



MN DNR Prescribed Burn Unit Plan

NA-01990-04

Burn Unit Name and ID:			D42407005 - Beaver Cutoff Big Burn				
County Name	Lat/Long	Sec	Township	Range	Forty	Management Unit Name and Number	Administrator
Winona	DMS Northing: 44 9 48.1 Easting: 91 59 42.6	11, 12, 13, 14	T108N	R10W	See Map	Whitewater WMA W09009	Wildlife

Burn Unit Description

Fuel Model ¹	MN Native Plant Community	Size of Burn (acres) ¹	Fuel Loading (tons/acre) ¹
FM 3 – figured below- Other models attached	Ups13 – Southern Dry Prairie	921 acres	3.0
FM 3	Ups23 – Southern Mesic Prairie		3.0
FM 9	FDs 38 – Southern Dry Mesic Oak Woodland		3.5

Additional Burn Unit Descriptors (e.g. land management goals, overstory/understory, soil, water, other ownerships/administration within burn area, other descriptors (power lines, roads etc))

This burn unit is a mosaic of numerous communities including oak savanna west of Siebenaler Ridge, native grass plantings and mesic prairies, mesic oak on the north slopes and jack pine in the southern sheltered draws. Agricultural fields are present on tops of the ridges. A portion of the unit is a Natural History Registry Site managed predominately through the use of fire through a Memorandum of Understanding with the Section of Wildlife and Scientific and Natural Area staff. Much of the area has been burned in the past as smaller burn units of either oak savanna, planted prairie sites, bluff prairies or native prairie. It is desirable to combine a number of these past smaller burn units into a larger "landscape" scale burn to reduce manpower needs and utilize natural firebreaks allowing for easier fire control. The paved county road along south edge of burn will act as that firebreak. A mowed and sandy access trail encompasses the rest of the burn unit except in the extreme north end where a leaf-blown, raked and hand cut firebreak will be used from the top of the ridge to the access trail below. Should an escape occur to the west, the Whitewater River will act as the secondary firebreak in that direction.

Objectives

Purpose of burn (measurable treatment objectives): The purpose of the burn is to set back any encroaching brush and trees in the native mesic prairie on tops of ridges; achieve the same in the many planted prairies and stimulate native grass and forb production following prescribed fire. Achieve 90% top kill of any brush within these sites as well as the larger Siebenaler ridge bluff prairie which runs 4,000 feet in length along the northeast leg of this burn unit. In the more open-grown woodlands downhill from Siebenaler ridge, objectives are to kill approx. 5-10% of the live trees to continue restoration of what was once oak savanna in this area. The CSA covertime in this area would be considered off-site oak. It is also an area where we have had oak wilt problems in the past.

Long term resource objectives: Long term resource objectives include maintaining a diverse mixture of native communities in this large area. It is likely (depending of timing of burn) that only a portion of the entire area will burn on any given burn. It will mimic larger landscape burns that may have occurred whereby the oak savanna and prairie communities burned while only fingers of fire crept into the north faced mesic oak stands. Resource objectives also include reducing competition from exotic species present including honeysuckle.

Timing of treatment (in calendar terms and phenological terms): It is preferred to conduct the burn prior to May 1, of any year to minimize impacts on flowering plants such as fumeflower which inhabits the open prairies in the southwest of the burn unit. To achieve reduction of woody shrubs and cool season grasses it will desirable to conduct fire when the leaves have appeared, mid to late spring on the shrubs and cool season grasses have greened up to set back competition.



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Burn Complexity: Use NWCG Complexity Rating Guide (NFES 2474) to Determine Burn Complexity (keep on file)					Low		Moderate XX		High		
Burn Prescription Window											
		Outputs Prescription Parameters				Guidance Prescription Parameters					
Wind Direction		Spread Rate		Flame Length		Wind Speed		Temp.	Relative Humidity	1 Hr Fuel Moisture	1000 Hr Fuel Moisture or Drought Code
		Head	Backing	Head	Backing	20'	Mid flame				
NW preferred although any will do.	Maximum Prescription	FM 3 363 ch/hr	FM 3 7 ch/hr	24'	4'	Max	Max	Max	Min	4 %	
		FM 9 31 ch/hr	FM 9 0.7 ch/hr	FM9 6'	FM9 1.0'	14	10	75	25		
	Minimum Prescription	FM3 43 ch/hr	FM 3 5	8'	3'	Min	Min	Min	Max	9 %	
		FM 9 1.0 ch/hr	FM 9 0.3 ch/hr	FM9 1.0'	FM9 1.0'	5	2	45	60		
Additional Considerations											
Consideration					Mitigation						
Cultural site(s): NONE											
Natural Heritage Elements:					There are a number of endangered, threatened and species of special concern within this burn unit. They have responded very well to past burns. It is recommended to burn prior to May 1, to reduce impact to flowering fameflower in NESW SEC. 14. KEEP ALL EQUIPMENT OFF THE FIELD IN NESW SEC. 14, INCLUDING J-5 BOMBARDIERS IF USED						
Adjacent Land Concerns: NONE											
Peat Soils or Wet Soils: SENSITIVE SOILS					Sandy soils sensitive to rutting – stay of fameflower field in particular.						
Other:					We have constructed two deer exclosures in the middle of section 14. We will need to burn these out prior to igniting the rest of the burn unit. This can be done days before main burn if desired.						
Emergency Telephone Numbers					Burn Activity Contacts						
Forestry		55555555			XXXXXXXX						
Fire Dept Altu.		55555555			XXXXXXXXXX						
Sheriff Winona		5555555			XXXXXXX						
Medical		911			XXXXXX						
Fire Warden and neighbor		5555555			XXXX						
Personnel Needs											
Burn Boss Level (Note: tied to the burn complexity level):					MRXB2 -						
Number Needed		Position					Names(Optional)				
4 16		MRX12 – ignition specialist will act as line boss as well. MFTT2									
Equipment Needs											
Number needed		Equipment Type					Source				
6 3 15		Pickups with slip-ons ATVs w/slip-ons Portable radios with Wildlife freq. And Forestry tact 1, tact 2 Flails, chainsaws, PPE, Portable pump, drip torches, bladder					Wildlife –5 trucks; forestry – 1 truck Winona –1; WWMA – 1; nongame-1				



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Operations Plans

Pre-burn Site Preparation Plan:

Through the use of a leaf blower remove leaves down slope from Siebenaler ridge to tie in to access trail at bottom of slope. This will be the NW firebreak. Cut all snags and buck up within 50 feet of same line. On day of burn, post MNDOT prescribed burn signs at both ends of burn along County Road 30. Set up two Portable Pump Sites as indicated on map. Contact fire wardens on east side of burn unit.

Ignition/Firing Plan: (Include provisions for a test fire, firing pattern, firing device, preferred wind direction, hazards/special considerations): Conduct Pre-Burn Briefing with crew, then conduct test fires to determine fire behavior.

Begin with two 5-person crews securing NW end of burn unit where hand line put in. Once 100 foot of blackened break achieved from top of ridge to bottom, continue lighting along Siebenaler ridge to establish blackened break along entire bluff prairie. At the same time, two crews of 5 personnel each will light simultaneously moving north and westerly from the southeast corner of the burn unit at the juncture of county road 30 and refuge line. The 5 person crew will light westerly and the remaining crew to head northerly burning out all that will burn along firebreak. Burn boss will keep in contact with both lines to determine when west crews can begin heading north along access trail within refuge area. Once they have entire south facing slope burned out, they can begin firing to the north along the access trail. Larger crew will continue lighting all that will burn along line, backfiring all way out along Siebenaler ridge meeting with crew which began fire at nw corner. It is expected that most days, the fire will not carry well in the sheltered canopied woods along the east line. Crews lighting there will monitor conditions and burn back from lines to establish secure blackened break. There is a blown down jackpine stand along the west firebreak that will be a hotspot. A firebreak has been mowed around the prairie field just west of this stand and will be burned out to act as adequate buffer in this area.

Holding Plan: (Staging area, holding lines, resources and positions):

Holding forces will follow the ignition personnel and ensure all lines are secure, frequently checking back for any escapes. ATVs and pickups with slip-ons and bladder bags will be primary tools used to control fire. Continued monitoring of the hand line firebreak area in the northwest corner will be necessary until any threats of burning snags has ceased.

Patrol/Mop-up Plan: (Mopup instructions, safety concerns, weather, contingency, rehab, patrol instructions):

By increasing the size of the burn unit, we have been able to utilize more secure firebreaks and thus will have minimal mop up required. Much of the line will be burned grassland with low potential of burning snags near the line. Any burning snags within 75 feet of line will be cut down however, and any smoldering material within 50 of the line will be extinguished.

Contingency Plans

(Include secondary control lines, termination of ignition procedures, list of contingency resources and approximate response times, trigger points, backup plan for equipment failure etc.):

If slop-over occurs, 1) cease primary ignition 2) Maintain control of backing fire 3) Burn boss will evaluate and re-allocate resource 4) Direct attack the spot 5) Ignition will continue when Burn Boss considers the spot under control or, 6) additional resources will be called if the Burn Boss considers the situation to be a wildfire. Should there be an escape to west of burn unit, line crew will attempt to extinguish adjacent to line in planted prairie areas or reed canary grass. Secondary break will be Whitewater River to west and area burned out to that line. Should escape occur to east of Siebenaler ridge bluff prairie, winds should be more light over wooded ridge to east and raked or wet line will be used to extinguish anything in that area.

Smoke Management Plan¹

Smoke Dispersion Category (should be fair or better to burn)¹:

Distance and Direction from Smoke Sensitive Area(s)¹: Check with XXXXXXX. to see if any concerns when we burn out grass along south lot. County road 30 along the south firebreak.

Smoke Management Plan (Describe how you intend to mitigate the effects of smoke on roads, firefighters, neighbors and other sensitive receptors. Include safety considerations)¹:

Post warning signs 1) Prescribed Burn Ahead if no smoke anticipated over road 2) Caution smoke over road if smoke anticipated

Safety Plan

Identify safety zones, escape routes, communications plan:

Each crew leader will identify safety zones for their personnel. Wide secure access trails around entire unit will be safe zone in most instances. Ignition specialists/line bosses may direct additional ignition specialists to light interior of firebreaks especially in areas where fire does not carry in canopied woods. Objective is to burn all open lands whether fire carries into woodland or not, so ignitors will be directed by burn boss to go interior to light additional areas when appropriate.

Personnel burning along County Road 30 to wear hi-visibility vests.

Medical Plan

(In addition to notification of 9-1-1 dispatcher, identify nearest ground and air ambulance service, availability of paramedics, location of nearest hospital and list what first aid supplies are available at the burn site and what person or equipment they are assigned to):

Dire emergency: contact Mayo MedAir – Rochester, MN 800-237-6822.

Olmsted Medical Center, 1650 4th St. SE, Rochester, MN

Or Minor medical injuries:

¹ Required for MN Pollution Control Agency reporting requirements

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Project Map	XX	Fire Behavior Calculations (optional)	On File		
Permission to Burn on non-DNR Land		Road Control Plan (optional)			
Risk/Safety Assessment (On File at WWMA office)	XX	Organization Chart (optional)			

Signatures

Prepared by: XXXXXXXX	Qualification Title: MRXB2	Date: 1/22/2007
Reviewed by ² : XXXXXXX	Qualification Title: MRXB2	Date:
Reviewed by ³ : XXXXXXX	Title: MRXB2	Date: 1-26-07
Approved by ³ : XXXXXXXX	Title: MRXB2	Date: 30 Jan. 2007

² All burn plans must be reviewed and signed by a qualified Burn Boss 1 or 2 as specified by Commissioner's Operational Order 47

³ As per Division policy



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Go/No Go Checklist

ALL burn prescription elements met.	ALL personnel have the required PPE with them.
ALL smoke management specifications met.	ALL pre-burn considerations (line preparation) identified in the plan addressed.
ALL current and projected fire weather forecasts have been obtained and are favorable.	ALL the required notifications been made. (landowners, media, cooperators, sheriff etc)
ALL planned operations personnel and equipment on-site, available and operational.	ALL permits and approvals been obtained. (open burning permit, Non-DNR land permission)
APPROPRIATE contingency resources have been confirmed and are available	ALL on-site holding forces adequate for containment under the expected conditions.
ALL personnel briefed on the burn objectives, their assignment, safety hazards, escape routes, communications and contingency plans.	Burn Boss believes the burn can be carried out according to the Prescribed Burn Unit Plan and will meet the planned objectives.

Prescribed Burn Unit Report

Weather

	Time	Wind Direction	Wind Speed	Temperature	Relative Humidity	Comment
Forecasted Fire Weather						
Spot weather forecast						
Observed weather						

Observed Fire Behavior

Time	Spread Rate	Flame Lengths	Scorch Height

Acres Burned by Cover Type

Fuel Model	Completed Acres	ECS Type Sub Type	Completed Acres

Post Burn Observations

Recommendations

Burn Boss Signature

Name:	Title:	Date:
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