

Introduction

This document is the technical companion to the Minnesota Department of Transportation (MnDOT) Prescribed Burn Policy.

MnDOT's use of prescribed burning must comply with the MnDOT Prescribed Burn Procedures, and the procedures, qualifications, and standards for training and employee safety provided in the Minnesota Department of Natural Resources (MN DNR) [Operational Order #47](#) and the [MN DNR Prescribed Burn Handbook](#). When the MN DNR operational order refers to administrative or organizational structures specific to the MN DNR, MnDOT will mirror the structures to the extent practical within the MnDOT organizational structure.

Definitions

Indian Country

As defined in 18 United States Code section 1151, Indian country includes reservations, allotments, and dependent Indian communities. Indian country may include off-reservation land.

Note: See the [Indian Country Guidance](#) and the [MnDOT Tribal Map Application](#) for additional information.

Prescribed Burn

A fire ignited on a defined area of land under certain, pre-determined conditions to meet specific objectives related to vegetation management.

Complexity Rating

The degree of difficulty of a prescribed burn determined by evaluation of the proposed burn by following the process described in the [Prescribed Fire Summary and Final Complexity Worksheet](#) (PMS 424-1), created by the National Wildfire Coordinating Group, an organization that sets national standards for wildland firefighting and prescribed burning.

Procedures

Establish roles and responsibilities

MnDOT will designate a Prescribed Burn Program Coordinator to provide the support and oversight necessary to ensure the safe and effective use of prescribed burning as a vegetation management tool.

Establish a written prescribed burn plan

All prescribed burns on MnDOT property must comply with a written prescribed burn plan. The plan must have clearly defined and attainable vegetation management objectives and provide for the protection of public safety including human life, health, and property. During plan development, input from MnDOT functional areas with a stake in the proposed use of prescribed burning described is important. The Prescribed Burn Program Coordinator or a qualified individual to whom the Prescribed Burn Program Coordinator has delegated this authority with the approval of the respective office or district must approve the plan. The plan must include the components required in the MN DNR Prescribed Burn Handbook. Templates for prescribed burn plans can be found on the MnDOT prescribed burn website or by following this link, [Prescribed Burn Plan Template](#).

Obtain Permits

Burn permits may be required at the state, county, and/or local levels. The Burn Boss is responsible for obtaining all necessary burn permits before ignition. State burn permits are obtained through the [MN DNR Forestry Office](#) in accordance with [Minnesota Statute §88.16](#).

Indian Country

The Roadside Vegetation Management Unit Supervisor will consult with the Office of Tribal Affairs and Tribal leadership to determine current, approved procedures for using prescribed burning in Indian Country.

Establish qualifications and standards for prescribed burns

All MnDOT employees conducting prescribed burns must meet the qualifications and the standards for training and employee safety set forth by the [MN DNR Operational Order #47](#). The MnDOT Prescribed Burn Program Coordinator must certify employees as meeting the appropriate qualifications.

Principal MnDOT Prescribed Burn Positions

Note: Prescribed Burn Positions are in alignment with the Minnesota Department of Natural Resources (MN DNR) [Operational Order #47](#) and [MN DNR Prescribed Burn Handbook](#). Although physical fitness testing is not required to burn for MnDOT, MnDOT employees may be required to meet physical fitness requirements when burning in partnership with other agencies.

Minnesota Firefighter Trainee (MFFTT)

Firefighter trainees may be used to assist in prescribed burn operations such as preparing line, holding line, assisting with water transport, traffic control, etc. These individuals may include employees, volunteers, and Sentence to Serve Crews.

Required training:

- RT-130 Annual Firefighter Safety Refresher
- Personal Protective Equipment Briefing

Conditions for use:

- MFFTT may be used only under the direct oral and visual control of a qualified firefighter (i.e., FFT2 or higher)

Firefighter Type 2 (FFT2)

An individual who is qualified at the FFT2 level may be used in a variety of prescribed burn tasks, including preparing, firing, and holding lines. They may also perform duties in support of engines, pumps, and other suppression equipment. They have no supervisory duties.

Refer to the most recent version of the National Wildfire Coordinating Group (NWCG) [Standards for Wildland Fire Position Qualifications PMS 310-1](#) for the current training requirements for a Firefighter Type 2. MN DNR does not have its own requirements for a FFT2 position.

Individuals working solely for MnDOT do not need to meet the physical fitness testing requirements. For non-MnDOT and non-federal assignments in Minnesota, individuals must meet the moderate testing qualifications. For out-of-state or federal assignments, individuals must meet the arduous testing qualifications.

Minnesota Firing Boss (MFIRB)

MFIRB is qualified to direct the ignition of low to high complexity burns under the supervision of a burn boss. The MFIRB typically directs a group of three to five FFT2s and may be responsible for the use of a variety of ignition devices. They may also be responsible for monitoring weather and burning conditions to meet the desired fire effects and the necessary level of control.

Required Training and Experience

- FFT2 training plus:
 - S-131 Firefighter Type 1
 - I-200 (or IS-200a) Basic Incident Command System (Homeland Security requirement)
- February 2020 28 MN DNR Prescribed Burn Handbook
 - S-219 Firing Operations
 - S-290 Intermediate Fire Behavior

Recommended training to support knowledge and skills:

- S-211 Portable Pumps and Water Use
- S-212 Power Saws
- L-280 Followership to Leadership

Required Position Task Books

- MFIRB Minnesota Firing Boss

Other positions that maintain currency for MFIRB

- MRXB3/2/1 Minnesota Burn Boss Type 3, 2 or 1
- RXB2/1 NWCG Prescribed Fire Burn Boss Type 2 or 1
- FIRB NWCG Firing Boss

Transition

- Personnel qualified and current in MRX11 or MRX12 position prior to the issuance of the 2020 Minnesota Prescribed Fire Handbook will be considered qualified as MFIRB unless the MnDOT Burn Program Coordinator recommends the completion of additional training or experience.

Minnesota Burn Boss Type 3 (MRXB3)

MRXB3 is qualified to direct a prescribed burn of low complexity on MN DNR or non-MN DNR lands. Personnel have demonstrated proficiency in the fuel type(s) they are burning. Typically, an MRXB3 executes small to medium grassland, oak savanna, or hardwood understory burns with roads or plowed breaks around them.

Required Training and Experience

- MFIRB training plus:
 - Same as MFIRB
- S-390 Fire Behavior Calculations

Recommended training to support knowledge and skills:

- S-211 Portable Pumps and Water Use
- S-212 Power Saws
- L-280 Followership to Leadership
- RX-341 Prescribed Burn Plan Development
- RX-301 Prescribed Burn Implementation
- RX-410 Smoke Management

Required Position Task Books

- MFIRB Minnesota Firing Boss *AND*
- MRXB3 Minnesota Burn Boss 3

Other positions that maintain currency for MRXB3

- MFIRB Minnesota Firing Boss
- MRXB2/1 Minnesota Burn Boss Type 2 or Type 1
- RXB2/1 NWCG Prescribed Fire Burn Boss Type 2 or Type 1
- FIRB NWCG Firing Boss

Minnesota Burn Boss Type 2 (MRXB2)

MRXB2 is qualified to direct a prescribed burn of moderate or lower complexity (as per the [NWCG Prescribed Fire Complexity Rating System Guide PMS 424](#)) on MN DNR or private lands. Personnel have demonstrated proficiency in the fuel type(s) they are burning and can burn with complexities such as wildland-urban interface and roads. Typically, an MRXB2 handles medium to large grassland, oak savanna or hardwood understory burns, small to medium slash, and small pine understory burns that have a duration for one burning (active fire) period (not to exceed 24 hours).

Required Training and Experience

- MFIRB or MRXB3 training plus:
 - S-390 Fire Behavior Calculations
 - RX-341 Prescribed Fire Plan Preparation
 - RX-301 Prescribed Fire Implementation

Recommended training to support knowledge and skills:

- S-270 Basic Air Operations
- S-211 Portable Pumps and Water Use
- S-212 Power Saws
- S-215 Fire Operations in the Urban Interface

- L-280 Followership to Leadership
- RX-310 Introduction to Fire Effects
- RX-410 Smoke Management

Required Position Task Books

- MFIRB Minnesota Firing Boss AND
- MRXB2 Minnesota Burn Boss 2

Other positions that will maintain currency for MRXB2

- MFIRB Minnesota Firing Boss
- MRXB3/1 Minnesota Burn Boss Type 3 or Type 1
- RXB2/1 NWCG Prescribed Fire Burn Boss Type 2 or Type 1
- FIRB NWCG Firing Boss

Minnesota Prescribed Fire Council Position Equivalencies

The Minnesota Prescribed Fire Council's Certified MN Prescribed Burner 2 (CMPB2) is equivalent to the MN Burn Boss 2 and the Certified MN Prescribed Burner 3 (CMPB3) is equivalent to the MN Burn Boss 3 for the purposes of operationally conducting a burn. However, burn plans written by CMPB2 and CMPB3 certified individuals must be reviewed and approved by MnDOT personnel qualified as MRXB2 or RXB2.

For course equivalencies, see the [MN DNR Prescribed Burn Handbook](#).

Contractors

Contractors hired to conduct prescribed burns on MnDOT land must meet the qualifications and the standards for training and personnel protective equipment set forth in the MN DNR Operational Order #47. Contracts for such work must include insurance and indemnity provisions approved by MnDOT Contract Management. The burn plan must be approved by the MnDOT Prescribed Burn Program Coordinator before the fire is ignited.

Establish traffic control plan

Prescribed burns on roadsides must be coordinated with the district traffic office and signed by the traffic engineer. Any necessary traffic control must follow all applicable standards in the [Minnesota Manual on Uniform Traffic Control Devices](#), with advance warning signs that read "Controlled Burn Ahead," "Prescribed Burn Ahead," and/or "Smoke Over Road."

Follow the Minnesota Smoke Management Plan

MnDOT prescribed burns must follow the [MN Smoke Management Plan](#), including guidance on minimizing impacts to downwind smoke receptors (Section 4.2.3, Smoke Management and Dispersion). A primary goal of smoke management on roadside prescribed burns is to avoid or minimize impacts on traffic. In most situations, burns will only occur when the wind will direct smoke away from traffic. The impacts of smoke on traffic must use modified ignition techniques, traffic controls, or other methods that will effectively minimize smoke impacts and ensure public safety.

Non-MnDOT Land Prescribed Burn Protocol

MnDOT employees may be involved in burning on non-MnDOT lands. This may be done as part of a collaborative effort with other agencies, non-profit organizations, or private landowners, or it may involve situations where doing so simplifies the execution of the prescribed burn.

When MnDOT initiates a burn that will include non-MnDOT lands, the form [Grant of Permission to Burn Lands not Administered by MnDOT](#) must be signed by each non-MnDOT landowner involved and the form(s) included as part of the prescribed burn plan. MnDOT may be liable for damages directly resulting from a prescribed burn, subject to the Minnesota Tort Claims Act, Minn. Stat. §3.736 and applicable law, unless there is a previous agreement to share or transfer this responsibility.

MnDOT prescribed burns on MN DNR land are covered by the MnDOT/MN DNR Master Partnership Agreement. Permission for specific burns must be documented in writing.

Flood Debris Reduction by Open Burning

The following procedures must be followed when using open burning for uncontained brush piles as a method for reducing flood debris:

- Follow the MN DNR and local agency prescribed burn permitting process.
- In coordination with the MnDOT Prescribed Burn Coordinator, follow the [MN DNR “Slash Pile Burning Guidelines.”](#)
- Notify the MnDOT Prescribed Burn Coordinator at least three days prior to burn operations.
- Notify County dispatch each day of burning. If burning continues through the evening hours, County dispatch must be notified a second time.
- Prior to ignition, provide in-person notification to homes and businesses within ½ mile downwind of burn operations.
- Prior to ignition, burn/smoke warning signage must be in place.
- If fire is active or smoldering during evening operations, electronic Dynamic Message Signs (DMS) must be in place as described above

Utility Terrain Vehicle (UTV) Usage

Two UTV with sprayers are required on all burns. Burns adjacent to railroads require three UTV with sprayers.