

Request for Proposals
Lynx East Timber Stand Improvement
Prescott National Forest, Arizona

Background and Statement of Work: The National Forest Foundation (NFF) in partnership with the Prescott National Forest, is seeking qualified forestry contractors to conduct hand thinning and manual piling as well as constructing hand line as part of the Lynx East Timber Stand Improvement (TSI) Project. The Lynx East TSI project will reduce the risk of stand replacing wildfire in the wildland urban interface (WUI), improve forest health, and increase the success and safety of future prescribed fire treatments.

The Lynx East TSI project area consists of a mix of vegetation types, which includes Douglas-fir/White fir/Ponderosa pine, Ponderosa pine/Gambel oak, and small amounts of Interior Chaparral vegetation types. Forest composition includes dense overstory of both Ponderosa pine, Douglas-fir and White fir. Understory and midstory composition consist of Gambel oak, Douglas-fir, White fir, and Alligator Juniper. Small shrub forms of AZ White oak, Pringle manzanita and New Mexican locust are within the project area as well, where New Mexican Locust will be cut but not piled. The project area varies from moderate to very steep terrain and contains several known historic treatments, where many decayed hand piles will need to be re piled. Additionally, facultative riparian species are present throughout the project area.

This Request for Proposals is for mandatory hand thinning and piling for 1,944.5 acres and for 14.2 miles of hand line construction. Up to 1,935.7 additional acres and 26.3 additional miles of hand line construction are available as optional bid items, pending proposals and funding availability.

Information Requested

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

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

Specific requirements are detailed below.

I. PROJECT OVERVIEW AND REQUIREMENTS

General Specifications

- (a) Description of Work – This Request for Proposals is for restoration services related to **hand thinning and hand piling, and hand line construction**, including the following:
1. Up to 3,880 acres of hand thinning and piling are available for treatment, of which 1,944.5 acres are required and 1,935.7 acres are optional, pending funding availability. All activities shall follow the general specifications stated below and detailed specifications stated in the **Appendices**.
 - i. Cut and pile all live Ponderosa Pine, White Fir, Douglas-Fir, Evergreen Oak and Juniper in accordance with diameter limits and all other cut specifications, specified in **Appendices B, D, and E**.
 - ii. Cut and pile all brush species and shrub forms, specified in **Appendices B, D, and E**.
 - iii. Cut and pile all standing dead as well as all dead and down, in accordance with specifications in **Appendices B and E**.
 - iv. Rake duff skirts to remove duff within 3 feet of all trees larger than 18" DBH, in accordance with **Appendices B and E**.
 - v. Procure and wrap all piles with waxed slash pile paper, as specified in **Appendices B and E**.
 2. Construct 14.2 mandatory miles of hand line, and 26.3 optional miles, pending funding availability. Hand line activities shall follow detailed specifications stated in **Appendix B**.
 3. All Resource Protection Measures shall be followed in accordance with **Appendices B and E**.
 4. Contractor shall not cut excluded species designated in **Appendices B, D, and E**.
 5. All project activities shall occur in accordance with project timing restrictions, specified in **Appendices B and E**.

The Contractor shall identify what they can supply in terms of materials, labor, equipment, supplies, supervision, quality control, and incidentals required to complete the work described. The Contractor shall perform all work in a safe and conscientious manner.

- (b) Project Location – The Lynx East TSI project is located in Yavapai Country on the Prescott National Forest, approximately 11.5 miles south of Prescott. See **Appendix A** for the specific location and options for best access.
- (c) Work Schedule – Due to project timing restrictions, it is anticipated that work may begin as early as **January 1, 2025**, upon contractor selection and finalizing the contract, agreement signature and completion of a pre-operation meeting. Due to project timing restrictions, all mandatory work items must be completed by **Sunday, March 1, 2026, with an extended contract possible if additional Optional Work Items are awarded. The awarded contractor must complete a minimum of 400 acres within each operating season.**

Other Project Requirements and Specifications

(a) Utilities – In many locations there will be no or limited sanitation, water, electrical or housing services available. The Contractor shall make its own arrangements for temporary facilities if needed.

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

- **Appendix A: Maps**
- **Appendix B: Detailed Specifications**
- **Appendix C: Equipment, Services, and Guidelines for Operations**
- **Appendix D: Photo Guide and Definitions**
- **Appendix E: Prescription**

Insurance Requirements

Upon selection of the winning bid, the Contractor agrees that it has and shall maintain the following insurance coverage indicated below. The effective date of all coverage shall precede the start of any work.

- a. State minimum workers' compensation insurance coverage for its employees, if any.
- b. Broad form general liability, property damage, and automotive liability insurance in the minimum amount of \$1,000,000 for bodily injury, death, or damage to property of any person and \$2,000,000 for bodily injury, death, or damage to property of more than one person. The Contractor shall name NFF an Additional Named Insured and provide NFF with a certificate of insurance evidencing such coverages, prior to the initiation of the Scope of Services.
- c. If the Scope of Services includes professional services as identified herein, Contractor shall also provide professional errors and omissions liability insurance. Professional services for purposes of this section include, but are not limited to performing architecture, engineering, landscape architecture, land surveying or planning, preparation and signing or stamping of drawings, maps, surveys or construction specifications, or design and development of computer software, programs or websites by the Contractor or by subcontractors on behalf of the Contractor, for which professional liability insurance would typically be required. The minimum coverage limits required are \$1,000,000 for each claim and \$1,000,000 annual aggregate.

Prohibited Telecommunications Services and Equipment

The Contractor is responsible for compliance with the prohibition on certain telecommunications and video surveillance services or equipment identified in 2 CFR 200.216.

Payment/Performance Security

Contractor shall post cash, a letter of credit, bond, or other financial security that is easily convertible into cash in a form acceptable to the NFF, in its sole determination, to assure completion of the work required under any subsequent agreement and payment of all amounts lawfully due to all persons supplying or furnishing to the Contractor or Contractor's

subcontractors with labor, laborers, materials, rental machinery, tools or equipment used or to perform the work. Contractor may incorporate required associated costs into mobilization costs or other approved expenses.

- a. Work that is classified as construction in accordance with the Miller Act or Little Miller Act or if required per conditions of the funding source, payment and performance bonding will be required in the full amount of any Agreement. For the purposes of this Request for Proposal, construction is defined as “any contract greater than \$100,000 for the construction, alteration, or repair of any public building or public work where the federal government is the owner”, or
- b. If Contractor is not self-performing at least 85% of the total contract value or if the cost of materials is in excess of the larger of \$100,000 or 50% of the contract total, payment and performance bonding will be required in the full amount of the agreement, or
- c. If the value of the agreement is in excess of \$250,000, Contractor will be required to post financial security in a form acceptable to the NFF in the amount of 5% of the total agreement value up to \$250,000 in total financial security.

Federal Exclusion Verification

The selected Contractor will be required to affirm that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

Federal Flowdown Provisions

Flowdown Requirements: Any Agreement associated with this RFP may be subject to flowdown requirements under associated federal or state funding agreements, which are included and made part of by this reference.

II. REQUIRED COMPONENTS

Technical Proposal

Please provide a detailed technical approach to the work.

Contractor Qualifications

- (a) Past Experience – Please provide a brief explanation of previous work experience with land management agencies.
- (b) References – Please provide three professional references that can speak to past performance.

Pricing Schedule

Contractor shall price work according to the schedule below. Prevailing wages are required per conditions of funding sources.

Task/Item	Units	Unit Cost	Quantity	Extended Cost
Mandatory Hand Thin and Hand Pile	Acre		1,944.5	
Mandatory Handline	Mile		14.2	
Mandatory Items Total Cost:				
Optional/Outyear Hand Thin and Hand Pile	Acre		1,935.7	
Optional/Outyear Handline	Mile		26.3	
Optional/Outyear Items Total Cost:				

III. SUBMISSION, EVALUATION, AND CONTACTS

Contractor Selection Process

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

The NFF will use the Evaluation Factors below to review each submitted bid. Based on the outcomes of that selection process, the NFF will notify successful and unsuccessful bidders by **December 13, 2024** and will prepare a separate contract document.

Pre-Bid Site Visit

A Pre-bid tour is scheduled for **Tuesday, November 12, 2024**. Contractors are encouraged to attend the pre-bid tour to better understand the scope of work and expectations. To attend the Pre-Bid Tour, Contractors must contact **Luke Reents** at **lreents@nationalforests.org** no later than **Friday, November 8, 2024**, to be placed on the RSVP list.

Evaluation Factors and Relative Importance

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

Level 3 Criteria

- Price / cost
- Equipment and contractor capability
- Timing of when contractor can begin and/or finish the project
- Past performance, references, and USFS feedback

Level 2 Criteria

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

Level 1 Criteria

- Benefits to the local community
- Relationship to local community

Point of Contact

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

Luke Reents

National Forest Foundation **Northern Arizona Forestry Program Senior Associate**
Lreents@nationalforests.org

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

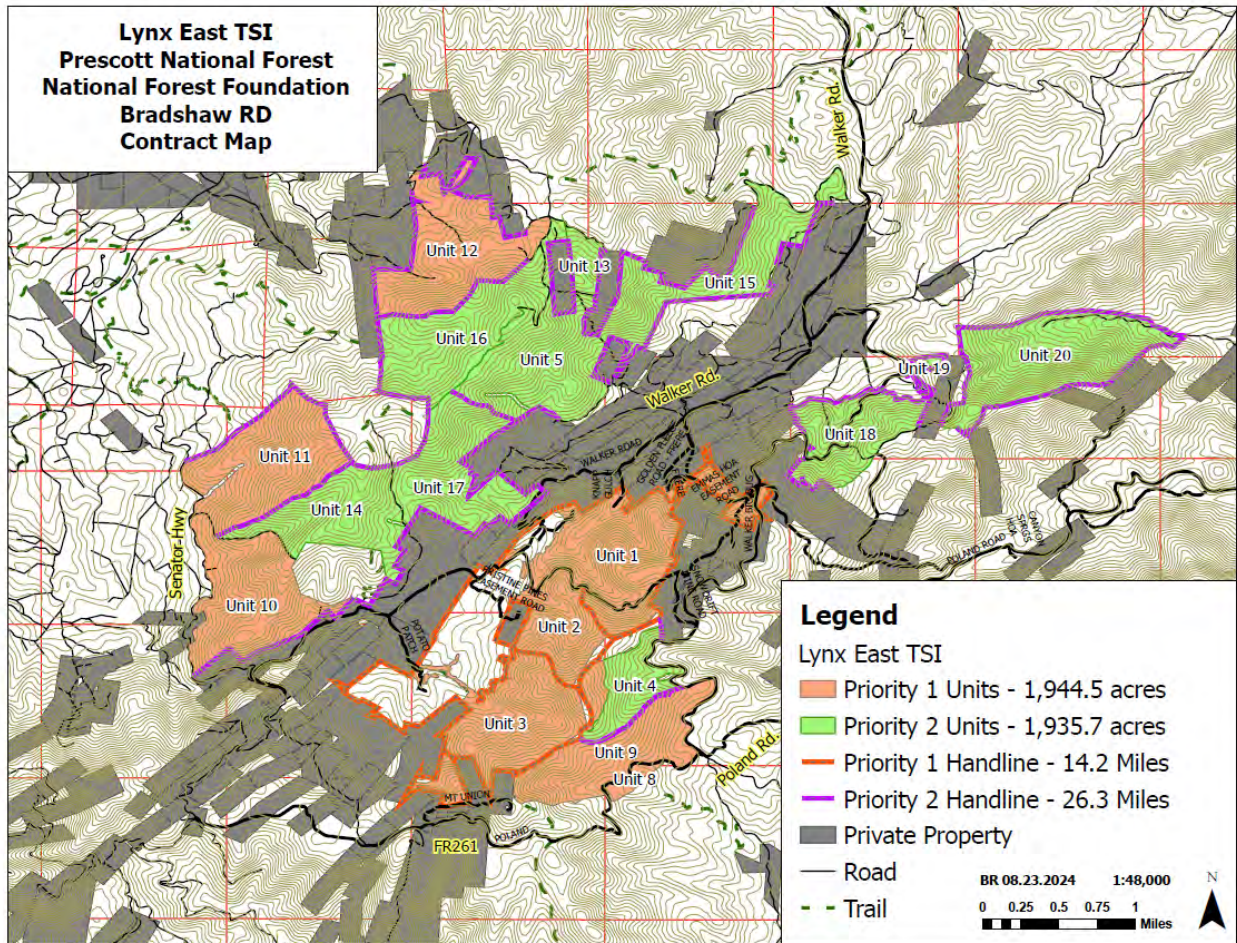
Bid Submission

Submit bids via email to **Lreents@nationalforests.org** by **November 26, 2024**.

Equal Opportunity Provider

In accordance with Federal law and U.S. Department of Agriculture policy, the National Forest Foundation is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs, or disability.

Appendix A: Maps



Appendix B: Detailed Specifications

Timing Restrictions

Ips Bark Beetle – Do not cut/pile live ponderosa pine to limit bark beetle activity.

- No cutting/piling activity permitted from Mar. 1 to Oct. 1.

Mexican Spotted Owl – Treatment area is within MSO Protected Activity Center and core.

- No activity permitted from Mar 1 to August 31. **Note – Bark beetle timing restriction is longer.**
- **Timing restriction for all units is March 1 to Oct 1**

Resource Protection Measures:

Streamside Management Zones: Thin throughout SMZ, No piling within 25 feet of defined stream channel.

- Within SMZs, contractor may fell 8 large trees (6+ inch DBH) per mile of stream into drainage which will not need to be piled, preferably 6 feet and greater length. About 1 tree per 10 chains of stream length.

Archaeology – Archaeology sites will be hand thinned. Cut material will be carried, NOT DRAGGED, and piled outside of sites. Heritage sites will be flagged in white prior to operations.

Trails: Slash shall be removed from trails immediately to keep clear.

Flagging: Contractor shall be supplied with PDF Maps and GPS shapefiles. No Boundary Flagging. Heritage sites will be flagged in white prior to operations.

Line Construction:

- The contractor shall construct hand line along treatment boundaries for 14.2 mandatory miles and 26.3 additional/optional miles pending funding availability, totaling 40.5 miles.
- Line construction shall be cut down to mineral soil. No duff or rotted logs inside the line.
- Line construction shall be 2 ft wide.
- Line construction berms shall be knocked down and level with terrain.
- Where slopes are steep, line shall be constructed to form a cupped trench to catch rolling material.

Cutting Specifications:

- Cut Ponderosa pine, White & Douglas fir, Evergreen oak, juniper, and brush species.
- Cut all brush species, including but not limited to, shrub forms of Evergreen oak, Manzanita, Mountain Mahogany, silktassel, New Mexican locust, and ceanothus.
 - **New Mexican Locust will be cut but not piled.**
- Cut all Ponderosa pine from 3 inches up to 9-inch DBH.
 - **Ponderosa pine Regeneration Spacing specifications:** Only cut Ponderosa pine regeneration (0 to 3-inch DBH) to reach a 15 foot by 15 foot spacing.
- Cut all White and Douglas Fir up to 9-inch DBH.
- Cut all Evergreen oaks (AZ White, Emory, Turbinella oak) and Junipers up to 5-inch DBH.
- Cut all standing dead conifers (pines & firs) up to 12-inch DBH. All cut material shall be piled.
- **Limb and top all dead and down material up to 12-inch diameter.** All cut material shall be piled.
- **Buck and pile all dead and down material up to 12-inch diameter.**

- Do not prune any live trees - Do not prune branches.
 - Cut it all or leave it all => if two trees share a stump, and the larger tree is above the diameter limit, do not cut either tree (**see Photo Guide below**)
- Stump heights shall not exceed 6 inches.

Old Growth tree Protection:

To prevent mortality of the oldest, largest trees:

- **Rake/Remove duff skirts** for all trees larger than 18 inch-DBH where all needles, leaves, and fuels shall be removed by rake or leaf blower down to mineral soil, within 3 feet of tree trunk.

Excluded Species:

- During the winter, do not cut any live trees that have no leaves.
 - These are usually riparian species that would not be cut and are difficult to identify without leaves.
- Do not cut Pinyon pines.
- Do not cut Gambel oaks.
- Do not cut grape vines or any trees with grape vines.
- Do not cut cactus, agave or yucca.
- Do not cut bear grass.
- Do not cut riparian trees (walnut, ash, box elder, cottonwood, willow, coffeeberry/ buckthorn).
- Do not cut cherry trees.
- When in doubt **DO NOT CUT. ASK!** – call **Joe Connolly 928-830-1277** or **Ben Roebuck 928-202-0281**

Hand Piling Specifications:

- All cut material shall be piled.
- All standing dead conifers (ponderosa pines and firs) up to 12 inch-DBH shall be cut and piled.
- All dead and down material up to 12 inches in diameter shall be bucked and piled.
- Limb and top all dead and down material up to 12-inch diameter.
 - The only dead material left on the ground should be 12-inch diameter and above, no small branches or tops.
- Piles shall be constructed to a minimum size of 6 ft wide x 6 ft tall. Larger piles are preferred (8+ ft tall). Hand piles will be regularly inspected for compliance with specifications.
- Hand piles shall be constructed in openings and outside the dripline of residual standing trees.
- Piles shall be constructed with a mix of heavy and fine fuels, where fine fuels are placed towards the center to stay dry with as few gaps as possible. Piles with only logs and boles will not be accepted.
- **Do not pile on dead material:**
 - DO NOT CONSTRUCT PILES on dead material or within 5 feet of dead material.
 - Dead material within 5 feet of piles shall be cut and included in piles.
- Do not pile on top of live plants such as shrubs, cut live material first then pile on top.
- **Where possible, do not pile material within 10 feet of 0-3 inch DBH Ponderosa Pine regeneration.**
- When old piles are present, material shall either be piled on top of old piles or the old piles shall be re constructed.
- No piles shall be constructed within 66 feet of powerlines and utility lines.

- No piles shall be constructed within 66 feet of Improvements (buildings, communication towers, propane tanks, etc.).
- No piles shall be constructed within 30 feet of private property lines.
- No piles shall be constructed within 20 feet of a system roads or system trails.
- No piles shall be constructed within 10 feet of fence lines, land survey monuments, or culverts.
- No piles shall be constructed within 50 feet of the Forest boundaries when residential structures are located adjacent to the Forest boundary.
- No piles will be constructed within 25 feet of stream channels.
 - Within SMZs, contractor may fell 8 large trees (6+ inch DBH) per mile of stream into drainage which will not need to be piled, preferably 6 feet and greater length. About 1 tree per 10 chains of stream length.
- Piles shall be constructed at least 30 feet inside of constructed handlines.
- Inside any designated archaeological sites, material will be cut with chainsaws, and carried, NOT DRAGGED outside of sites and piled outside of archaeological sites.
- Within 200 feet of any designated roads, larger oak, and juniper boles greater than 4 inches in diameter may be left out of piles for fuelwood collection.

Pile Wrapping

- All piles shall be 'wrapped' with waxed slash pile paper.
- Contractor shall procure and supply Kraft Clean Burn Waxed Slash Pile Paper or suitable substitute for project and include in the cost. Product can be found at: <https://pacforest.com/Item/339>
- At approximately 40 piles per acre, and 300-foot-long rolls, this is equivalent to approximately 1 roll per acre
- Each pile shall include one piece of 4 ft x 6 ft waxed paper.
- Contractor shall build a small 3+ foot tall pile with mix of fine fuels and branches located in center of pile and place paper on top, then place more logs and branches on top to 'lock in' the paper and prevent paper from moving or blowing away.
- Paper shall be located on the south side of the pile to ensure driest location.

Appendix C: Equipment, Services and Guidelines for Operations

ACCESS. From Prescott, head West on HWY 69 to and turn right onto Walker Rd. Continue for 8.0 miles. This is the west side of the project area. Units can be accessed from Walker Road, Big Bug Mesa Road, FR9040L, FR9404E, and FR52A

BOUNDARIES. Contractor will be supplied with PDF Maps and GPS shapefiles of the project cutting units, constructed handlines, and avoidance sites. Exterior perimeter boundaries will not be physically marked with flagging. Heritage sites within the project perimeter will be marked with white flagging. Contractor must reference GIS data.

SHUTDOWN PERIODS. In all units, a seasonal timing restriction is imposed to avoid creating favorable conditions for Ips bark beetles. No cutting may occur in any unit from March 1 to October 1. Shut down will also occur at the discretion of the Government for fire hazard, red flag warnings, and undesirable road/ground conditions.

CONTRACTOR REPRESENTATIVE. The Contractor shall provide a Contractor Representative for the performance of the work. The name of this person and an alternate(s) who shall act for the Contractor when the Contractor is absent shall be designated in writing to the National Forest Foundation (NFF). The Contractor Representative or alternate shall have full authority to act for the Contractor on all contract matters relating to the daily operation of this contract. The Contractor Representative and alternate(s) must be able to read, write, speak, and understand English.

CONTRACTOR'S QUALITY CONTROL PLAN

The Contractor shall provide a Quality Control Plan. In general, the Quality Control Plan must demonstrate how the Contractor will assure quality, will meet the requirements and specifications of the contract. It shall describe (1) how quality will be monitored to assure the performance standards are met, (2) the supervision of the work, and (3) personnel that will be performing the quality control.

GOVERNMENT QUALITY ASSURANCE SURVEILLANCE PLAN

The NFF Representative or Government will inspect the services to be provided under this contract; however, the Government has the sole authority for final acceptance of services under this contract.

For this project activity, there will be no Government-furnished property or material. Contractor will be responsible for the following:

A.1.a. Equipment Requirements: Chainsaws

The Contractor shall provide dependable, safe equipment and protective gear that meets all applicable state and federal laws and regulations relating to motor vehicles and equipment. The Government reserves the right to conduct inspections at any time.

A.1.b. Chainsaws

Any fueling or refueling of a chainsaw shall only be done in an area which has first been cleared or is free of all material capable of carrying fire; chainsaw shall be moved at least 10 feet from place of fueling before starting.

A.1.c. Spark Arrestors

The contractor shall not operate any internal combustion engine on any timber, brush or grass covered land, including trails or roads without a spark arrestor maintained in effective working order and meeting the guidelines set forth in the National Wildfire Coordinating Group Publication NFES 1363 and 2363.

A.1.d. Personal Protective Equipment

Personal protective equipment for eyes, face, head, and extremities shall be provided, used, and maintained in a sanitary and reliable condition. The Contractor shall provide to each employee who operates a chain saw, chain saw chaps and assure the chaps are worn during saw operations. These chaps must be approved by Underwriters Laboratory or meet Forest Service specification 6170-47. The chaps shall cover the full length of the thigh to the top of the boot on each leg.

Work may be suspended or modified when the Prescott National Forest personnel identifies conditions that represent an unacceptably high fire risk, such as very dry fuels, high winds, increased incidence of wildfires, erratic fire behavior, or Red Flag conditions.

A.1.e. Equipment Requirements: Pile Wrap

- All piles shall be 'wrapped' with waxed slash pile paper
- Contractor shall procure and supply Kraft Clean Burn Waxed Slash Pile Paper or suitable substitute for project and include in the cost. Produce can be found at: <https://pacforest.com/Item/339>
- At approximately 40 piles/acre, and 300 ft rolls, this is equivalent to approximately 1 roll/acre
- Each pile shall include one piece of 4 ft x 6 ft waxed paper.
- Contractor shall build a small 3+ foot tall pile with mix of fine fuels and branches located in center of pile and place paper on top, then place more logs and branches on top to 'lock in' the paper and prevent paper from moving or blowing away
- Paper shall be located on south side of the pile to ensure driest location.

A.1.i. Resource Protection

For any utility lines present in the project area, including both communications and power lines, the contractor shall take steps to avoid felling of trees across utility lines. In addition, no piles shall be constructed within 66 feet of any utility lines.

Cadastral survey markers (brass caps), benchmarks, project markers, and other markers and stakes are required to be protected from damage or removal. In the case of destruction or removal, Contractor is responsible for replacing the markers.

No natural or man-made features that may be of a historic or prehistoric value will be disturbed. The Contractor will notify the NFF when a suspected feature is discovered and will avoid the feature(s) until cleared by the Prescott National Forest personnel. Known areas requiring protection and avoidance will be identified on the ground and on the unit map. The nature of the identification will be noted on the unit map.

The Contractor shall complete treatments only on Forest Service administered Lands. Privately owned lands near the perimeter of the treatment unit will be identified on the

ground and the unit map provided at time of service. The nature of the identification will be noted on the unit map.

Thinning can be carried out in Streamside Management Zones (SMZ), however piles must be constructed 25 feet above the high water mark. Contractor shall fell 8 large trees (6+ inches) per mile of stream into drainages which will not need to be piled, best would be 6 feet long or greater. About 1 tree per 10 chains of stream length or 660 feet.

Work stoppage may also be required as a result of weather events in order to protect natural resources. These events include but are not limited to high risk of wild fire.

The Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, the Contractor shall remove from the work and premises any rubbish, tools, equipment, and materials that are not the property of the Government. Upon completing the work, the Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to the Contracting Officer or their designee.

A.1.k Fire Precautions

When operating on National Forest Lands, it is incumbent on the permitted user to know the current Industrial Fire Precaution Plan and to take the appropriate actions to meet the mitigation measures in these guidelines

Work may be suspended or modified when the NFF and/or Prescott National Forest personnel identifies conditions that represent an unacceptably high fire risk, such as very dry fuels, high winds, increased incidence of wildfires, erratic fire behavior, or Red Flag conditions. Work may be suspended by NFF and/or PNF personnel through a oral suspension followed up by written notice to the Contractor. The Contractor will be required to self-suspend operations based on Red Flag conditions and must follow fire restriction stages as outlined in their submitted fire plan.

**PRESCOTT NATIONAL FOREST
SPECIFIC FIRE PRECAUTIONARY MEASURES
EMERGENCY FIRE PRECAUTION SCHEDULE**

FIRE RESTRICTION/CLOSURE "STAGE"	
"STAGED" RESTRICTION LEVELS	INDUSTRIAL FIRE PRECAUTION PLAN
NO RESTRICTIONS	A
STAGE I	B
STAGE II	C
PARTIAL/FOREST CLOSURE **	D
RED FLAG WARNING (Issued by National Weather Service)	D

**Partial Forest Closure:

Project areas which are outside the boundaries of the partial forest closure may continue to operate under Industrial Fire Precaution Plan “C” operating criteria as agreed upon between the Permit Administrator and Purchaser in writing.

Project areas within the boundaries of the proclaimed partial forest closure area are to operate under Industrial Fire Precaution Plan “D”.

Staged restriction levels are determined by the appropriate Forest Line Officer in consultation with the Forest Fire Management Officer and Permit Administrator. The appropriate Forest Line Officer may adjust the predicted Industrial Fire Precaution Plan for local weather conditions within a Project Area. Changes in the predicted Industrial Fire Precaution Plan shall be agreed to in writing.

INDUSTRIAL FIRE PRECAUTION PLAN – DESCRIPTION

Authorized user will restrict operations in accordance with the attached Emergency Fire Precaution Schedule:

A - Normal Fire Precautions - No fire guard required except for welding and blasting operations.

B - Normal Fire Precautions – Authorized user will provide fire guard.

C - All power equipment use as well as blasting and welding operations will shut down from 9:00 am until 8:00 pm Mountain Standard Time (10:00 am to 9:00 pm MDT). Operations on mineral soil involving activities such as road excavation, watering, grading, surfacing, rock crushing, and/or other equipment maintenance may continue. Authorized user will provide fire guard.

D - Shutdown all operations; except operations on mineral soil involving road excavation, watering, grading, gravel surfacing, and rock crushing may continue with special Forest Service permit. Blasting and welding are prohibited. Authorized user will provide fire guard.

FIRE GUARDS

To prevent, detect, and suppress wildland fire, authorized users shall provide a fire guard at each operating area where power-driven equipment and tools have been operated during the day. The fire guards shall constantly perform their duties during operating hours and for three (3) hours after the work stops for the day, when the Fire Precaution Plan is Plan “B”, “C”, or “D”. *The fire guard may perform contract work in conjunction with fire guard duties.*

A fire guard on one operating area shall satisfy the requirements on adjacent areas if the travel time with available transportation is not in excess of ten (10) minutes to any of the other areas requiring such service and provided the fire guard patrols all area where authorized user’s activities occurred.

Each fire guard shall be vigilant, able and prepared to actions to prevent, detect, and report any wildland fires and to promptly and efficiently take suppression action with available required firefighting equipment and personnel on any wildland fire that starts on project area. Each fire guard shall be equipped with a vehicle and a fire tool cache consisting of a cache box with a complement of fire tools maintained in serviceable condition *equal to the total number of personnel engaged in the user’s*

operations. Approved firefighting tools may include the following: Pulaski; McLeod: long handles round pointed shovel. The fire guard will also carry at least 25 gallons of water for firefighting purposes.

WEATHER WARNINGS, WATCHES, AND ADVISORIES

During periods of critical fire weather conditions the National Weather Service may issue fire weather watches or red flag warnings to highlight combinations of sustained high winds, low relative humidity, high temperatures and dry fuels that could result in significant fire behavior in the event of an ignition. The thresholds for Red Flag Events are established by the local National Weather Service office. Red Flag Events are categorized in the following order:

- FIRE WEATHER WATCH is issued to alert the possibility of the development of conditions that would lead to a Red Flag Warning.
- RED FLAG WARNING is issued to warn of a predicted, impending or ongoing combination of weather factors that support an increased probability of ignition and rapid fire growth.

When a Red Flag Warning is issued by the National Weather Service, all authorized user operations will adhere to Industrial Fire Precaution Plan “D” and will shut down operations until the Red Flag Warning is rescinded. It is the daily responsibility of the Vendor to be aware of fire weather watches or red flag warnings in the area they are working.

A.1.1. Personnel

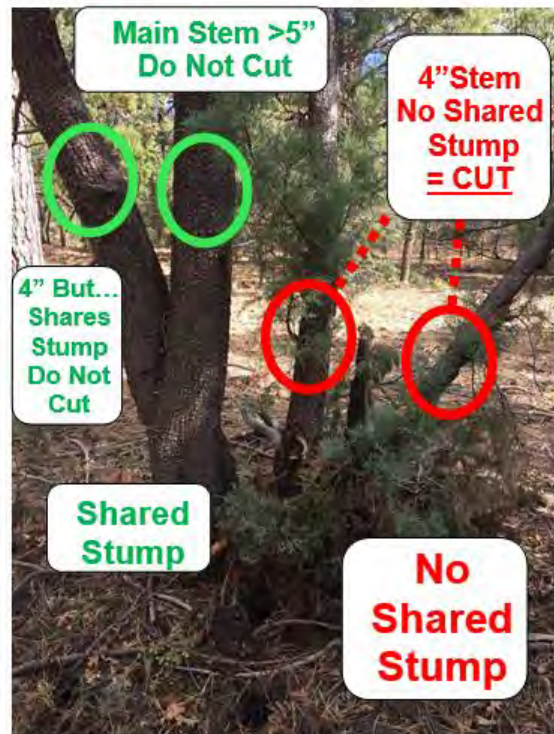
The contractor must provide a representative onsite to ensure safety and quality performance. The Contractor’s Representative or alternate shall have full authority to act for the Contractor on all contract matters relating to daily operation of this contract. The Contractor Representative and alternate(s) must be able to read, write, speak, and understand English.

Appendix D

Lynx East TSI: Prescription Photo Guide

Attachment 1: Photo Guide – Pruning

Pruning: Do Not Prune Any Live Trees. For forked Junipers and Evergreen Oaks, if largest stem is above diameter limit (5+ inch DBH) do not prune smaller stems which share the same stump. Smaller stems which are on separate stumps should be thinned. Cut it all or leave it all.



Attachment 2: Photo Guide – Species Guide

Alligator Juniper = CUT



Emory Oak = CUT



AZ White Oak = CUT



Turbinella Oak =



Attachment 3: Black Cherry – Do Not Cut

There is black cherry in this stand, which looks a lot like Emory oak.

- When in doubt DO NOT CUT.

In this unit, many cherry trees have tent caterpillars (May-June)

Cherry Leaves are glossy green with serrated margins. White flowers in May-June

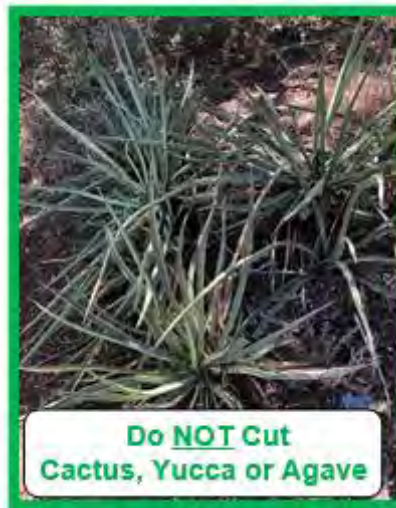


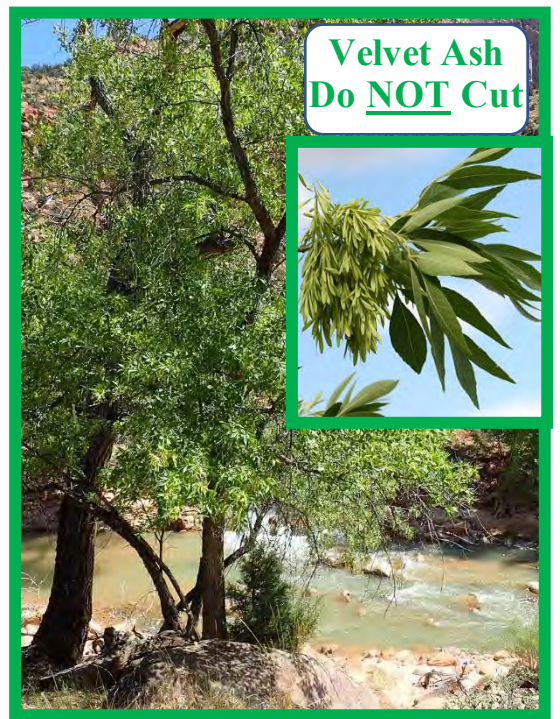
Smaller Cherry branches up to 4 inch have horizontal lines on the bark called “lenticels”

Larger Cherry trunks over 4 inch look very similar to Emory Oak, so be careful



Other Excluded Species: Do Not Cut





Lynx East TSI: Definitions of Terms and Abbreviations

Activity Slash: Debris from felled trees or brush (live and dead; boles, tops, and limbs) resulting from cutting activities conducted under current task order.

Boundary: Marked features to indicate the outer edge of a cutting unit.

Buck: To sever completely through tree boles to prescribed length.

Cutting Unit: Specific area of ground where work is to be performed within a larger project area.

Desirable Leave Tree Characteristics (see also “Undesirable Leave Tree Characteristics”):

Trees considered desirable as leave trees have most or all of the following characteristics:

- (a) Straight stem (leaning <15 degrees from vertical axis)
- (b) Well-formed crown (wide, full, symmetrical; >40% live crown ratio)
- (c) Live, single top with vigorous annual terminal growth (generally >6”)
- (d) Good coloration (foliage green during growing season)
- (e) Free of animal, insect or disease damage and/or symptoms
- (f) Absence of physical or mechanical damage

Diameter at Breast Height (DBH): Bole diameter measured at 4½ feet above ground level (uphill side of the tree) or at the smallest point below 4½ feet above ground level for trees with forks, branches, swell, or other deformities at breast height

Dripline: Vertical extent of a tree crown’s edge to the ground.

Forest Canopy Opening: Area of ground outside of the any tree’s dripline with no tree canopy above.

Forest Road (FR): Travel route on Forest Service land that may be open to highway legal vehicles, open to all vehicles, or closed as indicated on Forest Service official Motor Vehicle Use Map (MVUM) or maps provided in the awarded task order.

Horizontal: Less than 30° slope (as it pertains to the cut surface of a stump)

Improvement: Manmade feature such as a road, trail, power line, fence, structure, land survey monument, etc.

Land Survey Monument: Stamped metal cap attached to a metal pipe; generally found along property lines and section corners.

Live Crown Ratio: Ratio of crown length (portion of tree with live branches) to total tree height (expressed as a percentage).

Lop and Scatter: Logging slash or debris is cut and scattered to reduce slash concentrations. Slash being generally left within 18 inches of the ground. Slash is scattered into openings away from and without unnecessary damage to residual trees.

Opening: See *Forest Canopy Opening*.

Private Property: Ownership designation where property rights are controlled private citizen(s).

Pullback (or “Pull Back”): Pulling slash away from improvements and other fire-sensitive features according to the contract requirements specified in the task order “Detailed Information Sheet;” includes scattering of pulled back slash to meet slash height requirements.

Regeneration: Seedlings or saplings that develop or are present in the understory, generally less than 6in in diameter at breast height.

Residual Trees: Trees left standing in the unit which are not cut as part of the treatments.

Road Edge: The edge of a road is defined as the outer edge of the road ditch. For roads unaccompanied by a ditch, the edge of the road is defined as the edge of the pavement (along paved roads) or the line of relatively continuous vegetation, needle or leaf litter, or other undisturbed natural surface (along dirt roads).

Satisfactory Cut Tree: Trees cut that should have been cut according to contract specifications.

Satisfactory Leave Tree: Trees left that should have been left according to contract specifications.

Slash: Debris from tree or brush material resulting from, but not limited to, logging, thinning, natural or unnatural events, and/or fire.

Spacing (Tree): Horizontal distance from the bole of one leave tree to the bole of the next nearest leave tree. The average distance in feet between leave trees will be defined in the Detailed Information Sheet. Unless otherwise specified in the Detailed Information Sheet, spacing may be varied by ± 25 percent to ensure retention of the best trees. For example, a 20' X 20' spacing specification allows for a 5' variation to retain the best tree. In this example, some trees may be spaced 15' apart but the average spacing across the cutting unit shall still average 20' (excluding areas where trees are absent). In this example, no trees shall be spaced <15' apart.

Undesirable Leave Tree Characteristics: Trees considered undesirable as leave trees have one or more of the following characteristics:

- (a) Leaning or bent (>15 degrees from vertical axis; often related to prolonged suppression)
- (b) Crook or sweep in bole
- (c) Poor crown form (one-sided, narrow, or sparse; <40% live crown ratio)
- (d) Multiple, dead, or broken tops
- (e) Poor annual terminal growth (generally <6")
- (f) Poor coloration (foliage turning gray or brown)
- (g) Presence of insects, diseases, or animal damage
- (h) Physical or mechanical damage

Unsatisfactory Cut Tree: Tree cut that should have been selected as a leave tree.

Unsatisfactory Leave Tree: Uncut tree that, according to specifications, should have been cut; includes trees not severed from the stump, hang-up trees (suspended more than 3 feet off the ground), and stumps with live limbs.

Appendix E

Treatment Plan	Silvicultural Treatment: Forest Health - Thin from below		Project Name Lynx East TSI Poland Junction TSI Lynx East IRSC - TSI units	NEPA Hassayampa Landscape EA/Bradshaw Veg EA	Forest / District Prescott NF/Bradshaw RD		
	Prescribed by: Joe Connolly	Date: 04/30/2024	Identity	Cutting Units 18	Compartments See map		
	Certified by: /s/ BENJAMIN ROE <small>Digitally signed by BENJAMIN ROE Date: 2024.05.03 14:34:02 -07'00'</small>	Date: 05/03/2024		Acres 4698 acres			
	Treatment Method: Hand Thin						
	Slash Treatment: Pile slash						
	Constraints and Other Considerations:						
	Timing Restrictions: All Units <ul style="list-style-type: none"> Ips Bark Beetle - Do not hand thin and pile live ponderosa pine from March 1 to Oct 1, to limit bark beetle outbreaks. Mexican Spotted Owl – No activity from Mar 1 to August 31. 						
	Streams Management Zones: <ul style="list-style-type: none"> Thin through SMZ, No piling within 25 feet of defined stream channel. contractor shall fell 8 large trees (6+ inches) per mile of stream into drainage. 1 tree per 10 chains of stream length. 						
	Archaeology: Within heritage sites cut to the same prescription using chainsaws. Material will be carried, NOT DRAGGED, and piled outside of sites or lop/scattered depending on slash specs on map.						
	Notes for Implementation:						
Hand Line - Install fire line to mineral soil, 2 feet wide where units do not have existing roads or trails							
No pruning							
Pay attention to photo guide for species to cut and retain							
Rec.- Trails: Remove slash from trails immediately. Keep trails clear.							
Pile Wrap - All piles shall be 'wrapped' with waxed slash pile paper							
Follow-up Treatment (next 5 years):							
<ul style="list-style-type: none"> Rx burn across treatment area within 3-5 years 							
Boundary Designation:	Contractor supplied with PDF Maps and GPS shapefiles.						
Heritage sites:	Avoidance areas marked with White Flagging						
Layout completed by:	Ben Roe	Date:	February 2024				
Marking verified by:	N/A		Date:	N/A			

Section 1 – Existing Conditions

The treatment area is made up of a mix of vegetation types, including Dry Mixed Conifer ponderosa pine/Douglas-fir/white fir, ponderosa pine/Gambel oak and a small component of Interior Chaparral. The Dry Mixed Conifer forested areas are primarily composed of a dense overstory of Ponderosa Pine, Douglas-fir and white fir. Gambel oak makes up a major component of the understory and midstory along with a dense understory of Douglas-fir and white fir. The current make-up of this forest type is largely a result of fire exclusion since the 1890s. Studies of pre-settlement conditions show that these areas experienced fire every 5-8 years and as a result were much more open and had a larger component of ponderosa pine and smaller white fir and Douglas-fir communities.

Half of the remainder of the project area is made up of a ponderosa pine/Gambel oak type. These areas have an overstory of ponderosa pine with a midstory of AZ white oak, Emory oak and Gambel oak as well as a small component of alligator juniper. The understory of these areas is made up of Gambel oak and Fendler's ceanothus. These stands are much more open than the Dry Mixed Conifer areas and on south aspects tend to transition to chaparral ecotypes.

A small portion of the project area, about two percent, is composed of interior chaparral made up of a mix of shrub form Arizona white oak, pringle manzanita and New Mexican locust. These areas are largely found on drier and steep south facing aspects and transition into the ponderosa pine/Gambel oak forested areas.

Across the proposed treatment area there are wetter areas which support trees that function as Facultative Riparian species¹. During field review of the site, facultative riparian species were observed in ephemeral streams. These riparian species included walnut, ash, box elder, black cherry cottonwood, willow, and coffeeberry. No cutting of riparian species is permitted.

There are several known historic treatments in the project area on the north side of the community of Walker. There have been several small hand thinning treatments on the south side of Spruce Mountain, however these treatments did not target any brush species or small diameter trees and piles were never wrapped so few of those piles were ever successfully burned. As a result, these areas have significant ladder fuels and a large number of decayed hand piles that will need to be re-piled and wrapped in order to effectively reduce fuel risk in the area. In addition, during the 2022 Crooks fire a 600-foot-wide shaded fuel break was installed on the top of Spruce Ridge from the communications tower to Walker Road. This mechanical thinning included a thin from below of conifers up to 18 inches, retaining Gambel oaks and alligator junipers and maintaining a 20x20 foot spacing in more open areas. This treatment was then masticated to reduce fuel loading on this strategic area. On the south side of Walker Road the only historic treatments are a narrow fuelbreak running east from the Union Lookout. There is a planned 382 mechanical thinning treatment in the Potato Patch/Poachers row area just south of Walker Road as part of the Lynx East IRSC.

The proposed treatment area overlaps with Mexican Spotted Owl habitat, specifically in the Hassayampa EA it overlaps the Mt. Pine Acres Protected Activity Center and core, the Snowdrift Protected Activity Center and core, Combo PAC and Core, and the Big Bug PAC and Core. In addition, within the Bradshaw Veg EA treatments overlap the Transcendant, Wolf and Smith Ravine PACs, however due to limitations in the Bradshaw Veg EA, no treatments are proposed in MSO Core. The remainder of the project area outside of PACs overlaps MSO nest roost recovery and foraging habitat. In order to remain in compliance with the MSO Recovery Plan and Forest Plan direction, the project will have a diameter cap of 9 inches for hand thinning throughout the whole project area. A pre-implementation checklist has been approved by Roger Joos and Shaula Hedwall with an MSO breeding season timing restriction for the project from March 1 to August 31, as well as a larger timing restriction for cutting any ponderosa pines that goes from March 1 to October 1, to reduce the risk of *ips* bark beetle outbreaks.

¹ United States Department of Agriculture Natural Resource Conservation Service (USDANRCS). 2005. Riparian Area and recognition part 411. Ecological Sites Title 110. General Manual. Available at: http://policy.nrcs.usda.gov/scripts/lpsiis.dll/GM/GM_190_411.htm
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Table 1: Current Stand Conditions

Site Limiting Factors		Hydrology	
Fire exclusion has resulted increases in the density of overstory canopy as well as a buildup of ladder fuels comprised of shade tolerant species.		Ephemeral streams occur throughout the treatment area.	
Snags/Acre	CWD	Damaging Agents	Severity
10-20	High. More than 10 tons/ac	Ips Bark Beetle, Drought Mortality, Defoliation of Douglas Fir.	Moderate severity.
Litter/Duff - Deep. Litter depth ranges from 1 to 6 inches.			

Table 2: Site Characteristics

Area	4698 acres	Slope	0-40+%
Elevation	5300-7900 ft	Aspect	Mixed

Table 3: Soil Conditions

A. Interior Chaparral

TEUI	Acres	Notes
453	15 ac	Moderately deep, very cobbly sandy loam. Severe erosion hazard, maintain ground cover to minimize erosion
443	13ac	Shallow extremely channery sandy loam. Moderate erosion hazard.
448	7 ac	Loamy-skeletal, mixed, mesic, nonacid, mesic, very shallow, very gavelly loamy coarse sand.
475	20 ac	Shallow very stony coarse sandy loam. Severe erosion hazard, maintain ground cover to minimize erosion.

B. Ponderosa Pine – Gambel Oak

TEUI	Acres	Notes
530	5 ac	Mixed mesic, moderately deep, extremely cobbly sandy loam. Severe erosion hazard, maintain ground cover
540	1028 ac	Deep very cobbly sandy loam. Erosion hazard is severe, maintain ground cover to minimize erosion.
545	162 ac	Shallow very cobbly sandy loam. Severe erosion hazard, maintain ground cover to minimize erosion.
546	100 ac	Moderately deep very cobbly coarse sandy loam. Moderate erosion hazard
547	479 ac	Shallow very cobbly loamy coarse sand. Severe erosion hazard, maintain ground cover to minimize erosion.
553	21 ac	Shallow very cobbly loamy coarse sand. Severe erosion hazard, maintain ground cover to minimize erosion.
554	350 ac	Shallow, very cobbly sandy loam. Edaphic fire disclimax, maintained by frequent fire. Erosion hazard is severe. Maintain ground cover to minimize erosion
555	168 ac	Shallow, very cobbly sandy loam. Edaphic fire disclimax, maintained by frequent fire. Erosion hazard is severe. Maintain ground cover to minimize erosion
556	33 ac	Shallow very stony sandy loam. Severe erosion hazard, maintain ground cover to minimize erosion.
565	21 ac	Shallow, very gravelly loamy coarse sand. Moderate erosion hazard.
580	2 ac	Clayey-skeletal, moderately deep, very stony loam.
581	177 ac	Clayey-skeletal, moderately deep, very stony loam.

C. Ponderosa Pine/Douglas-fir/White Fir

TEUI	Acres	Notes
605	15 ac	Moderately deep gravelly sandy loam. Moderate erosion hazard
625	632 ac	Shallow bouldery sandy loam. Severe erosion hazard, maintain ground cover.
640	31 ac	Moderately deep, very cobbly sandy loam. Moderate Erosion hazard, maintain ground cover to min. erosion.
650	369 ac	Moderately deep, very cobbly loam. Erosion hazard is severe, maintain ground cover to minimize erosion
660	985 ac	Moderately deep, very cobbly sandy loam. Erosion hazard is severe, maintain ground cover to minimize erosion.

D. Riparian Gallery

TEUI	Acres	Notes
50	32 ac	Deep extremely bouldery coarse sand, frequently flooded

Section 2 – Long-Term Desired Conditions and Prescribed Treatment Objectives

The proposed treatment units encompass an area on the Prescott National Forest identified in the Hassayampa Landscape Restoration Environmental Analysis and Bradshaw Vegetation Management EA for hand thinning and piling treatments. This prescription will cover treatments on 4,698 acres on areas Southeast of Walker Arizona, with optional treatments proposed for the Breezy Pines subdivision due Northeast of Mt. Union and around Spruce Mtn. The current vegetation within the treatment area is comprised of a mix of ponderosa pine/Douglas-fir/white fir and ponderosa pine/Gambel oak with a small subset of interior chaparral on south aspects.

Ponderosa Pine-Gambel Oak and Douglas-fir/white fir/ponderosa pine/Gambel Oak

Within these areas, the proposed treatment is a fuels reduction treatment which will utilize a thin from below of evergreen oaks, junipers, small diameter firs and small diameter ponderosa pines (from 3" to 9" DBH) as well as brush species including manzanita, shrub live oak, silk tassel, and mountain mahogany. The treatment is designed to reduce the contiguous ladder fuels currently present in the stand which will reduce the risk of a stand replacing wildfire and lower the risk of damage to the residual overstory from a wildfire or prescribed burn. By reducing inter-tree competition, the proposed treatment is designed to encourage the health of retained ponderosa pines and improve tree growth and vigor, as well as encouraging the growth of ponderosa pine seedlings by allowing them to more effectively compete against the vigorous oak and fir component in the stand. The overall goal of the treatment is to reduce the risk of a stand replacing wildfire in the WUI, maintain an overstory of ponderosa pine and allow for the establishment of seedlings which can further the development of uneven-aged structure over time.

Interior Chaparral

A small portion of this project area is comprised of Interior Chaparral vegetation type which is defined as a fire climax ecosystem where recurrent episodic fire maintains the plant community. Chaparral is in a constant state of transition from young to older stages and back again, with fire being the major disturbance factor every 35 to 100 years (DC-Veg-11). During younger stages of development, Interior Chaparral PNVT contains a grass and forb component in the understory. After 10 to 15 years, the mid-to-late development stages are dense thickets with canopy cover greater than 70 percent and considerable shrub litter. Standing dead material accumulates in areas that have not burned for several decades and when this vegetation type burns it is stand replacing with high severity and high intensity, making space and increased nutrients for the new chaparral cohort.

The Prescott National Forest Plan calls for treatment in these area to reduce wildfire behavior in these vegetation types within the wildland-urban interface. Desired conditions call for a stand composed of younger and more widely spaced shrub patches and tree groups (DC-Veg-12). Hand thinning is used in chaparral sites where prescribed fire would be difficult as a first entry treatment due to close adjacency to private lands and structures. The goal of this type of treatment is to break up the continuity of the stands of chaparral and modify the way a fire would move across the site. The objective would be to improve the ability to initiate direct attack and effectively use tools such as water and fire retardant to slow a wildfires progress.

Riparian Species

As mentioned before, within this project area there are wetter areas and ephemeral streams which support facultative riparian species. These riparian species, will be maintained within the project area and will not be targeted.

Short-Term Objectives (Expected post-treatment outcome)

This treatment will move towards the long-term desired conditions, within the constraints of the current stand. The treatment objectives are to:

1. Reduce the risk of stand replacing wildfire, including both torching and crowning risk within the WUI.
2. Break up the continuity of fuels of and modify the way a fire would move across the landscape.
3. Enhance conditions for growth and reproduction of understory plants including ponderosa pine by increasing light availability, reducing interception of precipitation, and reducing competition for soil moisture and nutrients.
4. Create conditions conducive to the reintroduction of low severity surface fire which will minimize residual stand damage to ponderosa pine regeneration and overstory ponderosa pine.
5. Improve the health of ponderosa pine by decreasing inter-tree competition, and improve residual tree growth, health and vigor.
6. Encourage the continued growth of ponderosa pine regeneration to develop a balanced uneven-age structure in the long-term.
7. Enhance Old-Growth characteristics by decreasing competition and improving fire resistance in old, large trees.

Table 4: Prescribed Burning Considerations

Primary Objectives	Maintenance burn. Low intensity prescribed fire with limited overstory mortality every 2-5 years
Coarse Woody Debris Objectives	Retain 1-2 tons per acre CWD and 3 logs 12” diameter or greater/acre
Mineral Soil Exposure Objectives	Minimize soil disturbance where practicable
Acceptable Mortality	Pockets of less than 4 acres of overstory ponderosa pine
Burning Season	Discretion of Fuels Specialist
Other Restrictions	Where possible, minimize damage to ponderosa pine regeneration

Section 3 – Documentation: (FACTS, KV, planned future treatments, monitoring)

Table 5: Documentation

FACTS	Thinning for hazardous fuels reduction
Planned Future Treatments	Post-thinning broadcast burn. A minimum of once every 10 years, can be as often as 2-5 years

Section 4 - Implementation Guide

Lynx East TSI
Lynx East IRSC – TSI Units
Poland Junction TSI
4,698 acres

Call Joe Connolly – (928)-830-1277 or Ben Roebuck if you have questions - (928) 202-0281

Timing Restrictions:

Ips Bark Beetle – Do not cut/ pile live ponderosa pine from March 1 to October 1, to limit bark beetle outbreaks

Mexican Spotted Owl – Treatment area is within MSO Protected Activity Center and core

- No activity is permitted from Mar 1 to August 31. **Note – Timing restriction for bark beetle is longer.**
- **Timing restriction for all units is March 1 to Oct 1**

Resource Protection Measures:

- **Streamside Management Zones:** Thin throughout SMZ, No piling within 25 feet of defined stream channel
 - Within SMZs, contractor shall fell 8 large trees (6+ inches) per mile of stream into drainage which will not need to be piled, 6 feet long or greater. About 1 tree per 10 chains of stream length or 660 feet.
- **Archaeology** – Archaeology sites will be hand thinned. Cut material will be carried, NOT DRAGGED, and piled outside of sites.
- **Trails:** Remove slash from trails immediately. Keep trails clear.

Flagging: Contractor supplied with PDF Maps and GPS shapefiles, No Boundary Flagging. Heritage sites flagged in white.

Line Construction:

- Total of 20.8 mandatory miles of hand line along treatment boundary and 22 miles of optional hand line
- Line construction needs to be cut down to mineral soil. No duff or rotted logs inside the line.
- Line construction needs to be 2 ft wide.
- Line construction berm needs to be knocked down and level with terrain.

Cutting Specifications:

- Cut ponderosa pines, white fir & Douglas fir, evergreen oak, juniper, and brush
- Cut all brush species, including but not limited to, shrub form evergreen oak, Manzanita, Mountain Mahogany, silktassel, New Mexican Locust, and ceanothus.
- Cut all Ponderosa Pines from 3 inch up to 9 inch DBH.
 - Thin ponderosa pine regeneration from 0-3 inch DBH to a 10 foot x 10 foot spacing
- Cut all White Fir and Douglas-Fir up to 9 inch DBH.
- Cut all Evergreen Oaks (AZ White, Emory, Turbinella oak) and Junipers up to 5 inch DBH
- Dead: Cut all standing dead conifers (pines & firs) up to 12 inches DBH. All cut material will be cut and piled.
 - For all dead trees on the ground, cut all limbs and tops off up to 12 inches
 - Cut all dead boles on the ground up to 12 inches.
 - Pile all cut dead material.
 - Ensure that piles have a mix of fine fuels. Piles with only logs and boles will not be accepted
- Do not prune any live trees - Don't prune branches
 - Cut it all or leave it all => if two trees share a stump, and the larger tree is above the diameter limit, don't cut either tree (**see Photo Guide below**)
- No spacing specifications – Cut all pines, oaks and junipers up to diameter limit.
- Cut as low as you can, avoid stumps over 6 inches tall

Old Growth tree Protection:

To prevent mortality of the oldest, largest trees:

- Within cutting units, trees larger than 18 inches shall have duff skirts (needles, leaves, all fuels) removed with raking or leaf blower, down to mineral soil.
- 3 feet from trunk of tree must be raked or blown to mineral soil

Excluded Species (See Photos Below):

- Due to timing restriction limitations, during the winter, do not cut any live trees that have no leaves
 - These are usually riparian species that would not be cut and are difficult to identify without leaves
- Do not cut pinyon pines
- Do not cut Gambel oaks
- Do not cut grape vines or trees with grape vines
- Do not cut cactus, agave or yucca
- Do not cut bear grass
- Do not cut riparian trees (walnut, ash, box elder, cottonwood, willow, coffeeberry/ buckthorn)
- Do not cut cherry trees
- Do not cut ponderosa pine regeneration (DBH less than 3 inch).
- When in doubt **DO NOT CUT. ASK!** – call **Joe Connolly 928-830-1277** or **Ben Roebuck 928-202-0281**

Hand Piling Specifications:

- All material cut with chainsaws will be piled
- All standing dead conifers (ponderosa pines and firs) up to 12 inches DBH will be cut and piled
- All dead material down on the ground up to 12 inches in diameter will be piled
- Limb and top all dead material on ground up to 12 inch diameter.
 - The only dead wood on the ground should be 12 inches and above, no small branches or tops
- Piles will be a minimum of 6 ft wide x 6 ft tall. Larger piles are preferred (8+ ft tall).
- A 6-foot height for piles is a minimum and will be checked. Larger piles are preferred. Hand piles shall be constructed in openings or outside of the dripline of residual standing trees. Piles should be constructed with a mix of heavy and fine fuels, with fine fuels placed towards the center to stay dry and as few gaps as possible.
- Do not pile on dead material
 - DO NOT PUT PILES on dead material or within 5 feet of dead material
 - Dead material within 5 feet of piles must be cut and included in piles.
- Do not pile material on top of live plants such as shrubs, cut live material first then pile on top.
- Where possible, do not pile material within 10 feet of small 0-3 inch Ponderosa Pine regeneration.
- If old piles are present in the project area, material should be piled on top of old piles or re-pile old piles
- No piles shall be constructed within 66 feet of powerlines and utility lines.
- No piles will be constructed within 25 feet of stream channels.
 - Within SMZs, contractor may fell 8 large trees (6+ inches) per mile of stream into drainage which will not need to be piled, best would be 6 feet long or greater. About 1 tree per 10 chains of stream length.
- Inside any designated archaeological sites, material will be cut with chainsaws, and carried, NOT DRAGGED outside of sites and piled outside of archaeological sites.
- Piles shall be placed at least 30 feet inside of constructed handlines.
- No piles shall be constructed within 66 feet of Improvements (buildings, communication towers, propane tanks, etc.), 30 feet of private property lines, 20 feet of a system road or system trail, 10 feet of a fence, land survey monument, or culvert. In addition, no piles shall be constructed within 50 feet of the Forest boundaries when residential structures are located adjacent to Forest boundary.
- Within 200 feet of any designated roads, larger oak and juniper boles greater than 4 inches in diameter may be left out of piles for fuelwood collection.

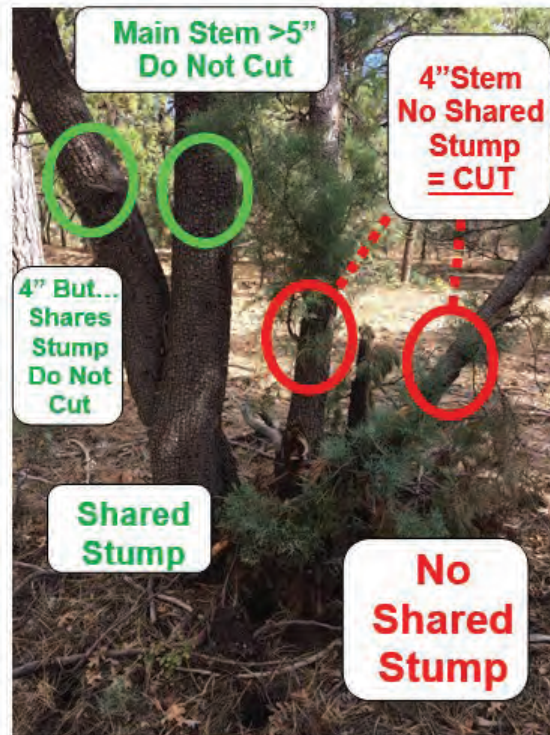
Pile Wrapping

- All piles shall be 'wrapped' with waxed slash pile paper
- Contractor shall procure and supply Kraft Clean Burn Waxed Slash Pile Paper or suitable substitute for project and include in the cost. Product can be found at: <https://pacforest.com/Item/339>
- At approximately 40 piles per acre, and 300 foot long rolls, this is equivalent to approximately 1 roll per acre
- Each pile shall include one piece of 4 ft x 6 ft waxed paper.
- Contractor shall build a small 3+ foot tall pile with mix of fine fuels and branches located in center of pile and place paper on top, then place more logs and branches on top to 'lock in' the paper and prevent paper from moving or blowing away
- Paper shall be located on south side of the pile to ensure driest location.

Section 5 – Attachments:

Appendix 1: Photo Guide - Pruning

Pruning: Do Not Prune Any Live Trees. For forked Junipers and Evergreen Oaks, if largest stem is above diameter limit (5+ inch DBH) do not prune smaller stems which share the same stump. Smaller stems which are on separate stumps should be thinned. Cut it all or leave it all.



Attachment 2: Photo Guide – Species Guide

Alligator Juniper = CUT



Emory Oak = CUT



AZ White Oak = CUT



Turbinella Oak = CUT



Black Cherry – Do Not Cut

There is black cherry in this stand, which looks a lot like Emory oak.

- When in doubt DO NOT CUT.

In this unit, many cherry trees have tent caterpillars (May-June)

Cherry Leaves are glossy green with serrated margins. White flowers in May-June



Smaller Cherry branches up to 4 inch have horizontal lines on the bark called “lenticels”

Larger Cherry trunks over 4 inch look very similar to Emory Oak, so be careful

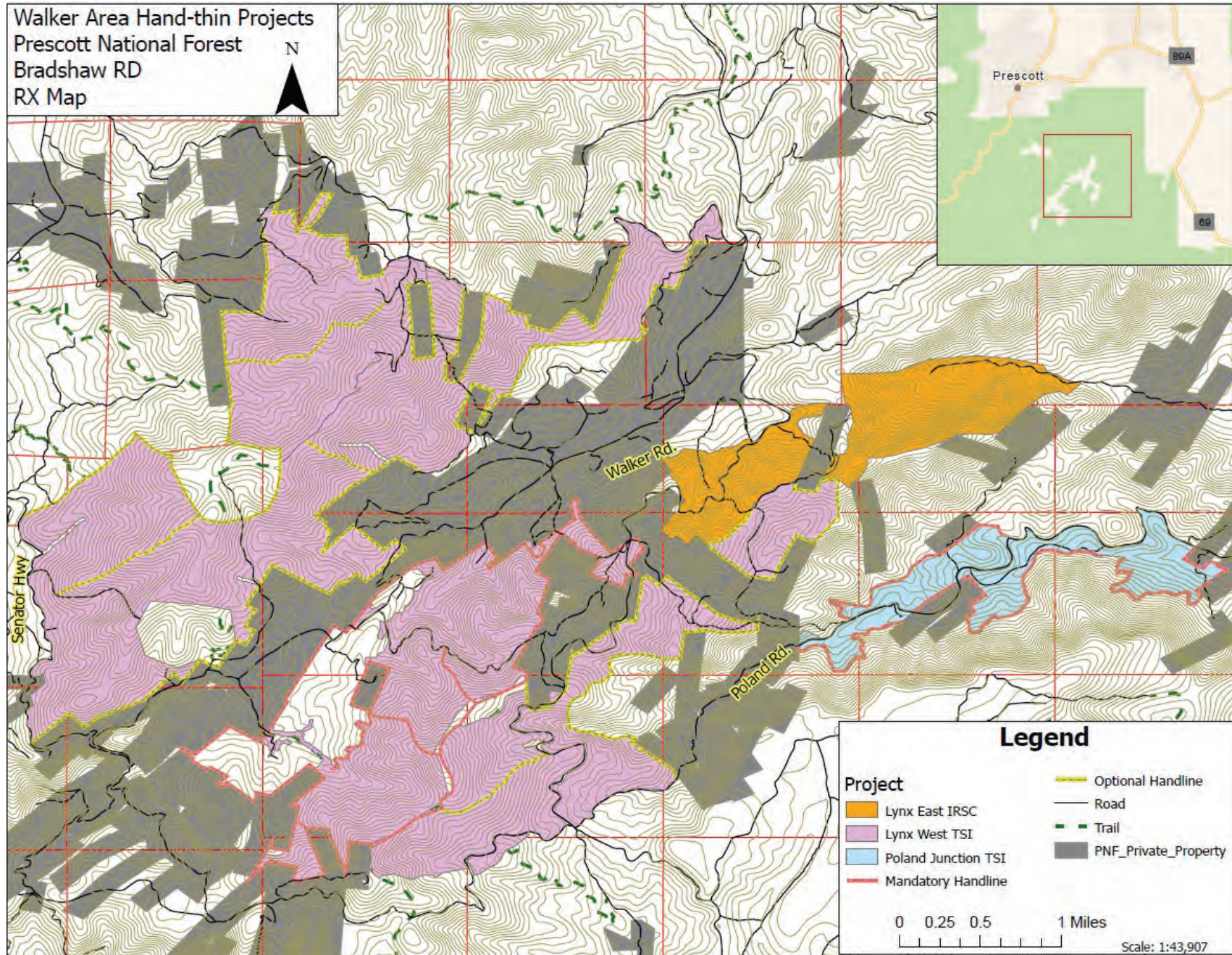


Other Excluded Species: Do Not Cut

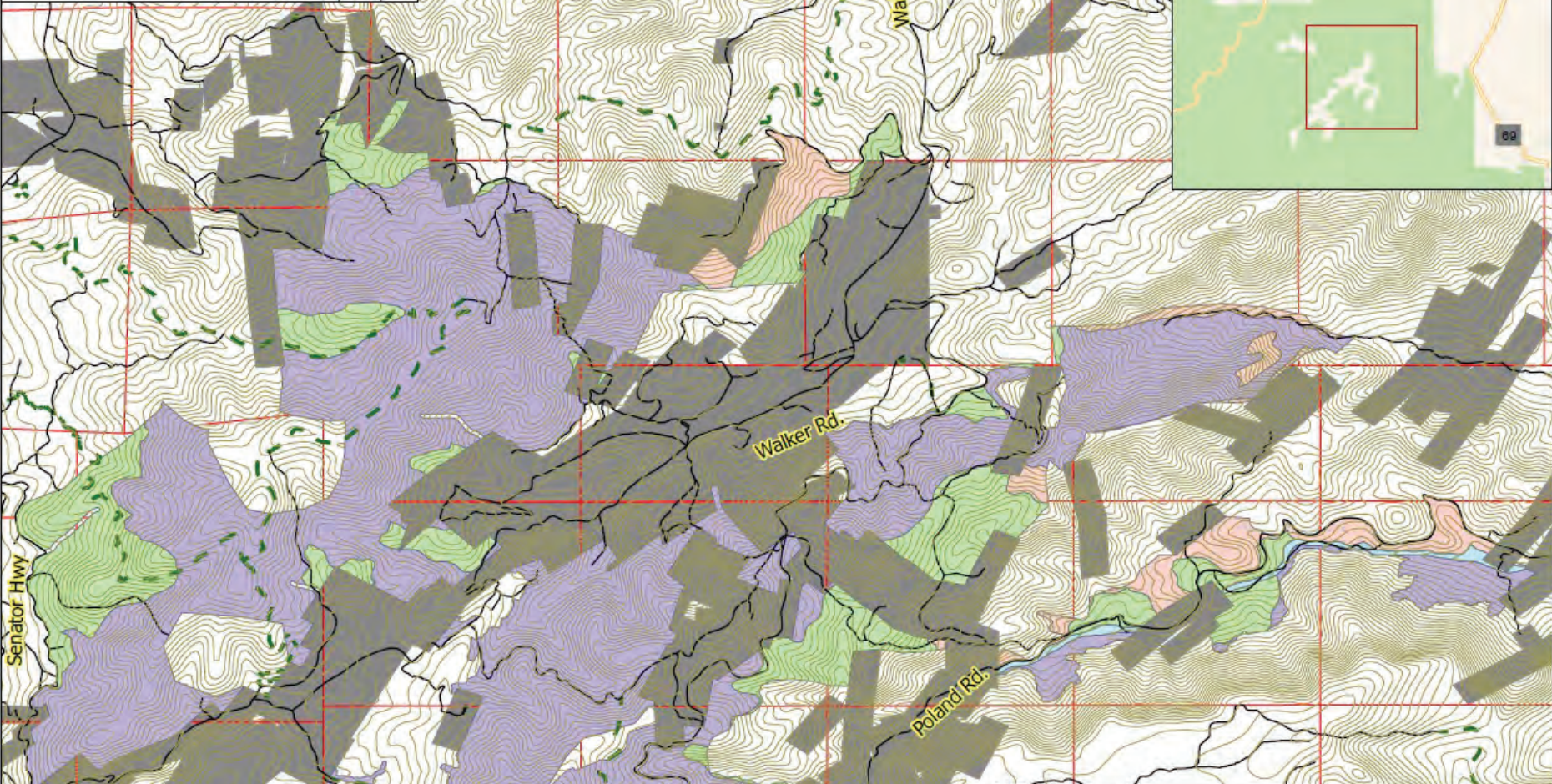
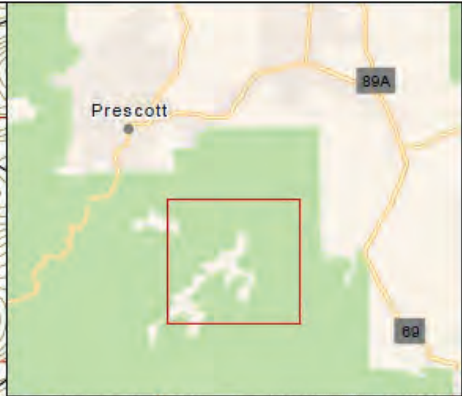




Section 6 – Maps

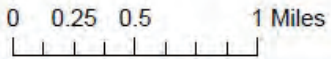


Walker Area Hand-Thin Projects
Prescott National Forest
Bradshaw RD
PNVT Map



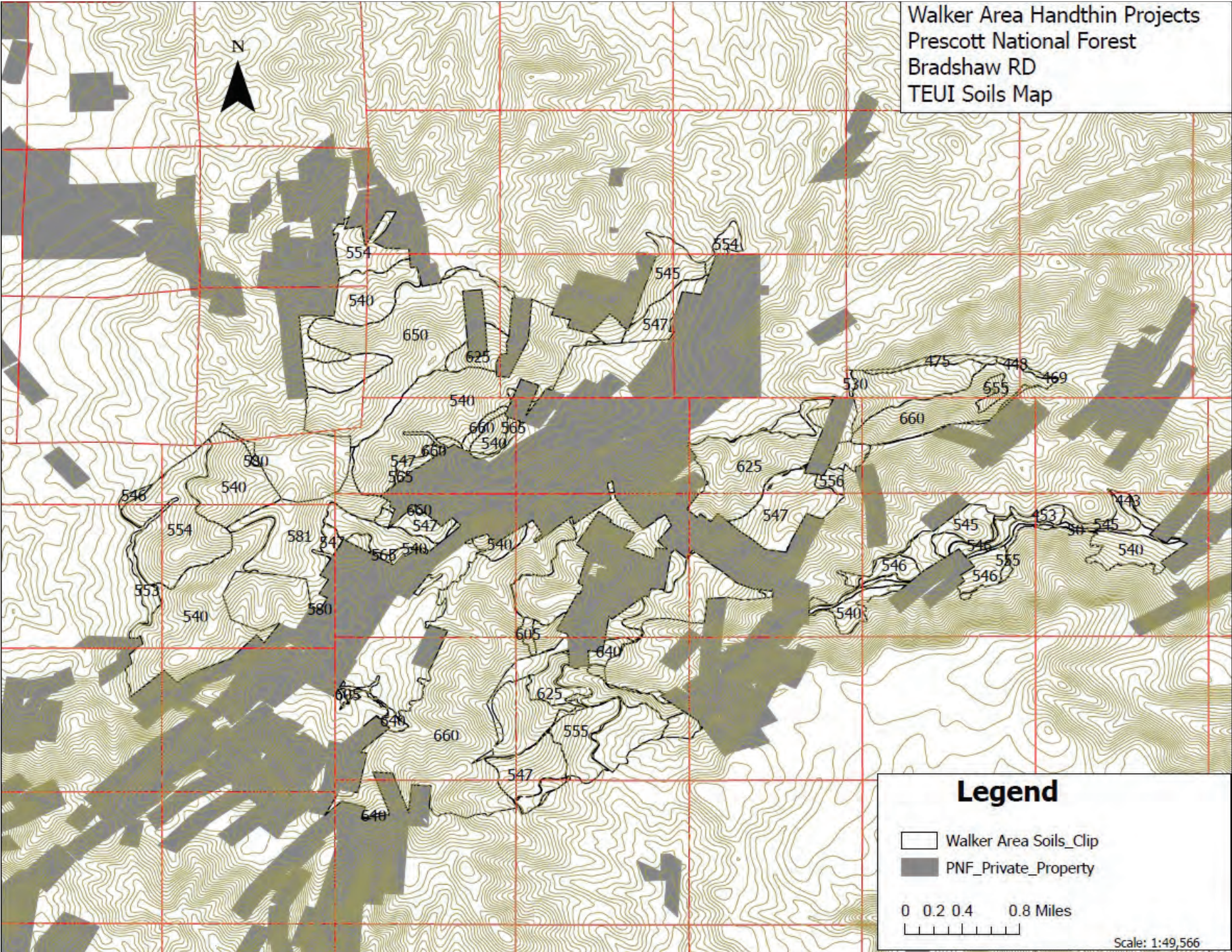
Legend

- Interior Chaparral
- Ponderosa Pine - E Oak
- Ponderosa Pine - G Oak
- Riparian Gallery
- Road
- Trail
- PNF_Private_Property



Scale: 1:43,907

Walker Area Handthin Projects
Prescott National Forest
Bradshaw RD
TEUI Soils Map



Legend

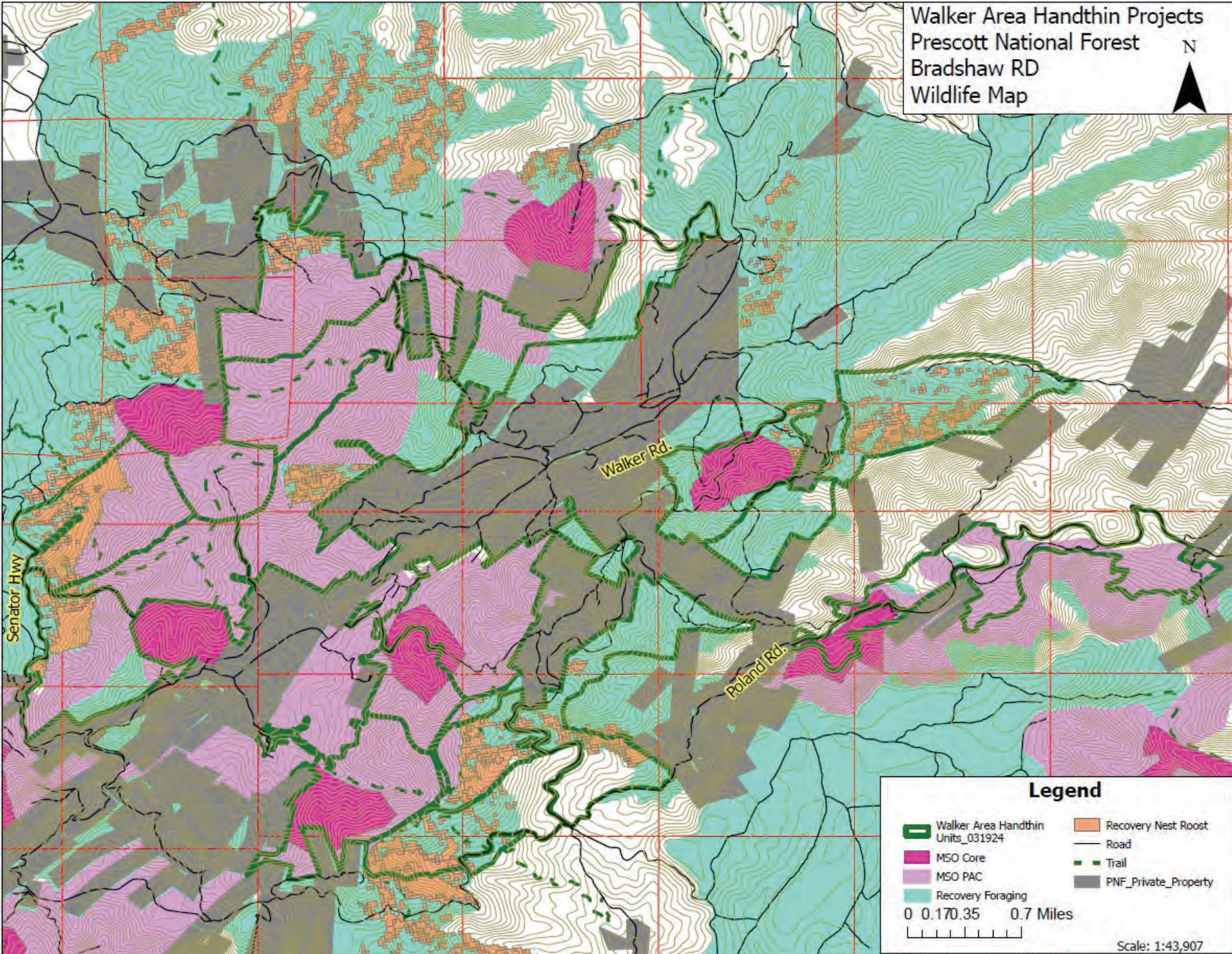
- Walker Area Soils_Clip
- PNF_Private_Property

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Scale: 1:49,566

Walker Area Handthin Projects
Prescott National Forest
Bradshaw RD
Wildlife Map



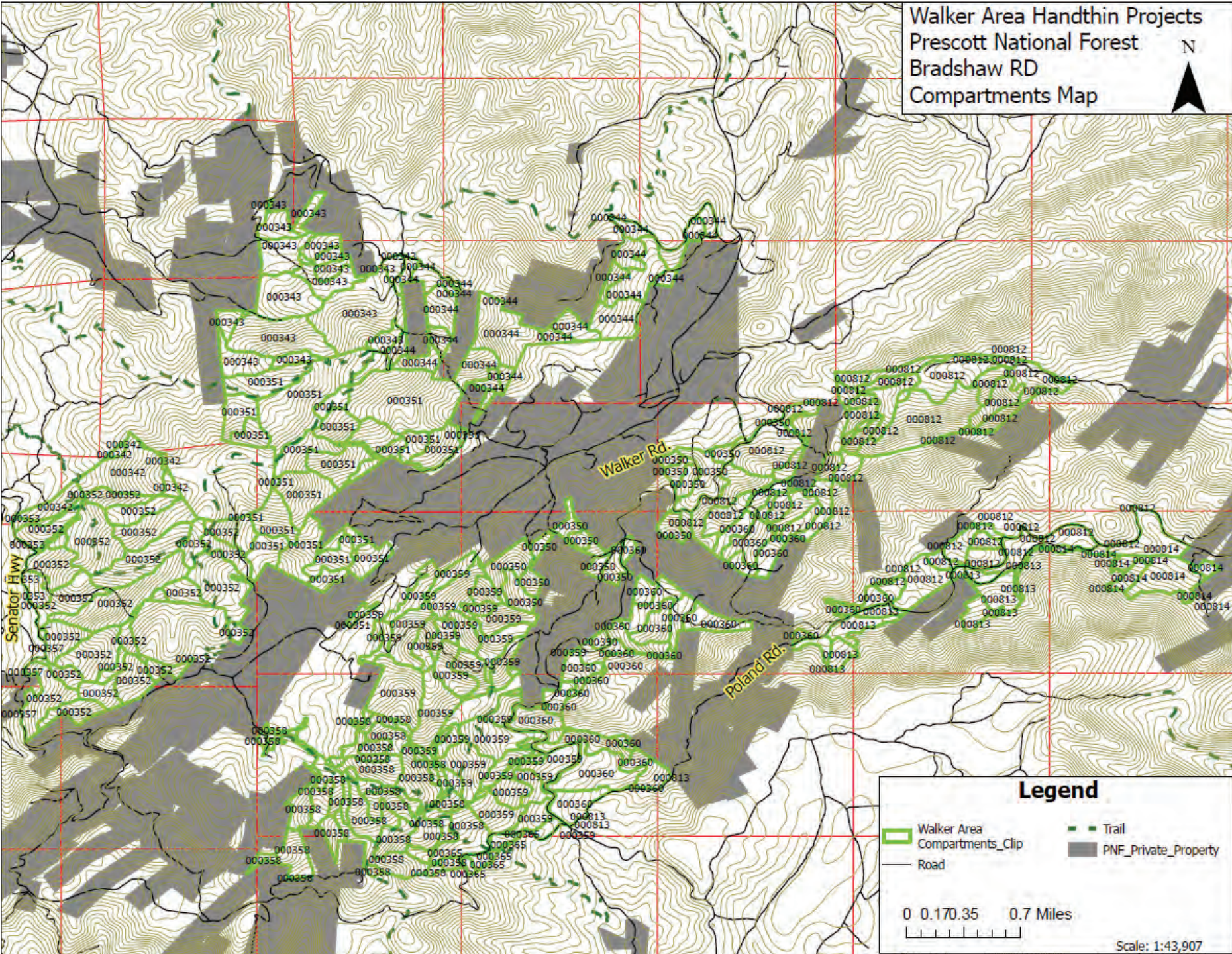
Legend

Walker Area Handthin Units_031924	Recovery Nest Roost
MSO Core	Road
MSO PAC	Trail
Recovery Foraging	PNF_Private_Property

0 0.170.35 0.7 Miles

Scale: 1:43,907

Walker Area Handthin Projects
 Prescott National Forest
 Bradshaw RD
 Compartments Map



Legend

Walker Area Compartments_Clip	Trail
Road	PNF_Private_Property

0 0.170.35 0.7 Miles

Scale: 1:43,907

Appendix F Flowdown Provisions

NFF Funding Code: 1596124

NFF Funding Name: PA Lynx East Timber Stand Improv

Funder Agreement ID: 24-PA-11030900-238

U.S. FOREST SERVICE ACKNOWLEDGED IN PUBLICATIONS, AUDIOVISUALS AND ELECTRONIC MEDIA.

Award Recipient or Contractor shall acknowledge U.S. Forest Service support in any publications, audiovisuals, and electronic media developed as a result of this agreement.

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This provision includes:

- The copyright in any work developed by Award Recipient or Contractor under this agreement.
- Any right of copyright to which Award Recipient or Contractor purchase(s) ownership with any Federal contributions.

PROHIBITION AGAINST INTERNAL CONFIDENTIAL AGREEMENTS.

All non federal government entities working on this agreement will adhere to the below provisions found in the Consolidated Appropriations Act, 2016, Pub. L. 114-113, relating to reporting fraud, waste and abuse to authorities:

1. The recipient may not require its employees, contractors, or subrecipients seeking to report fraud, waste, or abuse to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting them from lawfully reporting that waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.
2. The recipient must notify its employees, contractors, or subrecipients that the prohibitions and restrictions of any internal confidentiality agreements inconsistent with paragraph (a) of this award provision are no longer in effect.

3. The prohibition in paragraph (a) of this award provision does not contravene requirements applicable to any other form issued by a Federal department or agency governing the nondisclosure of classified information.
4. If the Government determines that the recipient is not in compliance with this award provision, it:
 - a. Will prohibit the recipient's use of funds under this award, in accordance with sections 743, 744 of Division E of the Consolidated Appropriations Act, 2016, (Pub. L. 114-113) or any successor provision of law; and
 - b. May pursue other remedies available for the recipient's material failure to comply with award terms and conditions.