Great Basin Institute

August 26, 2022

Lloyd Meadow Road Project
Sequoia National Forest and Giant Sequoia National Monument
Western Divide Ranger District
Tulare County, California

Notification of Pre-Bid Tour

Forestry Services Provider:

This solicitation is from the Great Basin Institute, an environmental non-profit organization working to restore forests, enhance watershed quality, and protect habitat. Your company has been selected to receive notice for a **pre-bid tour on September 9th, 2022** of select treatment units of the Lloyd Meadow Road Project. Removal of felled trees and vegetative debris from the landscape will reduce fuel load and provide safe public accessibility along approximately 8.8 miles of National Forest System roads within the Castle Fire perimeter in the Giant Sequoia National Monument, Western Divide Ranger District. Project activities are implemented in partnership with the Sequoia National Forest under a Master Stewardship Agreement and funded solely by the federal agency. Implementation is expected to begin in late Summer 2022 and be completed by December 31, 2023.

Pre-bid tour meeting time and location: September 9th, 2022 – Meet at 10:00 a.m. at the Lloyd Meadow Gate on Forest Road No. 22S82

We will visit several treatment units and will be available throughout the day to discuss the project in more detail.

Thank you for your time and consideration of this request. **Please contact us with any questions and *RSVP by September 7th if you plan to attend the tour on September 9th*.**

Jerry Keir - Great Basin Institute. (775) 846-9310 Email: jkeir@thegreatbasininstitute.org
Steven Caracciolo - USFS. (559) 920-7868 Email: Steven.Caracciolo@usda.gov

Road Number	Road Name	Miles
20S67	Lloyd Flat	1.64
20S77	Pyles Camp	0.38
20S78	Freeman Creek Grove	1.03
22S82	Lloyd Meadow	5.78
	Total Miles	**8.8**

Project Activities & Treatment Methods

Project activities include processing or removal of trees with a moderate and high hazard potential (hazard rating 4 to 7) in accordance with the Hazard Tree Identification and Mitigation report (USDA 2022). Hazard tree removal will be within one tree length of the road. Hazard trees will be felled using hand tools, chainsaws, or mechanically using feller-bunchers. Felled trees will be chipped, lopped and scattered, piled and burned, removed for wood products such as lumber, biomass, or personal or commercial firewood, or other similar means of processing and/or removal. Treatment may require skidding logs or trees to landing areas for processing, loading on trucks, and removal.

No new temporary or permanent road construction is proposed for this project. Road maintenance activities include cleaning culverts, ditches, and drains, and grading and re-establishing rolling dips or other drainage features of the roadbeds on haul routes within the project area. For giant sequoia, all dead trees over fifteen inches diameter shall be left standing unless a tree has other structural issues that render it an imminent hazard. **All live and dead giant sequoia trees shall remain as they are**. Stumps from live and recently dead trees in select areas will be treated with a registered borate compound.

Schedule of Items

Mandatory Work Activities:

Item	Description	Total Units	Unit of measure
1a	**Cut - Skid - Deck** (Mechanical commercial and non-commercial on planting unit)	42	Acres
1b	**Cut - Pile – Cull & Slash** (Mechanical non-commercial on planting unit)	42	Acres
2	**Cut - Skid - Deck** (Mechanical commercial and non-commercial)	301	Acres
3	**Biomass Removal only**	10,340	Tons
4	**Cut - Pile - Cull & Slash** (Mechanical non-commercial)	301	Acres
5	**Directionally Feel Hazard Trees**	13	Acres
6	**Road Maintenance** (pre/post haul)	8.8	Miles

Unit	Acres	Treatment Type	Marking Designation
34	114	Cut, Skid, Deck, Haul	Designation by Description
35	102	Cut, Skid, Deck, Haul	Single Tree Marked (Blue Paint)
36	64	Cut, Skid, Deck, Haul	Designation by Description
37	63	Cut, Skid, Deck, Haul	Single Tree Marked (Blue Paint)
38	13	Directionally Fell HT	Designation by Description

Project Design Features and Standards

The following protection measures shall be implemented to minimize or eliminate potential effects, or tocomply with the LRMP, GSNMMP, laws, regulations, and policy.

1. Aquatic Wildlife

AW1. No burn piles shall be placed within meadows, fens, springs, or 25 feet from the edge of riparianvegetation.

AW2. Piles that lie within 300 feet of perennial streams or special aquatic features or 150 feet of intermittentor ephemeral streams may be burned, but would, to the extent practicable, be ignited in a manner that allows any organisms to flee from the pile (for example, light on the leeward side so that fire moves asa front through the pile).

AW3. 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. Hose intakes shall be placedinto a bucket in the deepest part of the pool. A low-velocity water pump shall be used, and natural ponds shall not be pumped to low levels beyond which they cannot recover quickly (approximately one hour).

AW4. For water drafting on fish-bearing streams: drafting shall not exceed 350 gallons per minute for streamflow greater than or equal to 4.0 cubic feet per second (cfs); nor exceed 20 percent of surfaceflows below 4.0 cfs; and drafting shall cease when bypass surface flow drops below 1.5 cfs. (BMP WatUses-3 (USDA 2012)).

AW5. For water drafting on non-fish-bearing streams: drafting shall not exceed 350 gallons per minute for stream flow greater than or equal to 2.0 cfs; nor exceed 50 percent of surface flow; and drafting shall cease when bypass surface flow drops below 10 gallons per minute. Water sources designed for permanent installation, such as piped diversions to offsite storage, are preferred over temporary, short-term-use developments. Water drafting sites shall be located to avoid adverse effects to instream flowsand depletion of pool habitat. (BMP WatUses-3 (USDA 2012)).

AW6. In-channel water drafting locations shall include rocking of approaches, barrier rock, straw bales, orother measures to prevent overflow and leaks from entering the watercourse. (BMP WatUses-3 (USDA 2012)).

AW7. Tightly woven fiber netting, plastic monofilament, or similar material shall be not used for erosioncontrol or other purposes.

Giant Sequoia Groves

GS1. Forest Service timber sale administrator (TSA) or harvest inspector (HI) shall clearly identify areas where heavy equipment operation is authorized within a giant sequoia grove by approvingthe location of all landings and skid trails prior to construction and use. The TSA or HI shall monitor and assess operator compliance in approved areas within a giant sequoia grove.

GS2. Heavy equipment should not be operated within ten feet of the drip line (area on the ground belowthe outermost reaching crown of the tree) of a live giant sequoia tree greater than twelve inches dbh in order to avoid damaging root systems. Any exposed roots should be avoided. If operations within this area are necessary to remediate a safety hazard, the operators shall consult immediately with the harvest inspector or timber sale administrator.

GS3. Impacts to regenerating giant sequoias shall be avoided to the extent feasible.

Heritage Resources

HR1. Archaeological sites shall be flagged and avoided during all Project activities where possible (2018 Regional Programmatic Agreement [RPA] Appendix E, 1.1). To ensure site avoidance, site locations may be shared with official implementation personnel with the understanding that they bekept for internal use only and remain confidential (Appendix E, 1.3 (2)). Heritage Program Manager/Delegated Heritage Program Staff (HPM/DHPM) may provide written approval for an undertaking's activities within or adjacent to the boundaries of historic properties based on professional judgment that such activities will not have an adverse effect on historic properties, or under carefully controlled conditions such as those specified below.

HR2. Placement of barriers within or adjacent to site boundaries may be necessary to prevent access to or disturbance of deposits or historic features, or for protection of other sensitive resources on-site, whensite avoidance is not possible. Use of these boundaries is at the discretion of the HPM/DHPM and willonly be used when such barriers do not disturb subsurface deposits or lead to other effects to the site. (RPA, Appendix E, 2.1 (d))

a. Non-intrusive barriers: wooden and other barriers anchored with rebar; rocks/boulders orother items placed on the surface; weed-free straw bales or straw bales anchored with rebar; or other nonintrusive barriers approved by qualified Heritage Program staff.

b. Fencing: "T"-post fencing; snow fencing; orange highway-type fencing; or other fencingapproved by HPMs or qualified Heritage Program staff.

HR3. Felling and removal of hazard trees within historic properties may occur under the followingconditions (RPA, Appendix E, 2.2 (a)):

a. Trees may be limbed or topped to prevent soil gouging during felling.

b. Felled trees may be removed using only the following techniques as authorized by the HPM/DHPM: hand bucking, including use of chain saws, and hand carrying; rubber-tiredloader, crane/self-loader, helicopter, or other non-disturbing, approved methods.

c. Equipment operators shall be briefed on the need to reduce ground disturbances (e.g.,minimizing turns).

d. No skidding or tracked equipment shall be allowed within historic property boundaries.

e. Where monitoring is a condition of approval, its requirements or scheduling procedures should be included in the written approval.

HR4. Vegetation to be burned shall not be piled within the boundaries of historic properties unlesslocations (e.g., a previously disturbed area) have been specifically approved by the HPM or qualified Heritage Program staff. (Appendix E, 2.2 (b) (H))

HR5. Mechanically treated (crushed/cut) brush or downed woody material may be removed from historic properties by hand, through the use of off-site equipment, or by rubber-tired equipment approved by

HPMs or qualified Heritage Program staff. Ground disturbance shall be minimized to the extentpracticable during such removals. (Appendix E, 2.2 (b) (I))

HR6. Woody material may be chipped within the boundaries of historic properties so long as the staging of chipping equipment on-site does not affect historic properties and staging areas are specifically approved by the Zone or Forest Archaeologist or qualified Heritage Program staff. (Appendix E, 2.2 (b) (J))

HR7. HPMs shall approve the use of tracked equipment to remove brush or woody material

from withinspecifically identified areas of site boundaries under prescribed measures designed to prevent or minimize effects. Vegetative or other protective padding may be used in conjunction with HPM authorization of certain equipment types within site boundaries. (Appendix E, 2.2 (b) (K))

HR8. Linear sites (e.g., roads, trails) will be avoided when possible. When a linear site is unavoidable, it may be crossed or breached by equipment in areas where their features or characteristics clearly lack historic integrity as determined by the HPM or qualified Heritage Program staff. Adherence to this protection measure requires maintaining the integrity of the resource and avoiding damage to rock retaining walls, blazed trees, and other features (Appendix E, 2.1 (a)). Specific requirementsfor crossing linear sites are:

a. Crossings are not to be made at the points of origin, intersection, or terminus of linear sitefeatures.

b. Crossings are to be made perpendicular to linear site features.

c. The number of crossings is to be minimized by project and amongst multiple projects inthe same general location.

d. The remainder of the linear site is to be avoided, and traffic is to be clearly routed throughdesignated crossings.

HR9. Should any previously unrecorded heritage resources be encountered during implementation of this Project, all work in that area shall cease as soon as practicable and the Heritage Program staffshall be notified. Work may resume if approved by the HPM or qualified Heritage Program staff subject to implementation of additional protection measures, as necessary.

HR10. Monitoring may be required to enhance the effectiveness of all protection measures includingavoidance and working within site boundaries. (Appendix E, 1.5)

HR11. Prior to implementation, the Project Lead/Sale Administrator/Contracting Officer Representative shallcoordinate with the HPM, or their representative, to ensure protection measures are in place and understood.

HR12. When any changes in proposed activities are necessary to avoid historic properties (e.g., project modifications, redesign, or elimination; removing old or confusing project markings or engineeringstakes within site boundaries; or revising maps or changing specifications), these changes shall be completed prior to initiating any project activities. (RPA, Appendix E, 1.4)

HR13. If standard protection measures cannot provide appropriate protection, this project shall be subject tothe provisions of 36 CFR part 800. (Appendix E, 2.4)

Hydrology and Soils

HS1. Appropriate Standards and Guidelines (S&Gs) and BMPs from the GSNMMP and National BMPsshall be applied.

HS2. Project Specific Prescription for Streamside Management Zones (BMP Veg-3 (USDA 2012)):

Streamside Management Zones (SMZ) shall be included on Project implementation maps and flagged on the ground. SMZs are as follows:

Stream Class	**SMZ (Equipment Exclusion) Width by Percent Slope**					**Stream Order**
	<30%	>30%	>40%	>50%	>70%	

Meadows, Seeps, Springs, Bogs, Fens	100	150	200	250	1.5 times distance to slope break	-
I	100	150	200	250	1.5 times distance to slope break	4+
II	100	100	150	200		3-4
III	50	100	100	150		2-3
IV	<50	<50	75	100		1-2
V	<50	<50	<50	<50		1-0

a. No mechanized heavy equipment is permitted in SMZs. Hand fell trees and leave in placeor end-line. Repair furrows caused by end-lining.

b. Avoid piling and burning within SMZs to the extent feasible.

c. Felling should be away from the SMZs wherever feasible.

d. Maintain, fuel, and stage saws and equipment outside of SMZs.

e. Ground cover shall be added where necessary (lopped/chipped material from felled trees) within the SMZs and the large woody debris component shall be maintained.

f. No landings, staging areas, and temporary roads are permitted within SMZs unlessapproved by a qualified hydrologist.

g. Stream crossings shall be approved by a qualified hydrologist.

h. Flag SMZs on the ground as necessary to ensure protection.

HS3. Rehabilitation of heavy equipment use (i.e., repair rutting/furrowing) shall occur where needed toprevent concentrated flow or hillside erosion. (BMP Veg-4 (USDA 2012))

HS4. During management activities maintain (or add to the extent feasible in deficient areas) an average of 50 percent effective soil cover in treatment areas that is well distributed and generally in the form of fine organic matter. Where feasible, maintain 85 percent or more in riparian areas and slopes greater than 25 percent. Effective soil cover is that whose thickness and continuity provides adequate protection to prevent rill network formation. Fine organic matter includes plantlitter, duff, and woody material less than 3 inches in diameter. Management activities in areas withecological types that cannot normally support 50 percent soil cover shall be considered individually for soil cover needs. (BMP Veg-2 (USDA 2012))

HS5. Maintain 100 percent soil cover in a 100-foot-wide buffer below rock outcrops that have the potential to generate runoff into management activity areas and cause erosion. (BMP Veg-2 (USDA 2012))

HS6. In areas where sustained slopes exceed 35 percent, limit mechanical operations such as skidding,tractor piling, grapple piling, and mechanized tree felling except where supported by on-the- ground evaluation by an interdisciplinary team that includes a watershed specialist. (BMP Veg-2(USDA 2012)

HS7. Trees are permitted to be hand-felled and end-lined on slopes over 35%, but any furrow producedby the end-lining that exceeds 25 feet long by 6 inches deep shall be recontoured (“filled in”) to prevent concentrated flow and hillslope erosion. (BMP Veg-2 (USDA 2012))

HS8. Limit total soil compaction (displacement and total soil porosity reduction) to less than fifteen percent of the management activity area. No more than ten percent of the activity area can be displaced. Temporary roads, temporary landings, and skid trails shall be considered part of the activity area to evaluate. Areas excluded from this standard include National Forest System roads,trails, and facilities, and other dedicated sites. Soil will be considered displaced if more than one- half of the thickness of the topsoil or A horizon has been removed from a contiguous area largerthan 100 square feet. Soil will be considered compacted if there is less than 90 percent total soil porosity in a contiguous area greater than 100 square feet compared to undisturbed soils nearby. Conduct operations when soil porosity, especially macro porosity, will be maintained at a level sufficient for soil hydrologic function and long-term soil productivity for plant growth. Where possible avoid placing skid trails and landings on soils with high soil burn severity.

HS9. Operations limited to periods of low soil moisture.

HS10. No fuel storage shall take place within Riparian Conservation Areas (RCA), which are generally defined as 300 feet from special aquatic features and perennial streams, and 150 feet from seasonallyflowing streams, except at designated administrative sites. Refueling would take place in these zonesonly where there is no other alternative. (BMP Road-10 (USDA 2012)).

HS11. Within RCAs (excluding the SMZ) utilize low-ground-pressure equipment, or other non-ground-disturbing actions off of existing roads when needed to remove trees from the RCA.

HS12. Landings and skid trails shall comply with Forest Service management direction including use of existing landings, designation and use of temporary skid trails, and closure using water bars, etc., toprevent unauthorized use and erosion. (BMP Veg-4 (USDA 2012))

HS13. Watersheds with >50% moderate to high soil burn severity will require additional design measures toprevent a cumulative watershed effects response:

a. Hand piling or the use of a grapple piler on slopes over fifteen percent for site preparation andclean up.

b. Any skid trail that is within 25 feet (or less) of an SMZ should have:

i. Decreased water bar spacing to one-half of the normal BMP specification. Decreasedwater bar spacing should be used from the SMZ boundary to a 50 foot distance alongthe skid trail away from the SMZ boundary or, if the skid trail parallels the SMZ, forthe length that the skid trail is within 25 feet of the SMZ.

ii. >90% ground cover of slash and/or certified weed-free straw mulch[1] distributed on theskid trail from the SMZ boundary to a 50 foot distance along the skid trail away from the SMZ boundary or, if the skid trail parallels the SMZ, for the length that the skid trail is within 25 feet.

iii. In areas of high soil burn severity (i.e., BAER SBS map or RAVG mortality of >75%)where soil cover is less than 50%, water bar outlets should have slash and/or certified weed-free straw mulch distributed at the outlet for a distance of 50 feet downslope to prevent accelerated erosion on the adjacent unprotected hillslopes.

Invasive Plants

IP1. All off-road equipment shall be cleaned to ensure it is free of soil, seeds, vegetative matter, or other debris before entering NFS lands to prevent the introduction or spread of invasive plants. Prior to the start of operations, the Project administrator shall do a visual inspection for such debris.

Public Safety, Range, and Recreation Sites

PS1. Warning signs shall be posted in work areas, including all access points along trails and roads, to alertoncoming traffic and recreational users to safety hazards associated with the Project.

PS2. Coordinate treatment timing to minimize conflicts with recreation use.

PS3. Recreational and cattle trails shall be cleared of felled material and slash.

PS4. Damage to recreation sites and improvements shall be repaired in a timely fashion, such as but not limited to repair to road and pad surfacing, improvement repair or replacement, removing debris offsite, and seeding.

PS5. Minimize overlaying skid trails and haul roads on non-motorized system trails. If trails are used asskid trails or haul roads, trail cleanup and rehabilitation will be included in the contract.

PS6. Temporary road and/or skid trail crossings across designated forest trails and roads will be kept to a minimum. Any crossings shall be perpendicular to designated forest trails and roads. To reduce the potential for establishment of user created routes, rehabilitation must be completed in a timely mannerto ensure the public does not begin using them for motorized or non-motorized recreation. The rehabilitation plan shall include returning to natural contour, scarification, seeding with native mix andinstalling natural barriers as needed.

PS7. Trail width shall not be increased. Changes to trail alignment and surfacing will be minimized; the trailwill not be straightened, nor its surface changed with an alternate material unless such actions are needed to enhance the trail and protect resources.

PS8. Protect range improvements and repair any damage in consultation with the range permittee.

Vegetation

V1. All cut conifer stumps (from live and recently dead trees) greater than three inches in diameter (outsidebark) within and/or adjacent to developed recreation sites, trailheads, giant sequoia groves, rust resistant sugar pines, private or State land, and other high value areas, shall be treated with a registeredborate compound (*FSM R5 Supplement 2300-92-1 modified by FSH R5 Supplement 3409.11-2010-1*).

V2. Follow all applicable label requirements, all Federal and California laws and regulations, and Forest Service policies and direction for application of borate compounds. Only EPA and California- registered fungicides shall be used (currently only *Sporax* or *Cellu-Treat*). Basic Forest Service policyand direction on the use of pesticides is found in *FSM 2150 Pesticide-Use Management and Coordination* as well as in *FSH 2109.14 Pesticide-Use Management and Coordination Handbook*.
There is also a R5 supplement to FSM 2150. There is additional information in *FSH 6709.11 Healthand Safety Code Handbook*. California pesticide regulations are found in the California Code of Regulations Title 3, Division 6 (CCR) and can be found on-line at https://www.cdpr.ca.gov/docs/legbills/calcode/chapter_.htm.

V3. An incidental number of live or dead trees that pose a hazard to operability in the treatment units or onlandings and disposal sites may also be felled and removed during implementation.

V4. Dead giant sequoia trees over fifteen inches in diameter shall be left standing unless a tree has otherstructural issues that render it an imminent hazard. All live giant sequoia trees over twelve inches diameter shall remain standing.

Wildlife

W1. Retain felled trees on the ground where needed to achieve down woody material standards of ten totwenty tons per acre in logs greater than twelve inches in diameter.

Preference should be given to retaining the largest available logs.

W2. If a California condor is detected perching or roosting within 0.25 mile of Project activities prior to orduring Project implementation, contact the district wildlife biologist.

W3. Maintain a limited operating period (LOP), prohibiting activities within approximately ¼ miles of active California spotted owl nests during the breeding season (March 1 through August 15). The LOPmay be waived, where necessary, to allow for early season prescribed burning in up to five percent of California spotted owl PACs on a national forest per year.

W4. If a California spotted owl is detected nesting, perching, or roosting within 0.25 mile of Project activities prior to or during Project implementation, the district or forest wildlife biologist shall benotified to provide appropriate mitigation response.

W5. Schedule follow up slash treatment in suitable California spotted owl or northern goshawk habitat outside the breeding season, or if necessary, as late in the breeding season (March 1 – August 15) aspossible while still providing for public safety.

W6. Maintain a limited operating period (LOP), prohibiting activities within approximately ¼ miles of active northern goshawk nests during the breeding season (February 15 through September 15). The LOP does not apply to existing road and trail use. The LOP may be waived, where necessary, to allowfor early season prescribed burning in up to five percent of the northern goshawk PACs in on a national forest per year.

W7. If a northern goshawk nest is detected within 0.25 mile of Project activities prior to or during Projectimplementation, the district or forest wildlife biologist shall be notified to provide appropriate mitigation response.

W8. Mark to readily identify and monitor any newly discovered active northern goshawk and Californiaspotted owl nest sites located within the Project area.

W9. Project activities (except road use and on-road maintenance) shall be prohibited within suitable Pacificfisher denning habitat from March 1 through June 30. Should a fisher or marten den site be detected through any phase of the Project, contact the district wildlife biologist.

W10. In potential fisher denning habitat and along secondary or unpaved, low-traffic roads, implement hazard mitigation options other than complete removal for conifer snags greater than 35 inches diameter breast height (DBH) and hardwood snags greater than 27 inches DBH when it is safe to do so. Such options include cutting the hazard tree as high as possible to leave a portion of the trunk (10 to 20 feet tall) standing in order to provide potential microsites. Leave 15 to 20 feet of the thickest partof the trunk behind as a large log, particularly if it is decayed.

W11. Provide an adequate number of slash piles to ensure sufficient cover remains, where feasible. Where working in suitable fisher habitat, and in areas where cover is lacking or connectivity needs to be restored, retain some slash piles for fisher escape cover and prey habitat when it is safe to do so and when adequate materials occur within the work site. When feasible, piles should contain at least 2 large diameter logs, have enough interstitial space to allow for fisher occupancy, and be at least 6' X 8'in diameter.