

The Certified Burn Manager (CBM) course is structured around planning for and implementing a prescribed burn. Throughout the units, students are prompted to review ODF burn plan templates in preparation for implementation. The continuous process of reflection upon and adaptation to change throughout prescribed fire planning and implementation helps ensure that burn plans are accurate and defensible and that prescribed burns are safely and effectively implemented.

Thank you for taking the time to review this material carefully. The creation of learning objectives and an assessment is the result of many hours of collaborative deliberation, considering input from a variety of sources. Please take the time to create meaningful content to ensure that learning objectives are met and that students are able to pass their course assessment.

Course Description:

The purpose of ODF's Certified Burn Manager Training is to provide students with the knowledge and skill necessary to successfully plan and implement a prescribed burn. The course material is based on the full spectrum of potential duties and responsibilities of a Certified Burn Manager (CBM), including preplanning, planning, preparation and mobilization, implementation, demobilization, documentation, and monitoring.

Course Objectives:

By the end of the course the students will be able to:

- Identify applicable prescribed fire planning and implementation laws, policies, and guidelines.
- Describe and appropriately utilize the processes involved in preparing a prescribed fire plan.
- Identify different prescribed fire implementation tactics and strategies and their applications in various scenarios.
- Describe relevant post-burn activities and requirements.

Pre-course Work

Once accepted into the class, students will need to show completion of the following pre-course work:

Item	Form	Hours	Task
Online Videos	Online	4	View
Review of CBM OARs 629-042-1000	Online	1	Review
Review ODF CBM Duties and Responsibilities	Online	1	Review

Course Materials

Instructor Guide

Appendix A: Assessment (Final Exam)

Appendix B: Pile Burn Plan Template

Appendix C: Example Pile Burn Plan

Appendix D: Broadcast/Understory Burn Plan Template

Appendix E: Example Broadcast/Understory Burn Plan

Appendix F: CBM Duties and Responsibilities

Appendix G: Responsibility Transfer Form

Appendix H: Pre-Course Work Video Links and References

Overview of Roles

Training Provider

- Adopt, adapt, and/or develop course material that meets Oregon CBM course objectives.
- Select the class dates.
- Announce the class.
- Select students and communicate class expectations.
- Recruit instructors and communicate expectations.
- Report to ODF in a timely manner as required. as needed, ensuring all required reporting is completed in a timely manner.
- Support the technical needs of the instructors and students.

Lead Instructor

Required background (ORS [629-042-1065](#)): At least two years total experience either teaching adults or working in prescribed fire. It is recommended that lead instructors possess experience in both teaching and prescribed fire planning and implementation.

- Review overall course material, including prework, to have a context for the flow of the class.
- Review and update material as needed, in coordination with the Training Provider
- Serve as the coordinator/facilitator throughout the class.
- Frame the class content from the perspective of a CBM.
- Assign units for instruction to unit instructors.
- Lead A.A.R.
- Proctor the OR CBM test
- Sign student certificates
- Identify opportunities for updates to the course and communicate to ODF.

Unit Instructor

Required background (ORS [629-042-1065](#)): At least two years total experience either teaching adults or working in prescribed fire

- Attend planning meetings prior to the class.
- Teach units as assigned.
- Grade prework and assessments

- Serve as coach or panelist as needed.
Identify opportunities for updates to the curriculum or course and communicate to ODF.

Unit Descriptions

Unit 1: Preplanning (2 hours)

Summary

This unit outlines prominent policies and guidelines for consideration before beginning the planning process for a prescribed burn.

Step	Teach...	By addressing...	So that CBMs can...
Why RX?	Describe how prescribed fire can be used to meet specific land management goals.	Which land management goals can be achieved with prescribed fire?	Collaborate with landowner(s) to identify their land management goals and appropriate corresponding prescribed fire objectives.
	Identify risks associated with prescribed burning.	List the risk associated with prescribed burning. Personnel, damage to resources, inconvenience or nuisance, relationships	Recognize the risks and benefits of prescribed fire as a land management tool.
	Identify S.M.A.R.T. (Specific, Measurable, Achievable, Relevant, Time-bound) prescribed fire objectives to meet land management goals.	Take incomplete objectives and make them S.M.A.R.T.	Collaborate with landowner(s) to identify their land management goals and appropriate corresponding prescribed fire objectives.
Rules of the game	Identify Oregon statutes and rules applicable to prescribed fire and smoke management.	List the Oregon statutes and rules applicable to prescribed fire and smoke management.	Comply with smoke management policies and protocols and smoke receptors in the planning area. Plan for mitigation. Comply with all applicable laws, policies, and permitting requirements.
	Describe the purpose and process for obtaining waivers and agreements.	What is the purpose of prescribed fire waivers and agreements, and how do	Comply with all applicable laws, policies, and permitting requirements.

		you obtain them?	
	Identify who needs to receive notifications about the burn, when do they need to be notified, and what reporting requirements exist. Identify the best practices for the timing and messaging of notifications.	What groups should you notify during each phase of burn planning and implementation? What are the best practices for timing and messaging notifications? What are the reporting requirements?	Comply with communication, notification, and reporting requirements of ODF and any other agencies having jurisdiction for fire response. Identify neighbors and anticipate their notification requirements.
	Identify stakeholders, best practices, and requirements for communication, notification, and reporting before, during, and after the burn.	List the requirements and best practices for communicating and reporting to neighbors and agencies before, during, and after the burn.	Comply with communication, notification, and reporting requirements of ODF and any other agencies having jurisdiction for fire response.
	Describe the purpose and the process of developing a prescribed fire plan.	What is the purpose of the prescribed fire plan? What are the major steps to developing a prescribed fire plan? What are the roles and responsibilities of those involved in the development of the prescribed fire plan?	Develop a prescribed fire plan in accordance with state laws.

- **Unit Reference Materials and Resources**

- CBM Duties and Responsibilities (Preplanning)
- Best Practices Smoke Management Guide
- Relevant OARs, Forest Management Plan

- **Key concepts relevant to assessment questions that students will need to be able to answer by the end of the training:**

- The purpose of OAR 629-042-1005 to 629-042-1070, pursuant to ORS 526.360(3).
- It is not required that one be a Certified Burn Manager through ODF in order to conduct a controlled burn in the state of Oregon.
- The requirement that every person conducting an operation inside or within one-eighth of one mile of a forest protection district that uses fire in any form or

power-driven machinery shall first obtain from the forester a written permit.

- The Certified Burn Manager Advisory Committee advises on the administration of the Certified Burn Manager program including revocation of certification.
- ODF’s Prescribed Fire Coordinator is responsible for administering the Certified Burn Manager Program including issuance of certification books and cards.
- ODF Protection Unit Forester is responsible for issuing burn permits during fire season within 1/8th of a mile of ODF protected boundaries? (1 point)
- Reasons why a landowner may wish to conduct a prescribed fire on their property include wildfire hazard reduction, forest health, grazing, etc.

Unit 2: Planning (8 Hours)

Summary

This unit demonstrates the process of burn plan preparation including assessment and integration of risk mitigation as described in Unit 1.

Step	Teach...	By addressing...	So that CBMs can...
Gather info	Identify and map necessary information to accurately describe the prescribed fire area and plan for control of the prescribed burn.	<p>List the information you would look for when visiting the prescribed fire area.</p> <p>List information that you can get remotely for an area.</p> <p>What are the characteristics of a prescribed burn map?</p> <p>What should you consider when locating and selecting the type of control lines?</p>	Visit the proposed burn unit. Identify potential implementation opportunities and challenges.
	Determine the need for pre-burn preparation.	What are the common types of pre-burn unit preparations?	Complete pre-burn unit preparation to support the successful completion of the burn.
	Identify risks and risk management strategies	Given a risk scenario – suggest a risk	Recognize the risk of prescribed burning and apply

	and how to consider them in the burn plan.	management strategy that can be added to a plan.	risk management mitigation where possible.
Make a plan	Determine the prescription parameters that will meet objectives and constraints	Given a scenario - recognize when a prescription parameter will and will not meet objectives and constraints. Develop prescription parameters that will meet objectives and constraints.	Identify prescription parameters that will meet resource objectives and constraints. (Obtain technical assistance as needed.)
	Discuss the number and types of firing, holding, and contingency personnel and equipment necessary.	List the types of ignition tools. List the types of holding and contingency tools and resources. What should you consider when selecting the number of personnel and types of equipment?	Determine the number and type of firing, holding, and contingency personnel and equipment needed.
	Identify the characteristics of critical holding points and how to plan for them and consider them in implementation.	What are the characteristics of a critical holding point? Given a scenario – identify the critical holding points	Identify and plan for critical holding points.
	Discuss the considerations when developing an emergency response plan including the condition of the patient and the location and availability of emergency services and resources.	What are the levels of emergency responses that should be planned for? How do you make a plan for each level?	Establish an emergency response plan based on unit location and available emergency services and resources.
	Describe required and best practices for considering smoke in	List potential smoke receptors List the tools that can be	Identify smoke receptors in the planning area and address the smoke management policies

	prescribed fire planning.	used to plan for smoke. Given a scenario – suggest smoke management strategies that can be added to a plan.	and protocols.
	Identify the considerations for monitoring fire behavior and fire effects.	What are the strategies and tools for monitoring fire behavior? What are the strategies and tools for monitoring fire effects?	Monitor fire behavior and fire effects.
	Identify the process for initiating a contingency plan and declaring a wildfire	What are the types of contingency plans? What is the process for initiating a contingency plan? What is the process for declaring a wildfire?	Develop a process for initiating a contingency plan and declaring a wildfire

- **Unit Reference Materials and Resources**

- Pile and/or Broadcast/Understory Burn Plan Templates
- CBM Duties and Responsibilities (Planning)

- **Key concepts relevant to assessment questions that students will need to be able to answer by the end of the training:**

- Certified Burn Manager, ODF Protection Unit Forester together ensure that all prescription, staffing, equipment, and other plan specifications are met before, during, and after the prescribed fire.
- The burn plan is required by ODF representing an agreement between CBM and the landowner. Certified Burn Manager and ODF
- CBM and landowner are responsible for approving the burn plan, ODF reviews it.
- The landowner is responsible for ensuring that notifications are made not more than 90 days in advance of the burn.
- A contingency plan should be written prior to the implementation of a prescribed burn.
- Smoke management clearance including registration 7 days in advance is

required for burning slash piles associated with forest management activities within ODF protection.

- Grass fuels have the lowest tons per acre fuel loading when compared with forest litter and slash.
- The rate of spread is the slowest for backing fire when compared with head fire and flanking fire.
- The 1-hour size class of fuel responds the quickest to environmental changes when compared with the other size classes.
- PM 2.5 is particulate matter equal to or smaller than 2.5 microns, a criteria pollutant for compliance with the Clean Air Act.

Unit 3: Preparation and Mobilization (3 Hours)

Summary

This unit outlines the process of preparing and mobilizing for the prescribed burn as planned for in Unit 2.

Step	Teach...	By addressing	So that CBMs can...
Deciding to burn	Discuss how to obtain weather and smoke forecasts to determine if the prescribed burn is in the prescription.	What agencies regulate smoke emissions from prescribed burns? Describe the resources and process for obtaining weather and smoke forecasts. Given a weather forecast and prescription, determine if the burn is in prescription and will accomplish objectives.	Obtain local and/or spot weather forecasts and smoke management forecasts and evaluate to inform burn implementation.
	Identify the areas to evaluate to confirm that the burn unit has been suitably prepared for prescribed fire implementation.	List the features you will check to confirm that an area has been suitably prepared for prescribed fire implementation.	Coordinate with landowner(s) to ensure the burn unit has been suitably prepared for prescribed fire implementation. Address any concerns
	Identify how to obtain personnel and equipment that can	List the potential sources for personnel and equipment that can assist	Ensure availability and readiness of prescribed fire personnel, equipment, water,

	assist with prescribed fire implementation and contingency on private lands.	with prescribed fire implementation and contingency on private lands. What is the process of acquiring personnel and equipment for prescribed fire implementation and contingency?	and contingency resources.
Ready to burn	Discuss when and how to communicate with neighbors and regulatory agencies once you believe you are prepared to burn.	Who do you need to communicate with when you feel you are ready to burn?	Establish and maintain communication with neighbors, ODF and other regulatory authorities when preparing to and implementing a prescribed burn.
	Describe various methods for pre-burn monitoring and how it can be accomplished.	List the common methods for pre-burn monitoring.	Implement desired pre-burn monitoring.
	Identify best practices for determining if the on-site weather conditions are conducive to achieving prescribed fire objectives outlined in the plan.	List the best practices for determining if the on-site weather conditions are conducive to achieving prescribed fire objectives outlined in the plan.	Ensure fuels and on-site weather conditions are conducive to achieving prescribed fire objectives as outlined in the plan.

- **Key concepts relevant to assessment questions that students will need to be able to answer by the end of the training:**
 - Pre-burn tasks that must be completed before implementing the prescribed fire include obtaining burn and smoke permits; confirming the availability of equipment, staff, and water; obtaining a weather forecast; and notifications.
 - Be able to provide reasons for whether and how you would burn if the forecasted weather conditions for the burn day for smoke were favorable while those for fire spread were predicted to enter into prescription for a broadcast/understory burn for about 2 hours during the height of the burn period during a pile burn.
 - Be able to list items you can address in a briefing to mitigate the risk of slopovers and escape at critical holding points such as adjusting firing patterns, improving holding features, and increased staffing.

- Elements that are essential and particular to a prescribed fire briefing include burn objectives, prescription parameters, test fire procedures, escape and contingency plan, tactics to obtain specific fire behavior, and smoke dispersal and monitoring.
- Risks and hazards that must be addressed in a briefing include forecasted and non-forecasted weather changes; smoke; handling drip torch fuel; directing personnel that you may not be familiar with working with; terrain/access; and changes in fuel type and/or condition within the burn unit.
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- **Unit Reference Materials and Resources**
 - Pile and/or Broadcast/Understory Burn Plan Templates
 - CBM Duties and Responsibilities (Preparation and Mobilization)

Unit 4: Implementation (6 Hours)

Summary

This unit outlines the process of implementing the prescribed burn as planned for in Unit 2 and prepped and mobilized for in Unit 3.

Step	Teach...	By addressing...	So that CBMs can...
Burn day, before ignition begins	Identify the roles of the CBM, firing boss, and holding boss	List the roles of the CBM, firing boss, and holding boss	Configure personnel and equipment to meet objectives and control limitations.
	Identify the considerations for configuring personnel and equipment and monitoring for signs and symptoms of fatigue	What should you consider when configuring personnel and equipment? What are the signs and symptoms and fatigue and how do you mitigate them?	Configure personnel and equipment to meet objectives and control limitations. Monitor personnel for signs/symptoms of fatigue, illness, injury. Mitigate appropriately.
	Discuss the importance of pre-burn scouting critical holding points, values, and risk.	Why is it important to reassess critical holding points and values at risk on the day of the burn?	Scout the area to reassess critical holding points and values at risk.
	Discuss the requirements and best	List the requirements and best practices for the	Conduct organizational briefing at the beginning of

	practices for the pre-burn briefing	pre-burn briefing	each operational period.
	Review the prescribed fire Go/No-Go checklist	<p>What is the purpose of the go/no-go checklist?</p> <p>How do you intentionally check each section of the Go/No-Go checklist?</p> <p>Identify circumstances under which a CBM should decide to NOT initiate or continue a prescribed burn.</p>	Complete the Prescribed Fire Go/No-Go Checklist.
Fire on the ground	Identify the best practices for locating, conducting, and interpreting the results of the test fire.	<p>List the best practices for locating, conducting, and interpreting the test fire results.</p> <p>Given a burn map, identify the potential location of the test fire and justify the choice.</p> <p>Given the results of a test fire and the prescription and objectives of a burn, determine if the burn should continue.</p>	<p>Conduct the test fire and document the results.</p> <p>Evaluate fire behavior and effects and adjust holding and ignitions to meet prescribed fire and control objectives.</p>
	Discuss ignition tools and patterns and the situations where they are best applied.	<p>What are the ignition tools and patterns and their applications and limitations?</p> <p>Given a scenario – select the ignition pattern to meet objectives and constraints.</p>	Employ ignition patterns that will meet objectives and constraints.
	Discuss holding resources and strategies.	<p>What are the holding resources and strategies?</p> <p>What are the best practices for communication between ignitions and holding?</p>	Employ ignition patterns that will meet objectives and constraints.

	Discuss the indicators that ignition patterns need to be adjusted and how to adjust them to meet objectives.	How can you observe fire behavior, smoke, and fire effects to ensure that objectives are met? Given a scenario, suggest a change to the holding or ignition pattern to better meet objectives.	Evaluate fire behavior and effects and adjust holding and ignitions to meet prescribed fire and control objectives. Monitor smoke behavior, anticipate potential impacts, and adjust operations accordingly.
	Identify how to monitor and document fuel moisture and weather during a prescribed burn.	How can you monitor fuel moisture and weather during a prescribed burn? Who needs ongoing information about fuel moisture and weather during a prescribed burn?	Document the conditions and events of the prescribed burn.
	Identify when a prescribed fire is outside of prescription and how to implement a contingency plan or declare a wildfire.	List the reasons that you might implement a contingency plan? List the reasons that you might declare a wildfire? Outline the process for implementing a contingency plan. Outline the process for declaring a wildfire including.	Determine and document when the prescribed fire is outside prescription parameters or is not meeting prescribed fire plan objectives. Implement contingency plan or wildfire declaration as appropriate.
	Discuss which changes to the plan need to be communicated and to whom	When do you need to communicate a change in the plan, and who do you need to communicate with? Given a scenario where conditions change, develop a plan for communication	Communicate changing conditions to assigned resources, landowner, and ODF and other regulatory authorities as appropriate. Document the conditions and events of the prescribed burn.
	Discuss the considerations when determining the	What are the considerations when determining the	Ensure the completion of mop-up and patrol unless otherwise assigned to the

	specifications for mop-up and patrol	specification for mop-up and patrol?	landowner or another Certified Burn Manager.
	Identify the process for declaring a prescribed fire out or transitioning to another CBM	What is the process for declaring a prescribed fire out? What is the process for transitioning responsibility to another CBM?	Declare the prescribed fire out, or formally transition responsibility to another Certified Burn Manager or the landowner.
	Discuss the possible incident-within-an-incidents and how to respond to them?	Given an incident within an incident scenario – discuss how you would respond.	Manage or delegate responsibility for the management of any incident-within-an-incident.

- **Unit Reference Materials and Resources**

- CBM Duties and Responsibilities (Implementation)
- Pile and/or Broadcast/Understory Burn Plan Templates
- ODF CBM Prescribed Fire Transfer of Responsibility Form

- **Key concepts relevant to assessment questions that students will need to be able to answer by the end of the training:**

- Ways in which a prescribed burn can be determined to be “out” include patrol for 3 days without seeing any smoke, use of heat-detection technology such as infrared, and a significant season-ending or season-slowing rain and/or snow received on the unit.
- The test fire must be ignited in a representative location and in an area where it be easily controlled.
- Safety is the priority in every fire management activity, including prescribed fire.
- When using a strip head firing pattern which has started to produce too much intensity, consider reducing intensity by dot firing or reducing the number of lighters and/or their spacing and stagger.
- Mop-up standards by end of the day, patrol for the days following, and transfer of responsibility if applicable must be addressed at the conclusion of the ignition phase.
- Actions that could be taken in response to a wind event occurring during the days after ignition on a pile burn causing fire spread beyond the pile footprints in multiple directions include assessment of whether direct suppression tactics with resources available can be safely implemented to impede fire spread and notifying ODF and impacted neighbors if direct suppression tactics are

unsuccessful.

- Actions to take in response to a medical emergency that causes multiple members of your burn crew to be committed to evacuating the affected individual to a safe location for treatment during the burn include initiation of procedures identified in the medical plan section of the burn plan; declaration on the radio or other communication devices being used of a possible medical emergency; and request for any on-site medical responders if available to go to the injured party and do a patient assessment.

- **Unit 5: Demobilization and Post-Burn Activities (3 Hours)**

Summary

This unit outlines the process of debriefing and releasing personnel and equipment from the prescribed burn, completing post-burn documentation, and monitoring.

Step	Teach...	By addressing...	So that CBMs can...
Demob	Discuss the best practices for conducting an after-action review	List the best practices for conducting an after-action review	Assemble personnel and conduct after-action review.
	Identify the topics that should be discussed with resources when they leave the prescribed burn area.	List the topics that you should discuss with resources when they leave the prescribed burn area.	Brief resources on demobilization procedures and responsibilities.
Post-burn	Identify the required documentation types and routes for the various prescribed fire outcomes.	List the required documents and who you need to submit them to and by when for various prescribed fire outcomes.	Ensure the completion and timeliness of, and route as required all documentation, including responsibility transfer. Following a wildfire declaration, document the incident, including all actions prior to and after the declaration.
	Discuss the options for post burn monitoring and reporting	List the options for post-burn monitoring.	Conduct post-fire monitoring and reporting per arrangement with landowner(s)

- **Unit Reference Materials and Resources**
 - CBM Duties and Responsibilities (Demobilization and Post-Burn Activities)
 - Pile and/or Broadcast/Understory Burn Plan Templates
 - ODF CBM Prescribed Fire Transfer of Responsibility Form
- **Key concepts relevant to assessment questions that students will need to be able to answer by the end of the training:**
 - What questions would you want to include in an after-action review?
 - What concerns would you have about personnel returning home after a long day on your prescribed burn?

- **Final Exam (2 Hours)**

- **Learning Objectives**

Complete final assessment with a passing grade of 70% or greater.

- **Unit Reference Materials and Resources**

- All course materials

Appendix A: Final Exam

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Appendix B: Pile Burn Plan Template

Oregon Department of Forestry Pile Burn Plan						
Landowner or Company Name and Address/Driving Directions to Unit	Township	Range	Section	County	Lat/Long (Degrees, Decimal Minutes)	Unit Name
SIGNATURES						
Preparer(s):					Date:	
Certified Burn Manager Name, CBM #, and Phone:					Date:	
Landowner(s):					Date:	
REGISTRATIONS, SMOKE CLEARANCE, AND PERMITS						
NOAP and/or PDM Number and Smoke Registration (if required)		Burn and Smoke Permit Obtained (if required)				
NOTIFICATIONS						
NEARBY LANDOWNERS AND NEIGHBORS			FIRE, EMERGENCY RESPONSE, AND AIR QUALITY CONTACTS			
Name	Contact Info	Name	Contact Info			
		Oregon Department of Forestry				
		Rural/City/County Fire Department(s)				
		911 Non-Emergency Dispatch				
		Local Air Quality (if applicable)				
BURN UNIT DESCRIPTION						
Piled Fuel Type (Slash, Brush, etc.)	Piled Fuel Loading (https://depts.washington.edu/nwfire/piles/)			Size of Area Treated (acres)		
ADJACENT FUELS (Slash, Brush, Grass, and/or Timber) AND PRE-BURN SITE PREPARATION						

Oregon Department of Forestry Pile Burn Plan

OBJECTIVES

PREDICTED FIRE BEHAVIOR ANDS IGNITION PLAN

HOLDING, MOP-UP, AND PATROL PLAN

CONTINGENCY, SAFETY, AND MEDICAL PLAN

SMOKE MANAGEMENT

MINIMUM RESOURCES - PERSONNEL

Number needed	Position	Description
1	Certified Burn Manager	Certified to lead pile burns

MINIMUM RESOURCES - PERSONNEL

Number needed	Equipment Type	Source

ATTACHMENT A – PRE 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. PRIOR TO AND DURING IGNITIONS

- On-site weather and fuel conditions are within prescription and consistent with forecast during and after ignitions.
- Fire and smoke behavior are observed to be within prescribed parameters.

D. POST BURN CHECKLIST

- Mop-up completed to standards as described in burn plan.
- Personnel and equipment assigned for patrol if needed.
- Notifications of completed burn, if required.

Certified Burn Manager sign and date form when burn is completed and has been turned over to the landowner or another Certified Burn Manager.

Certified Burn Manager Signature: _____ **Date:** _____

Appendix C: Example Pile Burn Plan

Oregon Department of Forestry Pile Burn Plan						
Landowner or Company Name and Address/Driving Directions to Unit	Township	Range	Section	County	Lat/Long (Degrees, Decimal Minutes)	Unit Name
The Nature Conservancy 87200 Rathbone Road Eugene, Oregon 97405	17S 18S	4W 4W	33 3,4	Lane	44.0031189 123.172186	Willow Creek
SIGNATURES						
Preparer(s):	Maria Planner	<i>Maria Planner</i>		Date:	7/2/2023	
Certified Burn Manager Name, CBM #, and Phone:	Charles B. Mulcher CBM#23-01-7777, 541-541-5411	Charles B. Mulcher		Date:	11/1/2023	
Landowner(s):	Joane Public	<i>Joane Public</i>		Date:	10/25/2023	
REGISTRATIONS, SMOKE CLEARANCE, AND PERMITS						
NOAP and/or PDM Number and Smoke Registration (if required)		Burn and Smoke Permit Obtained (if required)?				
NOTIFICATIONS						
NEARBY LANDOWNERS AND NEIGHBORS			FIRE, EMERGENCY RESPONSE, AND AIR QUALITY CONTACTS			
Name	Contact Info	Name	Contact Info			
Ella May Naybor	555-555-5555	Oregon Department of Forestry – Eastern Lane	(541) 726-3588 or (541) 726-3581			
Bob and Bobbie Householder	555-444-4444	Eugene Springfield Fire	(541) 683-6200			
		Lane Regional Air Protection Agency	(541) 736-1056			
		911 Non-Emergency Dispatch	(541) 682-5111			
BURN UNIT DESCRIPTION						
Piled Fuel Type (Slash, Brush, etc.)	Piled Fuel Loading (https://depts.washington.edu/nwfire/piles/)			Size of Area Treated (acres)		

Oregon Department of Forestry Pile Burn Plan		
Brush	< 1 ton	63
ADJACENT FUELS (Slash, Brush, Grass, and/or Timber) AND PRE-BURN SITE PREPARATION		
Mixed Conifer and oak woodland on a north-facing slope. Piles to be covered and raked around as needed prior to ignition to prevent fire spread into adjacent fuels.		
OBJECTIVES		
Consume >90% of available fuels in pile.		
PREDICTED FIRE BEHAVIOR ANDNS IGNITION PLAN		
Ignitions will begin after 1000 hours using drip torches. Fire behavior could involve flame lengths of 5-10 feet within covered piles.		
HOLDING, MOP-UP, AND PATROL PLAN		
Ignitions will take place after sufficient soaking rains and/or snow have created fuel moisture levels in surrounding fuels sufficient to deter fire spread. Adequate clearing and mop-up to provide additional protection against fire spread will be provided around the piles as needed as well as patrol for the purposes of monitoring smoke impacts and/or fire spread potential.		
CONTINGENCY, SAFETY, AND MEDICAL PLAN		
<p>If fire escapes from burn piles, initial attack will be facilitated with personnel using hand tools. If fire cannot be safely contained with on-site sources, ODF will be alerted to the situation.</p> <p>Safety issues including safe handling of fuel and footing in uneven and wet or snow-covered terrain will be addressed in the briefing using the attached checklist.</p> <p>A first aid kit should be available during ignitions, mop-up, and patrol. Medical emergencies will be coordinated using the EMS system.</p>		
SMOKE MANAGEMENT		
Smoke management will be coordinated through LRAPA in accordance with the attached letter permit.		
MINIMUM RESOURCES - PERSONNEL		
Number needed	Position	Description
1	Certified Burn Manager	Certified to lead pile burns
1	Igniter	
MINIMUM RESOURCES - PERSONNEL		

Oregon Department of Forestry Pile Burn Plan

Number needed	Equipment Type	Source
1	Drip Torch	TNC
1	ATV w/ 50-gallon tank	TNC
2	Handtools	TNC

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ATTACHMENT A – PRE AND POST-BURN CHECKLIST

C. 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.

D. 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.

D. PRIOR TO AND DURING IGNITIONS

- On-site weather and fuel conditions are within prescription and consistent with forecast during and after ignitions.
- Fire and smoke behavior are observed to be within prescribed parameters.

D. POST BURN CHECKLIST

- Mop-up completed to standards as described in burn plan.
- Personnel and equipment assigned for patrol if needed.
- Notifications of completed burn, if required.

Certified Burn Manager sign and date form when burn is completed and has been turned over to the landowner or another Certified Burn Manager.

Certified Burn Manager Signature: _____ **Date:** _____

Appendix D: Broadcast/Understory Burn Plan Template

Oregon Department of Forestry Broadcast/Understory Burn Plan						
Landowner Name and Address and/or Driving Directions to Unit	Township	Range	Section	County	Lat/Long (Degrees, Decimal Minutes)	Unit Name
SIGNATURES						
Preparer(s):					Date:	
Certified Burn Manager Name, CBM #, and Phone:					Date:	
Landowner(s):					Date:	
REGISTRATIONS, SMOKE CLEARANCE, AND PERMITS						
NOAP and/or PDM Number and Smoke Registration (if required)			Burn and Smoke Permit Obtained (if required)			
NOTIFICATIONS						
NEARBY LANDOWNERS AND NEIGHBORS			FIRE, EMERGENCY RESPONSE, AND AIR QUALITY CONTACTS			
Name	Contact Info		Name	Contact Info		
			Oregon Department of Forestry			
			Rural/City/County Fire Department(s)			
			911 Non-Emergency Dispatch			
			Local Air Quality (if applicable)			
BURN UNIT DESCRIPTION						
Fuel Type (Slash, Brush, Grass, and/or Timber)		Fuel Loading (tons/acre)			Size of Unit (acres)	
PRE-BURN FUELS AND VEGETATION DESCRIPTION <u>INSIDE</u> BURN UNIT:						

Oregon Department of Forestry Broadcast/Understory Burn Plan

PRE-BURN FUELS AND VEGETATION DESCRIPTION OUTSIDE BURN UNIT:

PRE-BURN PREPARATION

DESCRIPTION OF PRIMARY CONTROL LINES AND PREPARATIONS FOR USE:

LOCATION OF AND CONFIRMATION OF ACCESS TO PRIMARY WATER SOURCES:

MINIMUM RESOURCES - PERSONNEL

Number Needed	Position	Description
1	Certified Burn Manager	Certified to lead broadcast/understory burns

MINIMUM RESOURCES - EQUIPMENT

Number needed	Equipment Type	Burn Phase (Ignition and/or Patrol/Mop-Up)

Oregon Department of Forestry Broadcast/Understory Burn Plan

RADIO, CELLULAR, OR OTHER FORMS OF COMMUNICATIONS

SYSTEM	FUNCTION	FREQUENCY	ASSIGNMENT
		TX RX	

CONTINGENCY AND WILDFIRE DECLARATION

CONTINGENCY ACTION POINTS INCLUDING WHEN AND HOW TO RESPOND:

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

CRITERIA AND PROCEDURE FOR WILDFIRE DECLARATION:

Contingency Resource Name	Response Time	Location

VALUES AT RISK AND PRESCRIPTIVE SIDEBOARDS INSIDE AND OUTSIDE UNIT

MITIGATION MEASURES TO PROTECT VALUES AT RISK:

SMOKE MANAGEMENT

Nearest Smoke Sensitive Receptor(s)/Class 1 Airshed	Distance and Direction

MITIGATION STRATEGIES AND TECHNIQUES TO REDUCE IMPACTS:

SMOKE MANAGEMENT FORECAST DAY BEFORE/DAY OF BURN:

Oregon Department of Forestry Broadcast/Understory Burn Plan

TEST FIRE AND IGNITIONS

TEST FIRE LOCATION(S):

IGNITION EQUIPMENT, METHODS, AND SEQUENCES:

HOLDING AND CONTAINMENT

CRITICAL HOLDING POINTS AND MITIGATIONS:

CONTAINMENT LINE SPECIFICATIONS AND RATIONALE:

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

MOP-UP STANDARDS:

FREQUENCY AND DURATION OF PATROL:

DESCRIBE CRITERIA AND NOTIFICATIONS FOR DECLARING THE BURN OUT:

Oregon Department of Forestry Broadcast/Understory Burn Plan

SAFETY, MEDICAL, AND EMERGENCY PLAN

NEAREST HOSPITAL:

SAFETY ISSUES AND MITIGATIONS:

RALLY POINT INCLUDING DRIVING DIRECTIONS:

RESOURCE MANAGEMENT GOALS

PRESCRIBED FIRE OBJECTIVES

ENVIRONMENTAL PARAMETERS AND FIRE BEHAVIOR

ENVIRONMENTAL PRESCRIPTION	ACCEPTABLE FIRE BEHAVIOR				
	Low	High		Low	High
Temperature (°F)			Flame Length (ft)		
Relative Humidity (%)			Rate of Spread (ch/hr)		
20-ft. Wind Speed (Forecasted)					
20-ft. Wind Direction (Forecasted)					
Eye-Level Wind Speed (Observed)					
Eye-Level Wind Direction					

Oregon Department of Forestry Broadcast/Understory Burn Plan

(Observed)					
Transport Wind Direction					
Fine Dead (1-Hr) Fuel Moisture					

WEATHER MONITORING AND METHODS

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

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

POST-BURN FUELS AND VEGETATION MONITORING AND METHODS

DESCRIBE METHODS FOR MONITORING POST-FIRE EFFECTS:

DRAFT

ATTACHMENT A – VICINITY AND BURN UNIT MAPS

DRAFT

ATTACHMENT B – PRE AND POST-BURN CHECKLIST

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.

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.

TEST FIRE

- On-site weather and fuel conditions are within prescription and consistent with the forecast.
- Test burn conducted, fire and smoke behavior within prescribed parameters.

POST BURN CHECKLIST

- Mop-up completed to standards as described in burn plan.
- Night patrol assigned, if needed.
- Personnel and equipment assigned for days following burn, if needed.
- Notifications of completed burn, if required.
- Debrief or After-Action Review (AAR)

Certified Burn Manager sign and date form when burn is completed and has been turned over to the landowner or another Certified Burn Manager.

Certified Burn Manager Signature: _____ **Date:** _____

Appendix E: Example Broadcast/Understory Burn Plan

Oregon Department of Forestry Broadcast/Understory Burn Plan						
Landowner Name and Address and/or Driving Directions to Unit	Township	Range	Section	County	Lat/Long (Degrees, Decimal Minutes)	Unit Name
John Q Public Obie Forests, LLC 70507 Follett Rd, Elgin OR	01N	40E	13	Union	45° 34.2205 -117° 45.8120	Unit 2 (NW Pine)
SIGNATURES						
Preparer(s):	Mark Planner		Mark Planner		Date:	05/20/2023
Certified Burn Manager Name, CBM #, and Phone:	Charles B. Mulcher Mulcher CBM#23-01-7777, 541-541-5411		Charles B.		Date:	05/20/2023
Landowner(s):	John Public		John Public		Date:	05/20/2023
REGISTRATIONS, SMOKE CLEARANCE, AND PERMITS						
NOAP and/or PDM Number and Smoke Registration (if required)	2022-971-05161		Burn and Smoke Permit Obtained (if required)		Not required	
NOTIFICATIONS						
NEARBY LANDOWNERS AND NEIGHBORS			FIRE, EMERGENCY RESPONSE, AND AIR QUALITY CONTACTS			
Name	Contact Info		Name	Contact Info		
Ella May Rancher	555-555-5555		Oregon Department of Forestry	Joe Forester. 515-515-7777		
Bob and Bobbie Householder	555-444-4444		Rural/City/County Fire Department(s)	Elgin RFD. Riley Chief. 515-777-4444		
			911 Non-Emergency Dispatch	Blue Mountain Dispatch. 515-666-6666		
			Local Air Quality (if applicable)	via ODF		
BURN UNIT DESCRIPTION						
Fuel Type (Slash, Brush, Grass, and/or Timber)		Fuel Loading (tons/acre)			Size of Unit (acres)	
Timber with understory litter		8 ton/acre			4 acres	

Oregon Department of Forestry Broadcast/Understory Burn Plan

PRE-BURN FUELS AND VEGETATION DESCRIPTION INSIDE BURN UNIT:

Pine plantation (12" ave. DBH). Understory pine litter. Minimal shrub cover except in south corner. Patch of natural regen, semi-thinned, on uphill (east) side. Occasional jackpots of light slash. Slope 5 to 15%.

PRE-BURN FUELS AND VEGETATION DESCRIPTION OUTSIDE BURN UNIT:

North side: Thinned and pruned larch and pine plantation, 8" average DBH. Sparse grass understory with patches of low shrugs. Slope 0 to 10%.

West and South: Open mixed conifer, recently thinned and slash burned in piles. Low shrub understory. Slope 10 to 20%.

East: Grass and forbs, low load, recently burned. 0% slope.

PRE-BURN PREPARATION

DESCRIPTION OF PRIMARY CONTROL LINES AND PREPARATIONS FOR USE:

- NW (DP6 – DP9): Blackline from previous burn.
- N and NE (DP9 – DP11): 3' handline to mineral soil following edge of forested area.
- S (DP11 – DP5): bladed line following skid trails.
- W (DP5 – DP6): handline per above, or mowed wetline/blackline if conditions permit.
- Additional unit preparation: Pull back any piled slash from under driplines of ponderosa pine leave trees and disperse or pile outside dripline.

LOCATION OF AND CONFIRMATION OF ACCESS TO PRIMARY WATER SOURCES:

- Two 250-gallon poly tanks filled and prepositioned onsite.
- Type 7 skid unit in pickup truck with 250 gallons.
- Pond on property (DP13), 5-minute drive from burn unit, for refill as needed. Pump prepositioned and primed.

MINIMUM RESOURCES - PERSONNEL

Number Needed	Position	Description
1	Certified Burn Manager	Certified to lead broadcast/understory burns
1	Firing Boss	Implement firing operations
1	Holding Boss	Implement holding operations

Oregon Department of Forestry Broadcast/Understory Burn Plan

1 (optional)	Fire Effects Monitor	Observe and document fire behavior and impacts on vegetation
2	6-person hand crews/squads	Holding and firing support
1	Type 7 skid unit operator	Driver/operator for truck with unit

MINIMUM RESOURCES - EQUIPMENT

Number needed	Equipment Type	Burn Phase (Ignition and/or Patrol/Mop-Up)
1	Type 7 skid unit in 4WD pickup truck with 400' hose	All
1	ATV with 35-gal skid unit and 50' hose	All
2	250-gal poly tank with water	All
6	FRS radios	All
2	Portable pump (1 at pond, 1 at poly tank location)	All
400'	1.5" hose with wyes and nozzles	All
400'	1" or garden hose with fittings and nozzles	All
3	Drip torches	Ignition
10 gal	Torch fuel. 3:1 mix	Ignition
16	Hand tools. Mix of Pulaskis, hoes, rakes, shovels, flappers	All
1	Tractor with bucket and plow	Patrol/Contingency

RADIO, CELLULAR, OR OTHER FORMS OF COMMUNICATIONS

SYSTEM	FUNCTION	FREQUENCY	ASSIGNMENT
FRS	TAC	TX RX Channel 9 (tone 11)	General communications
Cell	Command		Emergency notifications

CONTINGENCY AND WILDFIRE DECLARATION

CONTINGENCY ACTION POINTS INCLUDING WHEN AND HOW TO RESPOND:

Activate contingency if fire activity within burn unit is exceeding holding capacity of onsite resources. Any slopovers or spots within property boundary 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:

Skid roads north, southeast, and west of unit serve as secondary control lines. Back-up water source at pond on property with repositioned pump – use rocked road to access (do not attempt access via skid roads).

CRITERIA AND PROCEDURE FOR WILDFIRE DECLARATION:

Spots or fire transmission outside Obie Forests property boundaries require immediate notification of Oregon Department of Forestry. Prescribed fire ignitions will cease. Onsite personnel not required for containment of prescribed fire will attempt

Oregon Department of Forestry Broadcast/Understory Burn Plan

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	Elgin/La Grande/Wallowa
Elgin Rural Fire Department	30 min	Elgin

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: Obie Forests barn and fences (minimal risk). Neighboring properties (prevent fire transmission to north).

SMOKE MANAGEMENT

Nearest Smoke Sensitive Receptor(s)/Class 1 Airshed	SSRA: La Grande, Enterprise, Pendleton. Class 1: Eagle Cap Wilderness	Distance and Direction	La Grande 30 miles SW. Enterprise 30 miles ESE. Pendleton 60 miles E. Eagle Cap Wilderness 15 miles SE.

MITIGATION STRATEGIES AND TECHNIQUES TO REDUCE IMPACTS:

Primary concern in this location is the impact on neighbors. Burn when 20-foot winds are from N, NW, NE, W, SW, or when mixing height is over 1000'. Mop-up smoldering logs and stumps.

SMOKE MANAGEMENT FORECAST DAY BEFORE/DAY OF BURN:

To be obtained.

TEST FIRE AND IGNITIONS

Oregon Department of Forestry Broadcast/Understory Burn Plan

TEST FIRE LOCATION(S):

Anticipated SE corner of unit (DP11). May adjust if downslope winds are anticipated to drive fire behavior to greater extent than slope.

IGNITION EQUIPMENT, METHODS, AND SEQUENCES:

Drip torches with 3-person ignition team. Blackline on upslope and/or downwind side per prevailing effect and progress along unit flanks. Interior ignitions strip head-fire, shifting to dots if needed to reduce intensity. Dots anticipated for jackpot piles.

HOLDING AND CONTAINMENT

CRITICAL HOLDING POINTS AND MITIGATIONS:

Northwest and north lines are most critical for preventing transmission to neighboring properties. Establish and charge hose lay with laterals and nozzles along north line prior to ignitions. Patrol Northwest and north lines actively, with extra attention during initial ignitions along these lines. Grid 100' outside lines if any evidence of spotting. Ensure effective blacklining before proceeding to interior ignitions.

CONTAINMENT LINE SPECIFICATIONS AND RATIONALE:

Blade skid trails to achieve 3' wide line to bare mineral soil. Dig handlines to same specification. Wet-lines in grass should be mowed within 1 week of burn, with cuttings blown into unit during unit prep. Use 2- to 3-foot wet-line followed by 3-foot minimum black-line.

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. CBM will notify when to shift from burn to mop-up phase.

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 at 10:00 a.m. and 3:00 p.m. Pay particular attention to evidence of spot fire smoldering outside unit boundaries. Additional patrol at least once daily, afternoon preferred, until burn declared out.

Oregon Department of Forestry Broadcast/Understory Burn Plan

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. Notify ODF forester contact, Blue Mountain Dispatch, and Elgin RFD.

SAFETY, MEDICAL, AND EMERGENCY PLAN

NEAREST HOSPITAL:

- Grande Ronde Hospital. Ambulance via rural fire district. Call 911 if emergency.
- For other medical needs use the Elgin medical clinic, 15 minutes west on Hwy 82.

SAFETY ISSUES AND MITIGATIONS:

First aid kits with AEDs in Type 7 skid unit truck and in CBM truck. Personal protective equipment available for all operational personnel. Potable water and electrolyte fluids on site. Personnel advised to bring epi pens and personal meds appropriate for their conditions.

RALLY POINT INCLUDING DRIVING DIRECTIONS:

If evacuation is required, primary rally point is parking area east of green barn on property. Secondary rally point is main gate off Follett Road.

RESOURCE MANAGEMENT GOALS

- Reinvigorate native bunchgrasses in understory as forage for wildlife.
- Reduce intensity of future fire and protect ponderosa pine by managing accumulation of litter and duff.
- Reduce probability of crown fire by scorching lower crowns to induce crown lift.
- Reduce risk of wildfire transmission to and from adjacent properties.

Oregon Department of Forestry Broadcast/Understory Burn Plan

PRESCRIBED FIRE OBJECTIVES

Burn at least 70% of the area within the unit (patchy burn is anticipated). Within burned areas consume 40 to 70% of dead grass thatch and pine litter, and 30 to 50% of duff, as measured at conclusion of burn. Consume 50 to 80% of slash. Limit scorch height to 20', as observed 1 week after burn.

ENVIRONMENTAL PARAMETERS AND FIRE BEHAVIOR

ENVIRONMENTAL PRESCRIPTION			ACCEPTABLE FIRE BEHAVIOR		
	Low	High		Low	High
Temperature (°F)	40	85	Flame Length (ft)		
Relative Humidity (%)	30	80	Rate of Spread (ch/hr)		
20-ft. Wind Speed (Forecasted)	0	20			
20-ft. Wind Direction (Forecasted)	N, NW, NE, W, SW				
Eye-Level Wind Speed (Observed)	0	14			
Eye-Level Wind Direction (Observed)	Any				
Transport Wind Direction	N, NW, NE, W, SW				
Fine Dead (1-Hr) Fuel Moisture	5	20			

Prescription Comments: Assumes live fuel conditions at 30% MC. Low intensity conditions (low temp with high RH) may not achieve desired consumption levels. All modeled conditions limit scorch height to 20'. Two to 5 MPH wind preferred for heat dissipation from crowns.

Containment prescription (based on fuels outside burn unit): Acceptable combinations of FDMC (min) and eye-level wind (max):

FDMC: 5 6 8 10 12 14 16 18 20

Wind: 6 7 8 9 10 11 11 13 14

WEATHER MONITORING AND METHODS

Oregon Department of Forestry Broadcast/Understory Burn Plan

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

National Weather Service (Pendleton) fire weather forecast, zone 643 Northern Blue Mountains. Supplement with SPOT weather forecast. 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 wet and dry bulb temps, eye-level wind speed and direction. Calculate RH, FDFM, and FIG. Obtain and report hourly during firing and holding. Continued during mop-up as directed by CBM.

POST-BURN FUELS AND VEGETATION MONITORING AND METHODS

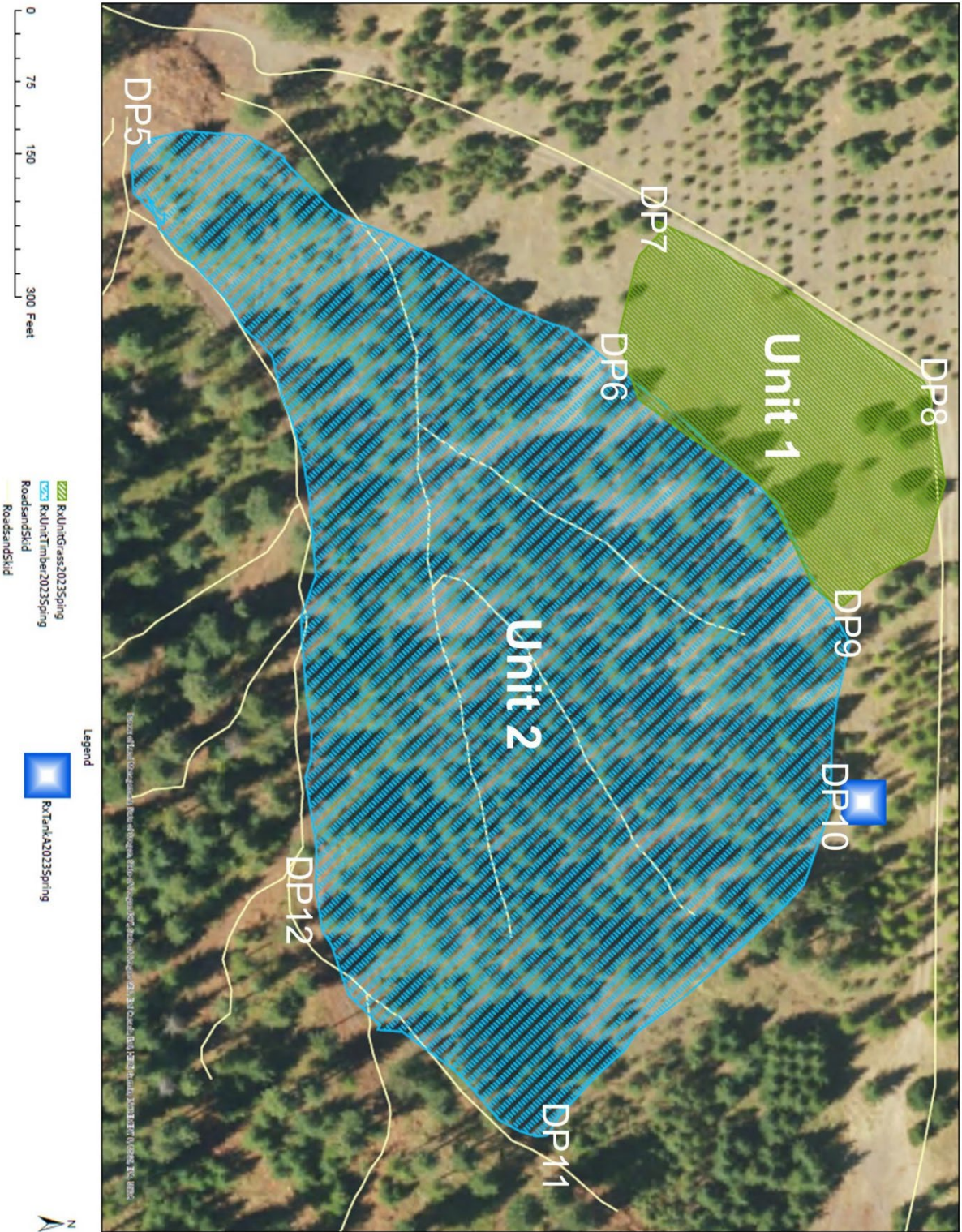
DESCRIBE METHODS FOR MONITORING POST-FIRE EFFECTS:

- Visual estimate of percent of unit burned.
- Visual estimate of thatch, litter, and duff consumption based on pre- and post-burn observations.
- On-site observation of fire behavior during firing and holding via FEMO.
- Post-fire observation of crown scorch in ponderosa pine.

ATTACHMENT A – VICINITY AND BURN UNIT MAPS

Obie Units 1 & 2

Spring 2023



VICINITY MAP A



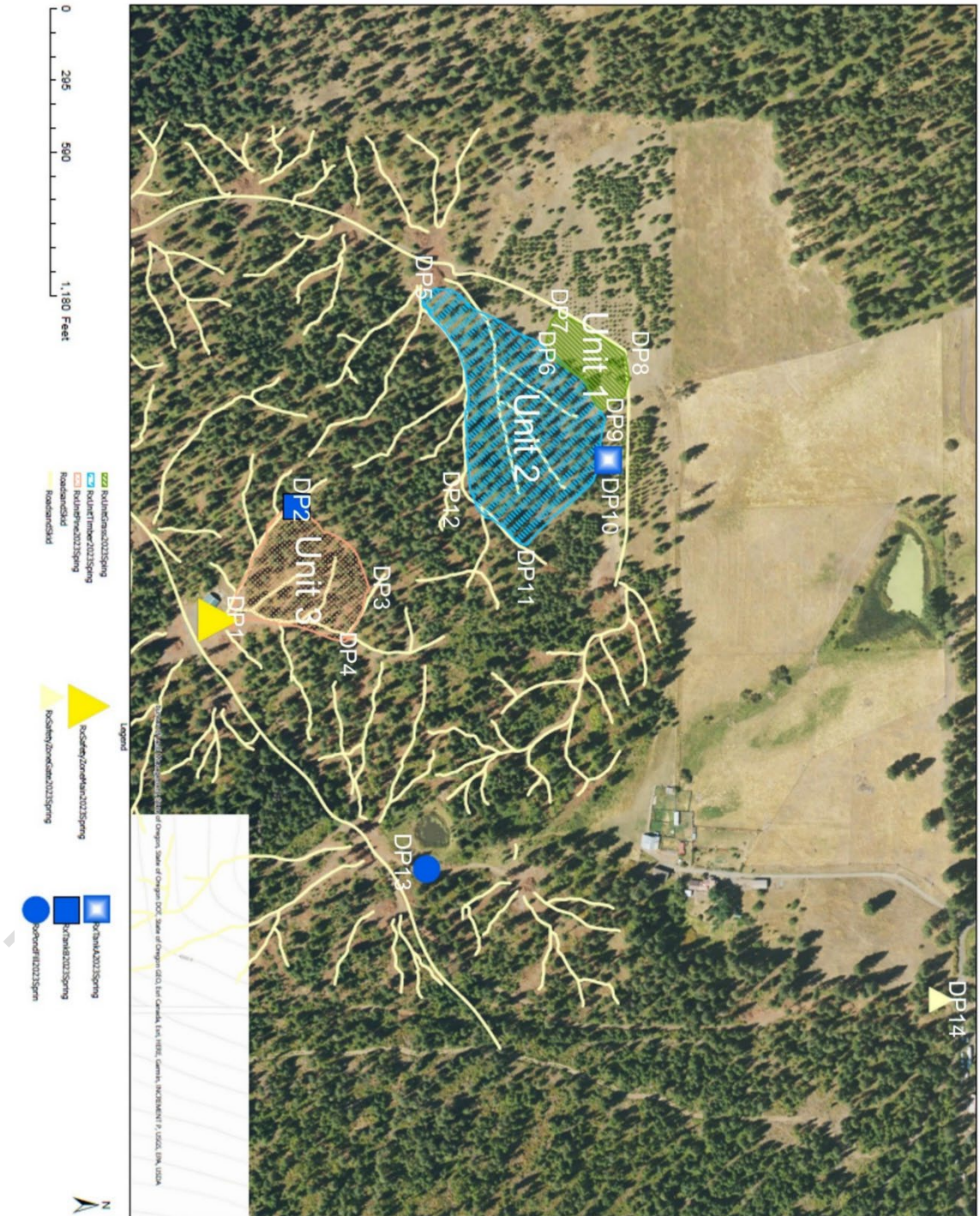
Obie Vicinity Map A

Spring 2023

VICINITY MAP B

Obie Vicinity Map B

Spring 2023



ATTACHMENT B – PRE- AND POST-BURN CHECKLIST

E. 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.

F. 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.

E. 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

- Mop-up completed to standards as described in burn plan.
- Night patrol assigned, if needed.
- Personnel and equipment assigned for days following burn, if needed.
- Notifications of completed burn, if required.
- Debrief or After-Action Review (AAR)

Certified Burn Manager sign and date form when burn is completed and has been turned over to the landowner or another Certified Burn Manager.

Certified Burn Manager Signature: _____ **Date:** _____

Appendix F: CBM Duties and Responsibilities

Oregon Certified Burn Manager Duties and Responsibilities

Preplanning

- Collaborate with landowner(s) to identify their management goals and appropriate corresponding prescribed fire objectives.
- Visit proposed burn unit. Identify potential implementation opportunities and challenges.
- Understand all applicable permitting requirements.
- Identify smoke management policies and protocols and smoke receptors in the planning area. Plan for mitigation.
- Identify neighbors and anticipate their notification requirements.
- Ensure necessary agreements and waivers are in place.
- Understand communication/notification/reporting requirements of ODF and any other agencies having jurisdiction for fire response.

Planning

- Assess vegetation conditions, and values at risk, within and adjacent to unit.
- Determine needs for pre-burn prep.
- Identify prescription parameters that will meet resource objectives and constraints. (Obtain technical assistance as needed.)
- Determine holding, firing, and contingency plan requirements based on reasonable worst case fire behavior, considering both in-unit and outside-of-unit fuels/conditions.
- Determine personnel and equipment needs.
- Develop an emergency/safety plan based on unit location and available emergency services and resources.
- Determine landowners' monitoring objectives.
- Identify criteria for declaration of wildfire.
- Prepare the burn plan in accordance with ODF guidance (see appropriate CBM burn plan template).

Preparation and Mobilization

- Coordinate with landowner(s) to ensure burn unit has been suitably prepared for prescribed fire implementation. Address any concerns or omissions.
- Implement desired pre-burn monitoring.

- Ensure availability and readiness of prescribed fire personnel and contingency resources.
- Establish and maintain communication with personnel, ODF, and other regulatory authorities.
- Obtain local and/or spot weather forecasts and smoke management forecasts and evaluate to inform burn implementation.
- Scout the area to reassess critical holding points and values at risk.

Implementation

- Ensure fuels and on-site weather conditions are conducive to achieving prescribed fire objectives as outlined in the plan.
- Ensure pre-burn considerations have been addressed and pre-burn monitoring has been completed.
- Configure personnel and equipment to meet objectives and control limitations.
- Conduct organizational briefing at the beginning of each operational period.
- Complete the Prescribed Fire Go/No-Go Checklist.
- Conduct the test fire and document the results.
- Evaluate fire behavior and effects and adjust holding and ignitions to meet prescribed fire and control objectives.
- Monitor smoke behavior, anticipate potential impacts, and adjust operations accordingly.
- Monitor personnel for signs/symptoms of fatigue, illness, injury. Mitigate appropriately.
- Communicate changing conditions to assigned resources, landowner, and ODF and other regulatory authorities as appropriate.
- Ensure the completion of mop up and patrol unless otherwise assigned to landowner or another Certified Burn Manager.
- Determine and document when the prescribed fire is outside prescription parameters or is not meeting prescribed fire plan objectives. Implement contingency plan or wildfire declaration as appropriate.
- Declare the prescribed fire out, or formally transition responsibility to another Certified Burn Manager or the landowner.
- Determine if the prescribed fire, or and portion of, has become a wildfire. Immediately notify ODF and any other fire suppression authorities having jurisdiction.

- Manage or delegate responsibility for the management of any incident-within-an-incident.

Demobilization

- Assemble personnel and conduct after-action review.
- Brief resources on demobilization procedures and responsibilities.
- Emphasize safe driving and rest/recovery objectives.
- Return equipment and supplies as appropriate.

Documentation

- Ensure the completion and timeliness of, and route as required all documentation.
- Following a wildfire declaration, document the incident, including all actions prior to and after the declaration.

Post-fire Monitoring

- Conduct post-fire monitoring per arrangement with landowner(s)
- Evaluate secondary fire effects and identify learning opportunities.

Appendix G: Responsibility Transfer Form

OREGON DEPARTMENT OF FORESTRY CERTIFIED BURN MANAGER PRESCRIBED FIRE TRANSFER OF RESPONSIBILITY

Pursuant to OAR 629-042-1040 to 1055 when a prescribed fire has achieved the conditions documented in the prescribed burn plan and the Certified Burn Manager (CBM) is no longer required to be on site of a prescribed fire, the CBM hereby transfers responsibility to the person/company below under the following conditions.

1. Transfer conditions as outlined in OAR 629-042-1045 2(a) have been met.
2. The Oregon Department of Forestry District has been notified of the transfer of responsibility.

The landowner or CBM assumes responsibility of control and mop up as outlined in the burn plan.

The _____ (identifier) prescribed fire located at _____ TSRQ under _____ notification number (if NOAP) is hereby transferred from _____ (CBM) to _____ (person or company) effective _____ AM/PM on _____, 20____.

Landowner/CBM

Certified Burn Manager

WARNING: A failure to provide the personnel and equipment under your supervision and control which are in the judgment of the forester needed and effective to fight fire, and which are reasonably available, and which can be brought to bear on the fire in a timely fashion may subject you to liability to the state for all of the costs of controlling and extinguishing the fire.

Appendix H: Pre-Course Work Video Links and References

Instructions: Please watch the videos at the links below and be prepared to discuss them during class. Pay special attention to methods that you are not accustomed to. Please allow approximately 4 hours to familiarize yourself with this content.

YouTube videos:

1. DNR video – how prescribed fire works: <https://youtu.be/viq5nzM--Ws>
2. What is a flame: <https://youtu.be/5ymAXKXhvHI>
3. Fire Triangle: <https://youtu.be/8WPk15XqN2E>
4. Parts of a fire/types of fire (smoldering etc.): <https://youtu.be/b1KvTswZYNA>
5. Fire behavior/fire environment: <http://www.youtube.com/watch?v=SB4pk91yq24>
6. Introduction to Fuels: <https://youtu.be/EA3nXYAqF5s>
7. Fire behavior/fuel models: <https://youtu.be/XCa10jUWAKI>
8. Fuel Loading: <https://youtu.be/1QQIDNA04Jo>
9. Photoload sampling: <https://youtu.be/6PxBtxGHpwU>
10. Topographic influences: <https://youtu.be/P2wEp--e1Ss>
11. Prescribed fire techniques: <https://youtu.be/Wg2O1vT-lv0>
12. A multi-purpose tool – NW fire science: https://youtu.be/s_Fj00_4n6Q
13. Grist Video: How indigenous knowledge can help control wildfire: <https://youtu.be/JHYuvFwA1qI>
14. Observations from recent prescribed fire reviews: <https://youtu.be/yUNcqO9A3H8>
15. Burn Planning: <https://youtu.be/9pwPP70G3wE>
16. Firebreaks: <https://youtu.be/3e5ViC8loEs>
17. 8-Line incident medical response: <https://youtu.be/oKENvnC44H8>
18. Rx fire awareness: <https://youtu.be/LvgvDOMwN60>
19. Suppression Tactics: <https://youtu.be/riecc7nygH8>
20. DNR Burn Portal: https://youtube.com/playlist?list=PLKpn_ilWjh50isganUPa1dOtNKh3y2dmk

Websites to become familiar with:

<http://waprescribedfire.org/> <https://www.weather.gov/wrh/fire?wfo=sew>
<https://wasmoke.blogspot.com/> <https://www.weather.gov/spot/monitor/>
<https://burnportal.dnr.wa.gov/> <https://www.putfiretowork.org/home>
<https://www.dnr.wa.gov/ForestHealthPlan#:~:text=The%2020%2DYear%20Forest%20Health%20Strategic%20Plan%20is%20grounded%20in,planning%20areas%20across%20eastern%20Washington.>
https://gacc.nifc.gov/nwcc/predict/fire_fuel.aspx

Additional reference Materials:

Incident Response Pocket Guide 2022: <https://www.nwccg.gov/sites/default/files/publications/pms461.pdf>

40 standard fuel models:

<https://gacc.nifc.gov/oncc/docs/40-Standard%20Fire%20Behavior%20Fuel%20Models.pdf>

Photoload Sampling techniques:

<https://www.bia.gov/sites/default/files/dup/assets/public/pdf/idc1-028662.pdf>