

**Concow Resilience Project: Crain Ridge**  
**Attachment B: Scope of Work**

The following treatments will be used to prepare the landscape for recurring prescribed fire. Riparian Conservation Areas (RCAs) are not flagged and piling specifications in RCAs must be met by utilizing Avenza and the maps provided. Contractor will confine operations to within the boundaries represented to them on the ground - USFS Boundary Markings prevail and no work shall be conducted outside of the boundaries. Contractor must utilize the Avenza ready maps supplied. Final treatment acreage will be calculated by RCD staff using a GNSS receiver. Acres may be reduced based on archaeological, biological, rock outcroppings, roads, unforeseen circumstances, and USFS Special Requests. The contractor will not be compensated for additional acres unless a change order is approved, or anything above the “Not to Exceed” price as stated in the contract.

<b>Bid Item</b>	<b>Description</b>	<b>Total in Task</b>
<b>Bid Item 1:</b> Unit 5A	Hand cut and Pile with Hardwood Release and Pruning	325 acres
<b>Bid Item 2:</b> Unit 5B	Hand cut and Pile with Hardwood Release and Pruning	7 acres
<b>Bid Item 3:</b> Handline	In units 5A and 5B, dig handline to a 3-ft wide scrape to bare mineral soil and keep a 10-foot buffer on each side of handline with no lopped material and/or piles.	18,394.75 ft
<b>Optional Bid Item 4:</b> Hazard Tree Removal	Fell dead trees 6-inch DBH or greater on unit 5B	Est. 75 trees

**Table 1: Bid Item and Description**

**Bid Item 1 & 2: Hand Cut & Pile Specifications**

On 332 acres of ground, perform the following vegetation management:

1. Cut all brush (apart from retained species listed below) using hand tools of choice. A metal-bladed brush cutter is a recommended tool for this task.
  - a. Cut material will be completely severed with no live limbs left on the stump, and leave vegetation will not be damaged or hindered. No sharply angled stumps will be left. Sever stems as low to the ground as possible.
  - b. Brush should be cut in riparian areas but prevent erosion by leaving soil-stabilizing brush and material on the cut banks of riparian areas.
    - i. Review section 3.G for piling locations next to riparian areas and Diagram 4.
    - ii. Watercourse buffers are virtual.
    - iii. Retain riparian species such as aspen, cottonwood, alder, willow, and dogwood within RCAs.

2. Leave Trees and Hardwood Release (See Diagram 1)
  - a. Material **not to be cut** includes Leave Trees (in order of preference):
    - i. Conifers of any size
    - ii. Black oaks ( $\geq 2''$  DBH)
    - iii. Madrones ( $\geq 2''$  DBH)
    - iv. Dogwood ( $\geq 2''$  DBH)
    - v. Maple ( $\geq 2''$  DBH)
    - vi. California Bay ( $\geq 2''$  DBH)
  - b. Species to be retained regardless of size, when possible:
    - i. Redbud
    - ii. Elderberry
    - iii. Coffeeberry
  - c. Leave trees should have **25-foot spacing between each tree**. Select for the healthiest tree with the best vigor based on species order of preference. It is desired to have a diversity of species retained in the unit.
  - d. Hardwood Pruning
    - i. **Species to prune:** Black oak and madrone.
    - ii. Prune to keep 5-6 of the best leader stems, chosen for health and vigor.
    - iii. **All cut material must be removed under the tree to 3 feet outside of the drip line.**
      1. Slash must be piled and not left as a berm around the base of the tree.
3. Piling (See Diagram 2)
  - a. Pile all recently cut material, previously cut material still present on site, and dead and downed material up to 10'' DBH.
  - b. **Minimum** acceptable hand pile size will be 5 feet high and 5 feet wide. There is no upper limit to how big the piles can be.
  - c. Piles should be compact with smaller material such as brush and branches in the bottom and center, and larger material such as boles in the middle and on top to compress lighter fuels.
  - d. Boles, slash, and any cut material will be oriented parallel to the slope (pointing up and down hill) to prevent rollout during burning.
  - e. Boles, slash, and any cut material will be oriented parallel on flat surfaces as well to ensure the compactness of the piled material and the success of burnt pile consumption.
  - f. Cover  $\frac{3}{4}$  of each pile with 6 mil plastic placed in the upper  $\frac{1}{5}$ th of the pile. Plastic must be sufficiently anchored with slash or brush so that it will not blow off in high winds.
    - i. Plastic covering will be furnished by the contractor.
  - g. Pile location:

- i. No piles will be placed within **25 ft** of keeper trees.
- ii. No piles within **15 ft** of ephemeral streams and **25 ft** of intermittent streams, wetlands, springs, and dry meadows (some hauling is therefore required; small amounts of lop and scatter to reduce hauled material may be permissible when vegetation is excessive, must get approval from project manager).
- iii. No piles will be placed underneath or within **20 ft** of powerlines.
- iv. No piles will be placed within **15 ft** of standing snags.
- v. No piles will be placed within **15 ft** of downed logs greater than 20 inches in diameter.
- vi. Piles must be **10 ft** away from the handline, at minimum **20 ft** away from project boundaries.

Unit	Treatment	Acres
5A	Cut & Pile	325
5B	Cut & Pile	7

**NOTE:** There is blackberry and poison oak present in this unit. It is expected that blackberry and poison oak will be cut and piled along with the other species. Contractor is responsible for providing their crew with the proper PPE to safely treat these materials.

### **Bid Item 3: Handline Specifications**

On units 5B and 5A, dig 18,394.75 ft of handline / fireline to support future burning operations.

- a. Fireline will be a 3-foot-wide scrape to bare mineral soil and a 10-foot-wide cut of all vegetation on both sides of the handline, producing a **20 ft** space cleared of all material with the handline in the middle.
- b. Material cut on the outside of the handline must be piled within the unit, keeping the 10 feet immediately adjacent to the line clear of material on both sides.
- c. Any vegetation on the handline and in the ten foot buffers on both sides, including keeper tree species, should be cut.
- d. A cup-trench on hand fire line shall be constructed on side slopes greater than 20%.

Do not damage serpentine rock or other rock outcrops. No scrape or swath cut is needed where there is a serpentine natural barrier, or a natural barrier of other rock material such as granite.

**Do not dig handline or cut material outside of the USFS boundary markers.**

See **Diagram 3** for specifications.

#### **Bid Item 4: Hazard Tree (Optional Bid Item)**

Unit 5B has fire-killed snags from the 2018 Camp Fire. We are asking that you only bid on this optional item if you have qualified, competent sawyers that can handle the intricacy of cutting difficult snags.

1. Directionally fell all snags 6" DBH and above. Care shall be taken to avoid cultural or Riparian sites.
2. All stumps will be flush cut and shall not exceed 12 inches. Variability is allowed if terrain does not permit 12".
3. Leave trees clearly used by wildlife (signs of nests, acorn woodpecker granary trees, large holes and cavities). If unsure, ask RCD project manager for clarification.
4. Buck material up to 10" DBH to 4-foot lengths and pile, including dead and downed material already on site and tops of hazard trees.
  - a. Leave anything greater than 10" DBH intact and in place.
  - b. Do not build piles on large, downed logs.
5. Trees to be cut will be marked with blue paint and a blue stump spot. Payment will be given on a per-tree basis.
  - a. Not-to-Exceed count will be calculated based on an estimated 75 trees in the unit that need to be cut. Final amount will be calculated by tallied stumps.

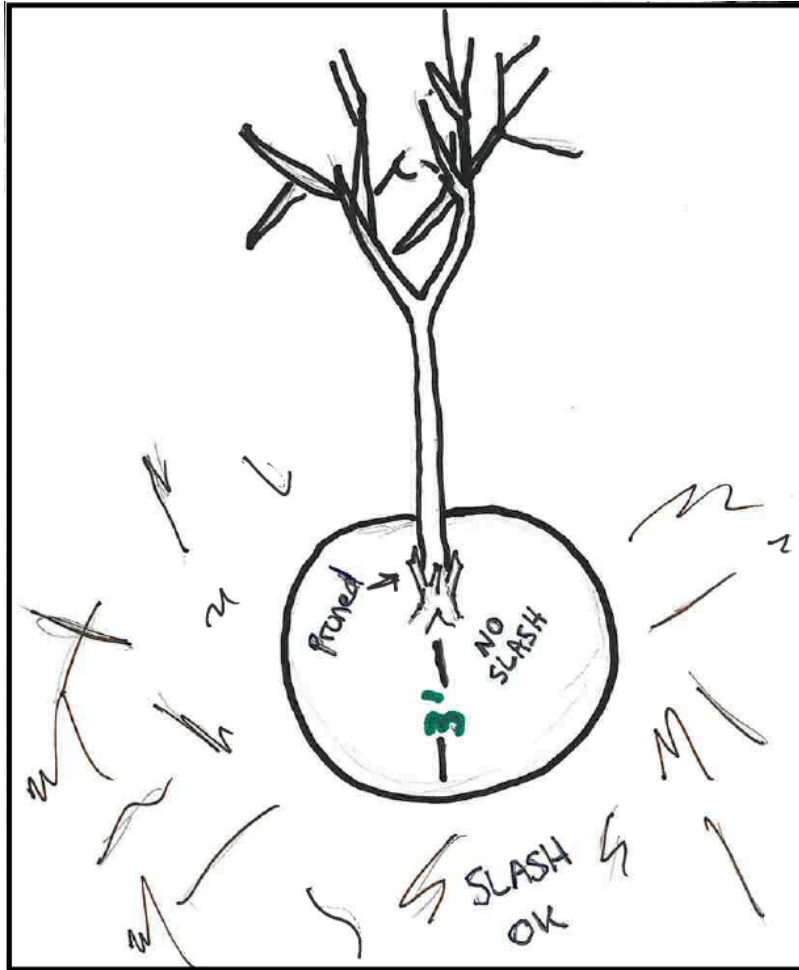
#### **General Measures**

1. Archaeological Site(s) General Measures
  - a. CUL-2
    - i. If heritage resources are inadvertently discovered during project implementation, the Forest or District archaeologist would be contacted immediately. The heritage resources would be recorded, clearly delineated, and protected
  - b. CUL-3
    - i. Vegetation to be burned shall not be piled within the boundaries of cultural sites unless locations (e.g., a previously disturbed area) have been specifically approved by qualified Plumas NF heritage staff.
  - c. CUL-4
    - i. Manual treatments with directional felling methods may be used within site boundaries, working with a qualified archeologist, to protect cultural resources.
2. General Wildlife
  - a. AMPHIB-2
    - i. If any California red-legged frogs, foothill yellow-legged frogs, or Sierra Nevada yellow-legged frogs are found at any time during implementation of the proposed project, operations will cease in the vicinity of the frog. The immediate area around the frog will be vacated and the frog will be left alone. No activity will occur in that area until such time as the frog has left the area on its own. California red-legged frogs, foothill yellow-legged frogs, and Sierra Nevada yellow-legged frogs will not be handled. The occurrence will be reported as soon as possible to the District Biologist and communicated to the appropriate line officer.

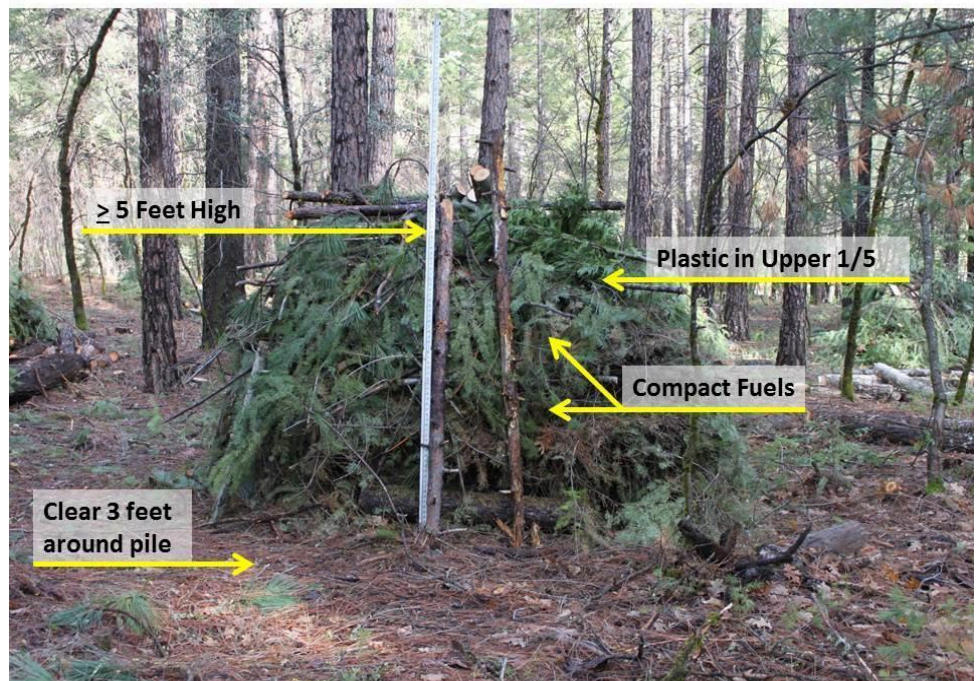
- ii. WLDF-1
    - 1. Incidental detections of federally listed and sensitive species prior to or during project implementation will be reported to the Forest or District Wildlife Biologist for protection in accordance with management direction for PNF.
- 3. General Botany
  - a. BOTANY-2
    - i. Populations of special-status plant species will be avoided, as per Interim Management Prescriptions, on a site-by-site basis. Ground-disturbing activities, including off-road equipment, burn piles, and chipping and spreading slash materials will be prohibited within controlled areas. Hand felling of trees and skidding of logs may be conducted within special-status plant occurrence areas if it is determined by the PNF botanist that effects would be minimal or that there will be beneficial effects on the site or habitat conditions. Burn piles will be staged 20 feet away from plants to ensure that radiant heat will not adversely affect individuals or the surrounding duff layer.
  - b. BOTANY-4
    - i. In the event any new populations of special-status species are discovered during various phases of the project, the area will be flagged and avoided until the PNF botanist or designee determines Design Feature applicability.
  - c. BOTANY-7
    - i. Serpentine soil communities, and other bedrock outcrops will be protected from motorized equipment and off-road vehicles. Landings, skid trails, piling, burning, mastication, and chip spread will not occur in these communities.
- 4. Invasive Species Considerations
  - a. INVASIVE-2
    - i. If project activities cannot be completely avoided within flagged weed infestations, risk minimization strategies will be employed, such as working in the infested area last, working in infested areas when propagules are not viable, limiting the number of people or equipment within the infestation. If work is done within known infestation area, off road equipment must be washed prior to leaving the area.
  - b. INVASIVE-3
    - i. Off-road equipment will be cleaned to ensure it is free of soil, seeds, vegetative matter, or other debris before entering National Forest System lands to prevent the introduction or spread of invasive plants. Contractor agreements will include clauses to require contractors to meet US Forest Service-approved vehicle and equipment cleaning requirements/standards. Equipment will be inspected by a designated examiner before initial entry and any subsequent re-entries onto the project area. Clean all off-road equipment and require inspection prior to leaving areas infested with noxious weeds. If determined necessary during the inspection, cleaning will occur at a vehicle washing station or agreed upon cleaning location before the equipment enters or re-enters the project area.
- 5. Other General Measures

- a. Chainsaw fueling shall occur on service roads and only where spills can be easily cleaned and at least 50 feet away from streams, bridges, or other areas that can transport spilled materials into natural waterways.
- b. Protected areas shown on the map and those identified on the ground prior to operations shall be protected. No equipment is allowed to enter protected areas. If an unidentified protected area (i.e. waterway, culturally sensitive area, biological area, etc.) is found no operations are to proceed in that area until the project manager has been notified and the contractor has been instructed on how to proceed.
- c. Contractors shall conduct all work in accordance with all federal, state, county, and local laws, rules, and regulations, including the California Forest Practice Rules, governing logging practices.
- d. Damages
  - i. Contractor is responsible for property damage including but not limited to: damaged fences, gates, waterlines, trees cut that were flagged to be left, etc.
  - ii. Contractors will need to work with USFS representatives, landowners, and BCRC staff on mitigating damages with either direct financial contribution and/or labor.
- e. Heat and Weather
  - i. Concow is extremely hot and arid in the summer. Contractor will ensure the health and safety of their employees when working in extreme temperatures. Project Managers will allow for reasonable breaks in work due to high temperatures but the Contractor must understand work shall be completed before the contract end date provided.
- f. Project Flagging Scheme

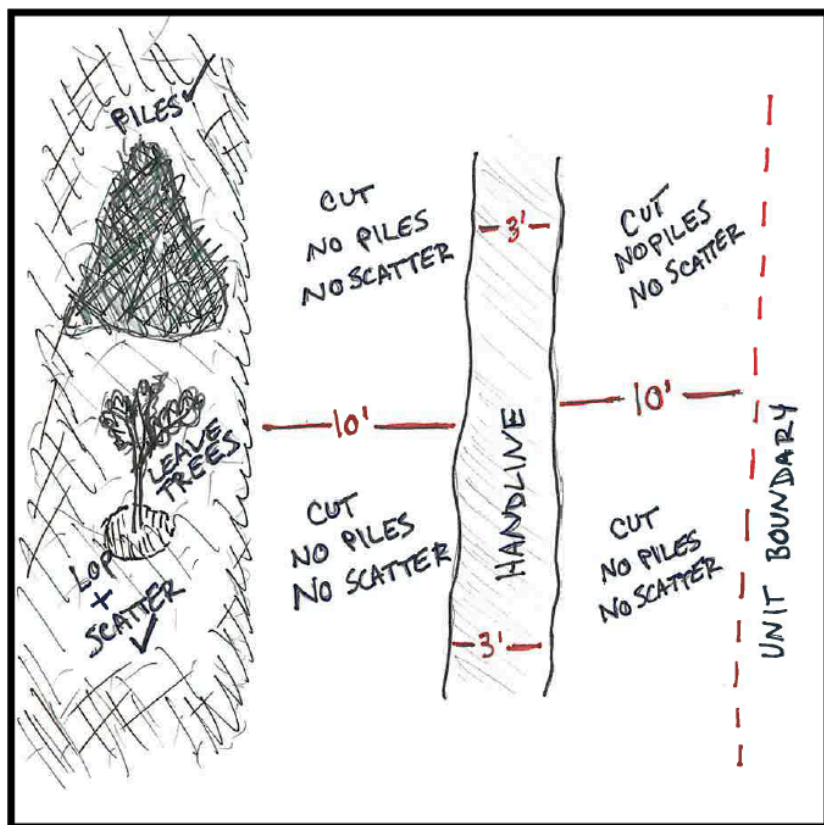
Description	Flagging Color(s)
Project Boundary	Flo Pink
Rare Plants	Blue/Black Striped
Archaeological Sites	Red/Black Striped



**Diagram 1: Pruning and Leave Trees**



**Diagram 2: Piling Specifications**



**Diagram 3: Handline specifications**

## Riparian Conservation Area Operating and Equipment Specifications<sup>1</sup>

Mechanical Thinning, Yarding, Mastication and Machine Piling Slash <sup>2,3</sup>				Active Landings	Underburn <sup>4</sup> <sup>5</sup>	Hand Cut <sup>6</sup>	Minimum Distance to Burn Piles
Hydrologic Feature	(A) Slope <35%	(B) Slope 35-50%	(C) Slope >50%				
Perennial Streams	25 or 82 feet	82 feet	Where soil conditions permit: Same as (B)	150 feet	25–82 feet	No buffer	25–82 feet
Intermittent Streams	25 or 82 feet				25–82 feet	No buffer	25–82 feet
Ephemeral Streams	15 feet	25 feet			No buffer	No buffer	15 feet
Special Aquatic Features (reservoirs, wetlands, fens, and springs)	25 or 82 feet	82 feet			25–82 feet	Perimeter of feature	25–82 feet
Other Riparian Features (dry meadows <sup>7</sup> , seasonal wetlands)	0 to 25 feet				25 feet	Perimeter of feature	25 feet

<sup>1</sup> Minimum buffers for California Red-Legged Frog are not included in this table. Refer to section 1.2 Biological Resources, CRLF-1.

<sup>2</sup> Fell trees away from streams.

<sup>3</sup> For streams and SAFs, minimum buffers vary depending on the presence of special-status aquatic species (see AMPHIB-1, SNYLF-2, and SNYLF-3).

<sup>4</sup> Prescribed burning is allowed in RCAs, but ignitions are not. Prescribed fire must back into this zone.

<sup>5</sup> In surveyed, occupied habitat for special status amphibians, the minimum exclusion distance is increased to 82 feet.

<sup>6</sup> No hand cutting of riparian vegetation or vegetation that provides stream bank stabilization. The minimum distance for burn piles must be adhered to. Hand cutting within SAFs, and other riparian features is allowed if marked by a designated hydrologist or biologist.

<sup>7</sup> Minimum buffers for meadow features vary depending on the condition of the meadow (e.g., if the meadow is encroached by conifers, there would be a smaller buffer).

## Diagram 4: RCA Specifications