

Chase Lake WMD

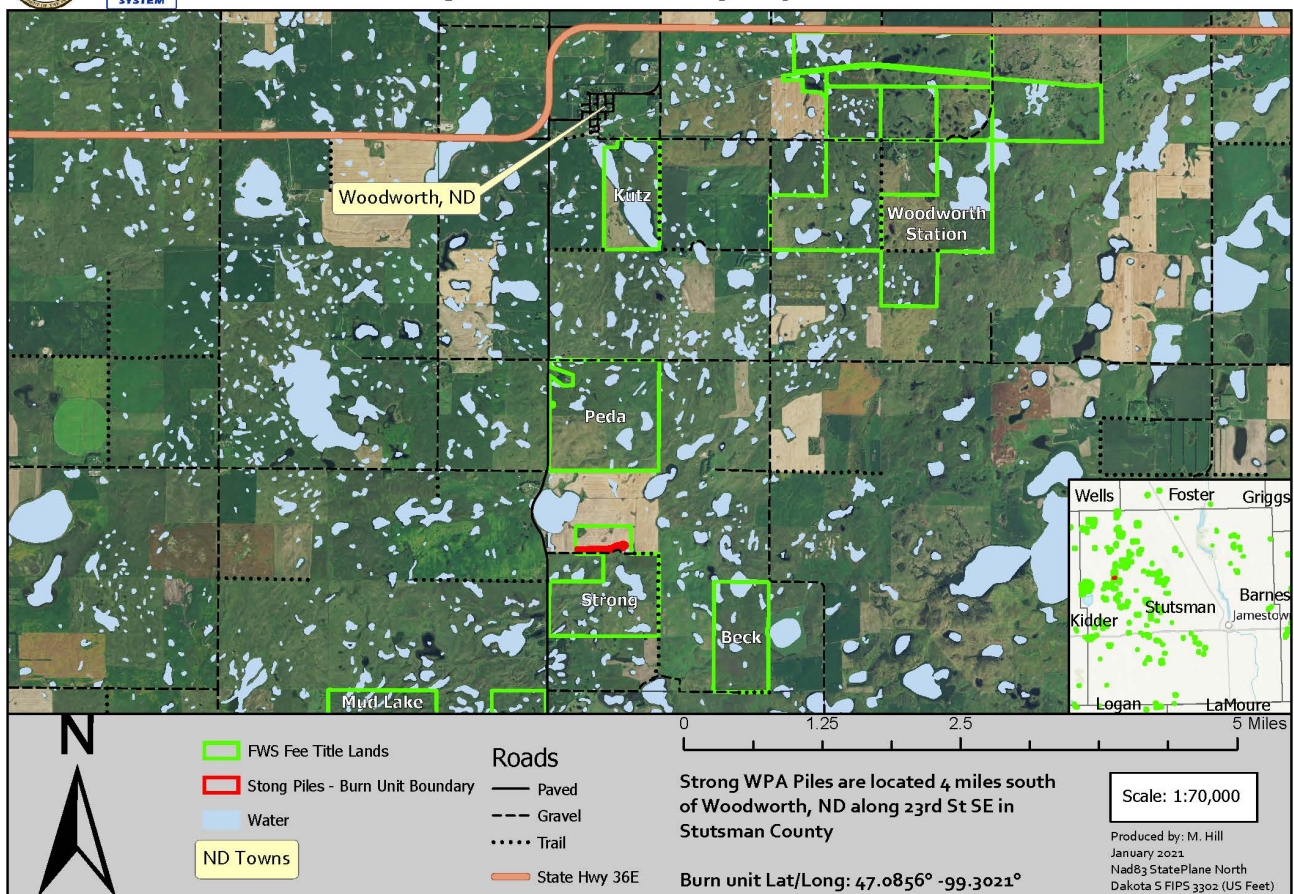
Strong WPA Piles

Prescribed Burn Plan



US FISH & WILDLIFE SERVICE

Kulm WMD - Strong WPA Piles - Vicinity Map



DOI Unified Region 5
 North Dakota Fire Zone
 Chase Lake WMD



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Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

ELEMENT 1: SIGNATURE PAGE

PRESCRIBED FIRE PLAN


ADMINISTRATIVE UNIT NAME(S): Chase Lake WMD – Stutsman County

PRESCRIBED FIRE NAME:

Prescribed Fire Unit (Ignition Unit): Strong WPA Piles

PREPARED BY:

Name (print): Michael J Hill Qualification/Currency: RXB2/2023

Signature:  Date: 1/14/2021

TECHNICAL REVIEW BY: *See Appendix B: Technical Reviewer Checklist*

Name (Jeff Dion Qualification/Currency: RXB2/2024

Signature:  Date: 1/15/2021

COMPLEXITY RATING: Moderate

MINIMUM BURN BOSS QUALIFICATION: RXB2

APPROVED BY:

Name – Agency Administrator (print): Paul Halko, Project Leader

Signature – Agency Administrator: _____ Date: _____

Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

ELEMENT 2A: AGENCY ADMINISTRATOR IGNITION AUTHORIZATION

See LAP

ELEMENT 2B: PRESCRIBED FIRE GO/NO-GO CHECKLIST

See LAP

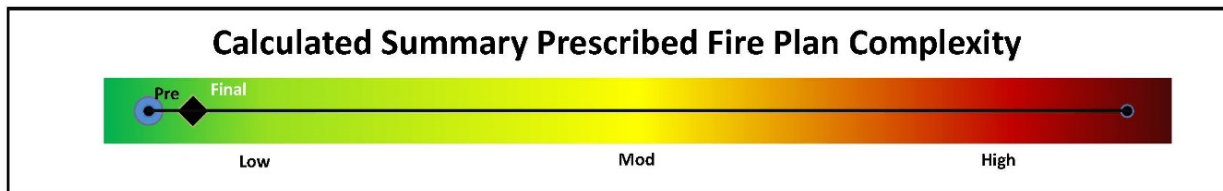
ELEMENT 3: COMPLEXITY ANALYSIS SUMMARY

NWCG Prescribed Fire Summary and Final Complexity Worksheet , PMS 424-1



Strong WPA Piles		Quantity	Significance
Values	On-Site	Nominal	Low
	Off-Site	Nominal	Mod
	Public/Political Interest	Few	Low

Element	Preliminary Risk	Post-Plan Risk	Technical Difficulty	Calculated Rating
Safety	Low	Low	Low	Low
Fire Behavior	Low	Low	Low	Low
Containment	Low	Low	Low	Low
Methods	Low	Low	Low	Low
Duration	Low	Mod	Low	Mod
Smoke Management	Low	Low	Low	Low
Dependence of	Low	Low	Low	Low
Organization	Low	Low	Low	Low
Objectives	Low	Low	Low	Low
Constraints	Low	Low	Low	Low
Project Logistics	Low	Low	Low	Low



Final Complexity Determination	Final Complexity Determination Rationale
Low	<p>An RXB3 (or higher) will be utilized to oversee burn operations. The following description outlines the factors related to the mitigations. Machine and hand pile burning is done after a late season weather event under conditions with high fuel moistures in the adjacent, untreated vegetation in order to minimize potential for spread outside of the burn units. Burning will take place in Fall/Winter/Spring months when adequate snow or other moisture is present and avoid major wind events. Smoke management will be mitigated by avoiding strong inversions, making necessary pre-burn contacts, and utilizing smoke signs to warn the public of potential short-term smoke impacts.</p> <p>Overall complexity rating of this program wide debris/slash piles burn is low due to the predictability of fire behavior, time of year, and climate conditions present during planned implementation. Pile burning as prescribed in this plan presents a low technical difficulty and a low risk to private property, the public and firefighter health and safety, provided that the prescription, the Fire Orders, and the procedures outlined in the Job Hazard Analysis are followed.</p>

Signatures	Rx Burn Plan Preparer's Name	Preparer's Signature	Date
	Michael J Hill	_____	_____
	Technical Reviewer's Name	Technical Reviewer's Signature	Date
	_____	_____	_____
	Agency Administrator's Name	Agency Administrator's Signature	Date
	_____	_____	_____

ELEMENT 4: DESCRIPTION OF THE PRESCRIBED FIRE AREA

A. Physical Description:

Burn Unit	Chase Lake WMD – Strong WPA Piles		
Legal Description:	T142N R68W S28	Latitude	47.0856°
Township	Strong Township	Longitude	-99.3021°
County	Stutsman	NAD 83 (Decimal Degree)	
Acres	8		

Topography: The topography of the unit is flat with elevations ranging from 1700-1800 feet.

Project Boundary: The burn unit is five piles

B. Vegetation/Fuels Description:

1. On Site Fuels Data: Mechanically built piles formed with excavators, skid steers, loaders, and tractors. Dozers are not normally used to construct piles, and therefore limited dirt will be present in piles. Fuels range from 1 hour fuels to 1,000 hour fuels. Dimensions of the piles vary, but the average pile size is 20'(l) x 20'(w) x 8'(h). The distribution of size classes is as follows:

Timelag Category	%	Species Composition
1000 Hour	50	Eastern Cottonwood, Elm
100 Hour	30	Eastern Cottonwood, Elm, Caragana
10 Hour	10	Eastern Cottonwood, Elm, Caragana
1 Hour	10	Eastern Cottonwood, Elm, Caragana

2. Adjacent Fuels Data: Fuels outside the piles will be a mixture of FM1/3, upland vegetation.

C. Description of Unique Features, Natural Resources, Values:

There are no T&E or cultural resource concerns on this unit. Values at risk will include boundary fences along the burn perimeter that will need active protection.

Any threatened or endangered species potentially affected by the prescribe burn will be addressed by a Section 7 consultation. Section 7 will be completed by Long Lake NWR staff. Cultural Resource Compliance will be submitted by fire staff and be on file.

D. Maps - Attach in Appendix A

1. Vicinity (Required)
2. Project/Ignition Unit(s) (Required)
3. Contingency (R6 FWS): Included Not Included
4. Ignition Sequence (R6 FWS): Included Not Included
5. Smoke Trajectory (R6 FWS): Included Not Included

ELEMENT 5: OBJECTIVES

A. Resource objectives:

See LAP(ICS 202)

B. Prescribed fire objectives:

See LAP(ICS 202)

ELEMENT 6: FUNDING

A. Cost:

Agency Administrator and FMO will coordinate any/all costs associated to the burn prior to ignition, including - not limited to, travel, OT, fuel and mechanical repairs.

B. Funding source:

Agency Administrator and FMO will coordinate any/all funding sources associated with completion of the plan prior to ignition.

ELEMENT 7: PRESCRIPTION

A. Prescription Narrative:

1. Describe how fire behavior will meet objectives: Prescription parameters are relatively wide. Prescription parameters are designed to constrain the environmental conditions to allow for meeting the objectives while reducing the chance of an escape. In the case of pile burning, the environmental prescription has less impact on the constraints for reducing the chance of escape. The primary constraint to reduce the chance of escape is having the adjacent fuels meet certain criteria described in detail in Element 9. By following the prescription parameters within this element, the objectives will be met. The primary environmental prescription parameters that will dictate whether the objectives will be met is wind direction. While this plan calls for any wind direction for each unit, it should be noted that no burning should take place within 1/2 mile upwind of any residence or business. In addition to wind direction, burning should be avoided during strong inversions and poor smoke dispersal times in areas with residences or roadways within one mile of the burn unit.

B. Prescription Parameters:

1. Environmental or fire behavior (or both)

See LAP

2. Fire Modeling or empirical documentation (or both)

Due to the implementation timing of this prescribed fire during the fall, winter, and spring months when fuels are saturated, frozen, or snow covered, fire behavior runs are not accurate in depicting appropriate fire behavior in adjacent fuels. The burn boss is to ensure that the adjacent fuels will not carry a surface fire, and therefore fire behavior modeling is not required.

C. Predicted Fire Behavior Outside Project Boundary

- Predicted fire behavior outside the unit is expected to be less than the unit being burned.

ELEMENT 8: SCHEDULING

A. Implementation Schedule:

Ignition Time Frames or Season(s) (or both): Implementation schedule is determined by the agency administrator and is not limited to any day of the year provided that the prescription parameters are met, and the Agency Administrator Ignition Authorization has been signed approving such actions. Ignition may be implemented any time of the day provided all attempts are made to minimize smoke production before an inversion sets in, during winter months. In general, daytime ignition is preferred in order to allow piles to consume and smoke to disperse before evening and high conditions inhibit smoke dispersion.

B. Projected Duration:

The duration will depend on burning conditions, size of pile, species composition, soil present in pile, and fuel arrangement. The duration will range from 1 day up to 4 four weeks (through the smoldering phase). Mop-up and/or patrol activities may occur on the following day(s). Equipment on-site to consolidate the pile materials will dramatically reduce the duration of the active ignition and smoldering phases.

C. Constraints:

Burning may only be conducted during preparedness level 4 or 5 with approval from the National office provided approval included feedback from the Geographic Area MAC group (see Interagency Standards for Fire and Aviation Operations, NFES 2724, Chapter 18). Controlled burning may not be conducted during Red Flag Warning Days or when the Rangeland Fire Danger Index is in the Extreme category.

ELEMENT 9: PRE-BURN CONSIDERATIONS AND WEATHER

A. Considerations:

1. On-site: Minimize Surface Fire Spread in Adjacent Fuels – Adjacent fuels must be either saturated, frozen, snow covered, and/or unable to carry fire to prevent fire spread beyond piles (including debris piles within areas where adjacent fuels do not exist with 30 feet of the pile). It will be at the discretion of the burn boss to determine that the conditions are acceptable to pile burning to minimize surface fire spread outside of the pile. The timing and seasonality of pile burning must allow for moisture to be present. The conditions below are suggested forms of adequate moisture and conditions limiting surface spread to conduct pile burning (other conditions may exist and burn boss shall document conditions on-site prior to ignition.
 - a) Rain accumulations of greater than 0.1 inches within the previous 48 hours prior to planned ignition
 - b) Snow accumulation greater than ¼”
 - c) Frozen ground to minimize the duff and organic material from burning
 - d) Heavy frost (small piles, few number of piles that can be closely monitored)

Section 7 consultations were completed for the Chase Lake WMD as part of CCP process for Chase Lake National Wildlife Refuge and Wetland Management District (2008). The CCP states that management actions within the CCP should not adversely affect Threatened and Endangered Species or their habitats. These Section 7 Intra-Service consultations are an appendix to the CCP and are on file at the Refuge. The agency administrators are responsible for determining the need for additional consultation on an annual basis: 1) whether any new ESA listings or designations of critical habitat have occurred for species in the vicinity; 2) whether any new T&E surveys have revealed species locations in or near proposed projects; and 3) whether the projects conducted the previous year had the intended effects on T&E species and habitat. Prescribed burning in areas where threatened and endangered species exist will not be conducted if the prescribed fire will be detrimental to the species or any adverse impacts cannot be mitigated.

Cultural resources are scattered throughout the Complex as the area was heavily used by Native Americans, but is a relatively un-researched archeological area. Cultural resource records are maintained at Chase Lake Headquarters. Archeological clearance for prescribed burning will be obtained from the regional archeologist. All restrictions and recommendations will be adhered to.

- 2. Off-site
None.

B. Method and Frequency for Obtaining Weather and Smoke Management Forecast(s):

See LAP

C. Notifications:

See Appendix A. Maps for Notification Map and contacts.

ELEMENT 10: BRIEFING

A. Briefing Checklist; including, but not limited to: (additional items may be added)

See LAP

ELEMENT 11: ORGANIZATION AND EQUIPMENT

A. Positions:

Burn boss will determine if additional positions are required based on current weather, fire danger, fuel conditions and experience of crew. *See LAP (ICS 204).*

B. Equipment:

No equipment is required for pile burning, however it is strongly recommended that equipment is used to consolidate burned-down piles to efficiently maintain adequate heat in the pile to effectively burn down the 1000 hour fuels. *See LAP (ICS 204).*

C. Supplies:

Drip torches, torch fuel, hand tools & portable pump - equipment is readily available on engines.

ELEMENT 12: COMMUNICATIONS

Burn Boss will identify radio frequencies and communication procedures *See LAP.*

ELEMENT 13: PUBLIC AND PERSONNEL SAFETY, MEDICAL

A. Safety Hazards:

See LAP (ICS 202), Appendix D: Job Hazard Analysis for additional safety hazards and mitigation.

B. Mitigation: Measures Taken to Reduce the Hazards:

All crew members will wear proper PPE and adhere to the Ten Standard Fire Orders at all times. All crew members will be

briefed on LCES, potential Watch Out Situations, hazards and mitigation measures prior to ignition. Caution signs will be placed on the road to warn public. *See Appendix D: Job Hazard Analysis for mitigation of safety hazards.*

C. Emergency Medical Procedures:

On scene personnel will follow the IAP (ICS 206) Medical Plan. Further guidance on emergency procedures can be found in the Incident Response Pocket Guide (NFES 1077) and Chapter 1 of the Wildland Fire Incident Management Field Guide. (PMS 210).

D. Emergency Evacuation Methods:

See LAP (ICS 206) Medical Plan.

E. Emergency Facilities:

See LAP (ICS 206) Medical Plan.

ELEMENT 14: TEST FIRE

A. Planned Location:

A test fire will be ignited in a representative fuel type, in an area that can be easily controlled. This area will generally be on the downwind side of the unit (or the downwind side of a pile) and adjacent to an established control line or natural barrier. Analysis of the initial ignitions may provide adequate test fire results. An entire pile may be necessary to be used as a test fire (test pile) in order to adequately determine fuel receptiveness, consumption, smoke dispersion, and holding concerns.

B. Test Fire Documentation:

1. Weather conditions on site - Current weather conditions will be documented in Element 20: On-Site WX & Fire Behavior Obs. Table.
2. Test fire results - Burn Boss will verify that the prescribed fire behavior characteristics will meet management objectives and smoke dispersion is favorable before ignition may continue as planned. If test fire results are unfavorable, the test fire will be extinguished, and the prescribed fire will not continue until conditions are favorable. Test fire results will be documented in Element 20: Unit Log Table.

ELEMENT 15: IGNITION PLAN

A. Firing Methods:

1. **Techniques:** Piles will be ignited by hand or by mechanical means (terra-torch). To limit smoke production, piles will be ignited in the absence of a strong inversion using multiple ignition points per pile. In order to achieve a backing pile burn or to limit intensity, piles should be lit on the downwind side or at the top of the pile and let the fire ‘back’ into the pile. If intensity of the pile is not a concern (no overhead canopy), the most effect way to achieve consumption is to light the piles at the bottom of the pile on the upwind side.
2. **Sequences:** If burning piles along a road corridor, ignition sequence should be such to minimize smoke impacts to roadway and traffic. In addition, ignition sequence should minimize smoke impacts to fireline personnel, such as working into the wind.
3. **Patterns:** Multiple firing patterns may be used to ignite piles. There are no prohibited patterns and it will be at the discretion of the burn boss to determine which pattern(s) are to be used.

B. Devices:

Drip torches, fusees, propane weed burner, or terra-torch can be used to ignite piles within the unit.

C. Minimum Ignition Staffing:

An RXB3 with a minimum of one FFT2 will be used to ignite the pile(s).

ELEMENT 16: HOLDING PLAN

A. General Procedures for Holding:

The piles will be ignited under conditions that do not favor surface fire spread (saturated, snow covered, frozen, non-existent adjacent fuels) outside of the burning pile. A test fire (test pile) shall confirm these conditions exist. The burn boss and other fire personnel shall monitor the existing fuels within and outside the burn unit for any unwanted surface fire spread, creeping, spotting, torching or other undesirable fire behavior or smoke production. If conditions change that produce undesirable fire behavior, the burn boss shall have to the decision-making authority to change tactics in ignition patterns, holding techniques, and rearrange resources to minimize fire behavior outside the burning piles. General holding procedures to pile burning include:

1. Have sufficient holding resources available to minimize fire spread in the surface fuels. This may warrant an engine or other equipment being on site (with the election of staging the equipment or fully staffing).
2. Return to burned piles to re-pile remaining unburned debris (chunking/consolidating), to aid in complete combustion of materials.
3. Allowing sufficient time for piles to burn down before chunking or mop-up occurs.
4. Mop-up: the burn boss may elect to conduct mop-up activities on any portion of the pile unit. Complete mop-up is not a requirement of holding plan for the fire to be placed into patrol/monitor status. If the burn boss elects to conduct intense mop-up activities, additional personnel and or equipment may be needed, and the burn boss may elect to acquire those needs as long as the prescribed fire remains at a low complexity.
5. Monitor/Patrol (terms used interchangeably) status: as an alternative to intense mop-up activities, the burn boss may elect to place the burn piles into patrol status in order to achieve the objectives without spending substantial time to extinguish the pile(s). Patrol status does take longer to extinguish piles, but it comes with benefits such as limiting personnel exposure, as well as time and cost savings. If the burn boss elects to place the pile(s) unit in patrol status he/she should exercise diligence with monitoring weather forecasts to ensure both fire behavior and smoke do not impact the surrounding communities, infrastructure, or resources.

B. Critical Holding Points and Actions:

1. Road Corridors: Much of the pile burning will take place to roadways and associated infrastructure. The burn boss shall ensure holding activities ensure the roadway and associated infrastructure (power poles, junction boxes, communication boxes, culverts, signs, driveways, etc) do not become impacted by fire. In addition, it is the responsibility of the burn boss to minimize smoke impacts to roadways and traffic. This is addressed in detail in Element 19.
2. Private Land and Population Areas: in a few instances, there may be building sites, towns, or housing developments within proximity to the Refuge boundary. All non-FWS lands and improvements shall be protected from fire.
 - a. Unit Boundaries: Although the unit boundaries are large in nature, every effort should be made to keep the fire within the unit boundary.
 - b. Refuge Boundary: holding efforts must be made to keep all fire activities within the Refuge Boundary or on FWS-owned Lands. There are several locations where the state and private inholdings occur within the Refuge boundary. These areas shall be protected from fire.

- c. Historic and Archeological Resources – Burn boss should adequately address any cultural/historic/archeological or sensitive site in the operational briefing. Holding actions around these sites should be protected from fire as well as disturbance from holding activities. A resource advisor may be needed to properly identify and protect these sites.
- d. Special Designated Areas: The burn boss shall consult with other refuge staff (Management, Biology, etc) in order to ascertain any specific holding needs or precautions that should take place within any special designated areas.

See LAP (ICS 204) for additional Critical Holding Points and Actions.

C. Minimum Organization or Capabilities Needed:

1. Ignition Phase: The number of resources needed to adequately hold the piles during the ignition stage of the prescribed fire is outlined in the IAP, as referenced by Element 11 – Equipment and Organizations. These given organizations shall be used as a foundation for determining the holding structure. The number and resource type shall be followed but the actual deployment of resources shall be determined by the burn boss (or FIRB or holding specialist if those positions are filled)
2. Mop-Up Phase: The mop up stage of the prescribed fire may require more, less, or different resources than what was used in the ignition phase. This determination will be made by the burn boss. Factors to weigh may include the type of fuel giving off residual smoke, the amount of residual smoke, location of the majority of the mop up, re-burn potential, and the quantity of work needing attention.
3. Patrol Phase: It is likely that pile burning will incur a substantial amount of time in the patrol/monitor phase. In this case only one person is required for the monitoring phase of the prescribed fire.

See LAP (ICS 204) for minimum resources needed to implement the ignition, holding, and patrol phases of the burn.

ELEMENT 17: CONTINGENCY PLAN

A. Management Action Points or Limits: Contingency planning is the determination of initial actions and resources needed if the prescribed fire exceeds or threatens to exceed any element of the prescribed fire plan including: prescription parameters, unit boundary, project area boundary, acceptable smoke impacts, and fire effects within the unit. The contingency resources will be used to bring the planned project back to its intended design. The activation of the contingency plan or resources does not solely constitute an escaped prescribed fire or conversion to a wildfire. If any one of the circumstances below occurs, contingency resources should be considered:

1. **Project objectives are not being met:**
This situation is typically the result of inadequate burning conditions. If it appears that project objectives are not being met the Burn Boss will immediately evaluate current environmental and fire behavior conditions and determine if they are within prescription.
2. **Prescription Parameters:**
One or more environmental or fire behavior prescription parameters are exceeded due to unexpected changes in weather or other factors.
3. **Smoke Impacts:**
Changes in weather, burning conditions or other factors occur that cause imminent smoke problems such as poor visibility on public roadways, significant impacts to the general public, residences or communities, or smoke that

may have significant negative impacts to firefighters on the line.

4. Minimum Implementation Organization:

Implementation organization falls below minimum requirements due to injury, illness or any other factor.

5. Unit Boundary:

The fire exceeds the unit boundaries as defined on unit maps within this plan.

6. Contingency Resources:

Contingency resources as identified in this plan are not available prior to the start of ignition operations, or identified contingency resources become unavailable after ignition operations have commenced.

B. Actions Needed: In the event where any one or more of the above circumstance has been met, the burn boss will activate the contingency plan, and the following actions shall take place:

1. Project Objectives are not being met:

If current conditions are within prescription parameters, the Burn Boss will evaluate expected environmental conditions for later in the operational period. If environmental conditions are expected to improve the Burn Boss may elect to temporarily suspend further ignition operations and hold resources until conditions improve or cancel any further ignition operations for the operational period and begin with control and mop-up of the unit. If environmental conditions are not expected to improve ignition operations will be cancelled and control and mop-up of the unit will begin immediately.

2. Prescription Parameters:

All resources will work at keeping active fire contained within the unit boundaries. The Burn Boss will continue to direct resources as long as active fire remains within the unit. If environmental and/or fire behavior conditions are expected to fall back within acceptable parameters, the Burn Boss may elect to continue with ignition operations later in the operational period when prescription parameters can be met. If environmental and/or fire behavior conditions are not expected to fall back within acceptable parameters resources will work at control and mop-up of unit and no further ignition operations will commence unless deemed necessary for control of the unit by the Burn Boss.

3. Smoke Impacts:

If changes in weather conditions or other factors occur that cause imminent smoke problems, the following plan will be initiated:

- a. All attempts will be made to reduce smoke emissions from the burn as quickly as possible. This may include immediate shut down of the burn and suppression of any portion of the unit still on fire. Mop-up will also be initiated in an attempt to reduce smoke production to the furthest possible extent.
- b. If additional resources are required to extinguish the burn and eliminate further smoke production, they will be requested through State Radio and may include local fire departments, personnel from other refuges or other state and federal agencies in the area.
- c. Smoke signs will be placed on impacted roads, traffic control will be initiated, and the county sheriff or other law enforcement personnel may be called in through State Radio to assist with local traffic control, including temporary closure of area roads if deemed necessary. Locations and assignments of any traffic control personnel will be determined by the Burn Boss and law enforcement personnel immediately prior to assignment. Weather variables may exist during any potential smoke problem that would prevent one from predicting the best location for traffic control measures prior to the event itself.
- d. If it appears that smoke from the burn will impact local communities or other smoke sensitive locations all efforts will be made to identify the potential problem areas and inform the public so that local actions to reduce impacts such as closing up buildings and moving smoke sensitive individuals away from the impacted areas can occur.
- e. The burn boss will remain on scene until smoke problems are resolved or until relieved by an individual appointed by the line officer.

4. Minimum Implementation Organization:

The Burn Boss will temporarily halt ignition operations and evaluate the potential for successful completion of the burn with the current organization. At a minimum, the Burn Boss will consider current and expected fire behavior and weather,

condition of downwind control lines, adjacent fuels, experience level of current organization, and capability of on-site equipment. If the Burn Boss feels that the burn can continue safely and successfully, he/she may elect to continue with operations. If a determination is made that problems may arise with continuation, then operations on the unit will shift to control and mop-up. At no time may ignition operations continue if organization or equipment levels fall below 80% of the minimum requirements.

5. Unit boundaries:

Minor escapes if readily controlled by on-site resources will be extinguished and ignition activities may resume. If a significant escape occurs and has significant spread potential, holding forces will take immediate suppression actions while ignition crews will hold up and perform holding duties on the current prescribed fire. The controlled burn may be extinguished, and all resources moved to suppression responsibilities at the discretion of the Burn Boss. If fire burns onto adjacent private lands and the Burn Boss determines the fire will not be contained with on-site resources, the Burn Boss will contact State Radio and request contingency resources. At this time the Burn Boss, or highest qualified individual on scene, will assume the duties of incident commander.

6. Contingency Resources:

If contingency resources as identified in this plan are not available ignition operations may not commence. If identified contingency resources become unavailable after commencement of ignition operations the Burn Boss may choose to secure the unit until alternate contingency resources can be identified and their availability confirmed or may choose to finish ignition operations if that is the prudent decision to be made.

C. Minimum Contingency Resources and Maximum Response Time(s):

At a minimum, two (2) additional firefighters with a minimum qualification of FFT2 will be available as contingency resources. The availability of these resources shall be ascertained by the burn boss and documented prior to the ignition of the test fire. If these contingency resources are unavailable, the burn will not take place. The maximum response time of the contingency resources should be no more than 2 hours to the burn site.

ELEMENT 18: WILDFIRE DECLARATION

A. Wildfire Declared By:

The Burn Boss is responsible for determining if an escape has become a wildfire. An escaped fire will be declared a wildfire if:

1. If a slop over, spot fire, or multiple spot fires occur, and it is immediately obvious that the fire will not be able to be controlled with on-site resources.
2. If lives are threatened, private property, resources, or other structures are threatened, regardless of pre-determined time frames for control determination.
3. If a slop-over or multiple slop-overs occur on private lands outside the burn unit greater than 1 acre in size.
4. If a slop over/spot fire or multiple slop overs/spot fires occur in areas outside the burn unit on U.S. Fish and Wildlife Service Lands and are not able to be contained within 30 minutes with an appropriate management response from on-site resources.

B. IC Assignment:

The Incident Commander will be determined during the operational briefing. The Incident Commander will be at least ICT5 qualified. The Burn Boss will assume the duties of Incident Commander unless an alternate or trainee is identified during the operational briefing. IC will announce wildfire declaration over radio and instruct all resources to convert over to State Fire channel for communications.

C. Notifications:

Upon declaration of a wildfire the Burn Boss, or someone designated by the Burn Boss, will notify State Radio and request additional resources as needed. The Burn Boss or designated individual will also contact the North Dakota Dispatch Center

and the Agency Administrator.

D. Extended Attack Actions and Opportunities to Aid in Fire Suppression (Optional):

Extended attack is very unlikely in this project area due to the nature of the fuels involved. If extended attack is necessary, all resource orders will be placed through the North Dakota Dispatch Center. If containment operations are expected to extend into the next operational (burning) period a fully qualified Type 3 Incident Commander (ICT3) will be requested.

ELEMENT 19: SMOKE MANAGEMENT AND AIR QUALITY

A. Compliance:

All burning will be done in compliance within guidelines established by the North Dakota Department of Health.

B. Permits to be Obtained:

A permit to conduct open burning is required from the North Dakota State Department of Health, Environmental Health Section. The appropriate permit will be requested from the state, and required conditions adhered to. The request will be made prior to the prescribed fire season.

C. Smoke-Sensitive Receptors:

See LAP (ICS 204) and Appendix A. Maps for location of smoke sensitive areas/receptors.

D. Potential Impacted Areas:

Adjacent roads may have short term visibility issues. Fire crew or additional traffic control personnel will control any traffic until visibility clears up. Burn boss will coordinate ignition and utilize favorable combination of prescription parameters to minimize any impact to residence.

E. Mitigation Strategies and Techniques to Reduce Smoke Impacts:

Burns will be conducted within acceptable prescription parameters including wind speed and direction. Burning will not be conducted when an inversion is in place and is not predicted to break by mid-day. Burns will be conducted as quickly as possible, while adhering to unit objectives and safety guidelines. This burning technique typically produces a convective column that will move smoke off the ground and into the atmosphere where it is dispersed by transport winds further limiting smoke concerns in the area. Fire crew personnel will be rotated out of heavy impact areas as needed. Mop-up will be conducted by Holding and Ignition personnel immediately after ignition operations are concluded. Mop-up will continue until all smokes are extinguished or until the possibility of escape or smoke management problems are eliminated.

ELEMENT 20: MONITORING

A. Fuels Information Required and Procedures:

One-hour fuels are the sole carriers of fire throughout the project area. One-hour fuel moistures may be calculated to predict conditions based on weather observations and forecasts with the use of tables such as those found in Appendix B of the NWCG Fireline Handbook. *See Element 7: Prescription, B. Prescription Parameters.*

B. Weather Monitoring (Forecasted and Observed) Required and Procedures:

Environmental prescription parameters including temperature, relative humidity, and winds will be monitored prior to initiating any burn. Weather conditions will continue to be monitored throughout the burn as often as deemed necessary by the Burn Boss. Weather observations will typically be taken on site with a standard belt weather kit or a kestrel. The day's observations can be compared to those taken by the remote automated weather stations in the area. Unit Log (ICS 214) with

On-Site WX & Fire Behavior Observations is located in the IAP.

C. Fire Behavior Monitoring Required and Procedures:

Fire behavior will be monitored visually by the Burn Boss or other designee. Observations will typically focus on flame lengths. Unit Log (ICS 214) with On-Site WX & Fire Behavior Observations is located in the IAP.

D. Monitoring Required to Ensure that Prescribed Fire Plan Objectives are Met:

First order fire effects will be monitored and documented in the On-Site WX & Fire Behavior Obs. to determine results of the burn. This monitoring will predominately involve ocular observations to determine if fuels are being consumed in a manner that meets objectives in Element 5 of this plan. Long term monitoring will not be possible on all units, but representative plots may be established on random units to determine long term fire effects. Long term monitoring will be the responsibility of the refuge biologist. Unit Log (ICS 214) with On-Site WX & Fire Behavior Observations is located in the IAP.

E. Smoke Dispersal Monitoring Required and Procedures:

Smoke dispersal will be monitored by the Bun Boss or other person designated to do so. Smoke dispersal will be evaluated to determine its impacts on nearby roadways, residences and general public. Unit Log (ICS 214) with On-Site WX & Fire Behavior Observations is located in the IAP.

ELEMENT 21: POST-BURN ACTIVITIES

A. Post-Burn Activities that must be completed:

Mop-up will be conducted by Holding and Ignition personnel immediately after ignition operations are concluded. Mop-up will continue until all smokes are extinguished or until the possibility of escape or smoke management problems are eliminated. Remaining burning materials within this area will be extinguished with and hand tools, equipment, and water (if determined appropriate by the burn boss). Traffic control operations will conclude as soon as mop-up is completed and all smoke concerns to roadways have been eliminated. Caution Smoke signs may be left overnight if Burn Boss deems necessary.

No rehabilitation to the burn unit should be necessary. Soft soils may become significantly rutted due to equipment travel. Fence posts and wire may also need repairs. Any equipment rehabilitation needs will be addressed during the AAR and completed on scene if possible.

An After Action Review (AAR) should be conducted after every operational period. This may not be possible until the next day. Guidelines for an effective AAR can be found in the Incident Response Pocket Guide.

The Burn Boss will be responsible for immediately notifying local dispatch of fire status and briefing agency administrator as soon as practical. Burn boss will monitor and declare the fire out 24 hours after last smoke is cited. Burn boss may select a crew member to monitor and declare fire out if burn boss is absent.

Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

PRESCRIBED FIRE PLAN APENDICIES

Appendix A: Maps: Vicinity, Project/Ignition Units, Contingency, Ignition Sequence, Smoke Trajectory

Appendix B: Technical Reviewer Checklist

Appendix C: Complexity Analysis

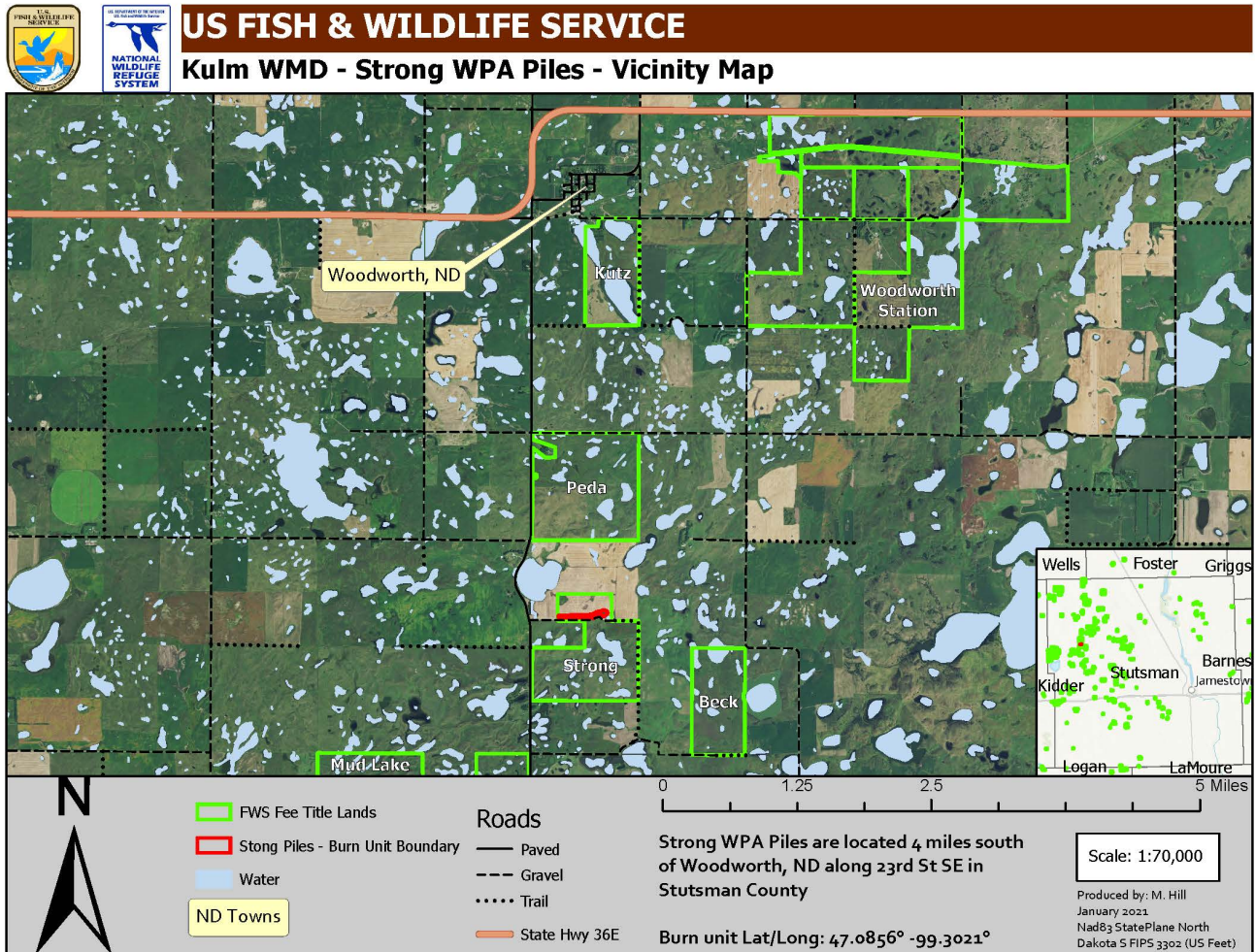
Appendix D: Agency-Specific Job Hazard Analysis or Risk Assessment

Appendix E: Fire Behavior Modeling Documentation or Empirical Documentation

Appendix F: Clearances and Permits/NEPA

Appendix G: Incident Action Plan

APPENDIX A: VICINITY MAP



APPENDIX A: PROJECT (IGNITION UNITS) MAP

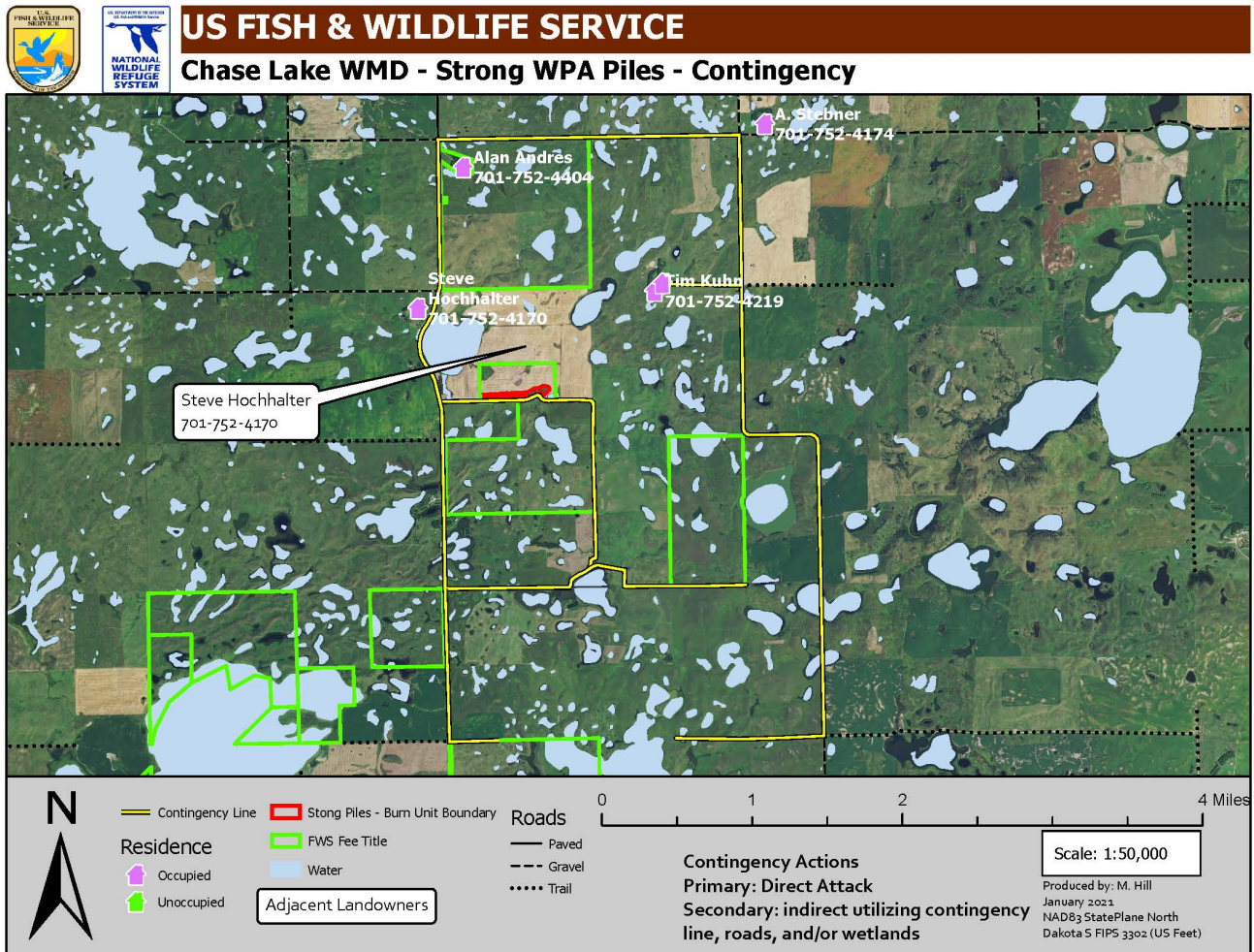


US FISH & WILDLIFE SERVICE

Chase Lake WMD - Strong WPA Piles - Project Map 8 Acres



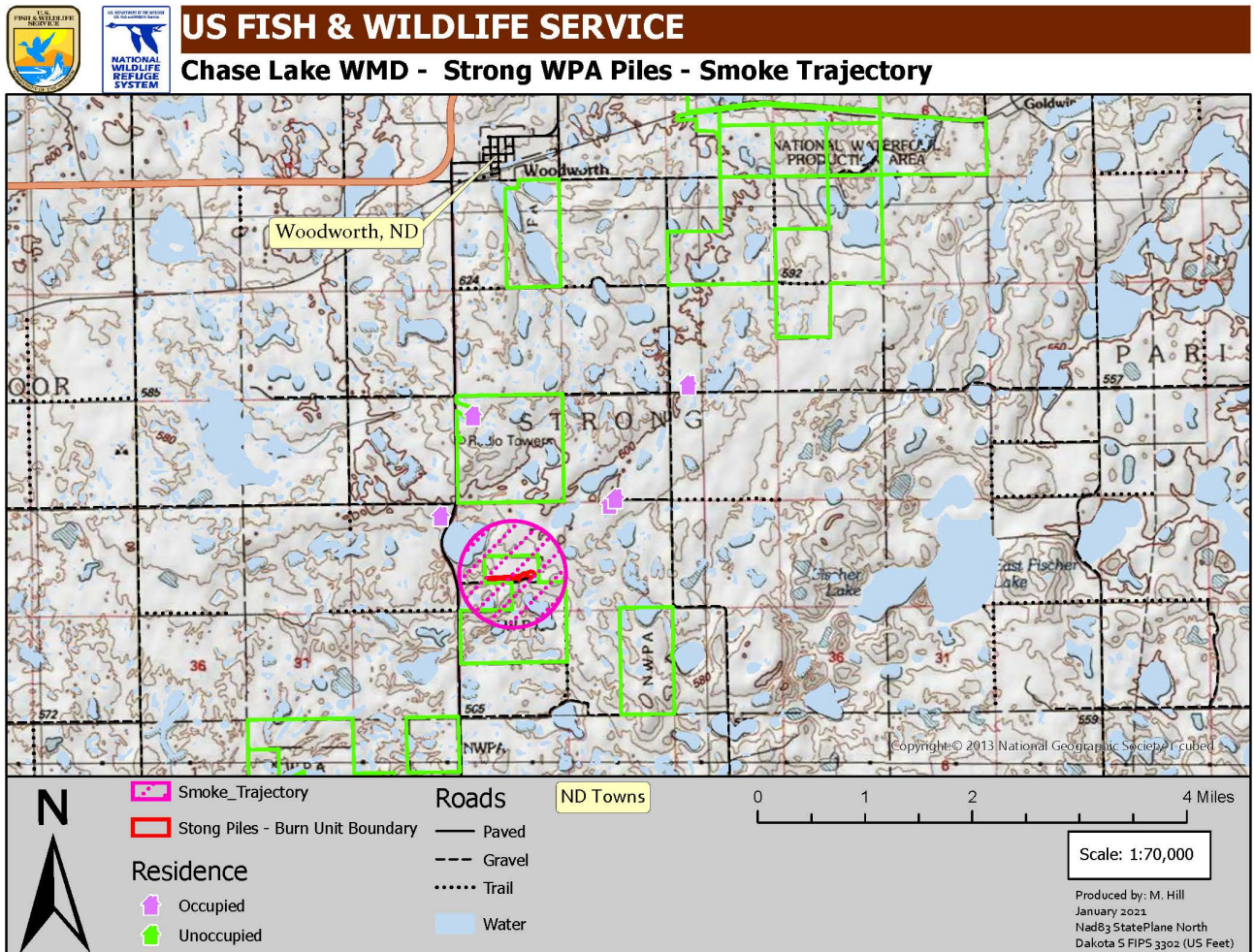
APPENDIX A: CONTINGENCY MAP



APPENDIX A: IGNITION SEQUENCE MAP



APPENDIX A: SMOKE TRAJECTORY MAP



APPENDIX B: TECHNICAL REVIEWER CHECKLIST

APPENDIX B. TECHNICAL REVIEWER CHECKLIST - USFWS R6

Administrative Unit	Burn Unit	Burn Subunit(s)	Burn Dates		Review Date	Valid Through	Reviewed By
			From	To			
ND-CLR	Strong WPA	Burn Piles	Jan. 1	Dec. 31	1/15/2021	12/31/2026	Jeff Dion
Prescribed Fire Elements			S / U		Comments		
1	Signature Page		S				
2	GO/NO-GO Checklists		S				
3	Complexity Analysis Summary		S				
4	Description of the Prescribed Fire Area Must Include:						
	A.	Physical Description:					
		* Location	S				
		* Size	S				
		* Topography	S				
		* Project Boundary	S				
	B.	Vegetation / Fuels Description:					
		* Describe the structural and composition of the vegetation type(s) and fuel characteristics	S				
		* Describe the percent of the unit composed of each vegetative type and the corresponding fuel model(s).	S				
		* Identify conditions (fuels, slope, aspect) in or adjacent to boundaries that may be a potential threat for escaped fire	S				
		* Identify any abiotic conditions like airshed, climate, soils, etc. as appropriate.	S				
	C.	Description of Unique Features and Resources:					
		* Plan adequately addresses T&E species concerns both within burn unit and adjacent	S				
		* Plan adequately addresses Archeological, Cultural, or Historical issues both within burn unit and adjacent	S				
	D.	Maps (all maps to include: Title; Name of Preparer(s); Date; North Arrow; Scale; & Legend) (Appendix A)					
		* Vicinity Map	S				
		* Project Map	S				
		* Contingency Planning Map (FWS R6 Required)	S				
		* Ignition Sequence Map (FWS R6 Required)	S				
		* Smoke Trajectory Map (FWS R6 Required)	S				
		** Optional Maps					

Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

5	Goals & Objectives		S	
6	Funding		S	
7	Prescription			
	Must Include:			
	A. Acceptable ranges of fire behavior and environmental conditions		S	
	B. Fire Behavior Discussion		S	
	C. Predicted Fire Behavior Outside Project Boundary		S	
	D. Modeled		S	
8	Scheduling		S	
9	Pre-Burn Considerations			
	Must Include:			
	A. Site Preparation		S	
	B. Spot Weather Forecast		S	
	C. Required Permits		S	
	D. Pre-Burn Contact List		S	
10	Briefing		S	
11	Organization & Equipment			
	Must Include:			
	A. Positions, Minimum Qualifications, Equipment, Supplies		S	
	B. Organization Chart(s) Included		S	
12	Communication		S	
13	Public / Personnel Safety & Medical Procedures			
	Must Include:			
	A. PPE		S	
	B. Safety Hazards / Mitigation		S	
	C. Emergency Medical Plan Included		S	
	D. Job Hazard Analysis (JHA) Attached (Appendix D)		S	
14	Test Fire			
15	Ignition Plan			
	Must Include:			
	A. Ignition Plan(s) Description		S	
	B. Ignition Sequencing Map(s) Attached (FWS R6 required)		S	

16	Holding Plan			
	Must Include:			
	A.	Critical Control Holding Points Identified	S	
	B.	Resources	S	
	C.	Water Resupply	S	
	D.	Mop-up Standards in Quantifiable tems (FWS R6 required)	S	
E.	Quantifiable Patrol Standards Identified (FWS R6 required)	S		

17	Contingency Plan			
	Must Include:			
	A.	Trigger Points Established	S	
	B.	Identification of additional resources & response time(s)	S	
	C.	Verify / Document Availability	S	
D.	Procedures to be followed. (FWS R6 Required)	S		

18	Wildfire Conversion			
	Must Include:			
	A.	Who has authority to declare a wildfire	S	
	B.	Actions to be taken	S	
C.	Communications	S		

19	Smoke Management & Air Quality			
	Must Include:			
	A.	Permit Requirements	S	
	B.	Sensitive Receptors Identified		
		* Smoke Trajectory Map (FWS R6 Required)	S	
C.	Modeling Outputs Included (if required)			
D.	Traffic Control Addressed (FWS R6 Required)	S		

20	Monitoring			
	Must Include:			
	A.	Minimum specify weather, fire behavior & fuels info	S	
B.	Identifies monitoring procedures inc. who and when	S		

21	Post-burn Activities			
	Must Include:			
	A.	Rehabilitation Standards are Established	S	
B.	Criteria to declare burn out and by whom	S		

Appendices			
A.	Maps:	S	
B.	Technical Reviewer Checklist	S	
C.	Complexity Analysis	S	
D.	Job Hazard Analysis	S	
E.	Fire Behavior Modeling Documentation	S	
F.	NEPA Checklist & Environmental Action Statement	S	

S = Satisfactory
U = Unsatisfactory

Recommended For Approval

Not Recommended For Approval



Technical Reviewer

RXB2 Yes

Qualifications & Currency (Y/N)

6/4/2024

Date

Approval is recommended subject to the completion of all requirements listed in the comments section, and / or on the Prescribed Fire Plan.

APPENDIX C: COMPLEXITY ANALYSIS

Strong WPA Piles		Quantity	Significance	Values Description: Describe the identified off-site, on-site, and political values
V a l u e s	On-Site	Nominal	Low	<i>Fences are the only on-site values.</i>
	Off-Site	Nominal	Mod	<i>Adjacent to the burn unit is private property. This private property includes upland/grassland, however given the constraints for the pile burning prescription parameters, the same conditions will exist on adjacent private lands, and therefore will not sustain surface fire spread in the 1 hour fuels.</i>
	Public/Political Interest	Few	Low	<i>The prescribed fire will be visible to the public and will generate a low amount of public interest.</i>

Element	Preliminary Risk	Risk Rating Descriptors	Agency Administrator/ Preparer Discussion Completed
Safety	Low	<ul style="list-style-type: none"> • Safety issues and hazards are easily identifiable, addressed in briefings, and managed. • Minimal organization produces little exposure of personnel to hazards. • Adverse impacts to public health and safety are unlikely. • Activities are high frequency/low risk. • Fatigue and exposure to hazards are limited. • Standard safety briefings and attention to Lookouts, Communications, Escape Routes, and Safety Zones (LCES) are sufficient. <p><i>Cold/wet weather issues can be mitigated through use of warm vehicles and appropriate PPE.</i></p>	Yes
Fire Behavior	Low	<ul style="list-style-type: none"> • Terrain is mostly flat or the slope and aspect are uniform, leading to a relatively unvarying fire. • Winds, fuel moisture, microclimate, and other fire conditions are relatively uniform and are not conducive to active fire spread. • Fire behavior is highly predictable. • Fire spread beyond the immediate ignition area(s) is not likely to occur or contribute to any control problems. <p><i>Fuels are uniform in nature as they are piled woody debris. Adequate clearance between existing piles exists to limit pile-to-pile spread. Fire behavior is highly predictable. Little to no torching or vertical movement is anticipated.</i></p>	Yes
Resistance to Containment	Low	<ul style="list-style-type: none"> • Ranges from no potential to a likelihood of few mechanisms such as spot fires, slopovers or fire creeping, each comprising small areas that are readily detected, accessed, and controlled by holding resources available on the prescribed fire. • No ladder fuels or concentrations are near critical holding points. • Ignition procedures do not create intense fire behavior. • Probability of ignition in fuels outside the unit is low. • Local drought and or fire danger indices are expected to be low to moderate. <p><i>Potential for escape is low due to the environmental conditions required for pile burning.</i></p>	Yes

Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

Element	Preliminary Risk	Risk Rating Descriptors	Agency Administrator/ Preparer Discussion Completed
Ignition Procedures and Methods	Low	<ul style="list-style-type: none">• An unexpected or adverse event is unlikely and coordination of firing sequence, patterns and timing is not critical to meet project objectives.• Specific fire intensities or rate of spread (ROS) are not critical for meeting resource objectives. <hr/> <p><i>Piles will be ignited by hand via hand ignition or mechanical ignition devices. Firing sequence and timing is not critical to meet project objectives. The entire project area is readily visible to the Burn Boss.</i></p>	Yes

Element	Preliminary Risk	Risk Rating Descriptors	Agency Administrator/ Preparer Discussion Completed
Prescribed Fire Duration	Low	<ul style="list-style-type: none"> • Ignition operations should be accomplished within one operational period. • Burn unit is small in size and residual burning is not expected after primary burn out of the unit. • Decrease in seasonal severity is expected. • Short time frame does not require special logistical support. • Mop-up is minimal or none is anticipated/planned. <p><i>Ignition anticipated to take one shift. Smoldering and monitoring phase may last several days due to the nature of heavy fuels in the piles</i></p>	Yes
Smoke Management	Low	<ul style="list-style-type: none"> • Smoke concerns are generally few or easily mitigated. • Smoke will be short-lived or inconspicuous. • Exposure to smoke by firefighters and the public will be minimal. • Few concerns exist about smoke from nearby communities. <p><i>Smoke approval must be attained from the ND Department of Environmental Quality, Division of Air Quality, prior to ignition.</i></p>	Yes
Number and Dependence of Activities	Low	<ul style="list-style-type: none"> • Activities are mostly independent from each other. • Coordination of activities is simple and straightforward. • The project does not involve another land management agency or jurisdiction. <p><i>Simple organization structure and supervision in addition to location of the piles being along the road system shall ease the dependence upon other activities (logistics).</i></p>	Yes
Management Organization	Low	<ul style="list-style-type: none"> • A small number of qualified people are required to implement the prescribed fire. • A single level of supervision is all that is needed (i.e. Burn Boss plus lighters and holders). <p><i>Pile burning only requires a few people, with the Burn Boss having direct supervision over the entire organization</i></p>	Yes
Treatment/ Resource Objectives	Low	<ul style="list-style-type: none"> • Few if any issues are present that hamper meeting treatment resource objectives. • Few or no adverse impacts are expected if resource objectives are not met. • No critical holding points. <p><i>The 2 objectives are achievable by following the constraints and prescription.</i></p>	Yes
Constraints	Low	<ul style="list-style-type: none"> • Constraints exist with little impact on implementing the prescribed fire or achieving objectives. 	Yes

Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

Element	Preliminary Risk	Risk Rating Descriptors	Agency Administrator/ Preparer Discussion Completed
Constraints	Low	<i>Environmental constraints such as rain, snow, and a forecast that maintains snow cover.</i>	Yes
Project Logistics	Low	<ul style="list-style-type: none"> • Minimal logistical support is needed to safely meet prescribed fire objectives. • No special equipment, support or communications needs are required. <i>Logistics are simple, straight forward, and will not constrain the project.</i>	Yes

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Safety	Low	Low	<ul style="list-style-type: none"> • Safety issues and hazards are easily identifiable, addressed in briefings, and managed. • Minimal organization produces little exposure of personnel to hazards. • Adverse impacts to public health and safety are unlikely. • Activities are high frequency/low risk. • Fatigue and exposure to hazards are limited. • Standard safety briefings and attention to Lookouts, Communications, Escape Routes, and Safety Zones (LCES) are sufficient. <p><i>Safety issues are mitigated through a proper briefing, adhering to the topics in the JHA.</i></p>	<p>IAP Front Cover: Briefing Checklist IAP ICS 202: Safety Hazards Appendix D: Job Hazard Analysis Element 13: Public & Personnel Safety, Medical</p>
Fire Behavior	Low	Low	<ul style="list-style-type: none"> • Terrain is mostly flat or the slope and aspect are uniform, leading to a relatively unvarying fire. • Winds, fuel moisture, microclimate, and other fire conditions are relatively uniform and are not conducive to active fire spread. • Fire behavior is highly predictable. • Fire spread beyond the immediate ignition area(s) is not likely to occur or contribute to any control problems. <p><i>Fuels are uniform in nature as they are piled woody debris. Adequate clearance between existing piles exists to limit pile-to-pile spread. Little to no terrain features exist. Fire behavior is highly predictable. No torching or vertical movement is anticipated as there are no aerial fuel models present. Snow cover or other forms of moisture (constraints) preventing the grass fuels from carrying surface is required.</i></p>	<p>Element 7: Prescription IAP: Prescription Parameters IAP: Page 10 Element 9: Pre-burn Considerations and Weather</p>

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Resistance to Containment	Low	Low	<ul style="list-style-type: none"> • Ranges from no potential to a likelihood of few mechanisms such as spot fires, slopovers or fire creeping, each comprising small areas that are readily detected, accessed, and controlled by holding resources available on the prescribed fire. • No ladder fuels or concentrations are near critical holding points. • Ignition procedures do not create intense fire behavior. • Probability of ignition in fuels outside the unit is low. • Local drought and or fire danger indices are expected to be low to moderate. <p><i>The most likely cause of an escape is a long duration warming drying trend in which the adjacent fuels become available for surface fire spread. This is addressed in the plan.</i></p>	<p>IAP Front Cover: Briefing Checklist IAP ICS 202: Safety Hazards Appendix D: Job Hazard Analysis Element 13: Public & Personnel Safety, Medical</p>
Ignition Procedures and Methods	Low	Low	<ul style="list-style-type: none"> • An unexpected or adverse event is unlikely and coordination of firing sequence, patterns and timing is not critical to meet project objectives. • Specific fire intensities or rate of spread (ROS) are not critical for meeting resource objectives. <p>An adverse event would cause a delay in achieving the objectives, however it would not cause a major interruption of the operation. A simple firing plan with a small number of personnel is needed to achieve the objectives.</p>	<p>Element 15: Ignition Plan</p>

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Prescribed Fire Duration	Mod	Mod	<ul style="list-style-type: none"> • Active ignition, fire spread, and patrol is expected to occur for several operational periods. • Some residual burning (heavy fuel smoldering, stump holes, etc.) is expected to occur for several days after the primary burn out of the unit. • Mop-up and patrol is typical with minimal resource and equipment needs. • Primary holding phase is expected to be completed within reasonably predictable local weather forecasts. • The prescribed fire depends on accurate forecasts through three days. <p><i>Ignition is not anticipated to take more than one shift. Holding will be minimal due to the environmental constraints required. Mop-up is not anticipated, again due to the environmental constraints required. Monitoring and patrol, however may take several days for the heavy fuels to adequately burn down to a point where the objectives are achieved. This will be a passive activity, only requiring a daily check of the smoldering phase, and maybe a little bit of consolidation of the remaining burning material. All these activities described in the patrol and monitoring phase can be achieved with one person.</i></p>	<p>Element 8: Scheduling Element 16: Holding Plan</p>
Smoke Management	Low	Low	<ul style="list-style-type: none"> • Smoke concerns are generally few or easily mitigated. • Smoke will be short-lived or inconspicuous. • Exposure to smoke by firefighters and the public will be minimal. • Few concerns exist about smoke from nearby communities. 	<p>Element 19: Smoke Management Appendix A: Maps (Smoke Trajectory) Element 8A: Implementation Schedule Element 14B: Test Fire Documentation Element 15A: Ignition Techniques/Sequences/Patterns</p>

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
			<p><i>Although smoke management is generally more difficult in the winter months, in which this plan is written for, the volume of smoke produced is very small, and easily dispersed even with the smallest amount of wind. Due to the remote nature of the pile locations, no smoke impacts are anticipated.</i></p>	<p>Element 17A3: Smoke Impacts Element 17B 3: Smoke Impacts Element 20E: Smoke dispersal monitoring and procedures Element 20A: Post Burn Activities</p>
Number and Dependence of Activities	Low	Low	<ul style="list-style-type: none"> • Activities are mostly independent from each other. • Coordination of activities is simple and straightforward. • The project does not involve another land management agency or jurisdiction. <p><i>The number and dependence of activities for pile burning is relatively independent of one another, due to the moisture/snow required to prevent the piles from spreading into the grass fuels adjacent</i></p>	<p>Element 15: Ignition Plan Element 16: Holding Plan</p>

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Management Organization	Low	Low	<ul style="list-style-type: none"> A small number of qualified people are required to implement the prescribed fire. A single level of supervision is all that is needed (i.e. Burn Boss plus lighters and holders). <p><i>A minimum of 2 people are required to safely implement this plan. In-person communications should suffice, and a single level of supervision is needed to oversee all operations.</i></p>	<p>Element 11: Organization and Equipment IAP: ICS 204 IAP: IAP 207</p>
Treatment/Resource Objectives	Low	Low	<ul style="list-style-type: none"> Few if any issues are present that hamper meeting treatment resource objectives. Few or no adverse impacts are expected if resource objectives are not met. No critical holding points. <p><i>The two objectives are relatively easy to achieve if following the constraints and the prescription parameters in the plan.</i></p>	<p>Element 5: Objectives IAP: ICS 202 Element 7A1: Describe how fire behavior will meet objectives Element 14B2: Test fire results Element 17A1: Project objects are not being met Element 17B1: Project objectives are not being met Element 20D: Monitoring required to ensure that prescribed fire plan objectives are met</p>
Constraints	Low	Low	<ul style="list-style-type: none"> Constraints exist with little impact on implementing the prescribed fire or achieving objectives. <p><i>The most important constraint is a weather requirement. This plan requires sufficient moisture to be present on the ground to inhibit the grass fuels from carrying a surface fire on the day of ignitions, as well as through the smoldering and patrol phase, which may take several days.</i></p>	<p>Element 8C: Constraints Element 9A 1: On-site Pre-burn considerations.</p>
			<ul style="list-style-type: none"> Minimal logistical support is needed to safely meet prescribed fire objectives. No special equipment, support or communications needs are required. 	<p>Element 11: Organization and</p>

Administrative Unit Name: Chase Lake WMD – Stutsman County

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Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Project Logistics	Low	Low	<i>No logistical support will be needed for this project. Supplies are readily available from the station fire cache and no special transportation or storage needs exist. Ignition and burnout will be completed in one day. The primary potential logistical problem that may affect ignition completion is the possibility of equipment breakdown.</i>	Element 11: Organization and Equipment Element 16: Holding Plan

Element	Post-Plan Risk	Technical Difficulty	Rating Descriptors
Safety	Low	Low	<ul style="list-style-type: none"> • No special actions are required to mitigate potential minor accidents or injuries identified in the risk assessment/Job Hazard Analysis (JHA). • Safety concerns can be easily mitigated through LCES. • No preparation work or special project design features are required. <p><i>Standard risk management mitigation measures will alleviate the safety concerns, which are identified in the JHA</i></p>
Fire Behavior	Low	Low	<ul style="list-style-type: none"> • Standard fire safety precautions are adequate to ensure personnel safety. • No fire behavior variations are expected and numerous barriers to fire spread exist. • The number, size or likelihood of spot fires and slopovers is minimal and do not require additional suppression resources. • Fire behavior is such that holding forces can easily control possible spot fires and slopovers using direct attack tactics. • No on-site operational fire behavior specialists are required. <p><i>No surface fire spread is anticipated in the fuels adjacent to the piles. No fire behavior modeling was used, due to the grass fuels not being available to support surface fire spread.</i></p>
Resistance to Containment	Low	Low	<ul style="list-style-type: none"> • Minimal holding resources are involved in the holding operation. • The burn unit and project area is easily accessible to the holding resources identified in the plan. • Minimal line width required to contain expected fire spread. • Minimal site prep is required. <p><i>Only two personnel are required to implement the ignition phase, and only one person is needed to monitor the piles after the ignition phase is complete.</i></p>
Ignition Procedures and Methods	Low	Low	<ul style="list-style-type: none"> • There is no need for special firing equipment, techniques, or patterns. • Firing procedures are simple and ignition team is small. • Use of only one type of ignition device is planned. • The ignition pattern requires minimal supervision of the lighters to achieve project objectives and manage safety concerns. • Communications are easily maintained with a single tactical frequency. • The entire project area is readily visible to the Firing/Burn Boss. <p><i>No specialized equipment is needed to implement the project. Small project area.</i></p>


Element	Post-Plan Risk	Technical Difficulty	Rating Descriptors
Prescribed Fire Duration	Mod	Low	<ul style="list-style-type: none"> • Ignition and mop-up operations are usually completed in 1 to 2 operational periods. • Mop-up and patrol is typical with minimal resource and equipment needs. • Standard press release is sufficient for public notification. <p><i>Ignition should only take one shift, monitoring will occur over several shifts. Even though the monitoring will occur over multiple days, only one person is needed for a daily check of the piles, and to possibly consolidate the piles with equipment.</i></p>
Smoke Management	Low	Low	<ul style="list-style-type: none"> • ERTs and SMTs are simple, routine and straightforward to achieve and will provide desirable smoke management outcomes. • Some limitations may be present in the plan. • Wind and dispersion parameters are not constrained. • No sensitive receptors exist. • Minimal coordination with air quality officials is required. <p><i>A minimal volume of smoke will be produced.</i></p>
Number and Dependence of Activities	Low	Low	<ul style="list-style-type: none"> • Minimal difficulty in coordinating the required activities. • Holding and lighting are loosely dependent on each other. • Coordination problems or communication failures or issues will not affect the completion of the project. • No to very few pre-burn considerations are required. <p><i>Coordination is straight forward, no active holding is needed because the adjacent fuels to the piles will not be able to support surface fire spread.</i></p>
Management Organization	Low	Low	<ul style="list-style-type: none"> • All team members are available within the local unit and are familiar with local factors affecting project implementation. • Several qualified personnel are available. • The operation is carried out employing a small burn crew. • There is no special pre-burn preparation organization is required. <p><i>One level of supervision is required, at the RXB3 level or higher.</i></p>

Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

Element	Post-Plan Risk	Technical Difficulty	Rating Descriptors
Treatment/ Resource Objectives	Low	Low	<ul style="list-style-type: none"> • There are few resource objectives to meet. • Measures to achieve the objectives are easy to complete and there are few or no restrictions on techniques. • There are few or no restrictions on techniques and prescription parameters. • Basic monitoring of fire behavior and weather is needed to determine if prescribed fire objectives are being met. • Many other opportunities will exist to meet objectives in a given year. • Pre-burn site preparation is not required to meet resource objectives.
Constraints	Low	Low	<ul style="list-style-type: none"> • Constraints are easily accommodated and do not increase the difficulty of completing the project or achieving objectives. • Required weather and fuel conditions are locally very common.
Project Logistics	Low	Low	<ul style="list-style-type: none"> • No specific logistic function is required and the local unit will handle their own support needs. • Project is nearby and easily accessible. • Local cache can supply the needs of the prescribed fire.

APPENDIX D: AGENCY-SPECIFIC JOB HAZARD ANALYSIS OR RISK ASSESSMENT

 <p>JOB HAZARD ASSESSMENT (JHA)</p> <p>Activity: Prescribed Fire & Fire Suppression</p> <p>(Certification of Hazard Assessment – 29 CFR 1910.133)</p>		<p>STATION: Chase Lake WMD</p> <p>DATE PREPARED: February 2016</p> <p>PREPARED BY: Jason Wagner</p> <p>CERTIFIED BY:</p>
		<p>PERSONAL PROTECTIVE EQUIPMENT REQUIRED:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Hearing - ANSI approved hearing protection (85 decibels and higher) <input checked="" type="checkbox"/> Eyes/Face – Approved safety glasses/goggles, neck shroud <input checked="" type="checkbox"/> Foot – ANSI approved 8” leather boots with lug soles <input checked="" type="checkbox"/> Hand – leather gloves <input checked="" type="checkbox"/> Head – ANSI approved hard hat w/chin strap, DOT approved helmet <input checked="" type="checkbox"/> Leg – Nomex pants <input checked="" type="checkbox"/> Body/Other – Nomex pants/shirt, fire shelter, insect repellent
BASIC JOB STEPS	HAZARDS	SAFE JOB PROCEDURE
Break work down to basic elements (such as remove, lift, carry, stop, start, apply, return, squeeze, weld, saw, walk, hold, grind, place, etc.). Describe what is done, not how it is done.	For each job step, state what accident could occur and/or what hazard is present. To determine this, ask yourself: Can the person fall; overexert; be exposed to burns, fumes, rays, gas, etc.; hit against; be struck by; in contact with; be caught in, on, or between?	State how each element of work should be performed to prevent the accident or avoid the hazard. What should the person do or not do? Be specific. What precautions should be taken? Ask yourself: What can I do to eliminate, modify, guard, identify, or protect against the potential hazard or accident, including such things as how the worker stands, holds, uses, carries, dresses, etc.?
General Prescribed Fire and Fire Suppression	Serious Injury or Death - apply to all hazards	Adhere to the STANDARD FIRE ORDERS, WATCH OUT SITUATIONS and LCES
	Entrapment	<ul style="list-style-type: none"> ● Observe STANDARD FIRE ORDERS, WATCH OUT SITUATIONS, AND LCES. ● Maintain Situational Awareness (SA) ● Annual entrapment avoidance & fire shelter deployment training.
	Snags, falling trees, debris rolling downhill	<ul style="list-style-type: none"> ● Post lookouts. ● Fall hazardous trees and snags or flag and direct traffic around hazardous trees. ● Alert crews about rolling debris.
	Burns Radiant Heat	<ul style="list-style-type: none"> ● Use standard PPE. (Sleeves down, gloves on, safety glasses on, neck shrouds down) ● Wear and maintain fire shelter properly ● Watch for burned-out stump holes

BASIC JOB STEPS	HAZARDS	SAFE JOB PROCEDURE
General Prescribed Fire and Fire Suppression (continued)		<ul style="list-style-type: none"> ● Flag or otherwise identify hazardous areas ● Work at a suitable distance from fire. ● No patches or decals are allowed on nomex, fire shirts, or tee-shirts.
	Poor visibility due to smoke or darkness	<ul style="list-style-type: none"> ● Refer to STANDARD FIRE ORDERS ● Use headlamp ● Keep 10-foot spacing between people ● Reduce rate of travel – slow down ● Scout terrain during daylight or acquire a good map & talk with someone familiar with the area. ● Consider fire spread potential, values at risk versus safety.
	Inhalation (dust, smoke, carbon monoxide)	<ul style="list-style-type: none"> ● Use bandana and safety glasses/goggles ● Avoidance to prolonged exposure; work upwind ● Training on CO and smoke hazards ● Rotate personnel out of smoke as often as possible.
	Fatigue	<ul style="list-style-type: none"> ● Limit shifts to 12 hours (when possible) ● Set a reasonable work pace ● Allow adequate rest breaks while on the fireline ● Provide showers and comfortable eating areas ● Supply adequate nutrition and water ● Provide quiet, shaded sleeping areas away from noise and dust. Sign & rope off sleeping areas ● Locate rest and recuperation sites away from running fire, falling trees & snags, rolling rocks, moving vehicles, heliports, helispots, etc. ● Alert personnel to local elements ● Standard First Aid Training ● Comply with established Work/Rest Guidelines (2:1 work/rest ratio, 1 day off in 14 days worked, 2 days off in 21 days worked)
	Snakes & Insects	<ul style="list-style-type: none"> ● Insects ● –use standard PPE ● –fasten pant cuffs to boot top ● –repellents ● –inspect body & clothing twice daily; pay special attention to crevices and creases ● Snakes ● –leave them alone ● –keep alert
	Poisonous Plants	<ul style="list-style-type: none"> ● Use standard PPE

BASIC JOB STEPS	HAZARDS	SAFE JOB PROCEDURE
<p>General Prescribed Fire and Fire Suppression <i>(continued)</i></p>	<p>Heat-related illnesses: heat cramps heat exhaustion heat stroke</p>	<ul style="list-style-type: none"> ● Change clothing that come in contact with poisonous plants ● Wash exposed skin ● Avoid smoke of burning poisonous plants ● Learn to identify poisonous plants <hr/> <ul style="list-style-type: none"> ● Reduce fatigue (#1-6) ● During period of continued extreme temperatures (90° +) crew members must be monitored closely for signs of “heat syndrome” – heat cramps, exhaustion and stroke. ● Acclimatize crewmembers to hot weather activity gradually ● Set a moderate work pace and gradually slow down as temperatures increase. Schedule the hardest work during the cooler morning & evening hours ● Keep plenty of water available & encourage crewmembers to drink it. Monitor canteens to ensure that crewmembers are getting their needed liquids. Thirst alone will not make a person drink enough water. Do not allow water for drinking to run out before you order more ● Crew members may want to eat less. High protein and other foods increase metabolic heat production and water loss ● Have table salt readily available during meals, but <i>do not</i> issue salt tablets ● Prevent sunburn ● Encourage crewmembers to keep their hardhats on in the sun. Hats provide a very effective air conditioning system ● Encourage crew members to bathe or wash thoroughly each day to keep their pores & hair clean. Dirty, clogged skin and matted hair slow down heat dissipation ● As the temperature increases, give crewmembers frequent rest period of at least 15 minutes. Encourage them to relax in cool locations if at all possible ● No synthetic clothing should be worn. T-shirts and other under garments should be 100% cotton
	<p>General Prescribed Fire and Fire Suppression <i>(continued)</i></p>	<p>Lightning & Thunderstorms</p>

BASIC JOB STEPS	HAZARDS	SAFE JOB PROCEDURE
	Lightning & Thunderstorms <i>(continued)</i>	away from wire fences, telephone line, and electrically conductive elevated objects <ul style="list-style-type: none"> ● Avoid tops of ridges, hilltops, wide-open spaces, outcrops of rocks and sheds or shelters in exposed locations ● Get away from horses and stock ● Turn off generators & electrical equipment
Pump Operation (portable pump)	Slips and falls	<ul style="list-style-type: none"> ● Use extra caution working in wet areas
	Noise	<ul style="list-style-type: none"> ● Use PPE
	Broken hoses	<ul style="list-style-type: none"> ● Shut down and replace broken hoses
	Flying debris	<ul style="list-style-type: none"> ● Use PPE ● Avoid excessive nozzle pressure and keep nozzles a safe distance from the ground
	Lifting strains	<ul style="list-style-type: none"> ● Lift with two people ● Use proper lifting techniques
	Burns	<ul style="list-style-type: none"> ● Use PPE ● Use extra caution around muffler and exhaust pipe
Hand Tool (Use & Maintenance)	Cuts, Punctures, Blisters, Slivers	<ul style="list-style-type: none"> ● Check handles and tool heads for tightness and condition ● Use PPE ● Carry tool on downhill side ● Use tool guard when tool is not in use ● Never throw tools ● When not being used, place tool on ground in plain sight ● Take a comfortable stance with feet spread and well anchored ● Check for overhead hazards ● Maintain a 10-foot distance between personnel ● Identify tools needing repair ● Training (S-130) ● File must have handle and guard ● Sharpen away from cutting edge
Firing Operations	Burns	<ul style="list-style-type: none"> ● Use PPE ● Avoid spills ● Change clothing that has had fuels spilled on it ● Proper training on firing operations (S-234)
	Explosions	<ul style="list-style-type: none"> ● Use proper fuel mixture ● Use safety cans for transporting fuel ● Proper grounding of larger containers
	Fumes/Inhalation	<ul style="list-style-type: none"> ● Mix fuels in adequately ventilated areas

BASIC JOB STEPS	HAZARDS	SAFE JOB PROCEDURE
Traffic Control	Passing vehicles Serious Injury or Death	<ul style="list-style-type: none"> ● Use headlights and overloads (if equipped) at all times. ● Post traffic controllers on roads as needed. ● Wear high visibility vests or clothing. ● Place warning signs on road.
Mop-up & Water Application	Burns	<ul style="list-style-type: none"> ● Use PPE
	Sprains	<ul style="list-style-type: none"> ● Avoid stepping in holes or depressions ● Warn crew of such dangers
	Flying debris	<ul style="list-style-type: none"> ● Use PPE (especially, goggles) ● Avoid excessive nozzle pressure and keep nozzles a safe distance from the ground ● Use fog stream
	Carbon Monoxide concentrations of smoldering fuels	<ul style="list-style-type: none"> ● Limit work shifts in concentrations of smoldering fuels ● Take breaks and camp in areas which minimize exposure to Carbon Monoxide
	Snags	<ul style="list-style-type: none"> ● Flag hazardous trees ● Use lookouts ● Work in pairs
	Lackadaisical attitude	<ul style="list-style-type: none"> ● Be alert ● Keep the lookup, look down, look around attitude at all times
Hazardous Materials	Spills & Leaks	<ul style="list-style-type: none"> ● Approach cautiously from upwind ● Secure the scene ● Identify the hazards ● Assess the situation ● Obtain help ● Respond in an appropriate manner ● Avoid touching material or inhalation of fumes, smoke and vapors.
Retardant Use	Impact from falling retardant and/or flying debris	<ul style="list-style-type: none"> ● Wear PPE ● Move out of drop area ● Stay clear of large old trees/snags and loose rocks/debris
	Slips & falls	<ul style="list-style-type: none"> ● Retardant is slick when wet . . . walk & drive slowly and carefully through these areas
Fire Shelter Deployment	Shelter in poor condition	<ul style="list-style-type: none"> ● Check shelter periodically for rips, tears and date
	Not knowing proper deployment procedures	<ul style="list-style-type: none"> ● Annual Entrapment Avoidance and Shelter Deployment Training ● Practice
	Deployment in dense fuels	<ul style="list-style-type: none"> ● Clear area ● Deploy in light fuels

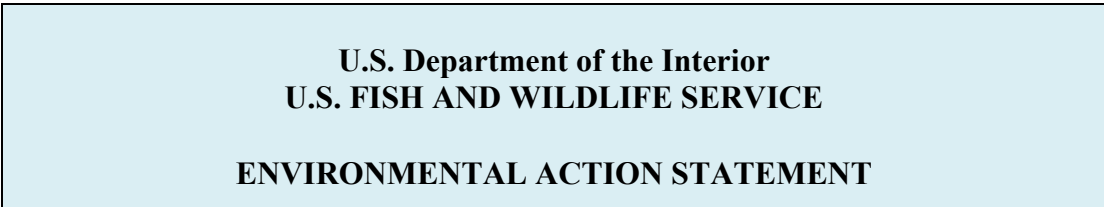
BASIC JOB STEPS	HAZARDS	SAFE JOB PROCEDURE
<p align="center">Fire Shelter Deployment <i>(continued)</i></p>		<ul style="list-style-type: none"> Scout a safety zone
	<p align="center">Hesitation and timely deployment</p>	<ul style="list-style-type: none"> Follow crew leader orders Drop all equipment and run to safety zone
	<p align="center">Lungs and airway threatened</p>	<ul style="list-style-type: none"> Face down in dirt Hold shelter down with gloved hands and feet
	<p align="center">Bad positioning in shelter</p>	<ul style="list-style-type: none"> Feet toward on-coming fire Hold shelter down with gloved hands and feet Get rid of line gear because of flammable material inside
	<p align="center">Exiting shelter prematurely</p>	<ul style="list-style-type: none"> Communicate with crew Wait until supervisor lets you know it is safe to come out
	<p align="center">No gloves</p>	<ul style="list-style-type: none"> Keep gloves on Have a spare pair readily available
<p align="center">Urban Interface Fire Suppression</p>	<p align="center">STRUCTURAL WATCH-OUT SITUATIONS</p> <ul style="list-style-type: none"> Wooden construction, shake roofs Poor access, narrow one-way roads Inadequate water supply Natural fuels 30 feet or closer to structures Extreme fire behavior Strong winds(25 mph plus) Evacuation of public = panic Structures located in chimneys, box or narrow canyons, on slopes 30% or more in continuous, flashy fuel types Bridge load limits 	<ul style="list-style-type: none"> Keep at least 100 gallons of water reserve in engine tank for your protection. Never pass up an available water source when tank is less than full Have a dedicated protective line for your crew and engine Park engine in safe area, with front toward escape route. Do not block escape routes. Back into driveways, or narrow access roads Use 1½ inch lines when possible Post lookouts as needed Do not park in saddles or chimneys Do not enter a burning structure Observe and do not exceed bridge load limits Utilize law enforcement authorities to conduct evacuations and maintain traffic control Keep headlights and warning light on for increased visibility
<p align="center">Working Around Fire Vehicles</p>	<p align="center">Serious Injury or Death</p>	<ul style="list-style-type: none"> Make visual or radio contact with operator before approaching vehicle. When working with or around, obtain briefing from operator on vehicle safety. Maintain visual with vehicle operator at all times. Avoid resting or leaving equipment around unattended vehicles. Avoid areas of frequent travel by fire vehicles. Personnel will not ride outside cab of moving vehicle Parked vehicle must have emergency brake set and wheels chocked.
<p align="center">Working Around ORUV/ATVs</p>	<p align="center">Serious Injury or Death</p>	<ul style="list-style-type: none"> Make visual or radio contact with operator before approaching ORUV/ATVs.

BASIC JOB STEPS	HAZARDS	SAFE JOB PROCEDURE
		<ul style="list-style-type: none"> ● When working with or around, obtain briefing from operator on ORUV/ATVs safety. ● Avoid resting or leaving equipment around unattended ORUV/ATVs ● Avoid areas of frequent travel by ORUV/ATVs. ● Personnel will not ride outside cab of ORUV or as a passenger on an ATV. ● Parked vehicle must have emergency brake set and wheels chocked.
<p align="center">Working Around Chain Saw Operations</p>	<p align="center">Serious Injury or Death Cuts (lacerations) Eye and ear damage Falling or Rolling Debris</p>	<ul style="list-style-type: none"> ● Use PPE ● Maintain safe distance from Chainsaw operations. Avoid working downhill from operations. ● Make visual or radio contact with sawyers prior to entering work area. ● Never approach sawyer while operating saw.
<p align="center">Working Around Power Lines</p>	<p align="center">Electrocution</p>	<ul style="list-style-type: none"> ● Downed conductor on vehicle: do not leave vehicle until power company arrives ● Do not operate heavy equipment under power lines ● Do not use rights-of-way as a jump or cargo drop spot ● Do not drive with long antennas under power lines ● Do not fuel vehicles under power lines ● Do not stand near power lines during retardant drops ● Do not park under power lines ● Do not apply straight stream to power line
<p align="center">Working Around Heavy Equipment Operations Dozer /Maintainer/Tractor</p>	<p align="center">Falling or Rolling Debris Serious Injury or Death</p>	<ul style="list-style-type: none"> ● Do not work downhill of equipment ● Do not work within 100 feet of heavy equipment ● Make visual or radio contact with operator before approaching equipment. Never approach moving heavy equipment. ● Obtain briefing from operator on Equipment safety and assignment.

APPENDIX E: FIRE BEHAVIOR MODELING DOCUMENTATION OR EMPIRICAL DOCUMENTATION

Due to the implementation timing of this prescribed fire during the fall, winter, and spring months when fuels are saturated, frozen, or snow covered, fire behavior runs are not accurate in depicting appropriate fire behavior in adjacent fuels. The burn boss is to ensure that the adjacent fuels will not carry a surface fire, and therefore fire behavior modeling is not required.

APPENDIX F: CLEARANCES AND PERMITS/NEPA



Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA; 40 CFR 1500-1508), and other statutes, rulings, orders, and policies to ensure environmental factors are weighted equally when compared to other factors in the decision making process, I have established the following administrative record and have determined that the proposed action of prescribed fire

- is a categorical exclusion as provided by 516 DM 8.5 and/or [43 CFR 46.210] (see attached documentation).
- is found not to have significant environmental effects as determined by the attached Finding of No Significant Impact and Environmental Assessment.
- is found to have special environmental conditions as described in the attached environmental assessment. The attached Finding of No Significant Impact will not be final nor any actions taken pending a 30-day period for public review [40 CFR 1501.4(e)(2)].
- is found to have significant effects and, therefore, a notice of intent will be published in the Federal Register to prepare an environmental impact statement before the project is considered further.
- is denied because of environmental damage, Service policy, or mandate.
- is an emergency situation. Only those actions necessary to control the immediate impacts of the emergency will be taken [40 CFR 46.150] (see attached documentation). Other related actions remain subject to NEPA review.

Other Supporting Document(s) (list):

Agency Administrator

Date

**U.S. Department of the Interior
 U.S. FISH AND WILDLIFE SERVICE
 Wildland Fire Management**

**ENVIRONMENTAL ACTION STATEMENT
 For Documenting Project NEPA Compliance and/or Categorical Exclusion (CE) Use**

Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA; 40 CFR 1500-1508), and other statutes, rulings, orders, and policies to ensure environmental factors are weighted equally when compared to other factors in the decision making process, I have established the following administrative record and have determined that the proposed action is Categorical Excluded (CE) from EA or EIS documentation requirements consistent with [40 CFR 1508.4]; [43 CFR 46.150]; [43 CFR 46.210]; [43 CFR 46.215]; 516 DM 2.3A; 516 DM 2.8; and 516 DM 8.5.

Treatment Information				
Treatment Name: Chase Lake WMD, Strong WPA Piles		Treatment Location: 47.0856° -99.3021°		
NFPORS Project # (if applicable)	Planned Start Date:	Planned Completion Date:	Estimated Duration:	Estimated Costs \$
Project Coordinator:		Phone No:		
		E-Mail:		
<p>Categorical Exclusion(s) (CE) for this treatment: <i>(check all that apply)</i></p> <p>516 DM 8.5 <u> X </u> Note: 516 DM 8.5 are Service specific CEs;</p> <p>43 CFR 46.210 _____ Note: 43 CFR 46.210 are DOI specific CEs and includes Hazardous Fuel Reduction and Burned Area Rehab;</p> <p>43 CFR 46.150 _____ Note: 43 CFR 46.150 addresses Emergency Responses (such as Emergency Stabilization).</p>				

1. Proposed Action and Alternatives:

a.) *Briefly describe the proposed action and any alternatives explored.*

b.) *Describe and/or list pertinent facts, such as land description, statutory citations (i.e. applicable laws that require you to do this action), to tie this action to the ground.*

c.) *Briefly discuss why the proposed action was selected and/or why other alternatives were not selected.*

2. Management Plan Conformance

- a.) State that the proposed action is consistent with land and/or resource management plans and cite the area of the plan(s) that this will address.*
- b.) Describe how the proposed action was designed in conformance with FWS standards and specific desired conditions.*
- c.) Insert findings for other applicable laws or new ruling approved since the signing of the land management plan. Document no impact to current management plans.*

3. Compliance with the National Environmental Policy Act

This is for all Programmatic NEPA and CEs, including the Service’s CEs and DOI Hazardous Fuels Reduction (HFR) or Burned Area Rehabilitation (BAR), and Emergency Stabilization (ES) CE use:

- a.) Quote the specific NEPA documents (EA, EIS, or other NEPA utilized), and/or Categorical Exclusion(s) that are being used for the action.*
- b.) Explain why the action fits the NEPA documents and/or CE(s) selected.*
- c.) State that the action does not present any Extraordinary Circumstances (see checklist below).*
- d.) If extraordinary circumstances do (or appear to) exist relative to the action, discuss circumstances and explain why the action is still categorically excluded.*

If 43 CFR 46.210 (k) [Hazardous Fuels Reduction] or 43 CFR 46.210 (l) [Burned Area Rehabilitation] used: State that the Proposed Action is categorically excluded from further documentation under NEPA in accordance with 43 CFR 46.210 (k) or (l), or both.

If 43 CFR 46.150 used for Emergency Stabilization (ES):

- a.) State that the Proposed Action is an emergency action not having significant environmental impacts in accordance with 43 CFR 46.150 and 516 DM 2.8. and insert any reasons.*
- b.) Insert any pertinent situations that were brought up during the design of the activities to explain why there is no potential for significant impacts.*
- c.) State that the emergency stabilization action is appropriate in this situation because there are no significant impacts and that the action is funded as an emergency stabilization project under the [Incident Name].*

Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

4. Permits/Approvals

Discuss any permits/approvals needed before the proposed action can be implemented.

5. Public Involvement/Interagency Coordination:

a.) List the public, other agencies, and/or States or Tribes that have been involved with the proposed action.

b.) Describe the extent of their participation.

6. Supporting Documents

Collect supporting documents for the determination. Include relevant office file material and put together a document list to include the key references.

Extraordinary Circumstances (43 CFR 46.215)

Any action that is normally categorically excluded must be evaluated to determine whether it meets any of the extraordinary circumstances in section 46.215; if it does, further analysis and environmental documents must be prepared for the action. [43 CFR 46.205 (c)(1)].

Below are the Extraordinary Circumstances from [43 CFR 46.215].

Check Yes or No for each item.

- | | | |
|------------------------------|--|--|
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 1. The proposed action will have significant adverse affects on public health. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 2. The proposed action will have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); floodplains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 3. The proposed action will have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 4. The proposed action will have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 5. The proposed action will establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 6. The proposed action will have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 7. The proposed action will have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by the bureau. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 8. The proposed action will have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species or have significant impacts on designated Critical Habitat for these species. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 9. The proposed action will violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment. |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 10. The proposed action will have a disproportionately high and adverse effect on low income or minority populations (EO 12898). |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 11. The proposed action will limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007). |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | 12. The proposed action will contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and EO 13112). |

APPENDIX G: INCIDENT ACTION PLAN (IAP)

**Incident Action Plan
Strong WPA Piles**



DOI Unified Region 5

North Dakota Fire Zone

Chase Lake WMD



Briefing Checklist

- Burn organization and assignments
- Prescribed Fire objectives and prescription
- Description of prescribed fire project area
- Special considerations and sensitive features
- Expected weather and fire behavior
- Communications
- Ignition plan
- Holding plan
- Contingency plan and assignments
- Wildfire declaration
- Safety and medical plan
- Risk Management

Administrative Unit Name: Chase Lake WMD – Stutsman County

Prescribed Fire Name: Strong WPA Piles

AGENCY ADMINISTRATOR IGNITION AUTHORIZATION (Prescribed Fire Plan, Element 2A)

Instructions: The Agency Administrator Ignition Authorization must be completed before a prescribed fire can be implemented. If ignition of the prescribed fire is not initiated prior to expiration date determined by the agency administrator, a new authorization will be required.

Prior to signature the agency administrator should discuss the following key items with the fire management officer (FMO) or burn boss. Attach any additional instructions or discussion documentation (optional) to this document.

Key Discussion Items

A. Has anything changed since the Prescribed Fire Plan was approved or revalidated? <i>Such as drought or other climate indicators of increased risk, insect activity, new subdivisions/ structures, smoke requirements, Complexity Analysis Rating.</i>
B. Have compliance requirements and pre-burn considerations been completed? <i>Such as preparation work, NEPA mitigation requirements, cultural, threatened and endangered species, smoke permits, state burn permits/ authorizations.</i>
C. Can all of the elements and conditions specified in Prescribed Fire Plan be met? <i>Such as weather, scheduling, smoke management conditions, suitable prescription window, correct season, staffing and organization, safety considerations, etc.</i>
D. Are processes in place to ensure all internal and external notifications and media releases will be completed?
E. Have key agency staffs been fully briefed about the implementation of this prescribed fire?
F. Are there circumstances that could affect the successful implementation of the plan? <i>Such as preparedness level restrictions, resource availability, other prescribed fire or wildfire activity</i>
G. Have you communicated your expectations to the Burn Boss and FMO regarding if and when you are to be notified that contingency actions are being taken?
H. Have you communicated your expectations to the Burn Boss and FMO regarding decisions to declare the prescribed fire a wildfire?

Implementation Recommended by:

FMO or Prescribed Fire Burn Boss Signature: _____ Date: _____

I am authorizing ignition of this prescribed fire between the dates of _____ and _____. It is my expectation that the project will be implemented within this time frame and as discussed and documented and attached to this plan. If the conditions we discussed change during this time frame, it is my expectation you will brief me on the circumstances and an updated authorization will be negotiated if necessary.

Additional Instructions or Discussion Documentation attached (Optional): Yes No

Ignition Authorized by:

Agency Administrator Signature and Title: _____ Date: _____

PRESCRIBED FIRE GO/NO-GO CHECKLIST
(Prescribed Fire Plan, Element 2B)

* Preliminary Questions	Circle YES or NO
Have conditions in or adjacent to the ignition unit changed, (for example: drought conditions or fuel loadings), which were not considered in the prescription development? If NO proceed with the Go/NO-GO Checklist below, if YES go to item B.	YES NO
Has the prescribed fire plan been reviewed and an amendment been approved; or has it been determined that no amendment is necessary? If YES , proceed with checklist below. If NO , STOP: Implementation is not allowed. An amendment is needed.	YES NO
GO/NO-GO Checklist	Circle YES or NO
* Have ALL permits and clearances been obtained?	YES NO
* Have ALL the required notifications been made?	YES NO
Have ALL the pre-burn considerations and preparation work identified in the prescribed fire plan been completed or addressed and checked?	YES NO
Have ALL required current and projected fire weather forecast been obtained and are they favorable?	YES NO
* Are ALL prescription parameters met?	YES NO
* Are ALL smoke management specifications met?	YES NO
Are ALL planned operations personnel and equipment on-site, available and operational?	YES NO
Has the availability of contingency resources applicable to today's implementation been checked and are they available?	YES NO
Have ALL personnel been briefed on the project objectives, their assignment, safety hazards, escape routes, and safety zones?	YES NO
If all the questions were answered " YES " proceed with a test fire. Document the current conditions, location and results. If any questions were answered " NO ", DO NOT proceed with the test fire: Implementation is not allowed.	
After evaluating the test fire, in your judgment can the prescribed fire be carried out according to the prescribed fire plan and will it meet the planned objective? Circle: YES or NO	

* Items required if checklist is modified *

Burn Boss Signature: _____ Date: _____

ICS 202 Objective(s):

C. Resource objectives:

1. Remove tree and brush piles in order to re-establish native grasses in support of promoting natural prairie ecosystems for the benefit of waterfowl, other migratory birds and trust species.

B. Prescribed fire objectives:

1. Consume > 80-100 % of all fuels

5. Operational Period Command Emphasis:

The Burn Boss is responsible for determining if an escape has become a wildfire.

Priorities in the event of a wildfire are as follows:

1. Protection of public and fire line personnel life safety
2. Protection of privately owned primary residences
3. Protection of private property and lands
4. Minimize any damage to natural resources

General Situational Awareness

Safety Hazards:

- Traffic on county roads
- Ensuring the weather forecast is favorable for pile consumption and to limit pile creep into adjacent fuels.

Smoke-Sensitive Receptors:

- None

6. Site Safety Plan Required? Yes No

Approved Site Safety Plan(s) Located at: Station Safety Plan and JHA's are located at Chase Lake WMD Office.

7. Incident Action Plan (the items checked below are included in this Incident Action Plan):

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> A/A Ign Authorization | <input checked="" type="checkbox"/> ICS 206 | <input type="checkbox"/> Complexity Analysis | <input type="checkbox"/> Contingency Map |
| <input checked="" type="checkbox"/> Rx Fire Go/No-Go | <input checked="" type="checkbox"/> ICS 207 | <input checked="" type="checkbox"/> Environmental Checklist | <input type="checkbox"/> Ignition Sequence Map |
| <input checked="" type="checkbox"/> ICS 202 | <input checked="" type="checkbox"/> Prescription Parameters | <input type="checkbox"/> Cultural Resource Review | <input type="checkbox"/> Smoke Trajectory Map |
| <input checked="" type="checkbox"/> ICS 204 | <input checked="" type="checkbox"/> Spot Forecast | <input type="checkbox"/> Vicinity Map | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> ICS 205A | <input checked="" type="checkbox"/> ICS 214 | <input type="checkbox"/> Project Map | <input type="checkbox"/> |

4. Physical Description							
Location	<u>Township Range Section</u>	<u>Latitude Longitude (NAD 83)</u>		<u>County</u>			
	T142N R68W S28	47.0856°	-99.3021°	Stutsman			
Size	<u>Topo Quad</u>	<u>Fire District</u>		<u>911 Address</u>			
	Pearl Lake ND	Woodworth Rural FD		5600 23 rd St SE Woodworth, ND 58496			
Topography	<u>Unit Acres</u>	<u>Burnable Acres</u>		<u>Perimeter Miles</u>			
	8	8		0			
Topography	<u>Aspect</u>	<u>Slope</u>		<u>Elevation</u>			
	Flat	0%		1900			
5. Operations Personnel:							
		<u>Name</u>	<u>Contact Number(s)</u>				
	FWS Project Leader:	Todd Frerichs	701-460-0576				
	FWS Zone FMO:	Jeff Dion	701-650-1171				
	Fire Management Specialist:	Mike Hill	701-450-8514				
6. Resources Assigned:							
Resource Identifier	Leader	# of Persons	Contact (e.g., phone, pager, radio frequency, etc.)	Reporting Location, Special Equipment and Supplies, Remarks, Notes, Information			
RXB2		1					
FFT2		1					
7. Work Assignments:							
Ignite, hold and patrol piles until piles are out. Continually patrol to ensure pile perimeter is secure.							
8. Special Instructions:							
Critical holding areas: any portion of the pile with exposed adjacent fuels that can easily be dried by radiant heat transfer, and cause creeping/smoldering outside of the pile into a fuel bed causing an escape.							
9. Communications (radio and/or phone contact numbers needed for this assignment):							
<u>Name</u>	<u>Function</u>	<u>RX Freq</u>	<u>RX Tone/NAC</u>	<u>TX Freq</u>	<u>TX Tone/NAC</u>	<u>Mod</u>	<u>Remarks</u>
FWS FIRE	Tac	168.3500	CSq	168.3500	CSq	D	FWS RX Fire TA
ST2-EMER	Command	155.4750	CSq	158.4750	156.7	A	County Dispatch
VFIRE23	Tac	154.2950	CSq	154.2950	CSq	A	State Fire Mutual Aid
AIR2GRND	Tac	167.4250	CSq	167.4250	CSq	A	ND01 Air to Ground

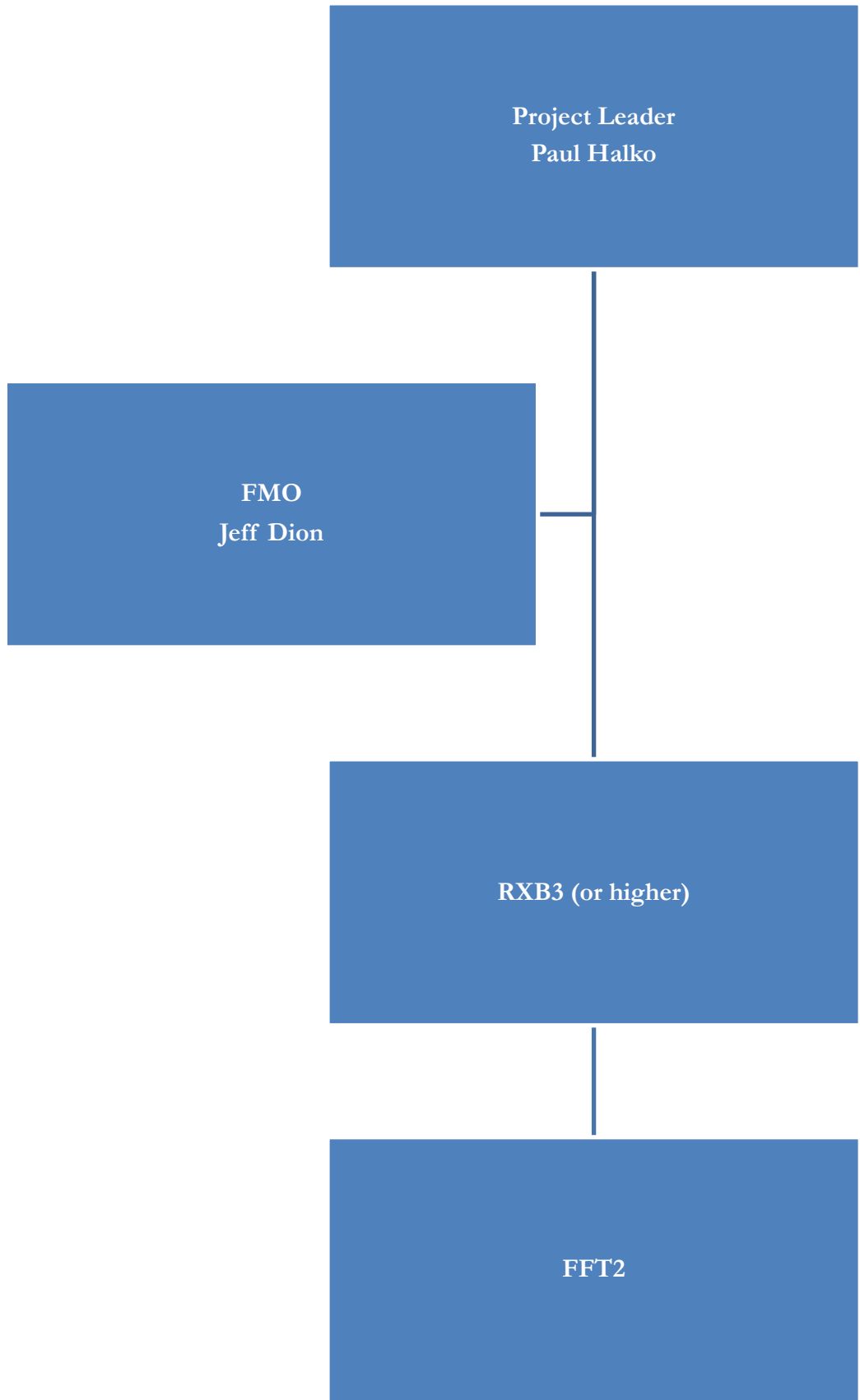
4. Basic Local Communications Information:		
Name	Phone #	Time/Comment
ND Zone FMO – Jeff Dion	285-3341/650-1171	
Bismarck Nat'l Wx Service	250-4494	
ND Dispatch Center	989-7330	
Stutsman County Dispatch	252-1000	
Woodworth VFD	752-4133	
Residence (within 1 mile)		
Steve Hochhalter	701-752-4170	
Adjacent Landowners (* absentee landowner)		
Steve Hochhalter	701-752-4170	

4. Medical Aid Stations:							
Name	Location	Contact Number(s)/Frequency	Paramedics on Site?				
			<input type="checkbox"/> Yes <input type="checkbox"/> No				
			<input type="checkbox"/> Yes <input type="checkbox"/> No				
5. Transportation (indicate air or ground):							
Ambulance Service	Location	Contact Number(s)/Frequency	Level of Service				
Medina Ambulance	Medina, ND	911 – Stutsman Co. Dispatch	<input type="checkbox"/> ALS <input checked="" type="checkbox"/> BLS				
Jamestown Area Ambulance	Jamestown, ND	911 – Stutsman Co. Dispatch	<input checked="" type="checkbox"/> ALS <input type="checkbox"/> BLS				
Carrington Ambulance	Carrington, ND	911 – Stutsman Co. Dispatch	<input type="checkbox"/> ALS <input checked="" type="checkbox"/> BLS				
Medical Air Service	Jamestown, ND	911 – Stutsman Co. Dispatch	<input checked="" type="checkbox"/> ALS <input type="checkbox"/> BLS				
Bismarck Air Medical	Bismarck, ND	911 – Stutsman Co. Dispatch	<input checked="" type="checkbox"/> ALS <input type="checkbox"/> BLS				
6. Hospitals:							
Hospital Name	Address, Latitude & Longitude if Helipad	Contact Number(s)/Frequency	Travel Time		Trauma Center	Burn Center	Helipad
			Air	Ground			
Jamestown Regional Medical Center	Jamestown, ND	701-251-0343	15 min	45 min	<input checked="" type="checkbox"/> Yes Level: 4	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
St. Alexius Medical Center	Bismarck, ND	701-530-7000	15 min	1.5 hr	<input checked="" type="checkbox"/> Yes Level: 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sanford Health	Jamestown, ND	701-253-4000	15 min	1.5 hr	<input checked="" type="checkbox"/> Yes Level: 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Regions Hospital	St. Paul, MN	800-922-2876	1.5 hr	5.5 hr	<input checked="" type="checkbox"/> Yes Level: 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7. Special Medical Emergency Procedures:							
<p>Declare the nature of the emergency. Closest Medical Aid personnel respond. Burn Boss will identify Medical Point of Contact (POC). Determine if transport is needed. If so, contact Central Dakota Communication Center via 911.</p> <p>Use Patient Assessment found on pink page #118 of the IRPG to assess patient and provide information to Dispatch. Document all information in log unit.</p>							

MEDICAL PLAN (ICS 206 WF)

Controlled Unclassified Information//Basic

Medical Incident Report					
FOR A NON-EMERGENCY INCIDENT, WORK THROUGH CHAIN OF COMMAND TO REPORT AND TRANSPORT INJURED PERSONNEL AS NECESSARY. FOR A MEDICAL EMERGENCY: IDENTIFY ON SCENE INCIDENT COMMANDER BY NAME AND POSITION AND ANNOUNCE "MEDICAL EMERGENCY" TO INITIATE RESPONSE FROM IMT COMMUNICATIONS/DISPATCH.					
Use the following items to communicate situation to communications/dispatch.					
1. CONTACT COMMUNICATIONS / DISPATCH (Verify correct frequency prior to starting report) <i>Ex: "Communications, Div. Alpha. Stand-by for Emergency Traffic."</i>					
2. INCIDENT STATUS: Provide incident summary (including number of patients) and command structure. <i>Ex: "Communications, I have a Red priority patient, unconscious, struck by a falling tree. Requesting air ambulance to Forest Road 1 at (Lat./Long.) This will be the Trout Meadow Medical, IC is TFLD Jones. EMT Smith is providing medical care."</i>					
Severity of Emergency / Transport Priority	<input type="checkbox"/> RED / PRIORITY 1 Life or limb threatening injury or illness. Evacuation need is IMMEDIATE <i>Ex: Unconscious, difficulty breathing, bleeding severely, 2nd – 3rd burns more than 4 palm sizes, heat stroke, disoriented.</i> <input type="checkbox"/> YELLOW / PRIORITY 2 Serious Injury or illness. Evacuation may be DELAYED if necessary. <i>Ex: Significant trauma, unable to walk, 2nd – 3rd burns not more than 1-3 palm sizes.</i> <input type="checkbox"/> GREEN / PRIORITY 3 Minor Injury or illness. Non-Emergency transport <i>Ex: Sprains, strains, minor heat-related illness.</i>				
Nature of Injury or Illness & Mechanism of Injury			Brief Summary of Injury or Illness <i>(Ex: Unconscious, Struck by Falling Tree)</i>		
Transport Request			Air Ambulance / Short Haul/Hoist Ground Ambulance / Other		
Patient Location			Descriptive Location & Lat. / Long. (WGS84)		
Incident Name			Geographic Name + "Medical" <i>(Ex: Trout Meadow Medical)</i>		
On-Scene Incident Commander			Name of on-scene IC of Incident within an Incident <i>(Ex: TFLD Jones)</i>		
Patient Care			Name of Care Provider <i>(Ex: EMT Smith)</i>		
3. INITIAL PATIENT ASSESSMENT: Complete this section for each patient as applicable (start with the most severe patient!)					
Patient Assessment: See IRPG page 106					
Treatment:					
4. TRANSPORT PLAN: Evacuation Location (if different): (Descriptive Location (drop point, intersection, etc.) or Lat. / Long.) Patient's ETA to Evacuation Location:					
Helispot / Extraction Site Size and Hazards:					
5. ADDITIONAL RESOURCES / EQUIPMENT NEEDS: <i>Example: Paramedic/EMT, Crews, Immobilization Devices, AED, Oxygen, Trauma Bag, IV/Fluid(s), Splints, Rope rescue, Wheeled litter, HAZMAT, Extrication</i>					
6. COMMUNICATIONS: Identify State Air/Ground EMS Frequencies and Hospital Contacts as applicable					
Function	Channel Name/Number	Receive (RX)	Tone/NAC *	Transmit (TX)	Tone/NAC *
COMMAND					
AIR-TO-GRND					
TACTICAL					
7. CONTINGENCY: Considerations: If primary options fail, what actions can be implemented in conjunction with primary evacuation method? Be thinking ahead.					
8. ADDITIONAL INFORMATION: Updates/Changes, etc.					
REMEMBER: Confirm ETA's of resources ordered. Act according to your level of training. Be Alert. Keep Calm. Think Clearly. Act Decisively.					



Prescription Parameters

ENVIRONMENTAL CONDITIONS	ACCEPTABLE	DESIRED	FORECASTED <small>(NWS spot forecast)</small>
Temperature °F	0-60	25	
Relative Humidity	35-100	50	
Wind Speed mph (20' forecast)	0-20	5-15	
Wind Direction	ANY*		
Dispersion Index**	N/A		

Element 9: Pre-burn Considerations and Weather Requirements: On-site: Minimize Surface Fire Spread in Adjacent Fuels – Adjacent fuels must be either saturated, frozen, snow covered, and/or unable to carry fire to prevent fire spread beyond piles (including debris piles within areas where adjacent fuels do not exist with 30 feet of the pile). It will be at the discretion of the burn boss to determine that the conditions are acceptable to pile burning to minimize surface fire spread outside of the pile. The timing and seasonality of pile burning must allow for moisture to be present. The conditions below are suggested forms of adequate moisture and conditions limiting surface spread to conduct pile burning (other conditions may exist and burn boss shall document conditions on-site prior to ignition).

- a) Rain accumulations of greater than 0.1 inches within the previous 48 hours prior to planned ignition
- b) Snow accumulation greater than 1/4"
- c) Frozen ground to minimize the duff and organic material from burning
- d) Heavy frost (small piles, few number of piles that can be closely monitored)

See Appendix E: Fire Behavior Modeling Documentation or Empirical Documentation

Due to the implementation timing of this prescribed fire during the fall, winter, and spring months when fuels are saturated, frozen, or snow covered, fire behavior runs are not accurate in depicting appropriate fire behavior in adjacent fuels. The burn boss is to ensure that the adjacent fuels will not carry a surface fire, and therefore fire behavior modeling is not required.

* While this plan calls for any wind direction for each unit, it should be noted that no burning should take place within 1/2 mile upwind of any residence or business. In addition to wind direction, burning should be avoided during strong inversions and poor smoke dispersal times in areas with residences or roadways within one mile of the burn unit.

**Dispersion Index (Transport Winds X Mixing Height) – even though a dispersion index isn't part of the prescription parameters, it is still recommended that the burn boss calculate the daily dispersion index based off the Spot Weather Forecast and document the Dispersion Index

- <13,000: Poor
- 13,000 – 29,999: Fair
- 30,000 – 59,000: Good
- 60,000 or greater: Excellent

Method and Frequency for Obtaining Weather and Smoke Management Forecast(s)

- A spot weather forecast for the burn site will be requested from the NWS for each ignition operational period by submitting the online form at <http://www.crh.noaa.gov/bis/fire.htm> or by phone at 701-250-4224.

9. On-Site WX & Fire Behavior Obs.								
Date/Time	Aspect			Cover Type			% Green	
	Location	Temp		RH	Wind		% Cloud Cover	Remarks: (smoke dispersal, fire behavior, fuel consumption)
		Dry	Wet		Speed	Direction		
	Test Fire							