. Bidder shall possess all permits, licenses, and professional credentials necessary to perform services as specified under this RFB.

B. SCOPE

The following specifications, terms, and conditions describe services requested by Great Basin Institute (GBI). GBI intends to award a contract to the Bidder(s) who best meets the requirements based on the merits of Bidder's technical proposal, past performance, and best value. The term of the contract shall begin the date the contract is executed by GBI and terminates on **December 31, 2024.**

The 1,125 acre Scottiago Forest Health and Fuels Reduction Project is located on the Amador Ranger District of the Eldorado National Forest (ENF). The purpose of the Scottiago Project is to reduce the threat of insect infestations, improve forest health and lessen catastrophic wildfire risk in the project area. Treatments include non-commercial vegetation management, primarily by mastication and hand thinning and piling of hand thinned units, within areas designated as high risk to current or future insect and disease attack that would result in increased tree mortality. The GBI is implementing this project under a Supplemental Project Agreement pursuant to a Master Stewardship Agreement with the US Forest Service.

In order to improve forest resilience, the Scottiago Project will reduce stand density, competing vegetation, and treat fuels on approximately 1,125 acres of National Forest System lands. Activities include hand felling (94 ac) mastication (983 ac) and optional hand thinning (estimated 48 ac), Mastication will target vegetation and undesirable non-crop trees using an excavator type machine or similar, equipped with a masticating head and or an ASV type tractor with masticating head within treatment units to the extent of equipment operability. Hand thinning and piling will occur mostly on slopes greater than 30% and within streamside mechanical exclusion areas. Optional hand thinning units are located within botanical sensitive lava cap areas.

Specifications and units are described in Exhibit D: Schedule of Items & Specifications. Exhibit H: A Project Map is provided separately to this RFB.

II.CALENDAR OF EVENTS

EVENTS	DATE/LOCATION
RFB - Bid Tour	May 3rd, 2023
Response/Proposal Due	June 27th, 2023 by 5:00pm
Pre-work Conference	Within 10 days prior to operations starting
Anticipated Contract Date	To be determined
Contract Termination Date	December 31, 2024

For process flexibility, note that all CALENDAR dates are subject to change.

A. SITE VISIT

Bidder is strongly encouraged to perform an independent site visit to the units to be treated in order to view the project setting and understand the site conditions and other factors potentially relevant to responding to this RFB.

B. PRE-WORK CONFERENCE

Bidder agrees that if awarded a contract, Bidder and its principals will attend a pre-work conference with GBI and U.S. Forest Service prior to starting operations to discuss job requirements. The date will be determined after award of the RFB.

III. GBI PROCEDURES, TERMS, AND CONDITIONS

A. RFB ACCEPTANCE AND AWARD

1. RFB responses will be evaluated by a committee comprised of employees of the Institute, USFS, and consulting personnel.
2. The committee will recommend award to the Bidder who, in its opinion, is best qualified to perform the work described in this RFB. Award may not necessarily be made to the Bidder with the lowest bid.
3. The GBI reserves the right to award to a single or to multiple General Service Providers, dependent upon what is in the best interest of the GBI.
4. The GBI has the right to decline to award this contract or any part of it for any reason.
5. Any specifications, terms, or conditions issued by the GBI, or those included in the Bidder's submission, in relation to this RFB, may be incorporated into any contract that may be awarded as a result of this RFB.
6. Award of contract. The right is reserved to reject any or all proposals, or to accept one part of a proposal and reject the other, unless the bidder stipulates to the contrary, and to waive technical defects, as the interest of the GBI may require. Award will be made by the GBI Project Administrator upon US Forest Service concurrence.

B. EVALUATION CRITERIA/SELECTION COMMITTEE

All bids to be evaluated by the Selection Committee (SC). The SC will be composed of GBI staff, USFS, and/or other individuals who have expertise or experience in this type of procurement. The SC will select/recommend a Bidder in accordance with the evaluation criteria set forth in this RFB. The evaluation of the RFB responses shall be within the sole judgment and discretion of the SC.

C. PRICING

1. Prices quoted shall be firm for the term of any contract that may be awarded pursuant to this RFB.
2. All prices quoted shall be in United States dollars.
3. Bidders are advised that in the evaluation of cost, if applicable, it will be assumed that the unit price quoted is correct in the case of a discrepancy between the unit price and extended price.

D. PROTESTS

Protests must be in writing and received no later than seven (7) business days after the GBI issues the Notice of Intent to Award, which is sent by electronic mail to all entities who submitted a proposal. GBI will reject the protest as untimely if it is received after this specified time frame. Protests will be accepted from Bidders or potential Bidders only. If the protest is mailed and not received by the GBI, the protesting party bears the burden of proof to submit documentation (e.g., certified mail receipt) that the protest was timely sent to be otherwise received by GBI within the RFB protest period.

Bid protests must contain a detailed and complete written statement describing the reason(s) for protest. The protest must include the RFB title and number, the name of the firm protesting, and include a name, telephone number, email address and physical address of the protestor. If a firm is representing the protestor, they shall include their contact information in addition to that of the protesting firm.

Protests must be mailed or hand delivered to **Jerry Keir, GBI Forestry Program Administrator, 16750 Mount Rose Highway, Reno, NV 89511**. Facsimile and electronic mail protests are sent to **Jerry Keir at jkeir@gbinstitute.org** and must be followed by a mailed or hand delivered identical copy of the protest and must arrive within the seven-day time limit.

The GBI Chief Executive Officer (CEO), in consultation with the USFS and GBI Board of Directors, will investigate the protest and if determined to be valid the CEO may reject and re-bid or not re-bid the work, or recommend award to

the remaining best qualified Bidder. Affected Bidders will be notified by electronic mail within 7 business days of the action taken. GBI may transmit copies of the protest and any attached documentation to all other parties who may be affected by the outcome of the protest. The decision of GBI as to the validity of any protest is final. GBI's final decision will be transmitted to all affected parties in a timely manner.

E. INVOICING

1. Payment shall be made within 45 days following receipt of a correct invoice and upon complete satisfactory receipt of product and/or performance of services.
2. Invoices, if applicable, shall be submitted monthly during project operations.
3. GBI shall notify General Service Provider of any invoice adjustments required.
4. Invoices shall contain, at a minimum, GBI RFB number, invoice number, remit to address, and itemized services description.
5. The GBI will pay General Service Provider in an amount not to exceed the negotiated amount(s) which will be referenced in the agreement signed by both parties.
6. Prior to making any payment, the GBI may require Contractor to furnish lien releases conforming to the requirements of California Civil Code section 8120, et seq., receipts or other evidence of payment from all persons performing work and supplying material to Contractor.
7. Contractor shall be required to make cash deposits for included timber and required deposits in advance of cutting and within 45 days of invoicing by GBI. These deposits shall be in cash in a form specified by GBI. Advanced deposits will be in such amounts as to maintain an unobligated balance sufficient enough to cover the value of timber to be cut. Contractor and GBI will agree on a systematic approach to provide sufficient advanced deposits.

IV. RFB RESPONSE SUBMITTAL INSTRUCTIONS AND INFORMATION

A. GBI CONTACTS

All contact during the competitive process is to be through the contact person listed on the first page of this RFB.

B. SUBMITTAL OF RFB RESPONSE

1. Late responses will not be accepted.
2. RFB responses must be received at the specified address by 5:00 p.m. on the due date specified in the Calendar of Events. Any RFB response received after that time or date cannot be considered and will be returned to the Bidder.
4. RFB responses are to be addressed/delivered as follows:

   Emailed : **jkeir@gbinstitute.org**

   Mailed: **Great Basin Institute**
   Att: Jerry Keir
   16750 Mt Rose Highway
   Reno, NV 89511
5. Bidders are to submit one (1) RFB response (Exhibit A – RFB Response Packet including all additional documentation stated in the "Required Documentation and Submittals" section of Exhibit A). Response Packet, and all additional documentation stated in the "Required Documentation and Submittals" section of Exhibit A.
6. All costs required for the preparation and submission of an RFB response shall be borne by the Bidder.
7. Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), GBI will be entitled to civil remedies set forth in the California False Claim Act.
8. The RFB response shall remain open to acceptance and is irrevocable for a period of 90 days, unless otherwise specified in the RFB documents.
9. It is understood that GBI reserves the right to reject any or all RFB responses.

C. RESPONSE FORMAT

1. Bidders shall not modify any part of Exhibits A, B, or C, or qualify their RFB responses. Bidders shall not submit to GBI a re-typed or otherwise re-created version of these documents or any other GBI-provided document.
2. RFB responses, in whole or in part, are NOT to be marked confidential or proprietary. The GBI may refuse to consider any RFB response or part thereof so marked. RFB responses submitted in response to this RFB may be subject to public disclosure. The GBI shall not be liable in any way for disclosure of any such records.

EXHIBIT A- RFB RESPONSE PACKET

RFB ELDO SA - 05: SCOTTIAGO FOREST HEALTH AND FUELS REDUCTION PROJECT

To: *Great Basin Institute*

From (Name and Official Title of Bidder): _____

Preferred electronic mail (email) address: _____

RFB RESPONSE PACKET GUIDELINES

- As described in section IV- RFB response submittal instructions and information, bidders are to submit one (1) RFB response containing the following, in their entirety:
    - Exhibit A – RFB response packet, including all additional required documentation as described in Exhibit A- required documentation and submittals.
- Bidders that do not comply with the requirements, and/or submit an incomplete RFB response may be subject to disqualification and their RFB response rejected in total.
- If bidders are making any clarifications and/or amendments, or taking exception to any part of this RFB, these must be submitted in the exceptions, clarifications, and amendments section of this Exhibit A – RFB response packet. GBI, at its sole discretion, may accept amendments/exceptions, or may deem them to be unacceptable, thereby rendering the RFB response disqualified.

BIDDER INFORMATION AND ACCEPTANCE

1. The undersigned declares that all RFB documents, including, without limitation, the RFB, Addenda, and Exhibits, have been read and that the terms, conditions, certifications, and requirements are agreed to.
2. The undersigned is authorized to offer, and agrees to furnish, the articles and services specified in accordance with the RFB documents of RFB ELDO SA-03.
3. The undersigned acknowledges acceptance of all addenda related to this RFB. List Addenda for this RFB on the line below:

Addendum #	Date

4. The undersigned hereby certifies to the GBI that all representations, certifications, and statements made by the Bidder, as set forth in this RFB Response Packet and attachments, are true and correct and are made under penalty of perjury pursuant to the laws of California.
5. The undersigned acknowledges that the Bidder is, and will be, in good standing in the State of California, with all the necessary licenses, permits, certifications, approvals, and authorizations necessary to perform all obligations in connection with this RFB and associated RFB documents.
6. It is the responsibility of each Bidder to be familiar with all of the specifications, terms, and conditions, and the site condition. By the submission of an RFB response, the Bidder certifies that if awarded a contract it will make no claim against the GBI based upon ignorance of conditions or misunderstanding of the specifications.
7. Patent indemnity: General or Professional Service Providers who do business with the GBI shall hold the GBI, its Directors, officers, agents, and employees harmless from liability of any nature or kind, including cost and expenses, for infringement or use of any patent, copyright or other proprietary right, secret process, patented or unpatented invention, article, or appliance furnished or used in connection with the contract or purchase order.
8. Insurance certificates are not required at the time of submission. However, by signing Exhibit A – RFB Response Packet, the Bidder agrees to meet the minimum insurance requirements stated in the RFB. This documentation must be provided to the GBI prior to execution of an agreement by the GBI and shall include an insurance certificate which meets the minimum insurance requirements, as stated in the RFB.
9. The undersigned Bidder hereby submits this RFB response and binds itself to the GBI. The RFB, subsequent Addenda, Bidders Response Packet, and any attachments, shall be used to form the basis of a Contract, which once executed shall take precedence.

Official Name of Bidder (As appears on Bidder's corporate seal and invoice):_____
Street Address Line 1: _____
Street Address Line 2:_____
City:_____State:____ Zip Code: _____
Web page: _____

Type of Entity / Organizational Structure (check one):

☐ Corporation
☐ Limited Liability Partnership
☐ Limited Liability Corporation
☐ Other: _____
☐ Joint Venture
☐ Partnership
☐ Non-Profit

Jurisdiction of Organization Structure: _____
Date of Organization Structure: _____
Federal Tax Identification Number: _____

Primary Contact Information:
Name / Title: _____
Telephone Number:____ _____ Fax Number: _____
E-mail Address: _____
Street Address Line 1: _____
City:_____State:_____Zip Code: : _____

SIGNATURE: _____

Name and Title of Signer (printed): _____

Dated this_____day of_____20___

Proposal Bid Sheet

Cost shall be submitted on this Bid Form as is. No alterations of any kind to the Proposal Form(s) are permitted. RFB responses that do not comply may be subject to rejection in total. The cost quoted below shall be the cost the GBI will pay for the term of any contract that is a result of this RFB process. Acreage estimates and are not to be construed as guarantees. No minimum or maximum is guaranteed or implied. There are ***no*** required deposits for road maintenance and slash disposal fees.

SCHEDULE OF ITEMS

Item	Description	Total Units	Unit of measure	Unit Price $	Total $
1.a	Mastication	55 (1- 56)	acres		$
1.b	Hand thin/Pile	10 (61-72)	acres		$
1.c	Hand thin/Pile (optional)	48 acres*	acres		$
				TOTAL	$

Mastication Units

1: 12 acres
2: 48 acres
3: 4 acres
4: 22 acres
5: 1 acre
6: 4 acres
7: 3 acres
8: 2 acres
9: 2 acres
10: 5 acres
11: 13 acres
12: 9 acres
13: 7 acres
14: 41 acres
15: 16 acres
16: 11 acres
17: 5 acres
18: 7 acres
19: 11 acres
20: 7 acres
21: 13 acres
22: 37 acres
23: 10 acres
24: 15 acres
25: 26 acres
26: 9 acres
27: 17 acres
28: 12 acres
29: 2 acres
30: 19 acres
31: 22 acres
32: 22 acres
33: 6 acres
34: 2 acres
35: 5 acres
36: 10 acres
37: 2 acres
38: 7 acres
39: 27 acres
40: 5 acres
50: 57 acres
51: 35 acres
52: 94 acres
53: 7 acres
55: 44 acres
56: 258 acres
Total: 983 acres

Hand thin Units

61: 19 acres
62: 3 acres
63: 5 acres
64: 5 acres
65: 13 acres
66: 9 acres
67: 1 acre
70: 5 acres
71: 21 acres
72: 13 acres
Total: 94 acres

*Optional Hand thin units are identified on the Sale Area Map with solid pink and black hash marking. Exact units to be hand thinned and total acres will be determined by Botanists in 2024.

EXCEPTIONS, CLARIFICATIONS, AMENDMENTS
RFB ELDO SA - 05: Scottiago Forest Health and Fuels Reduction Project

Bidder's Name:_____

List below requests for clarifications, exceptions, and amendments, if any, to the RFB and associated RFB documents, and submit with your RFB response. The GBI is under no obligation to accept any exceptions and such exceptions may be a basis for RFB response disqualification.

Reference to:			**Description**	
Page No.	Section		Item No.	

EXHIBIT B- Insurance Requirements

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Insurance certificates are not required at the time of submission; however, by signing Exhibit A – RFB Response Packet, the Bidder agrees to meet the minimum insurance requirements stated in the RFB. This documentation must be provided to the GBI, prior to award.

The following are the minimum insurance limits, required by the GBI, to be held by the GENERAL SERVICE PROVIDER performing on this RFB.

INDEMNIFICATION AND INSURANCE

A. Indemnification
GENERAL OR PROFESSIONAL SERVICE PROVIDER expressly agrees to defend, indemnify, and hold harmless the GBI and its Directors, officers, agents, and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from GENERAL OR PROFESSIONAL SERVICE PROVIDER's, its associates', employees', Subcontractors', or other agents' negligent acts, errors or omissions, or willful misconduct, in the operation and/or performance under this Agreement.

B. Insurance Requirements
GENERAL OR PROFESSIONAL SERVICE PROVIDER shall take out and maintain during the life of the Project all the insurance required in this section, and if requested shall submit certificates for review and approval by the GBI. The Notice to Proceed shall not be issued, and GENERAL OR PROFESSIONAL SERVICE PROVIDER shall not commence work until such insurance has been approved by the GBI. The certificates shall be on forms approved by the GBI. Acceptance of the certificates shall not relieve GENERAL OR PROFESSIONAL SERVICE PROVIDER of any of the insurance requirements, nor decrease the liability of GENERAL OR PROFESSIONAL SERVICE PROVIDER. The GBI reserves the right to require GENERAL OR PROFESSIONAL SERVICE PROVIDER to provide insurance policies for review by the GBI.

C. Workers Compensation Insurance
GENERAL OR PROFESSIONAL SERVICE PROVIDER shall take out and maintain during the life of the Workers Compensation Insurance for all of its employees on the project. In lieu of evidence of Workers Compensation Insurance, the GBI will accept a Self-Insured Certificate from the State of California. GENERAL OR PROFESSIONAL SERVICE PROVIDER shall require any Subcontractor to provide it with evidence of Workers Compensation Insurance.

D. Commercial General Liability Insurance
GENERAL OR PROFESSIONAL SERVICE PROVIDER shall take out and maintain during the life of the Contract Automobile and General Liability Insurance that provides protection from claims which may arise from operations or performance under this Agreement. If GENERAL OR PROFESSIONAL SERVICE PROVIDER elects to self-insure (self-fund) any liability exposure during the contract period above $50,000, GENERAL OR PROFESSIONAL SERVICE PROVIDER is required to notify the GBI immediately. Any request to self-insure must first be approved by the GBI before the changed terms are accepted. GENERAL OR PROFESSIONAL SERVICE PROVIDER shall require any Subcontractor or Professional Service Provider to provide evidence of liability insurance coverages.

The amounts of insurance shall be not less than the following:

$1,000,000/Occurrence, Bodily Injury, Property Damage -- Automobile.
$1,000,000/Occurrence, Bodily Injury, Property Damage -- General Liability.
The following coverages or endorsements must be included in the policy(ies):

1. The GBI, its Directors, officers, and employees are Additional Insureds in the policy(ies) as to the work being performed under the contract.
2. The coverage is *Primary and non-contributory* to any other applicable insurance carried by the GBI.
3. The policy(ies) covers *contractual liability.*
4. The policy(ies) is written on an *occurrence* basis.
5. The policy(ies) covers the GBI's Property in Consultant's care, custody, and control.
6. The policy(ies) covers *personal injury* (libel, slander, and wrongful entry and eviction) liability.

7. The policy(ies) covers explosion, collapse, and underground hazards, fire suppression expense, property damage to forest land due to fire, and property damage to non-owned automobiles and equipment due to fire.
8. The policy(ies) covers *products and completed operations.*
9. The policy(ies) covers the use of *owned, non-owned,* and hired automobiles.
10. The policy(ies) and/or a separate pollution liability policy(ies) shall cover pollution liability for claims related to the release or the threatened release of pollutants into the environment arising out of or resulting from Consultant's performance under this agreement.
11. The policy(ies) will not be canceled nor the above coverages/endorsements reduced without 30 days written notice to GBI at the address above.

EXHIBIT C- General Requirements
GENERAL SERVICES AGREEMENT
RFB ELDO SA - 05: Scottiago Forest Health and Fuels Reduction Project

1. DEFINITIONS

The following terms shall be given the meaning shown, unless context requires otherwise or a unique meaning is otherwise specified.

a. "GBI" means the Great Basin Institute, its employees acting within the scope of their authority, and its authorized representatives.

b. **"Change Order"** A Change Order is a written instrument used for modifying the contract with regards to the scope of Work, contract sum, and/or Contract Time. An approved Change Order is a Change Order signed by the GBI. An executed Change Order is a Change Order signed by both the GBI and the Contractor.

c. **"Contract"** means the agreement between the GBI and Contractor as memorialized in the Contract Document.

d. **"Business Entity"** means any individual, business, partnership, joint venture, corporation, sole proprietorship, or other private legal entity recognized by statute.

e. **"Buyer"** means the GBI's authorized contracting official.

f. **"Contract Documents"** comprise the entire agreement between the GBI and the Contractor and can include the GBI's contract form if used, any purchase order, RFB RFQ or Contractor response packet, and any addenda, appendices and GBI approved changes or amendments. The Contract Documents are intended to be complementary and include all items necessary for the Contractor proper execution and completion of the Work. Any part of the Work not shown or mentioned in the Contract Documents that is reasonably implied, or is necessary or usual for proper performance of the Work, shall be provided by the Contractor at its expense.

g. **"Contractor"** means the Business Entity with whom the GBI enters into a contractual agreement. Contractor shall be synonymous with "supplier", "vendor", "consultant" or other similar term.

h. **"Day"** unless otherwise specified, days are calendar days, measured from midnight to the next midnight.

i. **"Goods"** means off the shelf software and all types of tangible personal property, including but not limited to materials, supplies, and equipment.

j. **"Project Manager"** shall be the GBI designated individual responsible for administering and interpreting the terms and conditions of the Contract Documents, for matters relating to the Contractor performance under the Contract with the GBI, and for liaison and coordination between the GBI and Contractor.

k. **"Work"** means all labor, tasks, materials, supplies, and equipment required to properly fulfill the Contractor obligations as required in the Contract Documents.

l. **"Work Day"** Unless otherwise specified, work day includes all days of the year except Saturdays, Sundays and GBI holidays.

M. **"Stewardship Project Area (SPA)"** comprises all contracted units.

2. CONTRACTOR FINANCIAL OBLIGATION

The Contractor shall promptly make payments to all persons supplying labor and materials used in the execution of the contract.

3. MATERIAL AND WORKMANSHIP

a. All work shall be done and completed in a thorough, workmanlike manner, notwithstanding any omission from these specifications or the drawings, and it shall be the duty of the Contractor to call attention to apparent errors or omissions and request instructions before proceeding with the work. The Project Manager may, by appropriate instructions, correct errors and omissions, which instructions shall be binding upon the Contractor as though contained in the original Contract Documents.

b. All work must be satisfactory to the Project Manager. Work not in accordance with the Contract Documents, in the opinion of the Project Manager, shall be made to conform.

4. DEFECTIVE WORK

The Contractor shall replace at its own expense any part of the work that has been improperly executed, as determined by the Project Manager. If Contractor refuses or neglects to replace such defective work it may be replaced by the GBI at the expense of the Contractor, and its sureties shall be liable therefore.

5. SAFETY AND ACCIDENT PREVENTION

In performing work under the Contract on GBI premises, Contractor shall conform to any specific safety requirements contained in the Contract or as required by law or regulation. Contractor shall take any additional precautions as the GBI may reasonably require for safety and accident prevention purposes. Any violation of such rules and requirements, unless promptly corrected, shall be grounds for termination of this Contract or Contractor right to precede in accordance with the default provisions of the Contract Documents.

6. CHARACTER OF WORKFORCE

The Contractor shall employ none but skilled competent qualified personnel to perform the Work, and shall maintain discipline and order in the conduct of the Work at all times.

7. EMPLOYMENT OF APPRENTICES

a. In the performance of the contract, the Contractor and any Subcontractor shall comply with the provisions concerning the employment of apprentices in Section 1777.5 of the Labor Code and any amendments thereof.
b. In the event the Contractor or any Subcontractor willfully fails to comply with the aforesaid section, such Contractor or Subcontractor shall be subject to the penalties for noncompliance in Labor Code, Section 1777.7.

8. CHANGES

a. Changes in the Work can only be made in writing signed by an authorized employee of the GBI. If the change causes an increase or decrease in the contract sum, or a change in the time for performance under the Contract, an adjustment may be made as determined by the Project Manager.
b. The GBI reserves the right to make changes in the design of materials, equipment, or machinery, to make alterations or additions to or deviations or subtractions from the Contract and any specifications and drawings, to increase or decrease the required quantity of any item or portion of the Work or to omit any item or portion of the Work, as may be deemed by the Project Manager to be necessary or advisable and to order such extra work as may be determined by the Project Manager to be required for the proper execution and completion of the whole Work contemplated. Any such changes will be ordered in writing by the Project Manager. The determination of the Project Manager on all questions relating to changes, including extra work, shall be conclusive and binding.
c. Prior to issuing an amendment or change to the Contract, the Project Manager may request that the Contractor submit a proposal covering the changes. Within 10 business days of receiving the request, the Contractor shall submit its proposal to the Project Manager of all costs associated with the proposed amendment or change and any request for an extension of Contract time. Contractor proposal shall include detailed estimates with cost breakdowns, including labor, material, equipment, overhead, and profit. Labor shall be broken down into hours and rate per hour. If applicable, the proposal shall include a breakdown for off-site labor (including factory labor, engineering, etc.). The Contractor proposal shall include an analysis of schedule impact when the Contractor is requesting an adjustment in contract time. The Contractor shall be responsible for any delay associated with its failure to submit its change proposal within the time specified. If the Project Manager decides not to issue an amendment or change after requesting a proposal from the Contractor, the Contractor will be notified in writing. The Contractor is not entitled to reimbursement for Change Order preparation costs if the Contractor proposal is not accepted by the Project Manager.
d. If the Contractor agrees with the terms and conditions of the approved Change Order, the Contractor shall indicate its acceptance by signing the original copy and returning it to the Project Manager within 10 Work Days after receipt or with reasonable promptness and in such sequence as to not delay the Work or activities of the GBI or of separate Contractors, whichever is sooner. If notice of any change is required to be given to a surety by the provisions of any bond, the Contractor shall provide notice and the amount of each applicable bond shall be adjusted separately. Payment in accordance with the terms and conditions set forth in the executed Change Order shall constitute full compensation for all Work included in the Change Order and the GBI will be released from any and all claims for direct, indirect, and impact expenses and additional time impact resulting from the Work. If the Contractor disagrees with the terms and conditions of the approved Change Order, the Contractor shall indicate specific areas of disagreement and return the approved Change Order to the Project Manager with a detailed written dispute. No payment will be made on the disputed work until the approved Change Order is returned to the Project Manager. However, whether or not the Contractor agrees with the terms and conditions of an approved Change Order, the Contractor shall immediately revise its sequence of operations as required to facilitate timely completion of the changed work and shall proceed with the revised work sequence.
e. The Project Manager may, after having received a written cost quotation from the Contractor, order the Contractor, in writing, to proceed with the work prior to issuance of an approved Change Order through a change directive. The change directive will authorize the Contractor to proceed with the work subject to the cost quotation submitted by the Contractor. Within five days following receipt of the change directive, the Contractor shall submit a detailed change proposal documenting the amount of compensation. The Project Manager will review the change proposal and, at its option, will either issue an approved Change Order for the work or direct the Contractor to perform the work through Force Account. Until the method of compensation is determined, and the approved Change Order is received, the Contractor shall keep full and complete time and material records of the cost of the ordered work and shall permit the Project Manager to have access to such records. An approved Change Order shall supersede any previously issued written change directive covering the same Work.

9. EFFECT OF EXTENSIONS OF TIME

The granting, or acceptance, of extensions of time to complete the Work or furnish the labor, supplies, materials or equipment, or any one of the, will not operate as a release of Contractor or the surety on Contractor faithful performance bond.

10. DELAYS

a. The Contractor shall take reasonable precautions to foresee and prevent delays to the Work. When the Contractor foresees a delay event, and upon the occurrence of a delay event, the Contractor shall immediately notify the Project Manager of the probability or the actual occurrence of a delay, and its cause. With respect to all delays (compensable, excusable or inexcusable), the Contractor shall reschedule the Work and revise its operations, to the extent possible, to mitigate the effects of the delay. Within 15 days from the beginning of a delay the Contractor shall provide the Project Manager with a detailed written description of the delay, its cause, its impact and the Contractor mitigation plans. Failure to provide the notification required above waives the Contractor right to any additional time or compensation resulting from the delay for whatever cause. The Project Manager will investigate the facts and ascertain the extent of the delay, and the Project Manager's findings thereon shall be final and conclusive, except in the case of gross error. An extension of time must be approved by the Project Manager to be effective, but an extension of time, whether with or without consent of the sureties, shall not release the

sureties from their obligations, which shall remain in full force until the discharge of the contract. the extent of the delay, and the Project Manager's findings thereon shall be final and conclusive, except in the case of gross error. An extension of time must be approved by the Project Manager to be effective, but an extension of time, whether with or without consent of the sureties, shall not release the sureties from their obligations, which shall remain in full force until the discharge of the contract.

b. For inexcusable delays (delays caused by circumstances with in the Contractor control, the control of its Subcontractors or supplies of any tier, or within the scope of the Contractor contract responsibilities) the Contractor shall not be entitled to an extension of time or additional compensation for any loss, cost, damage, expense or liability resulting directly or indirectly from the inexcusable delay.

c. For excusable delays (delays to completion of the Work within the time limits set forth in the Contract Documents directly caused by events beyond the control of both the Contractor and the GBI, which delay is not concurrent with an inexcusable delay and which could not have been avoided by the Contractor through reasonable mitigation measures).

d. For compensable delays (delays to completion of the Work within the time limits set forth in the Contract Documents that could not be avoided by Contractor mitigation, caused directly and solely by the GBI or by causes within the exclusive control of the GBI, and which were not concurrent with any other type of delay) the Project Manager will grant the Contractor an extension of the time to perform under the Contract and compensation in an amount that represents the Contractor actual direct costs incurred as a direct result of the compensable delay. The Contractor may recover its direct costs only and may not recover (and waives) all other types of indirect, consequential, special and incidental damages.

e. For concurrent delays (two or more independent causes of delay directly preventing the Contractor from completing the Work within the time limits set forth in the Contract Documents where the delays occur at the same time during all or a portion of the delay period being considered, and where each of the delays would have caused delay to the Contractor even in the absence of any of the other delays, and none of the delays could have been avoided by Contractor mitigations) the following rules apply:

i. One or more of the concurrent delays are excusable or compensable, then the period of concurrent delay will be treated as an excusable delay; and

ii. All of the concurrent delays are inexcusable, then the period of concurrent delay will be inexcusable.

11. TERMINATION

a. Termination by GBI for Cause:

i. GBI may terminate the Contractor right to proceed under the Contract, in whole or in part, for cause at any time after the occurrence of any of the following events, each of which constitutes a default:

1. The Contractor becomes insolvent or files for relief under the bankruptcy laws of the United States.
2. The Contractor makes a general assignment for the benefit of its creditors or fails to pay its debts as the same become due.
3. A receiver is appointed to take charge of the Contractor property.
4. The Contractor fails to supply skilled supervisory personnel, an adequate number of properly skilled workers, proper materials, or necessary equipment to prosecute the Work in accordance with the Contract Documents.
5. The Contractor fails to make progress so as to endanger performance of the Work within the contractually required time.
6. The Contractor disregards legal requirements of agencies having jurisdiction over the Work, the Contractor, or the GBI.
7. The Contractor fails to provide the GBI with a written plan to cure a GBI identified default within five business days after the GBI's request for a plan to cure; the GBI does not accept the Contractor plan for curing its default; or the Contractor does not fully carry out an accepted plan to cure.
8. The Contractor abandons the Work. Abandonment is conclusively presumed when the GBI requests a written plan to cure a default and the Contractor does not submit the plan within five business days of the GBI's request.
9. The Contractor materially fails to meet its obligations in accordance with the Contract Documents.
10. The Contractor is in default of any other material obligation under the Contract Documents.

ii. If any of the above events occur, the GBI may, in its discretion, require that the Contractor submit a written plan to cure its default, which plan must be provided to the GBI within 5 business days of the request and must include a realistic, executable plan for curing the noted defaults.

iii. Upon any of the occurrences referred to in Article 18.a.i. above, the GBI may, at its election and by notice to the Contractor, terminate the Contract in whole or in part; accept the assignment of any or all of the subcontracts; and then complete the Work by any method the GBI may deem expedient. If requested by the GBI, the Contractor shall remove any part or all of the Contractor materials, supplies, equipment, tools, and machinery from the site of the Work within seven days of such request; and, if the Contractor fails to do so, the GBI may remove or store, and after 90 days sell, any of the same at the Contractor expense.

iv. No termination or action taken by the GBI after termination shall prejudice any other rights or remedies of the GBI provided by law or by the Contract Documents.

v. Conversion: If, after termination for other than convenience, it is determined that the Contractor was not in default or material breach, or that the default or material breach was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for convenience pursuant to Article 18.b. below.

b. Termination by GBI for Convenience

i. The GBI may, at its option, and for its convenience, terminate the Contract at any time by giving written notice to the Contractor specifying the effective date of termination. Upon such termination, the Contractor agrees to comply with the notice and further agrees to waive any claims for damages, including loss of anticipated profits, on account of the termination; and, as the sole right and remedy of the Contractor, the GBI shall pay the Contractor as set forth below

ii. Upon receipt of a notice of termination for convenience, the Contractor shall, unless the notice directs otherwise, do the following:
1. Immediately discontinue its performance of the Contract to the extent specified in the notice.
2. Place no further orders or subcontracts for materials, equipment, services, or facilities, except as may be necessary for completion of a portion of the Work that is not discontinued or that is necessary for an orderly cessation of the Work.
3. Promptly cancel, on the most favorable terms reasonably possible, all subcontracts to the extent they relate to the performance of the discontinued portion of the Work.
4. Thereafter, do only such Work as may be necessary to preserve and protect Work already in progress and to protect materials, plants, and equipment in transit to or on the site of performance.

iii. Upon such termination for convenience, the GBI will pay to the Contractor the sum of the following:
1. The amount of the contract sum allocable to the portion of the Work properly performed by the Contractor as of the effective date of termination, less sums previously paid to the Contractor.
2. Previously unpaid costs of any items delivered to the project site that were already fabricated for subsequent incorporation into the Work.
3. Any proven losses with respect to materials and equipment directly resulting from the termination.
4. Reasonable demobilization costs.

iv. The above reimbursement is the sole and exclusive remedy to which the Contractor is entitled in the event the contract is terminated for convenience; and the Contractor expressly waives any other claims, damages, demands, compensation or recovery related to this contract or project. The Contractor agrees to sign a general release incorporating this waiver.

c. Effect of Termination: Upon termination, the obligations of the Contract shall continue as to portions of the Work already performed and, subject to the Contractor obligations under Article 18.b.ii, as to bona fide obligations assumed by the Contractor prior to the date of termination.

d. Force Majeure: If the contract is suspended or terminated by the Great Basin Institute because Contractor performance is prevented or delayed by an event including an irresistible, superhuman cause, or by the act of public enemies of the State of California or of the United States ("Force Majeure") , the Contractor will be paid for Work performed prior to the Force Majeure event at either (i) the unit prices named in the Contract; or (ii) in the event no unit prices are named, a sum equal to the percentage of the total contract amount that matches the percentage of the total contract Work performed prior to the Force Majeure event.

12. DAMAGES

All losses or damages to material or equipment to be furnished pursuant to the Contract Documents occurring prior to receipt and final acceptance of the Work shall be sustained by the Contractor. The Contractor shall sustain all losses arising from unforeseen obstructions or difficulties, either natural or artificial, encountered in the prosecution of the Work, or from any action of the elements prior to final acceptance of the work, or from an act or omission on the part of the Contractor not authorized by the Contract Documents.

13. ORDER OF PRECEDENCE

a. In the case of conflicts, errors, or discrepancies in any of the Contract Documents, the order of precedence is as follows. Within the same order of precedence, specific requirements shall take precedence over general requirements.

i. Approved Change Orders
ii. Addenda
iii. RFQ or RFB.
iv. Referenced Standard Specifications and Drawings
v. Contractor Response Packet
vi. GBI USFS Stewardship Agreement

14. INDEMNIFICATION/RESPONSIBILITY

a. Contractor shall indemnify, keep and save harmless the GBI and each of its directors, officers, agents and employees against any and all suits, claims or actions arising out of any of the following:

i. Any injury to persons or property that may occur, or that may be alleged to have occurred, arising from the performance or implementation of this Contract; or

ii. Any allegation that materials or services developed, provided or used for this Contract infringe or violate any copyright, trademark, patent, trade secret, or any other intellectual-property or proprietary right of any third party.

b. Contractor further agrees to defend any and all such actions, suits or claims and pay all charges of attorneys and all other costs and expenses of defenses as they are incurred. If any judgment is rendered, or settlement reached, against the GBI or any of the other agencies or individuals enumerated above in any such action, Contractor shall, at its expense, satisfy and discharge the same.

c. This indemnification shall survive termination or expiration of the Contract.

15. PROHIBITION OF ASSIGNMENT

The Contractor shall not assign, transfer, or otherwise dispose of any of its rights, duties or obligations under this Contract.

16. NEWS RELEASES

The Contractor, its employees, Subcontractors, and agents shall not refer to the GBI, or use any logos, images, or photographs of the GBI

for any commercial purpose, including, but not limited to, advertising, promotion, or public relations, without the GBI's prior written consent. Such written consent shall not be required for the inclusion of the GBI's name on a customer list.

17. TRANSFER OF INTEREST

Contractor shall not assign, transfer or otherwise substitute its interest in the Contract or any of the contract obligations without prior written consent from the GBI.

18. SEVERABILITY

Should any part of the Contract be declared by a final decision by a court or tribunal of competent jurisdiction to be unconstitutional, invalid or beyond the authority of either party to enter into or carry out, such decision shall not affect the validity of the remainder of the Contract, which shall continue in full force and effect, provided that the remainder of the Contract can be interpreted to give effect to the intentions of the parties.

19. COVENANT AGAINST GRATUITIES

The Contractor warrants that no gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the Contractor, or any agent or representative of the Contractor, to any officer or employee of the GBI with a view toward securing the Contract or securing favorable treatment with respect to any determinations concerning the performance of the Contract. For breach or violation of this warranty, the GBI shall have the right to terminate the Contract, either in whole or in part, and any loss or damage sustained by the GBI in procuring on the open market any items which Contractor agreed to supply shall be borne and paid for by the Contractor. The rights and remedies of the GBI provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or in equity.

20. RIGHTS AND REMEDIES OF THE GBI

The rights and remedies of the GBI provided herein shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract.

21. WAIVER OF RIGHTS

Any action or inaction by the GBI or the failure of the GBI on any occasion, to enforce any right or provision of the Contract, shall not be construed to be a waiver by the GBI of its rights and shall not prevent the GBI from enforcing such provision or right on any future occasion. Rights and remedies are cumulative and are in addition to any other rights or remedies that the GBI may have at law or in equity.

22. CONFIDENTIALITY

Contractor agrees to maintain in confidence and not disclose to any person or entity, without the GBI's prior written consent, any trade secret or confidential information, knowledge or data relating to the products, process, or operation of the GBI. Contractor further agrees to maintain in confidence and not to disclose to any person or entity, any data, information, technology, or material developed or obtained by Contractor during the term of the Contract. The covenants contained in this paragraph shall survive the termination of this Contract for whatever cause.

EXHIBIT D – Schedule of Items & Specifications

GENERAL SERVICES AGREEMENT

RFB ELDO SA-05: Scottiago Fuels Reduction Project

SCHEDULE OF ITEMS

Item	Description	Total Units	Unit of measure	Unit Price $	Total $
1a	Mastication	55 (1- 56)	acres		$
1b	Hand thin/Pile	10 (61-72)	acres		$
1c	Hand thin/Pile (optional)	48 acres*	acres		$
				TOTAL	$

Mastication Units

1: 12 acres
2: 48 acres
3: 4 acres
4: 22 acres
5: 1 acre
6: 4 acres
7: 3 acres
8: 2 acres
9: 2 acres
10: 5 acres
11: 13 acres
12: 9 acres
13: 7 acres
14: 41 acres
15: 16 acres
16: 11 acres
17: 5 acres
18: 7 acres
19: 11 acres
20: 7 acres
21: 13 acres
22: 37 acres
23: 10 acres
24: 15 acres
25: 26 acres
26: 9 acres
27: 17 acres
28: 12 acres
29: 2 acres
30: 19 acres
31: 22 acres
32: 22 acres
33: 6 acres
34: 2 acres
35: 5 acres
36: 10 acres
37: 2 acres
38: 7 acres
39: 27 acres
40: 5 acres
50: 57 acres
51: 35 acres
52: 94 acres
53: 7 acres
55: 44 acres
56: 258 acres
Total: 983 acres

Hand thin Units

61: 19 acres
62: 3 acres
63: 5 acres
64: 5 acres
65: 13 acres
66: 9 acres
67: 1 acre
70: 5 acres
71: 21 acres
72: 13 acres
Total: 94 acres

*Optional Hand thin units are identified on the Sale Area Map with solid pink and black hash marking. Exact units to be hand thinned and total acres will be determined by Botanists in 2024.

Item 1.a Mastication

Desired Outcome: Mastication treatments are focused on increasing residual tree health, increasing standheterogeneity, and rearranging fuels to decrease fuel ladders and canopy continuity.

Description of Work: Masticate target vegetation and undesirable trees in mixed conifer& ponderosa plantations using an excavator type machine or similar, equipped with a masticating head and or an ASV type tractor with masticating head within treatment units to the extent of equipment operability

Either type of equipment must be capable of working on adverse ground up to 35% slope andcompleting all work items to specifications.

Technical Specifications:

- In identified units all brush, both live and dead, greater than 6 inches in height, down logs < 16" in diameter on large end and conifers not designated as leave trees, less than 9.9" dbh shall be machine masticated (shredded, mulched, or chipped). Pacific yews, sequoias, black oaks, dogwoods, aspen, elderberry and California nutmeg shall not be masticated unless necessary for equipment accessibility.
- Retained hardwood trees are to be ignored in terms of determining conifer tree spacing.
- All madrone and live oak and tan oak < 8" dbh are to be masticated. Species in order of preference when choosing leave trees are sugar pine, ponderosa pine, Douglas-fir, incense cedar and white fir. Giant sequoias will not be masticated. Conifer trees will be selected for removal to create a 20-25 foot spacing between leave trees. In specific units, Forest Service may designate in writing greater or lesser leave tree spacing. In no case will the Forest Service designate a leave tree spacing less than 16 feet.
- Desirable trees are trees with the tallest height, fullest crown, and straightest stem and, which are free of damage due to insect, disease, physical and mechanical factors and have at least a 40% crown ratio.
- All masticated vegetation shall have a stump height generally no greater than 3 inches above ground level as measured on the uphill side or 6 inches above obstacles (i.e., large rocks, down logs not designated for mastication).
- Residual masticated vegetative debris resulting from operations shall lie flat on the ground and generally not exceed 12 inches in height. Individual pieces of vegetative debris shall generally not exceed 4 feet in length. No masticated or cut material shall accumulate against leave trees.
- Vegetation within stream course Buffer Strips shown on Contract Area Map shall not be masticated unless otherwise flagged on-the-ground by the Forest Service and GBI or agreed to in writing.
- All trees marked with orange or red paint are designated leave trees and shall not be damaged or felled.

Item 1.b Hand thin and Pile

Desired Outcome: Hand thin and pile treatments are focused on increasing residual tree health, increasing standheterogeneity, and rearranging fuels to decrease fuel ladders and canopy continuity.

Description of Work: Hand thin and pile target vegetation and undesirable, non-crop trees in Plantations and natural stands using a chainsaw/loppers type tools or similar equipment.

Work will be completed on slopes that are generally greater than 35% along roadside corridors where mechanized equipment cannot access All brush within stream buffers that mastication cannot reached will be hand thinned and lopped/scattered away from the streams. Hand thin with lop and scatter, will occur in the streamside zone, no piling.

Technical Specifications:

Hand Thin

- In identified units all brush, both live and dead, greater than 6 inches in height, down logs < 16" in diameter on large end and conifers not designated as leave trees, less than 9.9" dbh shall be hand cut and piled. Pacific yews, sequoias, black oaks, dogwoods, aspen, elderberry and California nutmeg shall not be hand cut.
- Retained hardwood trees are to be ignored in terms of determining conifer tree spacing.
- All madrone and live oak and tan oak < 8" dbh are to be hand cut and piled. Species in order of preference when choosing leave trees are sugar pine, ponderosa pine, Douglas-fir, incense cedar and white fir. Giant sequoias will not be cut. Conifer trees will be selected for removal to create a 20-25 foot spacing between leave trees
- Desirable trees are trees with the tallest height, fullest crown, and straightest stem and, which are free of damage due to insect, disease, physical and mechanical factors and have at least a 40% crown ratio.
- All hand cut vegetation shall have a stump height generally no greater than 3 inches above ground level as measured on the uphill side.

Piling

- Generally, piles will not exceed 6 feet diameter x 6 foot height.
- Vegetative material resulting from cutting operations shall be reasonably compact and constructed at a size and distance so that burning does not result in unnecessary damage to residual timber.
- Piles shall be located a distance at least twice their height in feet (minimum of 12 feet) from the residual leave tree bole. No cut material or piles shall accumulate against residual leave trees of all species.
- Contractor shall construct firelines surrounding the piles. Firelines should be 12 inches width and scraped down to bare mineral soil.
- In areas where there is a potential for burning material to roll, firelines shall be trenched on the downhill side of each pile to adequately prevent material from crossing firelines.

Item 1.c Optional Hand Thin (Lava Cap special treatment area)

Description of Work: Hand thin and pile target vegetation and undesirable brush and trees to the spacing specified in technical specifications using a chainsaw/loppers type tools or similar equipment.

On contract map labeled optional hand thin (pink with hash marks), units are identified lava cap special treatment zones. These units will be hand thinned. Clearance for entry will be pending review by USFS botanists in May 2024. Site specific areas could add up to the total 47 acres but will most likely end up being smaller. Optional units will be flagged and work could have a more labor intensive requirement than the technical specs referenced below. If alternative treatments determined by the new specifications are beyond the scope of the original bid, a change order in the contract will be negotiated before work commences.

Before work commences, District Botanists will determination site specific technical specifications for each unit identified for treatment. The Hand thin and piling specifications will generally be the same unless botanists provides an alternative treatment specification.

Examples of the type of work that could occur in the lava cap special treatment areas:

- Hand Thin -lop and scatter to a depth no greater than 12" slash mat depth.
- A combination hand thin, lop and scatter and piling using the specifications in piling above.
- Hand Thin and then drag and remove material to be piled outside of lava cap special treatment area.

Technical Specifications:

Hand Thin

- In identified units all brush, both live and dead, greater than 6 inches in height, and conifers not designated as leave trees, less than 9.9" dbh shall be hand cut and piled. Pacific yews, sequoias, black oaks, dogwoods, aspen, elderberry and California nutmeg shall not be hand cut.
- Desirable trees are trees with the tallest height, fullest crown, and straightest stem and, which are free of damage due to insect, disease, physical and mechanical factors and have at least a 40% crown ratio.
- All hand cut vegetation shall have a stump height generally no greater than 3 inches above ground level as measured on the uphill side.

Piling

- Generally, piles will not exceed 6 feet diameter x 6 foot height.
- Vegetative material resulting from cutting operations shall be reasonably compact and constructed at a size and distance so that burning does not result in unnecessary damage to residual timber.
- Piles shall be located a distance at least twice their height in feet (minimum of 12 feet) from the residual leave tree bole. No cut material or piles shall accumulate against residual leave trees of all species.
- Contractor shall construct firelines surrounding the piles. Firelines should be 12 inches width and scraped down to bare mineral soil.

  In areas where there is a potential for burning material to roll, firelines shall be trenched on the downhill side of each pile to adequately prevent material from crossing firelines.

Drag and relocation of material

- Pulling material a maximum distance of 200'(average 50-100 feet) feet away from flagged avoidance areas.
- Use piling specifications above.

Equipment Requirements

- Contractor will provide cutting tools and equipment that are suitable for the job.
- All power tools shall be equipped with the Forest Service approved spark arrestors and in good working condition.

Control of Operations. Under this agreement, "Contractor operations" shall include activities or use of equipment of the Contractor, Contractor's employees or agents, sub- Contractors and their employees or their agents acting in the course of their employment in operations hereunder on National Forest lands or within Forest Service protection boundary (unless acting under the immediate supervision of Forest Service).

Contractor operations shall be conducted in a workmanlike and orderly manner. The timing of any required Forest Service designation of work on the ground and the performance of other Forest Service work shall not be such as to cause unnecessary delay to Contractor.

Project Operations Schedule Unless otherwise agreed in writing, Contractor operations shall be performed inaccordance with the following schedule:

Subdivisions/Unit/Area	Requirement	Purpose
Road Maintenance	The Contractor will be required to repair damage to any roads which are used without the consent of the GBI or the Forest Service or roads damaged by Contractor during operations.	All road work must be completed and accepted when road is no longer being used by contractor; or if GBI or the Forest Services determine that road repairs must occur sooner because of safety or resource concerns, road repairs will be initiated on time schedule deterjined by GBI or the Forest Service.

Limited Liability for Operations Fires, Maximum Amount of Contractor Obligation per Operation's Fire.

Cooperator's Obligation per Operations Fire
Maximum Amount: $ 35,000.00

EXHIBIT E - Specifications for Operations
GENERAL SERVICES AGREEMENT
RFB ELDO SA - 05: Scottiago Forest Health and Fuels Reduction Project

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

Stewardship Project Area Map (Map): This is the boundary of the Project Area as designated on the ground by the Forest Service to meet the anticipated needs of the parties. A detailed map will be provided to CONTRACTOR prior to the start of opperations. The map will have the following items identified:

a) Identified patented claims.
b) Boundaries of all harvest and stewardship treatment units.
c) Diameter limits for overstory and understory removal units.
d) Areas where leave trees are marked to be left uncut.
e) Specified roads.
f) Sources of base course, surface rock, and rock riprap listed in the Schedule of Items;
g) Roads where log hauling or use is prohibited or restricted.
h) Roads and trails to be kept open.
i) Improvements to be protected.
j) Locations of known wildlife or plant habitat and cave resources to be protected.
k) Locations of areas known to be infested with specific invasive species of concern.
l) Maximum stump heights when more than one height is listed by areas.
m) Skidding or yarding methods.
n) Streamcourses to be protected.
o) Locations of meadows requiring protection.
p) Locations of wetlands requiring protection.
q) Locations of temporary roads to be kept open.
r) Payment units, if required

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

Roads: CONTRACTOR is authorized to use existing National Forest system roads and specified roads approved by the U.S. National Forest Service. CONTRACTOR and the U.S. National Forest Service will determine that such use will not cause damage to the roads or National Forest resources. CONTRACTOR is authorized to construct, reconstruct and maintain roads, bridges, and other transportation facilities, as needed for harvesting included timber and completing stewardship projects on National Forest and other lands where Forest Service has such authority and with Forest Service approval.
The government may undertake or award other contracts for additional work at or near the site of the work under this contract. The CONTRACTOR shall fully cooperate with the other Contractors and with government employees and shall carefully adapt scheduling and performing the work under this contract to accommodate the additional work, heeding any direction that may be provided by GBI. The CONTRACTOR shall not commit or permit any act that will interfere with the performance of work by any other CONTRACTOR or by Government employees.

Plan of Operations for Roads: Annually, prior to start of operations, CONTRACTOR will prepare a

supplement to the Technical Proposal that shall include a schedule of proposed maintenance on all roads used and potentially subject to damage by CONTRACTOR for project access; and a description of planned measures to be taken to provide erosion control for work in progress, including special measures to be taken on any segments or road damaged by CONTRACTOR that need repairs prior to periods of seasonal precipitation or runoff. CONTRACTOR shall submit a revised schedule when they propose a significant deviation from the progress schedule. CONTRACTOR is obligated to repair all road damage caused by operations.

Specified Road Reconstruction: Not Applicable.

Road Maintenance: CONTRACTOR shall maintain roads commensurate with Contractor use. Repair of damaged roads will occur as directed by GBI or the Forest Service in accordance with road maintenance requirements. Upon completion of road use on any segment, road will be returned to a condition that is equal to or better than road condition prior to the commencement of CONTRACTORS operations. Performance of road maintenance work by CONTRACTOR may be required prior to, during, or after each period of use.

Protection of Land Survey Monuments: Forest Service shall appropriately designate on the ground all known survey monuments, section corners, and other corner accessories. CONTRACTOR shall protect all known survey monuments, witness corners, reference monuments, and bearing trees against avoidable destruction, obliteration, or damage during Contractor Operations. If any known monuments, corners, or accessories are destroyed, obliterated, or damaged by Contractor Operations, CONTRACTOR shall hire the appropriate surveyor or a registered land surveyor to reestablish or restore at the same location the monuments, corners, or accessories. Such surveyors shall use procedures in accordance with the Bureau of Land Management "Manual of Instructions for the Survey of the Public Lands of the United States" for General Land Office surveys and in accordance with State law for others. CONTRACTOR shall record such survey in appropriate county records.

Protection Measures Needed for Plants, Animals, Cultural Resources, Cave and Recreation Resources: Locations of known areas needing special measures for the protection of plants, animals, cultural resources, and/or cave resources are shown on Project Area Map and/or identified on the ground and listed in the Table below.

- Known archeological sites are shown on a separate map that will be provided to the CONTRACTOR (confidential and not to be duplicated). Areas are identified on the ground with flagging. Operations may require crossing certain sites which can be done only upon written approval of the Forest Service, or if indicated on map provided to the CONTRACTOR.

In addition to any special protection measures noted, CONTRACTOR has a general duty to protect all known and identified resources from damage or removal during Contractor Operations. Discovery of additional areas, resources, or members of species needing special protection shall be promptly reported to the Forest Service, and operations shall be delayed or interrupted at that location if it is determined there is risk of damage to such areas, resources, or species from continued operations. Wheeled or track-laying equipment shall not be operated in areas identified as needing prtotection measures, except on roads, landings, tractor roads, or skid trails approved. Unless agreed otherwise, trees will not be felled into such areas. CONTRACTOR may be required to backblade ground disturbed by Contractor Operations within such areas. CONTRACTOR shall immediately notify Forest Service if disturbance occurs to any area identified as needing special protection measures and shall immediately halt operations in the vicinity of the disturbance until GBI or the Forest Service authorizes CONTRACTOR to proceed. Contractor shall bear costs of resource evaluation and restoration to identified sites. Such payment shall not relieve Contractor from civil or criminal liability otherwise provided by law.

Subdivision/Area/ Unit	Conditions of Operation	Purpose
Project Area	Limited Operating Period (LOP) prohibiting mechanical operations during the breeding season for California Spotted Owls (March 1 through August 15) & Northern Goshawk (February 15 through September 1) as designated on the Contract Area Map.	Protection of wildlife species
Project Area	Limited Operating Period (LOP) restricting all work activities at or below the 4500-foot elevation would be implemented from 1st fall frontal system depositing a minimum of ¼ inch of rain between October 15th through April 15th. Activities may resume after a 72-hour drying period. LOP may be lifted in locations where sufficient survey data demonstrate the absence of CRLF or suitable breeding habitat. As designated on the Contract Area Map	Protection of hydrology & aquatics
Project Area	No operations permitted within areas posted on the ground with **yellow and white striped flagging** and designated as retention on Contract Areas Map.	Maintain structural diversity

All water supply locations	Sites used to draft water shall be approved by Forest Service prior to use. A Forest Service approved screen covered drafting box or other device shall be used to create low entry velocity.	Minimize removal of aquatic species.
Project Area .	No operations permitted within areas posted on the ground with **pink and black striped and purple** flagging and designated CA-1 on the Contract Area Map.	Protection of cultural resources
Project Area	Controlled area, no operations permitted within areas posted on the ground with **pink and chartreuse** flagging and designated CA-2 on the Contract Area Map	Protection of sensitive plants
Project Area	Controlled area. No operations permitted within areas identified by virtual boundary. Designated as Site Specific Protection Measures, Lava Cap, Contract Area "hash marks" on Map.	Protection of Lava Caps
Project Area	Controlled area. No operations permitted within areas posted on the ground with **orange flagging** labeled "Noxious Weeds". As designated as CA-3 on the Contract Area Map.	Control of noxious weeds
Project Area	Controlled area. No operations permitted during those times when Special Use Permit (SUP) Events are scheduled. No operations will be permitted that are determined by the Forest Service to potential conflict with SUP event.	SUP Events include motorcycle and equestrian riding events authorized by the District Ranger approximately 3 days each year. These events are confined to existing trail system and vary from year to year in terms of timing of event.

Protection of Residual Trees: Contractor's operations shall not unnecessarily damage young growth or other live trees to be reserved.

Safety: Contractor's operations shall facilitate the Forest Service's safe and practical inspection of Contractor's operations and conduct of other official duties on the Stewardship Project Area. Contractor's has/have all responsibility for compliance with safety requirements for Contractor's employees.

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

During periods of general recreation activity within Stewardship Project Area or vicinity, the Forest Service may restrict road construction, timber cutting, yarding, and other harvesting operations to days other than Saturdays, Sundays, and holidays.

LOGGING AND MAINTENANCE OPERATIONS SIGNING STANDARDS

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

SIGN STANDARDS

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

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

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

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

SIGN PLACEMENT

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

LATERAL CLEARANCE

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

HEIGHT

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

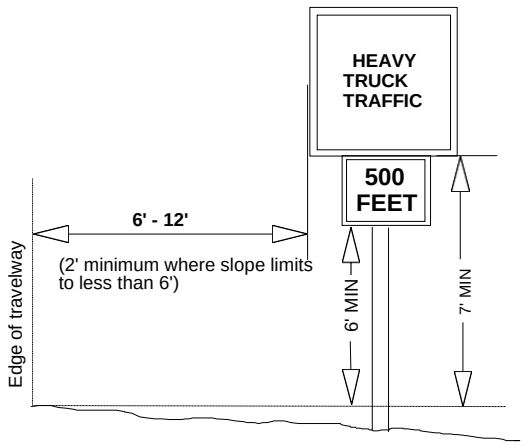


Figure 1: Sign Placement Dimensions

PLACEMENT DISTANCE

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

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

Figure 2: A Portion of MUTCD TABLE II-1

SIGN SUPPORTS

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

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

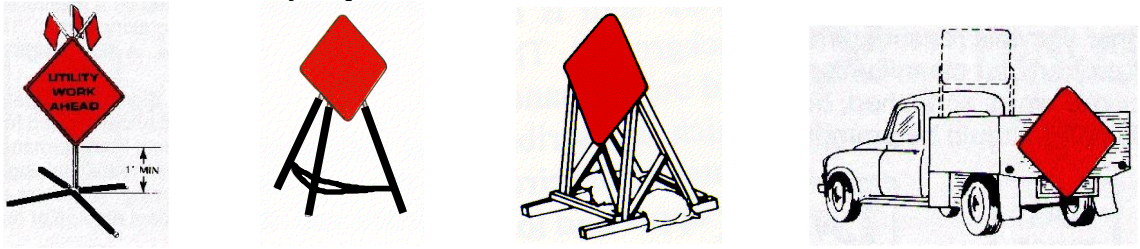
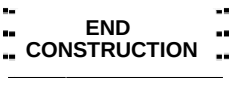


Figure 3: Examples of Temporary/Portable Supports

SIGNS

The following signs meet the intent of the Safety standard. ***This is not a complete listing of signs that may be needed.***

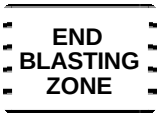
FG20-1-48*



FG20-2-48

FG20-3-42*

FG20-3a-42



FW22-3-30

FW20-1-30*

W21-3-30*

FW21-4a-30

FW11-7-24

W22-1-36*

FW8-6-24 FW11-9a-24 W7-3a-24* W13-1-18** W20-7aP-24*

* Specify Distance ** Specify Speed

BM-L-O

BM-R-O

Barricade Markers (See MUTCD for length and stripe size)

Accident and Injury Notification: Contractor shall notify GBI of any lost time personal injury accident or any accident or vandalism resulting in personal property damage over $400 in value that occurs as a result of or is associated with Contractor's Operations.

Contractor shall notify GBI within 8 hours of any personal injury accident. For vandalism and personal property accidents, Contractor shall notify GBI at the same time notification is given to the state and local law enforcement authorities.

Contractor shall take all reasonable measures after an accident or vandalism event to preserve the scene of the incident and provide information to facilitate a GBI investigation.

Sanitation and Servicing: Contractor shall take all reasonable precautions to prevent pollution of air, soil, and water by Contractor's operations. Precautions shall include if facilities for employees are established on the Stewardship Project Area, they shall be operated in a sanitary manner. The parties shall agree to the cleanup and restoration of a polluted site. Contractor shall maintain all equipment operating on Stewardship Project Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. Contractor shall not service tractors, trucks, or other equipment on National Forest lands where servicing is likely to result in pollution to soil or water. Contractor shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources. Contractor shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of free-flowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.

Prevention of Oil Spills: If Contractor maintain(s) storage facilities for oil or oil products on the Stewardship Project Area, Contractor shall take appropriate preventive measures to ensure that any spill of such oil or oil products does not enter any stream or other waters of the United States or any of the individual States. If the total oil or oil products storage exceeds 1,320 gallons in containers of 55 gallons or greater, Contractor shall prepare a Spill Prevention Control and Countermeasures Plan. Such plan shall meet applicable EPA requirements (40 CFR 112), including certification by a registered professional engineer. Contractor shall notify the GBI and appropriate agencies of all reportable (40 CFR 110) spills of oil or oil products on or in the vicinity of the Stewardship Project Area that are caused by Contractor's employees, agents, Sub-Contractor's or their employees or agents, directly or indirectly, as a result of Contractor. Contractor will take whatever initial action may be safely accomplished to contain all spills.

Hazardous Substances: Contractor shall notify the National Response Center and vprincipal contact of all releases of reportable quantities of hazardous substances on or in the vicinity of the Stewardship Project Area

that are caused by Contractor's employees, agents, Sub-Contractors, or their employees or agents, directly or indirectly, as a result of Contractor's operations, in accordance with 40 CFR 302.

Washing Equipment: In order to prevent the spread of noxious weeds into the Stewardship Project Area, Contrator shall be required to clean all off-road logging and construction equipment **prior** to entry on to the Stewardship Project Area. This cleaning shall remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds. Only logging and construction equipment so cleaned and inspected by the GBI or USFS will be allowed to operate within the Stewardship Project Area. All subsequent move-ins of equipment to the Stewardship Project Area shall be treated in the same manner as the initial move in. "Off-road equipment" includes all logging and construction machinery, except for log trucks, chip vans, service vehicles, water trucks, pickup trucks, cars, and similar vehicles.

Contractor shall employ whatever cleaning methods are necessary to ensure that off-road equipment is free of noxious weeds. Equipment shall be considered free of soil, seed, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required.

As agreed upon, Contractor shall inspect equipment at cleaning location, and provide documentation of inspection to the Forest Service.

New infestations of noxious weeds, of concern to Forest Service and identified by either Contractor or Forest Service, on the Stewardship Project Area or on the haul route, shall be promptly reported to the other party. Contractor and GBI shall agree on treatment methods to reduce or stop the spread of noxious weeds when new infestations are found. A current list of noxious weeds of concern to is available at each Forest Service office.

Stump Heights: Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in Appendix E except that occasional stumps of greater heights are acceptable when Contractor determine(s) that they are necessary for safe and efficient conduct of logging. Unless otherwise agreed, Contractor shall re-cut high stumps so they will not exceed heights specified in F-14 and shall dispose of severed portions in the same manner as other logging debris. The stump heights were selected with the objective of maximum reasonable utilization of the timber, unless the Map shows special areas where stump heights are lower for aesthetic, land treatment, or silvicultural reasons.

Protection of Streamcourses*:* Contractor Operations shall be conducted to prevent debris from entering streamcourses, except by agreement. In event Contractor cause (s) debris to enter streamcourses in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, Contractor shall remove such debris as soon as practicable, but not to exceed 2 days, and in an agreed manner that will cause the least disturbance to streamcourses.

Where Project Map displays mastication units that include streamcourses and streamcourse buffers, handwork specified as **Item 1.b Hand thin** is required. **No ground based equipment will be allowed within the streamcourse buffers. Hand thinning within the streamcourses buffers that are within the masticated units will be paid for as Mastication work accomplished. The acreage of Handwork within the mastication units and within the streamcourse buffers is not included in the estimated 94 acres of Handwork otherwise described above.**

a) Culverts or bridges shall be required on Temporary Roads at all points where it is necessary to cross Streamcourses. Such facilities shall be of sufficient size and design and installed in a manner to provide unobstructed flow of water and to minimize damage to streamcourses. Trees or products shall not be

otherwise hauled or yarded across streamcourses unless fully suspended.

b) Wheeled or track-laying equipment shall not be operated in streamcourses, except at crossings agreed to by Contractor and the GBI or as essential to construction or removal of culverts and bridges.

c) Flow in streamcourses may be temporarily diverted only if such diversion is necessary for planned construction and GBI gives written authorization. Such flow shall be restored to the natural course as soon as practicable and, in any event, prior to a major storm runoff period or runoff season.

Erosion Prevention and Control: Contractor's operations shall be conducted reasonably to minimize soil erosion. Equipment shall not be operated when ground conditions are such that excessive damage will result. Contractor shall adjust the kinds and intensity of erosion control work done, to ground conditions and weather conditions and the need for controlling runoff. Erosion control work shall be kept current immediately preceding expected seasonal periods of precipitation or runoff. Prior to periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, commensurate with its use, Contractor shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams. Unless otherwise agreed in writing, **after September 15 of each operating season**, erosion control work must be kept current. Contractor shall complete erosion prevention and control work, including streamcourse protection, within 15 calendar days after completion of skidding and/or yarding operations for each landing. Designation of on the ground work shall be done as promptly as feasible unless it is agreed that the location of such work can be established without marking on the ground. During periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, commensurate with its use, Contractor shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams. When operations are active, erosion control work will be kept current and will be completed as soon as practicable. Additioanlly, FS may require special erosion prevention measures which may include, but not limited to; use of certified weed free straw, wood chips, slash, mulch, etc. on areas of bare soil with high erosion hazard potential. No tightly woven fiber mesh or plastic monofilament netting shall be used for soil stabilization.

Protection of Improvements: So far as practicable, Contractor shall protect specified roads and other improvements (such as roads, trails, telephone lines, ditches, and fences):

a) Existing in the operating area,
b) Determined to have a continuing need or use, and
c) Designated on the Map.

Contractor shall keep roads and trails needed for fire protection or other purposes and designated on the Map reasonably free of equipment and products, slash, and debris resulting from Contractor operations. Contractor shall make timely restoration of any such improvements damaged by Contractor's operations and, when necessary because of such operations, shall move such improvements. Improvements shall be returned to their original locations following Contractor Operations.

Meadow Protection: Reasonable care shall be taken to avoid damage to the cover, soil, and water in meadows shown on the Map. Vehicular or skidding equipment shall not be used on meadows, except where roads, landings, and tractor roads are approved. Unless otherwise agreed, trees felled into meadows shall be removed by endlining. Resulting logging slash shall be removed where necessary to protect cover, soil, and water.

Wetlands Protection: Wetlands requiring protection under Executive Order 11990 are shown on the Map. Vehicular or skidding equipment shall not be used in such wetlands, except where roads, landings, and tractor roads are approved.

Temporary Roads to Remain Open: All bridges and culverts shall remain in place and ditches shall not be eliminated on Temporary Roads, shown as "Remained Open on the Map. All drainage structures shall be left in func

Skid Trails and Fire Lines: Unless otherwise agreed in writing, skid trail patterns shall be agreed to in advance of felling and main skid trails shall be flagged on the ground in advance of felling. Needed main skid trails will be constructed in advance of skidding. Main skid trails will be spaced on average of 120 feet apart, except when converging. Additional skid trails may be agreed upon when soil conditions permit. Harvest operations will be confined to designated main skid trails until soil conditions are dry. Dry soil for main skid trails is defined as soil that when sampled from a specified depth of 8 inches and placed in the hand and squeezed, the hand shows no significant moisture stains. Existing skid trails will be used whenever possible except when they do not meet other resource protection measures.

Contractor shall construct cross ditches and water-spreading ditches on tractor roads and skid trails, where needed to prevent erosion. By agreement, Contractor may use other comparable erosion control measures, such as backblading skid trails, in lieu of cross ditching.
tional condition.

Erosion Control Structure Maintenance: During the period of this SPA, Contract shall provide maintenance of soil erosion control structures constructed by Contractor until they become stabilized, but not for more than one year after their construction.

Slash Disposal: Contractor timing of product removal and preparatory work shall not unnecessarily delay slash disposal. Specific slash disposal measures to be employed by Contractor are stated in Appendix E.

Fire Precautions and Control:

a) **Plans.** Prior to initiating Contractor's operations during Fire Precautionary Period, Contractor shall file with BI a Fire Prevention and Control Plan providing for the prevention and control of fires on the Stewardship Project Area and other areas of Contractor's Operations. Such plan shall include a detailed list of personnel and equipment at the Contractor's disposal for implementing the plan.

b) **Fire Precautions.** Specific fire precautionary measures listed in this Appendix shall be applicable during Contractor's Operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during Contractor's operations in Fire Precautionary Period.

c) **Substitute Precautions.** The Forest Service may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection or some of the required measures and equipment are unnecessary.

d) **Emergency Precautions.** The Forest Service may require the necessary shutting down of equipment on portions of Contractor's Operations, as specified by the emergency fire precautions schedule. Under such conditions, after Contractor's cease(s) active operations, Contractor shall release for hire by Forest Service, if needed, Contractor's shutdown equipment for fire standby on the Stewardship Project Area or other areas of Contractor's Operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by Contractor for other fire fighting or protection from fire. Equipment shall be paid for at fire fighting equipment rates common in the area or at prior agreed rates

and, if Contractor request(s), shall be operated only by personnel approved by the Contractor. Personnel so hired shall be subject to direction and control by the Forest Service and shall be paid by Forest Service at fire fighting rates common in the area or at prior agreed rates.

e) **Fire Precautionary Period and Fire Plan.** Specific fire precautionary measures are set forth below. The following requirements shall apply during the period **April 1 to December 1** and during other such periods as specified by Forest Service. Specific fire precautionary measures listed in this Appendix shall be applicable during a Contractor's Operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during Contractor's operations in Fire Precautionary Period. Listing of specific fire precautionary measures is not intended to relieve CONTRACTOR in any way from compliance with State fire laws covering fire prevention and suppression equipment applicable to Contractor Operations.

EXHIBIT F - Fire Plan
GENERAL SERVICES AGREEMENT
RFB ELDO SA - 05: Scottiaggo Forest Health and Fuels Reduction Project

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 Project Area is delineated by attached map. The provisions set forth below also specify conditions under which Contractor 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, sub-CONTRACTORs and their employees from setting fires not required in completion of the agreement, shall be responsible for preventing the escape of fires set directly or indirectly as a result of Contractor 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 SPA Area, during operating hours, a qualified fire supervisor authorized to act on behalf of the Contractor in fire prevention and suppression matters.

B. Forest Service

GBI or 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 administration.

3. DEFINITIONS:

The following definitions shall apply:

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

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

Mechanical Operations: The process of felling, skidding, chipping, shredding, masticating, piling, log processing and/or yarding which requires the use of motorized power which includes, chainsaws, chippers, motorized carriages, masticators, stroke delimbers, 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 Contractor:

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

- This Contract requires, Fire Box and associated Fire Tools, according to CPRC Section 4428.

A. **Fire Tools and Equipment**:

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

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

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

C. **Fire Extinguishers**:

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

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

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

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

D. Spark Arresters and Mufflers:

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

E. Power Saws:

Each power saw shall be equipped with a spark arrester approved according to C.P.R.C. Section 4442 or 4443 and shall be maintained in effective working order. An Underwriters Laboratories

(UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating power saw. In addition, a size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can but not more than 300 feet from each power saw when used off cleared landing areas.

F. Tank Truck or Trailer:

Contractor shall provide a **water tank truck or trailer** on or in proximity to SPA Area during Contractor's Operations hereunder during Fire Precautionary Period. When Project Activity Level B or higher is in effect, a tank truck or trailer shall be on or immediately adjacent to each active landing, unless otherwise excepted when Hot Saws or Masticators are being used. See Section 6 for specific Contractor 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 SPA 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 SPA 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		1,000 Feet		2,000 Feet		3,000 Feet		4,000 Feet		5,000 Feet		6,000 Feet		7,000 Feet		8,000 Feet		9,000 Feet		10,000 Feet	
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
	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM	PSI	GPM

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

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

(3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range

Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

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

When Contractor is using hot saws or masticators, an additional 250 feet of lightweight 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.

G. **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, the 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 and GBI of any fires on Project 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	**Camino Dispatch**	**Camino**	**530-642-5170**
Nearest FS Station	Placerville R.D	Placerville	530-647-5300
Inspector			
COR			
District Ranger			

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.

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, GBI may accept a reasonable alternative location. The communication system shall provide prompt and reliable communications between Contractor's headquarters (or agreed to alternative) and GBI telephone.

H. **Fire Patrol person**: 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 and GBI 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 SPA Area Map Legend.

Fire Danger Rating Area/Fire Weather Station f P.A.L. Zone Moderate

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 530-644-6048

Levels:

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. Restrictions at each level are cumulative.***
A	Minimum requirements noted above in Sections 4 and 5.
B	1. Tank truck, trailer, or approved CAFS substitute shall be on or adjacent to the Active Landing.
C	1. When Hot Saws or Masticators are operating, a tank truck, trailer, or approved CAFS substitute shall be within ¼ mile of these operations. Effective communications shall exist between the operator and the Active Landing. 2. Immediately after Mechanical Operations cease, Fire patrol is required for two hours.
D	1. Immediately after Hot Saw or Masticator operations cease, Fire patrol is required for three hours. 2. No Dead Tree felling after 1:00 PM, except recently dead. 3 No burning, blasting, welding or cutting of metal after 1:00 PM, except by special permit.
Ev	1. The following activities may operate all day: 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. 2. Hot Saws or Masticators may operate until 1:00 PM; provided that: a) A tractor or other equipment with a blade 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. 3. All other conventional Mechanical Operations are permitted until 1:00 PM. 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: • Rubber Tire Skidding • Chipping on Landings • Helicopter Yarding • Fire Salvage 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 Contractor community considerations etc. (See attached Project Activity Level Variance Agreement).

Level	***Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.***
E	The following activities may operate all day: 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. All other activities are prohibited.

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. The historic average days per month for the period from May through October at each PAL value is shown in the following table.

Project Activity Level Climatology						
Eldorado National Forest: Average of all Weather Stations						
Years Analyzed:	2004 -	2010				
Working Operating Season - May 1-Oct 30 (predicted PAL used) excludes Sundays and Holidays						
PAL:	**A**	**B**	**C**	**D**	**EV**	**E**
Month	**Average Days per Month at Each PAL Value**					
May	9	3	4	0	0	0
June	4	8	8	4	0	0
July	0	1	16	5	0	0
August	0	0	6	14	2	0
September	0	1	6	10	2	1
October	4	3	8	3	1	0
Total Days per Season	**17**	**16**	**48**	**36**	**5**	**1**

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

Project Name: _____
Agreement Number: _____
Agreement 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	
Agreement considerations:	
Normal Operating Season	
Frequency of recent Contractor fires in area	
Type of operation	
Contractor's past/current performance & equipment readiness	
Other site specific mitigation or precaution (i.e. Contractor's 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.

Project Manager | Date

Contracting Officer | Date

EXHIBIT G - Supplemental Best Management Practices & Design Criteria
GENERAL SERVICES AGREEMENT
RFB ELDO SA - 05: Scottiaggo Forest Health and Fuels Reduction Project

Transportation System

Roads and trails within the Project area will be managed consistent with the 2008 Eldorado National Forest Public Wheeled Motorized Travel Management Environmental Impact Statement (Travel Management EIS) and compliant with applicable standards. Roads not identified as open to public use may be blocked by gates, barricades, rocks, other barriers or by signage. In addition to the seasonal closure identified by the Travel Management EIS, roads identified as open for public use may be temporarily closed during inclement weather or during logging operations to protect reconstruction investments and for public safety.

Project Design Criteria

Aquatic Wildlife

Table 1: Operating requirements for ground based mechanized equipment in Riparian Conservation Areas (RCAs) for the Scottiago Project.

Habitat Type[1]	RCA Zone	Width (feet)	Equipment Requirements	Operating Requirements
Perennial/ Intermittent Streams andSpecial Aquatic Features (SAFs)	Exlusion Zone	0 to 100 feet from stream or SAF edge; or 0 to 25 feet beyond riparian vegetation, whichever is greater	Prohibited Mechanical Harvesting/ Shredding[2] andSkidding[3]	Equipment reach in may be allowed upon consultation with RCA team[4].
Perennial Streams and SAFS	Partial Treatment	100 to 300 feet from stream edge;or 25 feet beyond riparian vegetation to 300 feet	Allowed: Mechanical Harvesting/ Shredding[2] andSkidding[3]	Ground based equipment operations prohibited on slopes greater than 25%. Use existing skid trails except where unacceptable impact would result. Do not construct new primary skid trails or landings within RCA zones without consultation with the RCA team[4].
Intermittent Streams	No Restrictions	100 to 150 feet from stream edge;or 25 feet beyond riparian vegetation to 150 feet	Allowed: Mechanical Harvesting/ Shredding[2] andSkidding[3]	

Habitat Type[1]	RCA Zone	Width (feet)	Equipment Requirements	Operating Requirements
Ephemeral Streams	Exclusion Zone	0 – 25 feet	Prohibited Mechanical Harvesting/ Shredding[2] and Skidding[3]	Equipment reach in may be allowed upon consultation with RCA team[4].
	Partial Treatment	25 – 150 feet	Allowed: Mechanical Harvesting/ Shredding[2] andSkidding[3]	Ground based equipment operations prohibited on slopes greater than 25%. Use existing skid trails except where unacceptable impact would result. Do not construct new primary skid trails or landings within RCA zones without consultation with the RCA Team[4].

Design Criteria Specific to Aquatic Resources

Design Criteria are measures taken to ensure meeting purpose and need while minimizing the potential for adverse effects.

- Potential breeding habitat for the California red-legged frog (CARLF) occurs below 4,000 feet in elevation, and in ponds and lakes, or perennial and intermittent stream reaches with less than 2% gradient. Potential non-breeding habitat for CARLF includes all land and water within 1 mile of potential breeding habitat. Overland migration occurs during the wet season (defined as starting with the first frontal rain system that deposits a minimum of 0.25 inches of rain after October 15 and ending April 15), which creates a Limited Operating Period (LOP) for certain activities.

General Measures

Protection measures may be altered on the ground for a specific site based on recommendations by relevant specialists (soil scientist, aquatic biologist, botanist, or hydrologist).

- If a sensitive or listed amphibian or turtle is sighted within the Action Area, cease operations in the sighting area, and inform a Forest Service aquatic biologist of the sighting immediately. Before commencing activities, consultation may need to be re-initiated with USFWS for listed species.
- Protect any seeps, springs, bogs and wet areas not located on map found in the field during treatment, with same criteria for Special Aquatic Features (SAFs).
- Do not use tightly woven fiber or monofilament netting (or similar materials) for erosion control or other purposes when netting is left exposed.
- An emergency response plan shall be created and implemented to prevent the contamination of waters from accidental spills of hazardous materials (per BMP 7.4).

Specific Measures

Water Drafting

- The development of water drafting sources shall follow all applicable guidelines under BMP
- (USFS 2012). Locate water drafting sites to avoid adverse effects to in-stream flows and depletion of pool habitat.
- Water drafting sites would be assessed or surveyed for TES species prior to use and

periodically during use depending on operation duration and seasonality. If sensitive, threatened, or endangered species are identified at a potential water drafting site, that site would not be used for water drafting.

- In perennial and intermittent streams, pump intake screens shall have openings not exceeding 3/32-inch (0.09375 inch) and be sized according to the pump intake capacity. Place hose intake into bucket in the deepest part of the pool. Use a low-velocity water pump and do not pump natural ponds to low levels beyond which they cannot recover quickly (approximately one hour).
- For water drafting on fish-bearing streams: do not exceed 350 gallons per minute for stream flow greater than or equal to 4.0 cubic feet per second (cfs); do not exceed 20% of surface flows below 4.0 cfs; and, cease drafting when bypass surface flow drops below 1.5 cfs.
- For water drafting on non-fish-bearing streams: do not exceed 350 gallons per minute for stream flow greater than or equal to 2.0 cfs; do not exceed 50% of surface flow; and, cease drafting when bypass surface flow drops below 10 gallons per minute.
- In-channel water drafting locations would include rocking of approaches and barriers of rock or sloping of drafting pads away from water source to prevent spillage at vehicle from returning to the watercourse.

Botany

- User created routes off of Omo Ranch Road and 8N62 will be blocked using rock, bollards, or other native material barriers. These routes are not on the MVUM and currently impact lava cap plant communities and FS Sensitive plants.
- Sensitive and watchlist plant populations within the project area would be flagged for avoidance. All ground disturbing activities, landing, skid trails, burn piles, hazard tree removal, brushing, and mechanical equipment, would be excluded from sensitive plant protection areas. Where it is necessary to remove trees or conduct roadside brushing from within site boundaries, the project botanist would be consulted to mitigate impacts. All thinning of trees adjacent to site boundaries would be directionally felled away from the site. If new sensitive plant occurrences are discovered during project implementation the project botanist would be notified to develop necessary protection measures.
- All potential habitat for Sensitive Plants would be surveyed prior to project implementation. Any unsurveyed potential habitat would be flagged for avoidance.
- Lava caps, which support unique plant communities in the project area, would be protected from motorized equipment and vehicles. Skid trail and Line construction through lava cap communities would be avoided when feasible.
- All equipment and vehicles (Forest Service) 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 cleaning facility before the equipment and vehicles enter the project area.
- Known invasive plant sites along roads in the project area will be flagged prior to implementation and will be avoided as much as possible. If infestation cannot be avoided contact a Forest Service Botanist.
- Where proposed work occurs in known invasive plant infestations equipment would be cleaned prior to leaving infested areas.
- Any straw or mulch used for erosion control would be certified weed-free. A certificate from the county of origin stating the material was inspected is required.

Archeology/Heritage

The Scottiago project will comply with Section 106 of the National Historic Preservation Act of 1966, as amended in accordance with provisions of the "Programmatic Agreement among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), the California State Historic Preservation Officer, the Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Processes for Compliance with Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forest of the Pacific Southwest Region" (Regional PA 2013).

Fuel reduction using hand tools and other activities may be permitted within the boundaries of known Historic Properties, if approved by the District Archaeologist. Sites that are at risk from fire will be flagged and avoided during prescribed understory burning. Sites that are not considered at risk or have previously burned at moderate or high intensity may be included in the prescribed burn at the discretion of the District Archeologist. Construction of fire lines will occur outside of the cultural resource site boundaries unless directed by the District Archaeologist. All machine and hand piles will be placed away from site boundaries at a distance such that site features will not be affected by flames and heat. Hazard tree removal on or in the vicinity of cultural resource sites will be coordinated with the District Archaeologist.

Sites within harvest units or near road maintenance/reconstruction projects will be identified with flagging and avoided during ground disturbing project activities. All thinning of trees adjacent to site boundaries will be directionally felled away from the site. Non-merchantable trees and brush may be removed by hand, within site boundaries, at the direction of the District Archaeologist. Road reconstruction may require the use of Standard Protection Measures or mitigation as per the Regional PA 2013.

Should any previously unrecorded cultural resources be encountered during implementation of this project, all work should immediately cease in that area and the District Archaeologist be notified immediately. Work may resume after approval by the District Archaeologist provided any recommended Standard Protection Measures are implemented. Should any cultural resources become damaged in unanticipated ways by activities proposed in this project; the steps described in the Regional PA 2013 for inadvertent effects will be followed.

The District Archaeologist will be kept informed of the status of various stages of the project, so that subsequent field work can proceed in a timely fashion. Monitoring of the area may occur after the project has been completed. This work will be documented in amendments to the Archaeology Specialist Report, as appropriate.

EXHIBIT H - Project Maps

Attached Separately