



### MN DNR Prescribed Burn Unit Plan

NA-01990-04

<b>Burn Unit Name and ID:</b>		<b>McGregorMarsh/Boyd D2G0503</b>									
County Name	Lat/Long	Sec	Township	Range	Forty	Management Unit Name and Number	Administrator				
Aitkin	46 37 32 (DMS) 93 17 7	20, 29	48	23		McGregor WMA 00210	Wildlife, Private 113 ac., 252 ac.				
<b>Burn Unit Description</b>											
Fuel Model <sup>1</sup>	MN Native Plant Community		Size of Burn (acres) <sup>1</sup>		Fuel Loading (tons/acre) <sup>1</sup>						
93% Fuel model 3	Wet Meadow Carr WMn82		315		3						
7% Fuel model 5	Mesic Hardwood MHn44a		50 (365 acres total)		3.5						
<p>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))</p> <p>Burn area is a wet meadow with lowland brush, hayground, pasture and small wooded aspen islands. 70% of area is private land. A home with outbuildings and livestock holding pens are on the northeast edge of site and well protected by short mowed or pastured grass and gravel driveway. County Road 73 is the east side of site. There is a power line that runs through the NE corner of the site (4 poles). Railroad line is on south side. A snowmobile trail with 2 bridges (wood decks) also runs through the south end.</p>											
<b>Objectives</b>											
<p><i>Purpose of burn (measurable treatment objectives):</i> Top kill 50% of brush to help setback succession and open landscape for wildlife species such as sharp-tailed grouse.</p> <p><i>Long term resource objectives:</i> Open landscape by reducing brush height and density.</p> <p><i>Range of acceptable results:</i> Sprout reduction 30-50%.</p> <p><i>Timing of treatment (in calendar terms and phenological terms):</i> Area should be burned in mid to late spring to get good top kill on live stems. Top kill is better if burn happens with bud break or leaf out.</p>											
<b>Burn Complexity: Use NWCG Complexity Rating Guide (NFES 2474) to Determine Burn Complexity (keep on file)</b>				Low	X	Moderate	High				
<b>Burn Prescription Window</b>											
		<b>Outputs Prescription Parameters</b>				<b>Guidance Prescription Parameters</b>					
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				
SW,S,SE	Maximum Prescription	FM3 148ch/hr	FM3 7ch/hr	FM3 14'	FM3 4'	Max 17	Max 7	Max 85	Min 25	Clear 4-11%	18% min
	Minimum Prescription	FM3 29ch/hr	FM3 4ch/hr	FM3 6'	FM3 3'	Min 4	Min 2	Min 45	Max 70	Cloudy 7-14%	
<b>Additional Considerations</b>											
<b>Consideration</b>				<b>Mitigation</b>							
Cultural site(s): none known				<b>No digging into ground</b>							
Natural Heritage Elements: none nearby				<b>Checked Natural Heritage Database 3-22-04</b>							
Adjacent Land Concerns: yes				<b>Prescription protects home and farm buildings</b>							
Peat Soils or Wet Soils: yes				<b>Avoid starting exposed peat on fire. Wetland still may be frozen which will minimize rutting by equipment.</b>							
Other:											
<b>Emergency Telephone Numbers</b>				<b>Burn Activity Contacts</b>							
Forestry - Aitkin		218-927-4040		BNSF Safety Road Master (218-384-4340)			817-234-6011				
Fire Dept - McGregor		911		Landowners...			XXX-XXX-XXXX				



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Sheriff	Aitkin County	218-927-2138	Mark at rice paddies
Medical		911	(city of McGreg)
			218-XXX-XXXX
			218-XXX-XXXX

#### Personnel Needs

Burn Boss Level (Note: tied to the burn complexity level):		MRXB2
Number Needed	Position	Names(Optional)
1	MRXB2	Dave Kanz
2	TVOP	
2	Crew Boss	
2	Igniters	
7	Fire Fighters	

#### Equipment Needs

Number needed	Equipment Type	Source
2	MMII	Wildlife
2	Type 6 engine	Wildlife
1	Aitkin 6-wheeler w/50gal	Wildlife
1	Aitkin ATV w/15 gal:	Wildlife
1	Portable pump	Wildlife

#### Operations Plans

**Pre-burn Site Preparation Plan:** Shear fire breaks in late winter.

**Ignition/Firing Plan:** (Include provisions for a test fire, firing pattern, firing device, preferred wind direction, hazards/special considerations):

- Lighting method: drip torches
  - radio communications between igniters, holding crew and burn boss
  - all igniters know where escape routes and safety zones are throughout the fire
  - igniters need to watch for sudden wind shifts
- Anchor ignition in burn unit (usually corner) opposite current prevailing SE,S or SW wind: Plan will be to start on north end. One div. can head east then south along dozed line, burning in fine fuels adj. to break. At the same time, other division will head west to ditch then south making sure there is at least a 50-100' blackened strip along the break. For both div. eventually they will have to cross ditches using MMs. When sufficient back burning is complete, set headfire to get columnar fire towards center of site.
- Cease lighting if spot fires occur. Cease lighting until burn boss signals to continue.

**Holding Plan:** (Staging area, holding lines, resources and positions):  
 Staging area will be in farm yard, (park trucks along driveway) One type 6 engine will be staged there. One type 6 engine will be staged on the west dike outside of the burn area. Portable pump will be set up in stock pond. One MMII will travel with the west ignition crew tracking a wet line on the dozed fire break and hold line after firing, moving along with the ignitor. An ATV w/ tank will follow up and monitor line. One MMII will travel with the east crew tracking a wet line on the pasture and hold line after firing, moving along with igniter. An ATV w/tank will follow up and monitor that line. As the crews reach the southern end, the MMII's may be reassigned to work together, due to the ditch system.

**Patrol/Mop-up Plan:** (Mopup instructions, safety concerns, weather, contingency, rehab, patrol instructions):  
 Mop up all flaming and smoldering materials within 100 feet of the fire line. In woodland, put out any flaming or smoldering wood above ground within 200 feet of fire line. Cut down flaming or smoldering trees that cannot be put out. Patrol until release by burn boss. Monitor weather and smoke conditions from fire line for smoke dispersal. Watch for falling snags when working in woods. Report any significant weather changes, smoke dispersal changes or fire behavior to burn boss.

#### 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.):  
 There are secondary control lines down wind of the burn area in the form of small ditches around cut hayfields. If fire



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goes across the line, ignition will end, holding forces will take action under direction from burn boss to anchor, flank and pinch escape while containing existing burn unit. MMIIIs will be able to cross those ditches, ATVs probably won't. If fire is not contained by that action, contingency resources may be drawn from: McGregor FD (10 min), Sandy Lake Forestry (15 min), RLNWR, (20 min). If conditions trigger continuing spot fires over the line, prescribed fire will be put out and mopped up. If fire line equipment fails, rotate out with ATV and have one person work on failed equipment if fixable in the field.

#### Smoke Management Plan<sup>1</sup>

Smoke Dispersion Category (should be fair or better to burn)<sup>1</sup>: Fair to better

Distance and Direction from Smoke Sensitive Area(s)<sup>1</sup>:  
Adjacent house and farm buildings adjacent to burn site. (See signed permission to burn sheet). Several homes are 1 mile to the north.

Smoke Management Plan (Describe how you intend to mitigate the effects of smoke on roads, firefighters, neighbors and other sensitive receptors. Include safety considerations)<sup>1</sup>:  
Avoid smoke downwind to receptors by prescribed wind direction and weather. Rotate firefighters out of smoke, have good firebreaks and wetline so firefighters do not have to be in heavy smoke to hold, igniters use goggles, neck shrouds when igniting. Duration of smoke is estimated at 5 hours. Notify homes to the north prior to burn. Notify Burlington Northern/Santa Fe prior to burn. Rx Burn signs will be put up on Co. Rd. 73 (Simpson Road)

#### Safety Plan

Identify safety zones, escape routes, communications plan:  
Safety zones and escape routes will change as the fire progresses and this will be communicated at the briefing. In general, the sheared fire break will be wet and provide good escape routes. Ditches will have very cold water in them, and banks may be steep. Black areas are safety zones. Lights on for all engines and ATVs. Radio communication on the burn will be on Tach 1.

#### 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):  
Nearest ground ambulance is in McGregor. Nearest air ambulance is in Brainerd. Nearest clinic is in McGregor. Nearest hospital is in Aitkin. First aid kits are in engines and MMII. Most DNR fire staff have cell phones. At the pre-burn briefing, someone will be identified as trained in CRP/Advanced First Aid.

#### List of Attachments

Project Map	X	Fire Behavior Calculations (optional)			
Permission to Burn on non-DNR Land	X	Road Control Plan (optional)			
Risk/Safety Assessment (optional)		Organization Chart (optional)			

#### Signatures

Prepared by: Dave Kanz	Qualification Title: MRXB2	Date: 3-31-05
Reviewed by <sup>2</sup> :	Qualification Title:	Date:
Reviewed by <sup>3</sup> :	Title:	Date:
Approved by <sup>3</sup> :	Title:	Date:

<sup>1</sup> Required for MN Pollution Control Agency reporting requirements

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

<sup>3</sup> 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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