Oregon Department of Forestry Broadcast/Understory Burn Plan								
Landowner Name and Address and/or Driving Directions to Unit	Township	Range	Section	County		/Long (Degree		Unit Name
Landowner: Oregon State University Directions: 99W to NW Arboretum Drive, west on NW Peavy Arboretum Rd, north on Research Forest Rd 520, then north on Rd 522 for 0 to 0.1 mi.	T10S	R05W	36 (NE ¼ of NE ¼)	Benton	44° 123 Oak 44°	e Corner: 36.588' N, ° 14.142' W. : Release: 39.782' N, 12	23°	Woodpecker Rx (two subunits: Pine Corner & Oak Release)
Anticipated Burn Date (ra	ange): Fall 2023							
	SIGNA	ATURES AND CON	TACT INFO	RMATION				
Preparer(s) Signatur Name and Phone:		μω Ρι john.punches@c	oregonstate	e.edu		Date:	10/0	)2/25
Burn Manager Signature, John Punches Name and Phone: 541-602-4689		μω Ρ.μ.   john.punches@c		e.edu		Date:	10/0	)2/2025
Landowner(s) Signatu Name and Phone:	for OSU College of Forestry mark.swanson@oregonstate.edu				Date:	<b>Date</b> : 10/02/2025		
	REGISTRA	TIONS, SMOKE CI	EARANCE,	AND PERMITS				
NOAP and/or PDM Number and Smoke Registration (if required)		ng	Permit	and Smoke Obtained (if equired)		Pending		
		NOTIFICA	ATIONS					
NEARBY LAN	DOWNERS AND NEIGH	BORS	FIRE, EN	MERGENCY RES	PONSE	, AND AIR QU	JALIT	Y CONTACTS
Name	Contact Info		Name		Conta	ct Info		
Rick and Margaret Fletcher	fletcher@oregonstate	fletcher@oregonstate.edu			Leo Williamson 541-207-6038 Leo.H.WILLIAMSON@odf.oregon.gov			
Thompson Tree Farm Inc	6860 SW WINDING W OR 97333		ty/County partment(s)	Aaron Harris – Adair Rural Fire 541-990-8953 aaron@adair-rural-fire.com				
(residential neighbors)	·	Outreach efforts, including leaflets and social media, will be conducted in the		n-Emergency n	Benton Co. Emergency Service 541-766-6789		ervice	
				r Quality (if ble)	F Via ODF			
		BURN UNIT D						
Fuel Type (Slash, Brush, G	Fuel	Fuel Loading (tons/acre)			Size of Unit (acres)			
Logging slash, perennial goaks and valley pines.		12-13 tons/acre Oak Release- 1. Pine Corner- 1						

## **Oregon Department of Forestry Broadcast/Understory Burn Plan**

#### PRE-BURN FUELS AND VEGETATION DESCRIPTION INSIDE BURN UNIT:

Burn unit is comprised of two subunits.

- N subunit ("Oak Release") is a 1.5 acre portion of a 3.5 acre patch cut, the primary objective of which was to release scattered Oregon white oak from conifer dominance. Approximately half of the unit has been designated a prescribed fire unit, with the other half having been treated via mastication following harvest. The half to be burned is located on the east side of the unit. The post-harvest stand structure consists of widely space Oregon white oak (8-20"), with scattered bigleaf maple (4-12"). Scattered logging slash, unburned remnants of slash piles, perennial grasses, and tall forbs (e.g., thistle) comprise the fuelbed. Aspect east, slope 0-5%.
- S subunit ("Pine Corner") is a 1 acre portion of a 3 acre patch cut. Retained trees are primarily large-diameter valley pine (18-36") and Douglas-fir (24-30"), with scattered Pacific madrone (12-20") and resprouting bigleaf maple. Scattered logging slash, unburned remnants of slash piles, perennial grasses, tall forbs (e.g., thistle), and light pine litter comprise the fuelbed. Aspect north, slope 0-30%.

#### PRE-BURN FUELS AND VEGETATION DESCRIPTION OUTSIDE BURN UNIT:

- N subunit ("Oak Release"). N, E, S, and W of unit: Douglas-fir, grand fir, and bigleaf maple forest (90%+ canopy cover) with understory of sword fern, cascara buckthorn, poison-oak, Siberian miner's lettuce, and false-brome. Slope 5-25%. Fuel model generally TU1, with low FL and ROS under in-prescription conditions.
- S subunit ("Pine Corner"). N, E, and W of unit: Douglas-fir, grand fir, and bigleaf maple forest (90%+ canopy cover) with understory of sword fern, cascara buckthorn, poison oak, Siberian miner's lettuce, and false-brome. Slope 5-25%. S of unit: Douglas-fir and madrone forest, midstory of bigleaf maple, understory of sword fern, California hazel, and poison-oak. Fuel model generally TU1 with low FL and ROS under in-prescription conditions.

#### **PRE-BURN PREPARATION**

#### **DESCRIPTION OF PRIMARY CONTROL LINES AND PREPARATIONS FOR USE:**

- N subunit ("Oak Release") bounded on E by Research Forests Road 522 with wide road prism (20'+, compacted dirt and gravel surface). N, E, and S boundary will have herbaceous fuels cut with a star blade, and logging slash removed by hand and chainsaw, both to a width of 8' with no overhanging fuels. A 24" hand line will be installed in this 8' swath. N and S boundaries have mastication line features from 2024 upon which line can be constructed.
- S subunit ("Pine Corner") is bounded on W by Research Forests Road 522 with wide road prism (20'+, compacted dirt and gravel surface) and partially bounded on the S by Research Forests Road 520 with wide road prism (20'+, paved). To the N, E and remainder of the S boundary a hand line (24") will be cut. Herbaceous fuels will be cut in an 8' swath with a weed whacker with star blade, and logging slash and other woody fuel will be removed from that swath by hand and with chainsaw. Overhanging fuels to a height of 8' will be removed.

#### Additional preparation:

- Pull back any piled slash/decayed logs from under driplines of leave trees and disperse or pile outside dripline.
- Install 2' fireline around standing snags and large wood on ground to reduce likelihood of combustion.
- Install 2' fireline around rotten stumps within 25' of control lines to reduce potential they are involved in burn and associated mop-up requirements.

**LOCATION OF AND CONFIRMATION OF ACCESS TO PRIMARY WATER SOURCES:** Will have 500-gallon tank on trailer with pump and adequate hose. Pickup truck with 125-gallon tank and pump with 200' of 1" forestry hose. Pump chance will <0.2 mi away at Forest headquarters (8692 NW Peavy Arboretum Rd).

#### **MINIMUM RESOURCES - PERSONNEL Number Needed Position** Description 1 OSU burn manager Oversee burn operations 1 Firing lead Implement firing operations 1 Holding lead Implement holding operations 8 Personnel Assist with holding, firing, mop-up as needed

Oregon Department of Forestry Broadcast/Understory Burn Plan							
MINIMUM RESOURCES - EQUIPMENT							
Number needed	Burn Phase (Ignition and/or Patrol/Mop-Up)						
1	Pickup with 125-gallon tank, pump, hose	Ignition, Mop-up					
1	Trailer with 500-gallon tank (or pre-positioned tanks), pump, hose	Ignition, Mop-up					
2	250-gallon tanks (pre-positioned and filled) or equivalent, one at each subunit	Ignition, Mop-up					
2	Portable pump	Ignition, Mop-up					
4	Backpack pump (5 gallon)	All					
1200'	1.5" hose with wyes and nozzles	Ignition, Mop-up					
600'	1" and/or garden hose with fittings and nozzles	Ignition, Mop-up					
4	Drip torches and/or propane burners	Ignition					
Per crew size	Hand tools (variety on site to accommodate crew needs)	All					
Per crew size	FRS radios (1 per crew member plus extra)	Ignition, Mop-up					

RADIO, CELLULAR, OR OTHER FORMS OF COMMUNICATIONS						
SYSTEM	FUNCTION FREQUENCY		FREQUENCY	ASSIGNMENT		
FRS	TAC	TX RX	Channel 1 (no tone)	General communication		
Cell	Dispatch/Agency Communication		541-929-3266	Notify of test fire, ignition start/end, end of day status, patrol		
Cell	Command		911	Emergency notifications		

#### CONTINGENCY AND WILDFIRE DECLARATION

#### CONTINGENCY ACTION POINTS INCLUDING WHEN AND HOW TO RESPOND:

Primary contingency capacity will consist of additional personnel and water delivery resources on scene during burn operations. In addition to the minimum resources noted on page 2 we will have on scene an additional 500 gallons of water with pump and hose and six additional personnel capable of holding/suppression efforts.

Activate additional continency (per list, below) if fire activity within burn unit is exceeding holding capacity of onsite resources. Any slop-overs or spots not controlled by onsite resources within 30 minutes or ½ acre of area indicate need for activation of contingency resources.

#### LOCATION AND CONDITION OF SECONDARY CONTROL LINES AND BACK-UP WATER SOURCES:

To the east of both subunits, the 500 Rd runs in a north-south direction and will admit two-directional traffic. Kronemiller Lake, an artificial pond, offers an excellent pump chance. To the north of both units lies Calloway Creek, a perennial creek offering significant contingency in case of fire escape, in addition to pump chance opportunity. Beyond Calloway Creek to the N is the 540 Rd, which is accessible from Highway 99W for heavy engine traffic, and offers further contingency. A number of young Douglas-fir-dominated stands (fuel model TU2, high crown bases and reduced shrub understory) are located to the east of both units. These stands offer reduced wind speed, shaded conditions for escape contingency. An extension of the Peavy Arboretum Road lies to the east of these stands, offering further control opportunity and access for engines.

#### CRITERIA AND PROCEDURE FOR WILDFIRE DECLARATION:

Spots or fire transmission outside OSU property boundaries require immediate notification of Oregon Department of Forestry. Prescribed fire ignitions will cease and onsite personnel not required for containment of prescribed fire will attempt suppression of wildfire within extent of their training and equipment. Wildfire incident will be turned over to ODF personnel upon their arrival.

Contingency Resource Name	Response Time	Location
Oregon Department of Forestry	30 min	Varies
Adair Rural Fire Department	15 min	Varies

#### VALUES AT RISK AND PRESCRIPTIVE SIDEBOARDS INSIDE AND OUTSIDE UNIT

## **MITIGATION MEASURES TO PROTECT VALUES AT RISK:**

Inside: Manage flame length to maintain acceptable crown scorch – see prescription notes.

Outside: Neighboring properties (prevent fire transmission to east and south).

SMOKE MANAGEMENT								
	Nearest Smoke Sensitive Receptor(s)/Class 1 Airshed	SSRA: Corvallis/Willamette Valley/Tampico Road Class 1: Three Sisters, Mt. Washington, Mt. Jefferson wilderness areas.	Distance and Direction	Corvallis 4 miles south.  Tampico Road – 1 miles north.  Willamette Valley airshed 3 mile east.  Wilderness areas 60+ miles east.				

#### **MITIGATION STRATEGIES AND TECHNIQUES TO REDUCE IMPACTS:**

Burn when 20-foot winds are from S, SE, SW, or E (not preferred, due to smoke transfer into Soap Creek), or when mixing height is over 1500'. Mop-up smoldering logs and stumps.

SMOKE MANAGEMENT FORECAST DAY BEFORE/DAY OF BURN: To be obtained.

#### **TEST FIRE AND IGNITIONS**

#### **TEST FIRE LOCATION(S):**

- N subunit ("Oak Release"): Anticipate NE corner of unit (DP1) to assess fire behavior in N subunit. May be extinguished
  easily from adjacent road if fire behavior outside of prescription conditions. May adjust if upslope/east winds are
  anticipated to drive fire behavior to greater extent than slope. Secondary test location at DP2 to assess fire behavior in N
  subunit may be employed.
- S subunit ("Pine Corner"): Anticipate test fire in SW corner of unit (DP2) to assess fire behavior. May be extinguished easily from adjacent road if fire behavior outside of prescription conditions.

#### **IGNITION EQUIPMENT, METHODS, AND SEQUENCES:**

Drip torch and/or propane burners. Blackline on N or downwind sides of subunits per prevailing effect and progress along unit flanks. Interior ignitions should attempt strip headfire but may require backing or flanking fire to achieve desired FL and ROS. Maintain FL 4' or less with exceptions for torching of small trees or shrubs or unburned remnants of slash piles from 2024 harvest season. Maintain ROS 20 ch/hr or less. N subunit: Start at northeast corner (DP1) or downwind corner and work into the wind, likely south and west. S subunit: Ignite on uphill (south) end of unit and ignite downhill towards the ephemeral stream channel.

#### **HOLDING AND CONTAINMENT**

#### **CRITICAL HOLDING POINTS AND MITIGATIONS:**

N subunit: Patrol N, W, and S machine/handline and prevent slop-over into adjacent vegetation. May require wetting of vegetation on green side of handline prior to ignitions. Patrol forest stand E of west line and ensure prompt control if spotting occurs. Ensure effective blacklining along adjacent lines before proceeding to interior ignitions.

S subunit: Patrol N, E, and S handline and prevent slop-over into adjacent vegetation. May require wetting of vegetation on green side of handline prior to ignitions. Patrol forest stand W of Road 522 and ensure prompt control if spotting occurs (unlikely). Ensure effective blacklining along adjacent lines before proceeding to interior ignitions.

#### **CONTAINMENT LINE SPECIFICATIONS AND RATIONALE:**

Clean road to achieve 3' wide line to bare mineral soil. Dig handlines to minimum 2' wide to bare mineral soil, or at least 1.5 times height of adjacent in-unit vegetation. Mow/cut in-unit vegetation adjacent to control lines to reduce height as needed.

## MOP-UP, PATROL, AND NOTIFICATION OF DECLARING BURN OUT

#### **MOP-UP STANDARDS:**

Extinguish smoldering/flaming materials within 50 feet of all unit boundaries once ignitions have completed in vicinity of that line and fuels have consumed. Burn boss will notify when to shift from burn to mop-up phase. Heavy downed fuels and smoldering stumps will be extinguished with combination of wet and dry mop-up.

#### FREQUENCY AND DURATION OF PATROL:

Two hours of active patrol following conclusion of mop-up, plus comply with any patrol requirements per ODF. Follow-up patrol the next day. Pay particular attention to evidence of spot fire smoldering outside unit boundaries. Additional patrol daily until burn declared out.

### DESCRIBE CRITERIA AND NOTIFICATIONS FOR DECLARING THE BURN OUT:

Burn may be declared out when no evidence of ongoing combustion (smoldering/flaming/heat) can be observed/detected within burn unit and any associated spot fires for three days, subject to ODF confirmation/approval. Notify ODF, Adair Rural Fire Department, and OSU Director of Research Forests.

## SAFETY, MEDICAL, AND EMERGENCY PLAN

#### **NEAREST HOSPITAL:**

Good Samaritan Regional Medical Center, 3600 NW Samaritan Dr., Corvallis, OR. 541-768-5111. Ambulance via rural fire district. Call 911 if emergency.

#### **SAFETY ISSUES AND MITIGATIONS:**

First aid kits with AEDs in OSU vehicles. PPE required for all persons engaged in fire operations. Potable water and electrolyte fluids on site. Participants advised to bring epi pens and personal meds appropriate for their conditions. Mark Swanson-current certification, Wilderness First Responder. John Punches, Wilderness First Responder.

Road closures will be effected by Research Forest staff due to high recreational use of area. Roads to be closed include the 500 Rd N of the Forestry Club Cabin, the 540 Rd from 99W to the 543 Rd, and the 522 Rd from the 520 Rd to the Harvest Lab. The Sec 36 Trail will remain open, with a smoke warning.

#### **RALLY POINT INCLUDING DRIVING DIRECTIONS:**

If evacuation required, primary rally point is intersection of 520 and 522 roads. Secondary rally point is Harvest Lab, NE of both subunits along Rd 522.

#### RESOURCE MANAGEMENT GOALS

- Reduce intensity of future fire and protect overstory trees managing accumulation harvesting slash, litter and duff. Kill
  small trees to prevent their development as ladder fuels.
- For N subunit, prepare the site for successful natural regeneration of Oregon white oak to promote a multiple-aged oak stand.
- For S subunit, prepare the site for successful natural regeneration of valley pine to promote a multiple-aged valley pine stand.
- Reinvigorate grasses and forbs in understory as forage for wildlife, and to prepare the site for seeding with native grass species, including Roemer's fescue and tufted hairgrass.
- Reduce risk of wildfire transmission across property.
- Train personnel for prescribed fire responsibilities.

#### PRESCRIBED FIRE OBJECTIVES

Tree community composition: reduce mesic conifer seedling/sapling abundance by >90% to favor dominance by fire-tolerant species such as Oregon white oak, valley pine, and madrone. Understory vegetation: top-kill woodland shrub species such as tall snowberry and California hazel, stimulating dense resprouting from root crown. Fuels: consume >80% of dead herbaceous fuels, and 50-80% of woody fuels (1, 10, and 100-hr time-lag classes), thus reducing potential for wildfire spread through subunits. Implement effective site preparation (mineral soil exposure and nutrient mobilization) for Willamette Valley prairie vegetation, including grasses like Roemer's fescue and culturally important forbs such as camas. Train personnel in unit preparation, firing, holding, mop-up, and monitoring techniques. Fuel consumption metrics observable immediately following cessation of burning. Vegetation responses observable one growing season after burn.

#### **ENVIRONMENTAL PARAMETERS AND FIRE BEHAVIOR**

ENVIRONMENTAL PRESCRIPTION			ACCEPTABLE FIRE BEHAVIOR			
	Low	High		Low	High	
Temperature (°F)	40	85	Flame Length (ft)	.5	4*	
Relative Humidity (%)	25	90	Rate of Spread (ch/hr)	.2	30	
20-ft. Wind Speed (Forecasted)	0	20				
20-ft. Wind Direction (Forecasted)	S, SE, SW, W					
Eye-Level Wind Speed (Observed)	0	6				
Eye-Level Wind Direction (Observed)	Any					

Transport Wind Direction	S, SE, SW, E, NE			
Fine Dead (1-Hr) Fuel Moisture	4	12		

#### **Prescription Comments:**

Pine Corner subunit includes TL8 and GR1 fuel components, with sparse patches of latter weedy materials and dispersed, non-continuous, low volume logging slash. Patches of bigleaf maple sprouting are anticipated to be too high in moisture content to contribute to fire behavior. Unit is considered to be partially sheltered from wind due to interior and adjacent stand characteristics.

Oak Regeneration subunit includes weedy vegetation, modeled as GR2 with live fuel moisture content of 70%. Dispersed logging slash will increase burn duration but is not anticipated to increase overall ROS or FL. Unit is considered to be partially sheltered from wind due to interior and adjacent stand characteristics.

#### Containment:

Adjacent forested stands were modeled as TU1 and are expected to exhibit high resistance to ignition, and low rates of spread, under anticipated conditions. Fuel moistures will be measured in the adjacent forested stands on morning of burn day. With sufficient wetting rains during mid-October, shaded forest floor fuelbeds are expected to maintain higher moisture content than fuels in the subunits. This moisture differential is a key factor in containment. Periodic reconnaissance within adjacent downwind stands will be conducted to monitor for spot fire initiation.

\*Flame lengths exceeding 4' acceptable for torching behavior of isolated shrubs and small trees, provided prevailing fuels are exhibiting flame lengths of 4' or less.

#### **WEATHER MONITORING AND METHODS**

#### MOST REPRESENTATIVE REMOTE AUTOMATED WEATHER STATION (RAWS) OR OTHER RELIABLE WEATHER STATION:

National Weather Service (Salem) fire weather forecast, zone 683, if available, supplemented with NWS public forecast, Obtain SPOT weather forecast if available. Obtain onsite weather observations one day in advance and submit with spot weather forecast request. Utilize Windy app to identify anticipated wind changes by hour.

## WEATHER DATA COLLECTION METHOD AND FREQUENCY BEFORE, DURING, AND AFTER IGNITIONS:

On-site collection of temperature, eye-level wind speed and direction. Calculate RH, FDFM, and PIG. Communicate hourly during firing and holding.

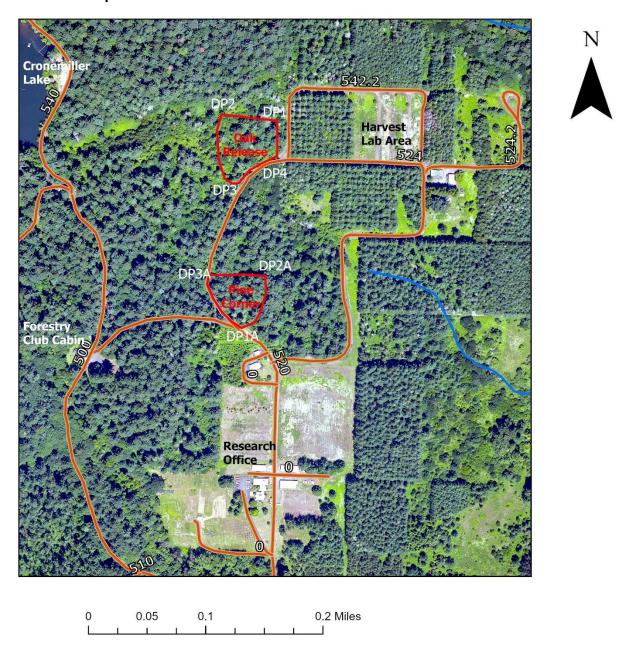
#### POST-BURN FUELS AND VEGETATION MONITORING AND METHODS

#### **DESCRIBE METHODS FOR MONITORING POST-FIRE EFFECTS:**

- Visual estimate of percent of unit burned.
- Line-intercept data for coarse woody and fine woody fuels, to be compared with data collected by FOR 321 class in Fall 2024.
- Visual estimate of thatch, litter, duff, slash and seedling consumption/mortality based on pre- and post-burn observations.
- On-site observation of fire behavior during firing and holding via FEMO. Photo document, if possible.
- Post fire observation of crown scorch in overstory trees.

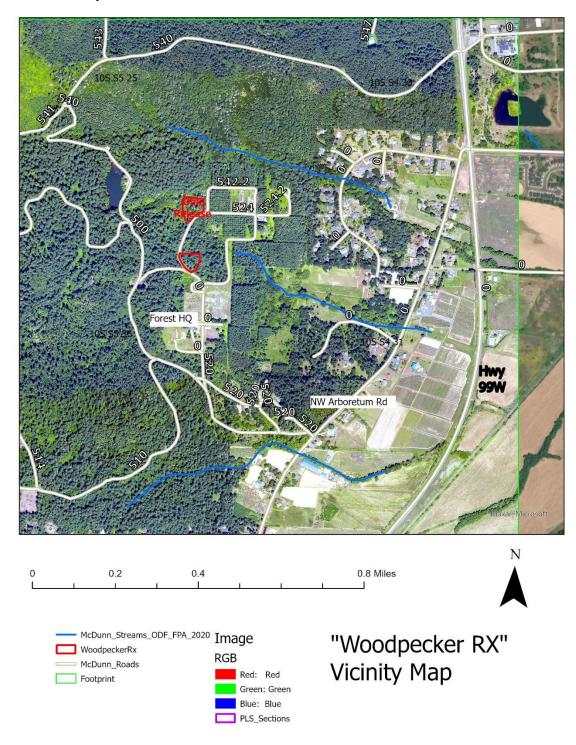
## MAP A: Unit

# "Woodpecker Rx"

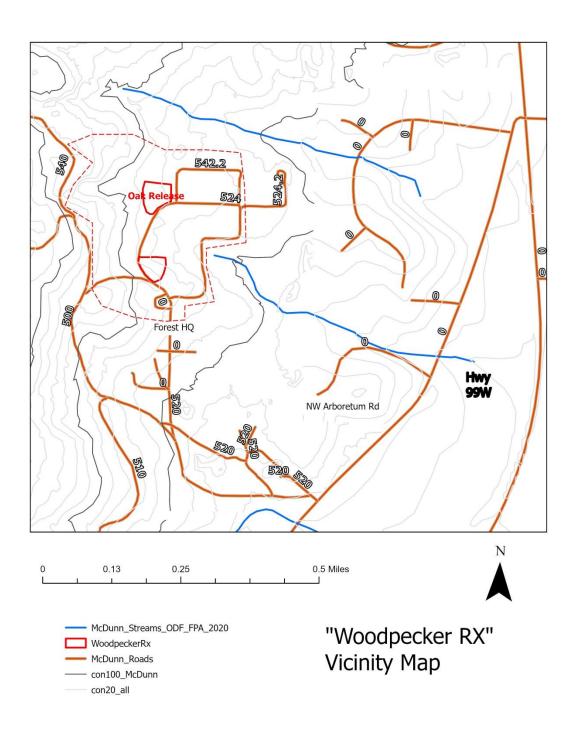


Forest headquarters visible in lower center of map. Forest Rd 522 borders western boundary of south subunit and east-southeast boundary of northern subunit.

**MAP B: Vicinity** 



**MAP C: Topography and Secondary Control Lines** 



Notes: dark gray lines represent 100' contours, while lighter gray lines represent 20' contours. The dotted red lines represent opportunities for secondary control. To the north, portions of the Calloway Creek Trail (with Calloway Creek itself beyond). To the east, a number of roads. To the south, open thinned woodland and openings/parking lots associated with the Forest Headquarters. To the west, the well-developed 500 Rd. Numerous additional seco

# PRE-BURN GO/NO GO, CREW BRIEFING, TEST FIRE, AND POST-BURN CHECKLIST

A. PRE-BURN (Prior to Crew Briefing)	
Fire Unit is as described in plan and copy of plan is on site.  Required firebreaks complete and are consistent with current and predicted conditions.  Certified Burn Manager assigned, permits obtained and documented in burn plan.  Required number of personnel present.  Short and long-range weather and smoke management forecast obtained and within prescription.  Notifications complete.  Required equipment for holding, weather monitoring, ignition and suppression on-site and functioning.  Personnel have reviewed equipment for readiness.  Planned ignition, holding, and containment methods are appropriate for current and predicted conditions.  Planned contingencies, mop-up, and patrol are appropriate for current and predicted conditions.  Off-site contingency resources are operational and available.	
B. CREW BRIEFING	
Burn unit size, boundaries, and fuels inside and outside unit reviewed with maps provided for reference.  Hazards and safety issues.  Prescribed burn objectives  Anticipated fire and smoke behavior.  Organization of crew and assignments.  Methods of ignition, holding, mop-up, communications.  Contact with the public, traffic concerns.  Location of main roads, vehicles, keys, and nearest phone.  Location of back-up equipment, supplies, and water.  Suppression plan and use of contingency resources for escaped prescribed fire.  Medical emergency procedures  Answer questions from crew.	
C. TEST FIRE	
On-site weather and fuel conditions are within prescription and consistent with forecast.  Test burn conducted, fire and smoke behavior within prescribed parameters.	
D. POST BURN CHECKLIST	
<ul> <li>Mop-up completed to standards as described in burn plan.</li> <li>Night patrol assigned, if needed.</li> <li>Personnel and equipment assigned for days following burn, if needed.</li> <li>Notifications of completed burn, if required.</li> <li>□ Debrief or After Action Review (AAR)</li> </ul>	
Burn Manager sign and date form when burn is completed and has been turned over to the landowner or another Burn Manager.	'n
Rurn Manager Signature:	