



MN DNR Prescribed Burn Unit Plan

NA-01990-04

| | | | | | | | |
|-------------------------------|------------------------|-----|--------------------------------------|-------|-------|---------------------------------|---------------|
| Burn Unit Name and ID: | | | Glipi Pine Rx Burn D215-06-01 | | | | |
| County Name | Lat/Long | Sec | Township | Range | Forty | Management Unit Name and Number | Administrator |
| St. Louis | 47 55.411 91 42.381 | 23 | 63 | 11 | | Glipi Road | Lake County |

Burn Unit Description

| | | | |
|-------------------------|-----------------------------|-----------------------------------|--|
| Fuel Model ¹ | MN Native Plant Community | Size of Burn (acres) ¹ | Fuel Loading (tons/acre) ¹ |
| 9, 10 | Northern Mesic Mixed Forest | 4 | 13.7 tons/acre 0-3" 25-45 tons/acre 3"+ |

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 site is administered by Lake County and is within the Garden Lake Deer Yard. The objective is to underburn an existing mature white pine stand to prep for regeneration by natural seeding. Soil types are primarily sandy loam. The closest private residence is west-southwest approximately one mile from this unit. A water source is found adjacent to the site from Glipi Creek and also from Pickeral Lake approximately 2 miles east on the Glipi Road. The Glipi Pine Unit can be accessed from the Glipi Forest Management Road.

Objectives

Purpose of burn (measurable treatment objectives): Reduce 1 hour fuels by 80-100% and 10 hour fuels by 50-75%. Kill or stress 50-80% of the brush within the burn unit. Expose mineral soil on 50-75% of the unit
Long term resource objectives: Establish a mixed conifer/hardwood stand with 50-75% crown closure.
Range of acceptable results: Reduce 1 hour fuels by 50-100 % and 10 hour fuels by 25-75%, expose mineral soil on 30-75% of site.
Timing of treatment (in calendar terms and phonological terms): 5/1-10/15

| | | | |
|--|-----|------------|------|
| Burn Complexity: Use NWCG Complexity Rating Guide (NFES 2474) to Determine Burn Complexity (keep on file) | Low | Moderate X | 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 | | | | |
| Any Direction | Maximum Prescription | 8 ch/hr | 1 ch/hr | 4' | 1' | Max | Max | Max | Min | 5% | 16% |
| | Minimum Prescription | 1 ch/hr | 0.5 ch/hr | 1' | .5' | Min | Min | Min | Max | 10% | 30% |

Additional Considerations

| Consideration | Mitigation |
|---------------------------------|------------|
| Cultural site(s): None | |
| Natural Heritage Elements: None | |
| Adjacent Land Concerns: No | |
| Peat Soils or Wet Soils: No | |
| Other: | |

Emergency Telephone Numbers

Burn Activity Contacts

| | |
|---------------------|----------------------|
| Forestry-Tower | Lake County Forester |
| Midway Dispatch | |
| Sheriff-Lake County | |
| Superior Dispatch | |
| | |
| | |
| | |



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Personnel Needs

Burn Boss Level (Note: tied to the burn complexity level): MRXB2

| Number Needed | Position | Names(Optional) |
|---------------|----------------|-----------------|
| 1 | MRXB2 | |
| 1 | Ignition Spec. | |
| 1-2 | Engine Bosses | |
| 4-6 | MFF2 | |
| 1 | Safety/Weather | |

Equipment Needs

| Number needed | Equipment Type | Source |
|---------------|-------------------------|--------|
| 1-2 | Type 6 or Type 7 Engine | |
| 3-6 | Drip Torches | |
| 4-6 | Bladder Bags | |
| 300' | 1.5" Hose | |
| 150' | 1" Hose | |
| 6 | Nozzles | |
| 3 | Y-Valves | |
| 1 | Pump | |
| | Hand Tools | |
| | PPE | |
| 5-10 | Radios | |

Operations Plans

Pre-burn Site Preparation Plan: A Fire break will be established around the perimeter of the unit by dozing and clearing of debris by hand.

Ignition/Firing Plan: (Include provisions for a test fire, firing pattern, firing device, preferred wind direction, hazards/special considerations):
The site will be lit by hand with drip torches. Firing will begin on the down wind side with a test fire. If it is determined that the fire behavior is within acceptable parameters the fire will be allowed to back across the unit. Additional firing will occur to maintain a continuous backing fire perpendicular to the wind across the entire unit.

Lighting will cease should a spot occur and the lighters will work to help suppress the spot.

***The final firing plan will be established in the shift plan on the day before or the day of the burn based on wind direction.**

Holding Plan: (Staging area, holding lines, resources and positions): Resources will stage on the Glipi Road . A hose lay will be established on the firebreaks on the downwind side and flanks of the unit using Glipi Creek as the water source. A T6 or T7 engine and crew will serve as part of the holding crew and to IA any spots that occur. The hose lay will consist of 1.5" hose with Y-valves every 100' and 50' of one inch hose with nozzles at each Y-valve. Holders will use primarily bladder bags and hand tools to hold the line. The hose lay will serve as a backup if the bladder bags and hand tools are not sufficient to hold the line.

This may also function as an Engine Boss training opportunity.

***The final holding plan will be established in the shift plan on the day before or the day of the burn.**

Patrol/Mop-up Plan: (Mop-up instructions, safety concerns, weather, contingency, rehab, patrol instructions): After ignition is complete initial mop-up will focus on the down wind side of burn unit. Initial mop-up will focus on any burning material within 25 feet of the line. All burning snags will be felled. After most of the 1 and 10 hour fuels have been consumed the site will be mopped up 100% due to the small size of this unit. The Burn Boss will remain on the site until they feel it is safe to leave.

The burn boss will check the site the following morning and any mop-up needed will be completed at that time. The burn boss will check the site on successive days until the site is determined to be out.

***The final mop-up plan will be established on the morning after the burn.**

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.): Secondary control lines include roads, trails, gravel pits and areas with poor fuels.

All ignition will immediately cease should an escape occur. Ignition will not continue again until the burn boss gives the approval to proceed. If escapes continue to be a problem the burn boss will re-evaluate the conditions and decide if the burn should continue.



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NA-01990-04

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Contingency resources include Kawishiwi (25 min.) and Ely VFD (35 min.).

An up to date contingency plan will be developed the day before or the morning of the burn detailing available resources.

Should an escape fire occur and the ability to control the escape is beyond the capabilities of the resources on site the burn boss will declare the burn a wild fire. Requests for contingency resources to suppress the wild fire will be coordinated through Superior Dispatch.

The following trigger points will be used as indicators to decide if tactics need to be changed:

1. RH lower than forecasted
2. Winds higher than forecasted.
3. A spot fire occurs with initial ignition and/or spots continue throughout the day.
4. Contingency resources are dispatched to a wild fire.
5. A piece of equipment has a mechanical failure.
6. An injury occurs on the fire.

If one or more of these trigger points are reached tactics will be re-evaluated and a decision will be made if the burn will continue.

Should contingency resources for the RX fire be dispatched to a wild fire than the Burn Boss will alter tactics to primarily a holding action. This holding action will continue until one or more of the following occurs:

1. The wild fire is contained and contingency resources are released from the wild fire.
2. Alternate contingency resources are identified and contacted.
3. Continuing the holding action increases the likelihood that the RX fire will become a wild fire and the best choice is to complete the RX fire.
4. Continuing the holding action increases the likelihood that the RX fire will become a wild fire and the best choice is to extinguish the RX fire.

Should an equipment failure occur and a repair cannot be made the situation will be evaluated. The following are options that will be considered:

1. Order a replacement for the failed piece of equipment and continue the burn.
2. Cancel the burn, if it is prior to ignition and a replacement can't be obtained.
3. If the burn is on going, determine if it is best to complete ignition or if all running fire should be extinguished with equipment on site.
4. If the burn is on going, order a replacement piece of equipment to aid in holding or extinguishing running fire.

Should an injury occur on the fire the situation will be evaluated as to the best course of action. Requests for medical assistance and evacuation will be coordinated through Superior Dispatch. The Burn Boss will change tactics to primarily a holding action until one or more of the following occurs:

1. The injured party is successfully evacuated.
2. The injured party does not need immediate evacuation and the burn can continue.
3. Continuing the holding action increases the likelihood that the RX fire will become a wild fire and the best choice is to complete the RX fire.
4. Continuing the holding action increases the likelihood that the RX fire will become a wild fire and the best choice is to extinguish the RX fire.

Smoke Management Plan¹

Smoke Dispersion Category (should be fair or better to burn): Fair to Excellent.

Distance and Direction from Smoke Sensitive Area(s)¹:

The nearest homes are approximately 1 mile west southwest of the burn unit. The Fernberg Road is north 1/2 mile. Smoke impacts will be minimized to residences due to the distance between the burn units and the residences. Residual smoke will be minimal after mop-up and should provide few problems other than minor concentrations in low-lying areas adjacent to the burn. Area roads close to the burn are will receive minimal smoke to obscure visibility due to distance and lift of the smoke. Signs will be placed on the road to alert motorist of the prescribed burn.

¹ Required for MN Pollution Control Agency reporting requirements



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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:

The prescription for this burn will minimize smoke impacts on local residences and roads. The prescription, wind direction, duration of the burn, and the distance between the burn unit and homes and roads should allow for smoke to lift and have minimal impacts on these sites.

It will be important for people working on this fire to be aware of their exposure to smoke and to rotate out of downwind areas at regular intervals. The Burn Boss, Ignition Specialist, and Engine Bosses will need to be aware of this and ensure that people are rotated out of the smoke

Safety Plan

Identify safety zones, escape routes, communications plan:

Safety zones for this fire will be Glipi Creek and the gravel pit west of the burn unit on the Glipi Road. Safety zones will be pointed out to burn personnel prior to ignition. After ignition commences, the black will serve as an additional safety zone. Escape routes include fire breaks and roads.

Communication on the burn will be on DNR tactical channel 1 (151.475). Area communication will be on the Superior Net (169.925) or on the Fernberg Repeater (169.925 tone 100.0). Communication on a wild fire will be on Forest Service tactical channel 1(168.050), Fire Mutual Aid (154.295) and Air/Ground (151.340). Cell phone communication may also be available at the burn, however it will not be the primary means of communication.

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):

A medical plan will be developed for the Ely Area for the entire season and will be part of the burn packet on this burn outlining area medical resources and how to contact them. Any medical evacuations will be coordinated through Superior Dispatch. A 20 person first-aid kit will be on site and will be in the Tower Wildlife Engine. An individual trained in first-aid, a first responder or an EMT will be part of the burn crew.

List of Attachments

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

Signatures

| | | |
|----------------------------|----------------------|-------|
| Prepared by: | Qualification Title: | Date: |
| Reviewed by ² : | Qualification Title: | Date: |
| Reviewed by ³ : | Title: | Date: |
| Approved by ³ : | Title: | Date: |

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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Burn Unit Name and ID:

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 |
|------|-------------|---------------|---------------|
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Acres Burned by Cover Type

| Fuel Model | Completed Acres | ECS Type Sub Type | Completed Acres |
|------------|-----------------|-------------------|-----------------|
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Post Burn Observations

Recommendations

Burn Boss Signature

| | | |
|-------|--------|-------|
| Name: | Title: | Date: |
|-------|--------|-------|