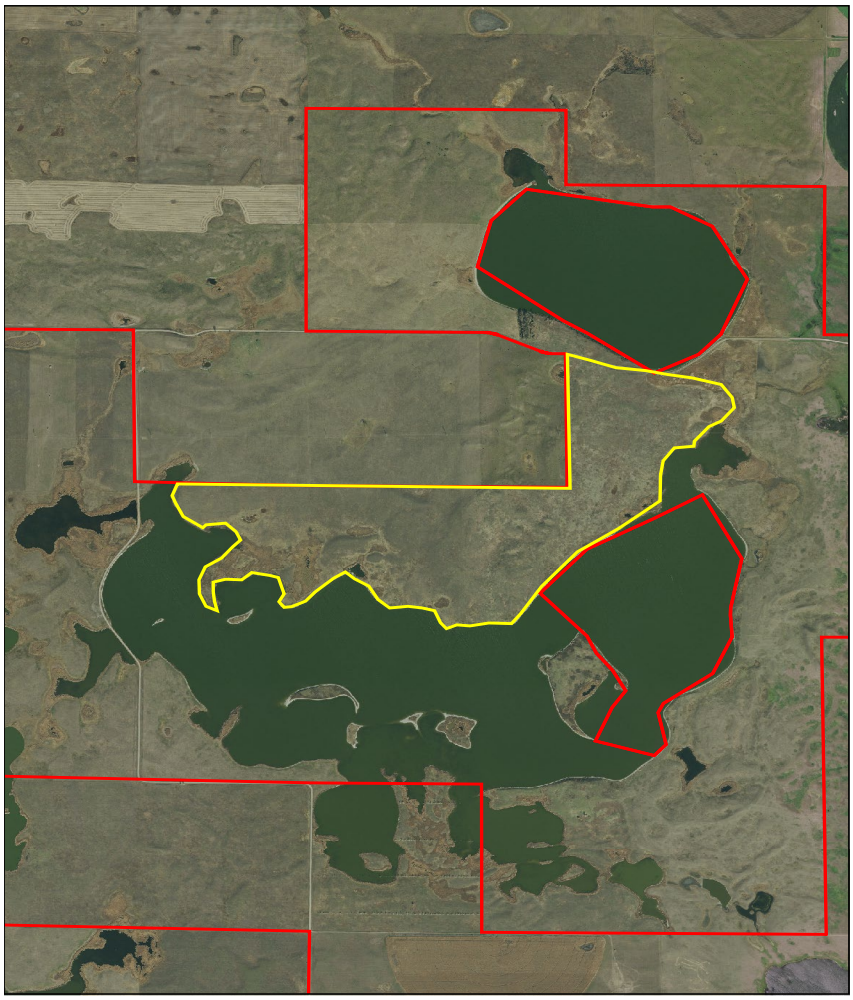
Chase Lake WPA

Prescribed Burn Plan



US Fish & Wildlife Service Region 6

North Dakota Fire Zone

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Element 1: Signature Page

PRESCRIBED FIRE PLAN

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

PRESCRIBED FIRE NAME:

Prescribed Fire Unit (Ignition Unit): Chase Lake WPA Unit 3

PREPARED BY:

Name (print): Terry Gwilliams Qualification/Currency: RXB2

Signature: [signature] Date: 3-3-20

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

Name (print): Dominick Marsden Qualification/Currency: RXB2/Y

Signature: [signature] Date: 3.23.2020

COMPLEXITY RATING: Moderate

MINIMUM BURN BOSS QUALIFICATION: RXB2

APPROVED BY:

Name – US FWS Agency Administrator (print): Paul Halko

Signature – Agency Administrator: PAUL HALKO Digitally signed by PAUL HALKO Date: 2021.03.02 15:58:04 -06'00' Date:

Element 1: Signature Page

PRESCRIBED FIRE PLAN

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

PRESCRIBED FIRE NAME:

Prescribed Fire Unit (Ignition Unit): Chase Lake WPA Unit 3

PREPARED BY:

Name (print): Terry Gwilliams Qualification/Currency: RXB2

Signature: _____ Date: _____

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

Name (print): _____ Qualification/Currency: _____

Signature: _____ Date: _____

COMPLEXITY RATING: Moderate

MINIMUM BURN BOSS QUALIFICATION: RXB2

APPROVED BY:

Name – US FWS Agency Administrator (print): _____

Signature – Agency Administrator: _____ Date: _____

Element 2A: Agency Administrator Ignition Authorization

See IAP

Element 2B: Prescribed Fire Go/No-Go Checklist

See IAP

Element 3: Complexity Analysis Summary

See Appendix: C Complexity Analysis for complete Complexity Analysis.

Element 4: Description of Prescribed Fire Area

A. Physical Description:

The WPA is 5 miles west of Woodworth on highway 36 and then 5 miles south on gravel.

See IAP (ICS 204)

B. Vegetation/Fuels Description:

1. On-site fuels data:
   The unit consists of tame and native grasses with areas of Canada Thistle. The majority of the unit would be classified as (FM1) but there are stands of Big Blue Stem (FM3) and areas around the wetlands that are (FM3) are also strongly represented.

2. Adjacent fuels data:
   Adjacent fuels are similar within the WPA and primarily private crop and CRP around the WPA.

3. Percent of vegetative type and fuels model(s):

Vegetation Type	Fuel Model	Acres	%
Native/Tame Mix	1	350	85
Tame	1	0	0
Crop	1	0	0
Wetland	3	23	15
Road	N/A		
Total Acres		373	100

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

There are no T&E or cultural resource concerns on this unit. Values at risk include boundary and interior fences.

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

Maps - Attachments 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
6. Topo: ☐ Included ☒ Not Included

Element 5: Objectives

A. Resource objectives:

See IAP(ICS 202)

B. Prescribed fire objectives:

See IAP(ICS 202)

Element 6: Funding

A. Cost:

Fish and wildlife service 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:

Fish and wildlife service 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:
   Prescribed fire is used as a management tool to mimic natural wildfires that developed the prairie as it is today. Fire will remove the litter and allow native warm season grasses & forbs to grow in areas heavily dominated by exotic invaders. FM's 1 & 3 are light and flashy fuels primarily wind driven. Fire behavior parameters are listed below. Values will vary with lower end found on the backing and flanking fires and high end on the head fires. Similar fire behavior will be found outside of the unit.

B. Prescription Parameters:

1. Environmental or fire behavior (or both)
   See IAP
2. Fire Modeling or empirical documentation (or both)
   See Appendix E: Fire Behavior Modeling Documentation or Empirical Documentation for Behave Plus Runs and NRCS Potential for Damage by Fire Map.

Fire behavior outside the unit would be similar to that inside the unit with the exception of cured crops. The BTU's that cured crops put out will be too much that direct attack will not work.

Element 8: Scheduling

A. Implementation Schedule:

1. 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 extinguish smoke before night time conditions fall out of prescription.

B. Projected Duration:

Project will take one operational period to complete during normal working hours. This does not include site prep which will be completed prior to ignition date. Mop-up and/or patrol activities may occur on the following day.

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
   a. A mowed fire break (10' min. - raked in high fuel loading areas) will be established along areas of the burn unit that do not have natural barriers. Sprinkler lines or wet-lines may be substituted for mowed fire breaks where practical or where terrain does not lend itself to mowing (too steep, rocky areas, etc…). Pre-established black lines at least 10 feet wide may also be substituted for mowed fire breaks. Black lines may be established around values at risk including, but not limited to, power pole locations and wood sign locations. *See Appendix A. Maps for locations of mowed fire breaks and further details of physical site preparations.*
   b. Section 7 consultations were completed for the Chase Lake WMD as part of CCP process for North Dakota Wetland Management Districts CCP (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. *See Appendix G: Clearances and Permits.*
   c. 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 WMD. Archeological clearance for prescribed burning will be obtained from the regional archeologist. All restrictions and recommendations will be adhered to. *See Appendix G: Clearances and Permits.*
2. Off-site
   None.

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

See IAP

C. Notifications/Permits:

All necessary permits will be obtained by the FMO or designee prior to the start of a project.

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 IAP

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 IAP (ICS 204).*

B. Equipment:

4 UTV's with 70-100 gal tanks. *See IAP (ICS 204).*

1 Type 6 engine

C. Supplies:

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

Element 12: Communication

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

Element 13: Public and Personnel Safety, Medical

A. Safety Hazards:

See IAP (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 on the Fireline Handbook (NFES 0065).

D. Emergency Evacuation Methods:

See IAP (ICS 206) Medical Plan.

E. Emergency Facilities:

See IAP (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 prior to the start of ignition operations. This area will generally be on the downwind side of the unit and adjacent to an established control line or natural barrier. Analysis of the initial ignitions may provide adequate test fire results.

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 – Strip and Spot fires to ignite backing, flanking, and head fires utilizing hand-held firing devices by personnel on foot or ATV mounted firing devices.
2. **Sequences -** Exact ignition sequences to be used will be determined and approved by the Burn Boss prior to ignition of the unit. Local factors may influence on-site weather conditions, therefore the ignition sequence will not be determined until all resources arrive on site at which time the planned ignition sequence will be provided during the operational briefing.
3. Patterns – Working towards the upwind side, a backing fire along the downwind side, followed by flanking fires with interior chevron or strip fires would be typical patterns for a unit of this size to manage fire behavior and smoke. A solid strip head fire would be used on the upwind side to complete the burn.

B. Devices:

Drip torches, ATV drip torch, fusees and flare pistols. ATV ignitions will be performed in accordance with National and Regional Fish and Wildlife Service guidelines with a properly qualified operator.

C. Minimum Ignition Staffing:

Ignition staffing typically requires 1-3 personnel coordinated by the Burn Boss or assigned personnel on their side of the unit. Interior ignitions will be coordinated through the Burn Boss.

Element 16: Holding Plan

A. General Procedures for Holding:

The burn boss may elect to have a portable pump set up at a convenient location for engines to fill. Locations of re-fill sites will vary depending upon the season of the burn and water levels in nearby wetlands. *See Appendix A. Maps for locations of potential refill sites.*

Wet-lines will be established immediately prior to any ignition along established control lines, unless a natural or manmade control line provides a barrier to fire spread such as a gravel road, disked fire break or harvested crop

field that has been worked. At least one holding resource such as an engine, UTV, or firefighter will follow up each ignition to monitor for creeping or spotting of fire outside of control lines. Additional resources, typically an UTV, will continually patrol all lines of the unit extinguishing all smokes within 10 ft. of the line or until otherwise directed by the burn boss.

After ignition is completed, crews will immediately begin mop-up actions. Burn boss will establish mop-up standards based on adjacent fuels and expected weather conditions. At a minimum, control lines adjacent to readily available fuels will be cold–trailed and extinguished a minimum of 50 ft. in from the edge. The burn boss will decide whether or not a unit needs subsequent monitoring based on current and expected weather. This unit will be completed within one operational period. Fuel types and burning conditions outlined within this plan will generally not support fire activity overnight.

B. Critical Holding Points and Actions:

Critical holding areas will typically be the mowed fire break lines, especially downwind lines. A type 6 engine or ATV/UTV will be assigned to these lines for constant patrol until line is secure to ensure there is no possibility of fire creeping outside the unit. Timing and speed of ignition will depend on ability of holding resources and good communications between the two. *See IAP (ICS 204) for detailed Critical Holding Points and Actions.*

C. Minimum Organization or Capabilities Needed:

Ignition crew may be used as needed for holding as they complete their ignition operation. *See IAP (ICS 204).*

Element 17: Contingency Plan

A. Management Action Points or Limits:

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:

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):

Two wildland capable engines (equivalent to a Type 7 or larger) with a staff of two will be the minimum required available contingency resource. If the incident commander determines that structures are threatened as a result of the escaped fire, a minimum order of one structure engine with crew per threatened structure will be ordered. It can generally be assumed that if a local fire department is not currently involved in any suppression efforts that at least two engines with a minimum of two personnel can be ordered and on scene within 30 min.

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 ICT4 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 Arrowwood Complex Project Leader.

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 (1 hour time lag). 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. No burning will be done on days when smoke dispersal is forecasted to be poor for the entire day.

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. *See Appendix G. Clearances and Permits.*

C. Smoke-Sensitive Receptors:

See See IAP (ICS 204) and Appendix A. Maps for location of smoke sensitive areas/receptors. See Appendix F. Smoke Management Plan.

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, dispersion and atmospheric stability. Burning will not be conducted when an inversion is in place and is not predicted to break by early afternoon. 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 section 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. A minimum 100 foot wide perimeter will be used for mop-up standards with further evaluation by the Burn Boss upon completion. Burning materials within this area will be extinguished with water and hand tools. 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 sited. Burn boss may select a crew member to monitor and declare fire out if burn boss is absent.

Prescribed Fire Plan Appendices

Appendix A: Maps:

- Vicinity,
- Project,
- Contingency,
- Ignition Sequence,
- Smoke Trajectory,
- Notifications Map

Appendix B: Technical Reviewer Checklist

Appendix C: Complexity Analysis

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

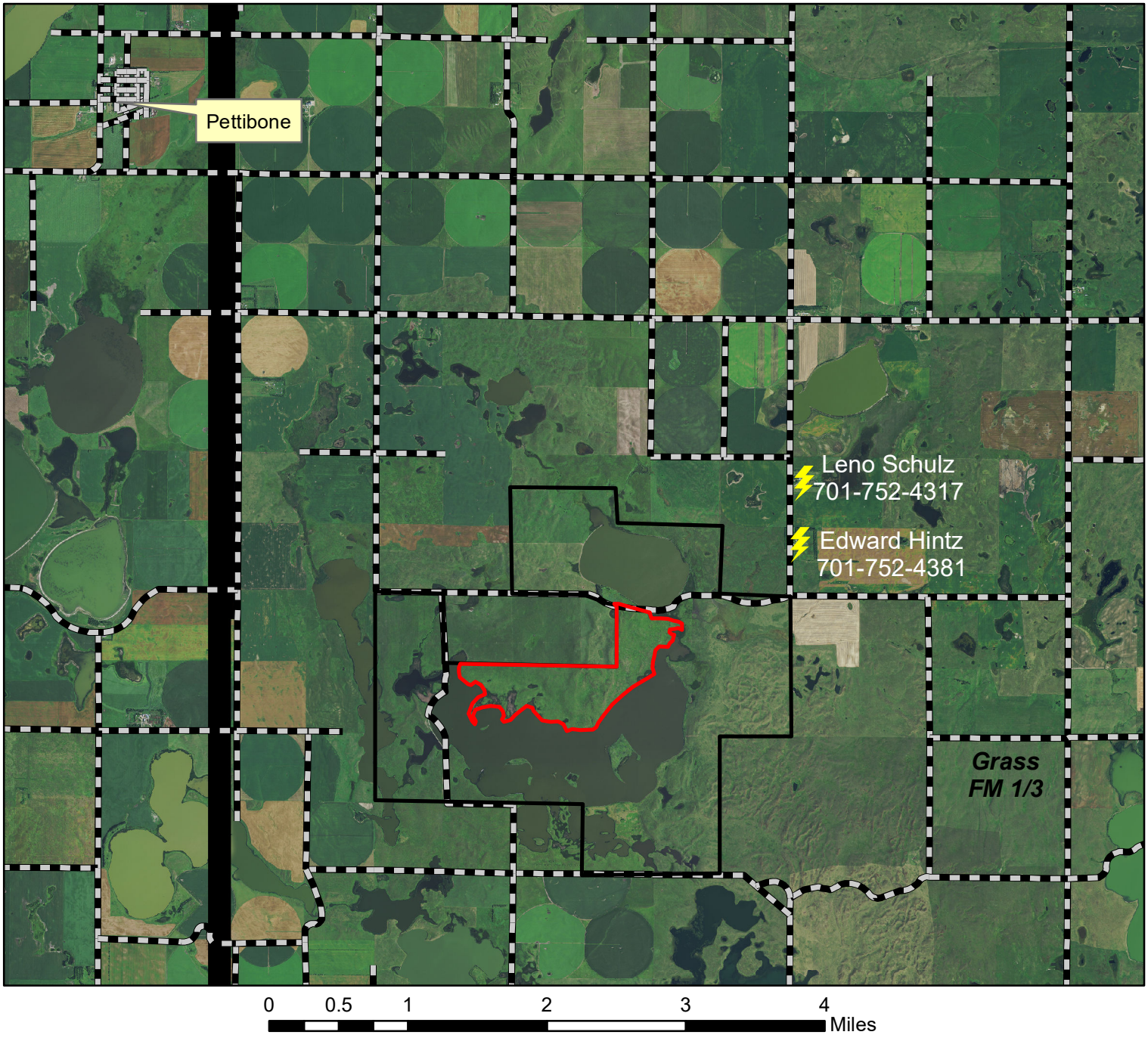
Appendix E: Fire Behavior Modeling Documentation or Empirical Documentation

Appendix F: Smoke Management Plan and Smoke Modeling Documentation (Optional)

Appendix G: Clearances and Permits

Appendix H: IAP, Communication & Medical Plans

Chase Lake WPA Unit 3
Vicinity Map



Legend

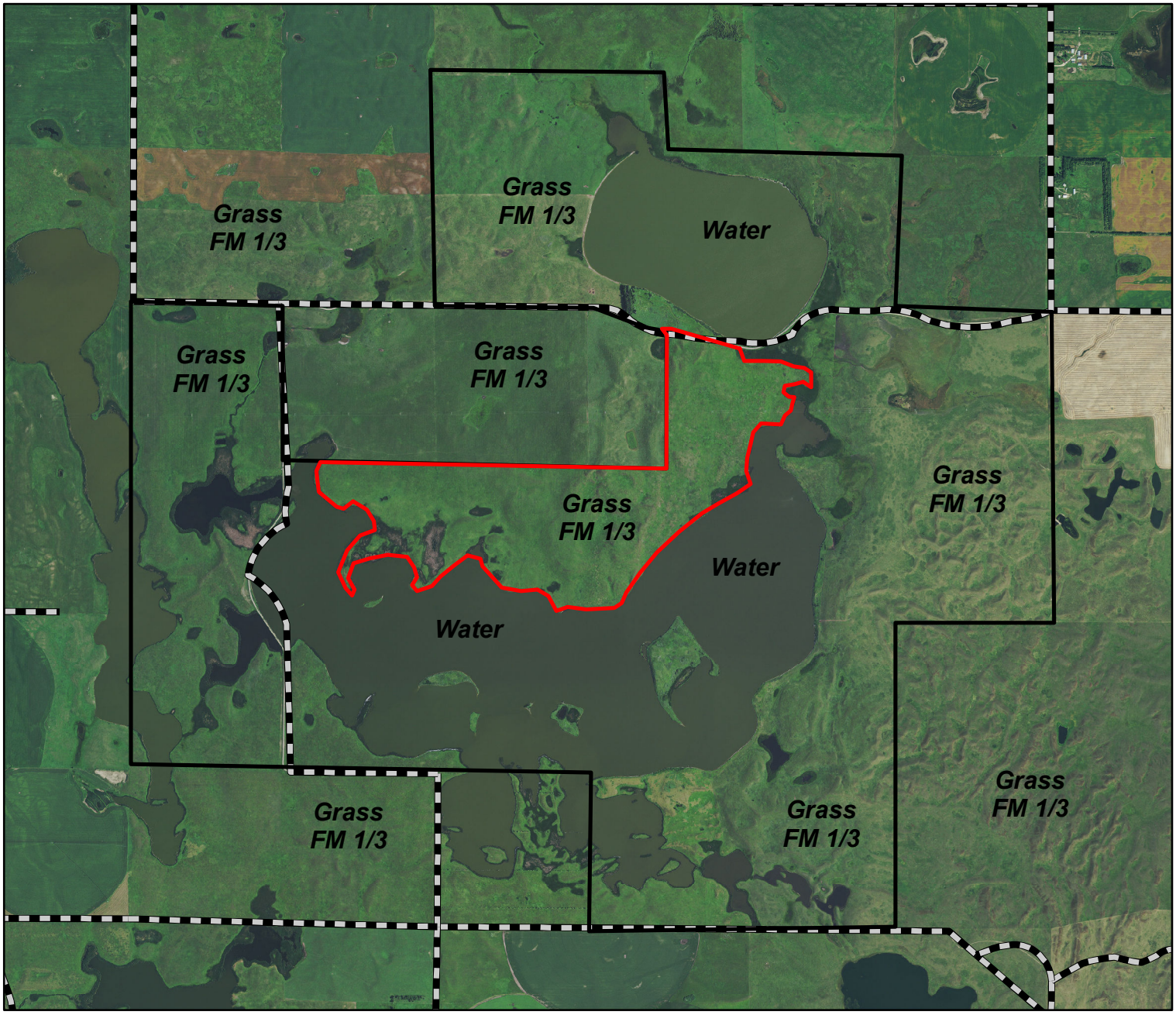
- WPA Boundary
- Gravel Road
- Burn Unit Boundary

N
W E
S

The burn units are located 5 miles east, 3 miles south and 1 mile back west of Pettibone.

Prepared by; Terry Gwilliams 01/27/2020
141N 69W Sec. 5

Chase Lake WPA Unit 3
Project Map



Legend

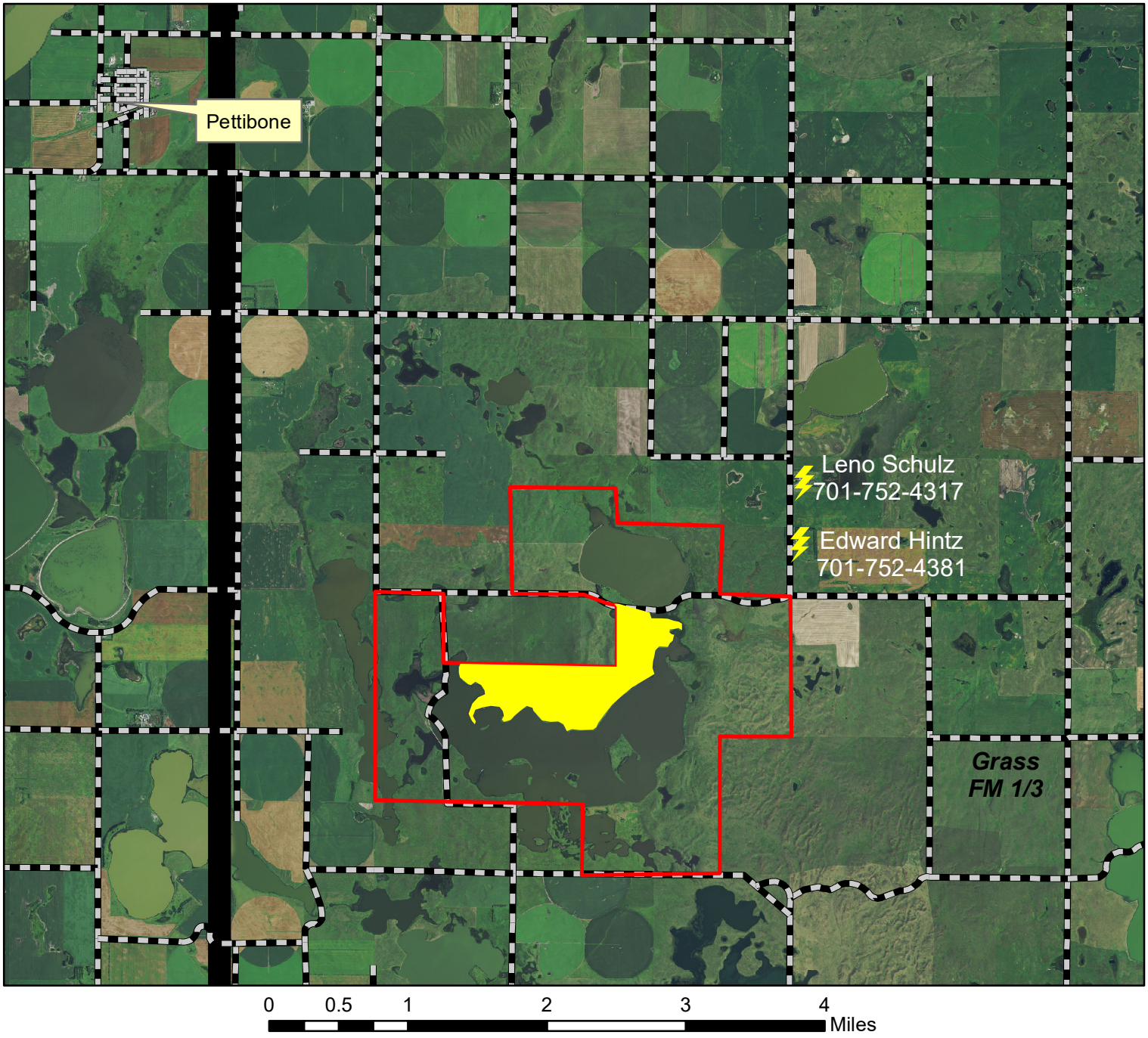
- WPA Boundary
- Gravel Road
- Burn Unit Boundary

N
W E
S

The burn units are located 5 miles east, 3 miles south and 1 mile back west of Pettibone.

Prepared by; Terry Gwilliams 01/27/2020
141N 69W Sec. 5

Chase Lake WPA Unit 3
Contingency Map



Legend

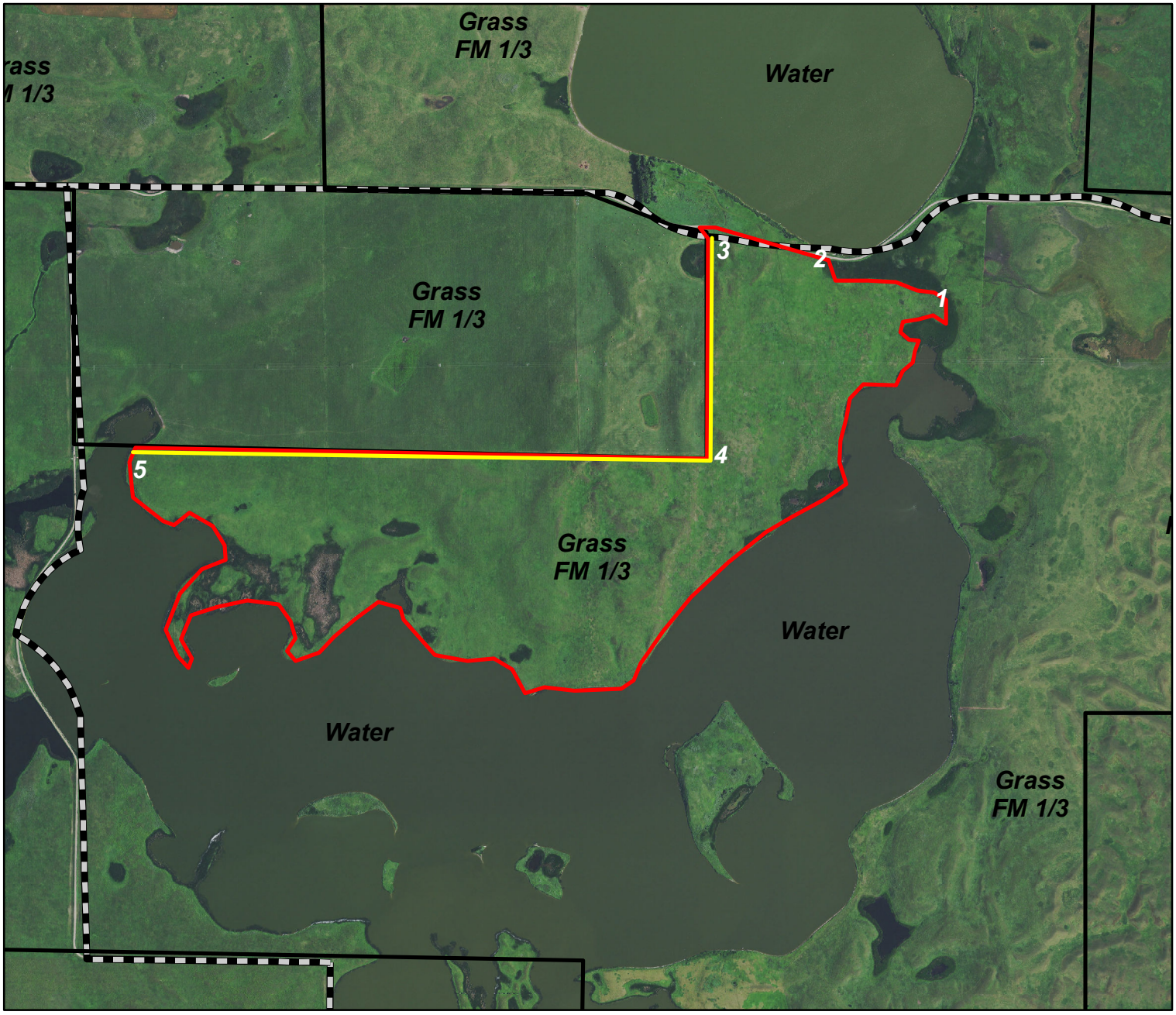
- WPA Boundary & Contingency Lines
- Gravel Road
- Burn Unit Boundary

N
W E
S

The burn units are located 5 miles east, 3 miles south and 1 mile back west of Pettibone.

Prepared by; Terry Gwilliams 01/27/2020
141N 69W Sec. 5

Chase Lake WPA Unit 3
Ignition Map



0 0.175 0.35 0.7 1.05 1.4 Miles

Legend

- WPA Boundary
- Gravel Road
- Burn Unit Boundary
- Mow Lines

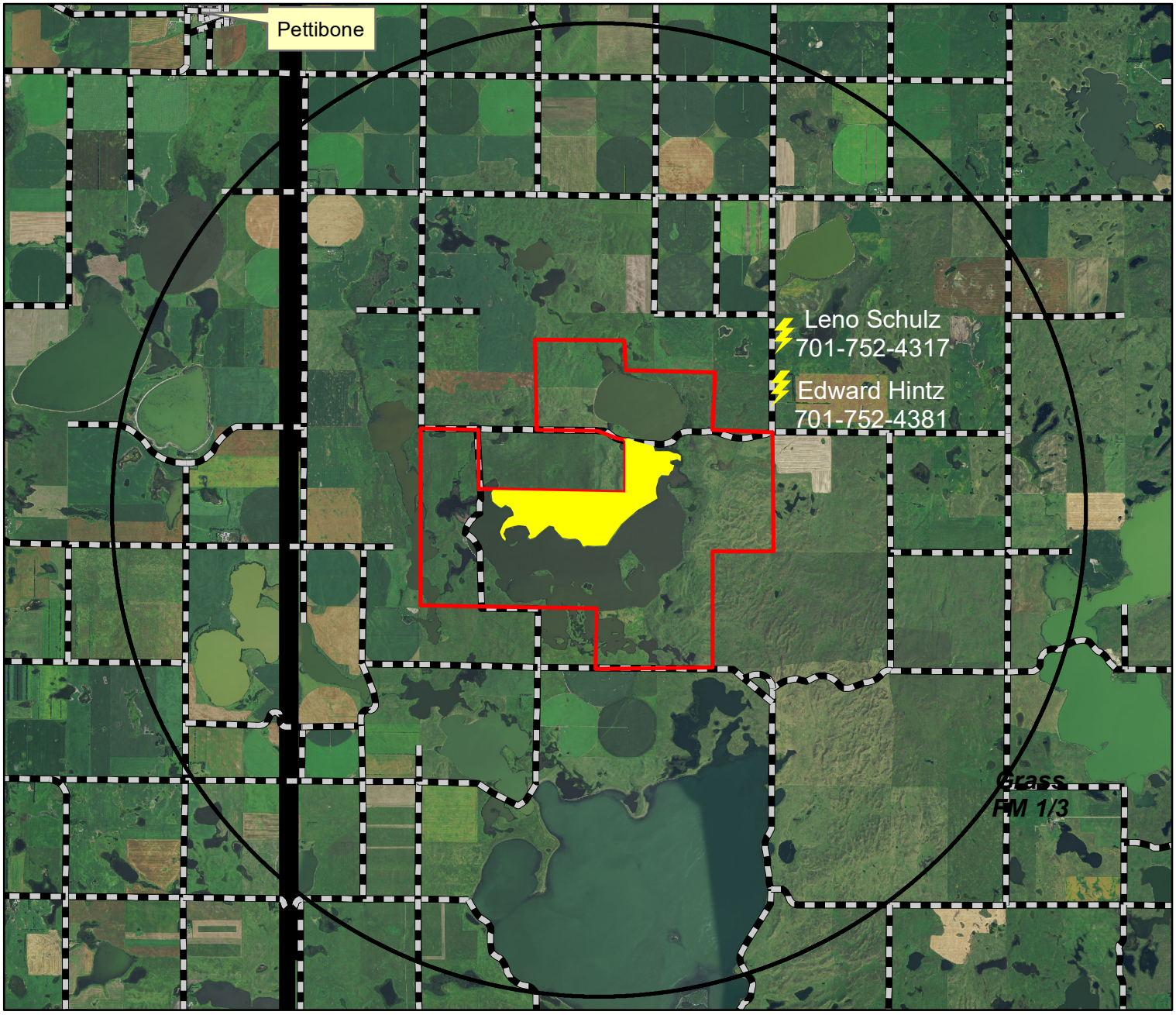
N W E S

The burn units are located 5 miles east, 3 miles south and 1 mile back west of Pettibone.

Prepared by; Terry Gwilliams 01/27/2020
141N 69W Sec. 5

Ignition sequence with a northwest wind direction;
1-5 Along lake shore, 1-2
4-3, 2-3, 4-5

Chase Lake WPA Unit 3
Smoke Trajectory Map



Legend

- WPA Boundary
- Gravel Road
- Burn Unit Boundary
- Smoke Trajectory

N
W E
S

The burn units are located 5 miles east, 3 miles south and 1 mile back west of Pettibone.

Prepared by; Terry Gwilliams 01/27/2020
141N 69W Sec. 5

Smoke trajectory shown with any wind direction

APPENDIX B. TECHNICAL REVIEWER CHECKLIST - USFWS R6

Administrative Unit	Project Name	Unit Name	Burn Dates		Valid Through	Reviewed By
			From	To		
Chase Lake WMD	Chase Lake WPA	Chase Lake WPA Unit 3	1-Jan	31-Dec	12/31/2025	Dominick Marsden

Prescribed Fire Elements		S / U	
1	**Signature Page**	S	Update Region on Main Plan and IAP cover page
2	**GO/NO-GO Checklists**	S	
3	**Complexity Analysis Summary**	S	
4	**Description of the Prescribed Fire Area Must Include:**		
	A. Physical Description:	S	
	* Location	S	May want to include 911 address in IAP
	* Size	S	
	* Topography	S	
	* Project Boundary	S	
	B. Vegetation / Fuels Description:	S	
	* 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:	S	
	* 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)	S	
	* 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	S	

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	U	Mowed fire breaks must be 14' wide
	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**		S	
15	**Ignititon 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.	Management Action 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 Declaration 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	S	
		* Smoke Trajectory Map (FWS R6 Required)	S	
	C.	Modeling Outputs Included (if required)	S	
	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

Dominick Marsden
Technical Reviewer

RXB2|4
Qualifications & Currency

3.23.2020
Date

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

Chase Lake WPA Unit 3		Quantity	Significance	Values Description: Describe the identified off-site, on-site and political values
Values	On-Site	**None**	**Low**	Few or no special internal features are present that require special attention in planning or implementation.
	Off-Site	**Nominal**	**Mod**	There are moderate to high values at risk if the unit is burned while the adjacent crops are cured and unharvested.
	Public/Political Interest	**None**	**Low**	There has been little to none political controversy related to the project and little or no news media interest.

Element	Preliminary Risk	Risk Rating Descriptors	Agency Administrator/Preparer Discussion Completed
Safety	Low	• 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. Safety issues are easily identifiable and mitigated. The burn will be consistent with numberous other burns around the district and present no special safety concerns. Safety concerns will be addressed in pre-burn briefings. Any unit specific safety issues (ie. powerlines, wet spots, abandoned well etc..) will be highlighted during these briefings. A Job Hazard Analysis will be attached to the plan as well, outlining common hazards and mitigating steps.	Yes
Fire Behavior	Mod	• Fuels vary within the unit, both in loading and arrangement. • Fire behavior may present control challenges that are easily mitigated. • Medium fuel loadings with some high concentrations are present. • Variable terrain features may significantly affect fire behavior and present moderate ignition and control problems. • Local winds and burning conditions may vary enough to cause shifts in fire behavior that briefly exceed modeled fire behavior and threaten controllability. • Periodic torching can be expected either as isolated points or in limited areas. • Probability of ignition outside of the unit is low and any spotting is expected to be short range. Fuels vary moderately within the units, both in loading and arrangement. Medium loading with some concentrated areas of high fuel loading are both present within the units. Two fuels models (FM 1 & 3) are represented.	Yes
Resistance to Containment	Mod	• Potential for multiple wildfire mechanisms such as spot fires or slopovers that can propagate at moderate rates of spread but can be held by prompt holding actions. • Some fuel concentrations or ladder fuels exist near critical holding points. • Expected fire intensities in the primary fuel type create little potential to challenge standard fire lines. • The probability of ignition in fuels outside of control lines is low to moderate. • Some dependency on natural fuel breaks to hold the prescribed fire. • Local drought and or fire indices are expected to be moderate to high. Potential for escape is moderate due to the amount of mow lines with a moderate amount of fuel loading adjacent to the planned unit.	Yes
Ignition Procedures and Methods	Mod	• Multiple firing sequences patterns and timing must be coordinated to meet project objectives and reduce the risk of an unexpected or adverse event. • Specific fire intensities or ROS are somewhat critical for meeting resource objectives but are readily attained by placing local skill sets in firing boss positions. Firing sequence and timing is critical to maintain safe burn conditions and to meet project objectives. The entire project will be visible to the FIRB/Burn Boss. Coordination and communication will be vital throughout ignitions to ensure a safe and effective burn.	Yes
Prescribed Fire Duration	Low	• 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. Iginition will be completed within one operational period. Minimal mop-up due to grass fuel model.	Yes
Smoke Management	Mod	• Noticeable smoke will be produced creating at least some public concern. • Short-term health or safety concerns related to smoke exposure may occur if actual weather deviates from forecasted. • Nearby communities are highly conscious of smoke from wildland fire. • Some possibility for a NAAQS exceedance violation. • The prescription or ignition portions of the plan need to consider smoke management. Potential impacts include a few neighboring farm houses and nearby roads.	Yes
Number and Dependence of Activities	Low	• 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. Burn day activities are generally independent of one another. A low to moderate level of coordination between resources may be necessary. In some instances, mulitiple burn units may be ignited in one day, making dependency on other resources more vital, however, these units will be simpler in overall complexity, therefore keeping the final rating low.	Yes
Management Organization	Low	• 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). This burn will require a single level of supervision (Burn boss plus lighters and holders).	Yes
Treatment/Resource Objectives	Low	• 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. The reduction of grass litter is easily achieved using a level of fire behavior that is easily achieved, managed and monitored.	Yes
Constraints	Mod	• Constraints exist with some constraints imposing limits on implementing the prescribed fire or achieving objectives. No constraints related to access, water sources, specific tactics or equipment and aircraft exist. Spring burn scheduling may conflict because other agencies and refuges may also be burning in the spring, typing up needed personnel. Mow line and landowner contacts should be in place before burn season starts. Weather and scheduling conflicts are the most common limiting constraint on any of the units that are planned to be burned. Some scheduling conflicts can be avoided with pre-season planning and use of additional resources.	Yes
Project Logistics	Low	• Minimal logistical support is needed to safely meet prescribed fire objectives. • No special equipment, support or communications needs are required. The burn will have no adverse project logistics. All travel will be local and within 1 day drive. No specialized equipment is needed. Project duration will be less than two days.	Yes

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Decriptors	Elements and Actions in the RX Fire Plan that Address Risk Mitigation
Safety	Low	Low	• 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. There is minimal potential for serious accidents/injury to firefighters or the public on this burn.	No Change.
Fire Behavior	Mod	Low	• 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. Fire behavior outside the unit would be similar or less than that inside the unit depending on neighboring land use. Primarily lower fire behavior can be expected off federal lands. If fire escapes and burns additional refuge land, similar fire behavior can be expected.	No Change.
Resistance to Containment	Mod	Mod	• Potential for multiple wildfire mechanisms such as spot fires or slopovers that can propagate at moderate rates of spread but can be held by prompt holding actions. • Some fuel concentrations or ladder fuels exist near critical holding points. • Expected fire intensities in the primary fuel type create little potential to challenge standard fire lines. • The probability of ignition in fuels outside of control lines is low to moderate. • Some dependency on natural fuel breaks to hold the prescribed fire. • Local drought and or fire indices are expected to be moderate to high. Overall, resource values won't be negatively affected by an escape. Fences and signs may be damaged. An escape should be quickly contained due to the surrounding features.	No Change.
Ignition Procedures and Methods	Mod	Mod	• Multiple firing sequences patterns and timing must be coordinated to meet project objectives and reduce the risk of an unexpected or adverse event. • Specific fire intensities or ROS are somewhat critical for meeting resource objectives but are readily attained by placing local skill sets in firing boss positions. Firing methods and procedures must be coordinated to provide for adequate safety and to meet project objectives.	No Change.
Prescribed Fire Duration	Low	Low	• 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. Ignition on all units last one operational period and 1 hour fuels require minimal mop-up.	No Change.
Smoke Management	Mod	Low	• 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. Any impacts would be minimal and temporary because of the 1 hour fuels present in the unit. Impacts will be mitigated by insuring smoke lift and dispersal will lessen impacts to any smoke sensitive features.	No Change.
Number and Dependence of Activities	Low	Low	• 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. Coordination problems should not increase the risk of escape using allowed wind directions and precription parameters.	No Change.
Management Organization	Low	Low	• 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). Problems with supervision or communication are expected to be minimal. Unit and operations consistent throughout the district.	No Change.
Treatment/Resource Objectives	Low	Low	• 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. Burning some other time, treating mechanically, or grazing can approximate objectives. Failure to burn would have no adverse impacts to natural resources.	No Change.
Constraints	Mod	Low	• Constraints exist with little impact on imolementing the prescribed fire or achieving objectives. Lack of available personnel may keep the burn from occuring whenever it is in prescription. Other opportunities shoud arise later in the season when adequate staffing and weather occur.	No Change.
Project Logistics	Low	Low	• Minimal logistical support is needed to safely meet prescribed fire objectives. • No special equipment, support or communications needs are required. Problems related with logistics will not increase the risk of escape, affect the completion of the project or create a safety concern.	No Change.

Element	Post-Plan Risk	Technical Difficulty	Rating Descritors
Safety	Low	Low	• 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. Safety concerns can be easily mitigated through LCES. A standard safety briefing as part of the project briefing should be sufficient to cover the safety concerns. Special mitigation to protect public health and safety are not needed.
Fire Behavior	Low	Low	• 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. Crews on hand will usually be successful employing direct attack on spot fires and slop overs. After the intiating stages, direct attack may not catch an escape, however, there are numberous roads, canals, lakes and areas of light fuel available as contingency lines.
Resistance to Containment	Mod	Low	• 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. Holding operations will generally be supervised at the engine boss level. All protions of the permeter will be accessible to some type of holding forces (engines or hand tools). Wind, tempereture and RH parameters in the burn plan are common in the spring.
Ignition Procedures and Methods	Mod	Mod	• The need for multiple firing devices, sequences, techniques, or patterns has been identified. • Firing procedures are somewhat complex in at least some portions of the project area and a single Firing Boss (FIRB) is used. • Two different types of ignition devices are planned. • The ignition pattern requires direct control of the lighters to achieve project objectives and manage safety concerns. • Communications may require the use of a command (repeater) and at least two tactical frequencies will be used. • The project area is large but can be observed from high points and terrain and/or distance does not contribute to sequence and timing problems. Two ignition groups will typically be used on RX burns with the county. On more complex units, a FIRB may be advised. Multiple layers of supervision will be used creating a moderate complexity.
Prescribed Fire Duration	Low	Low	• 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. Due to 1 hour fuels ignition and mop-up last one due unless there are heavies present or under drier condions when duff layers are more redily available to burn.
Smoke Management	Low	Low	• 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.
Number and Dependence of Activities	Low	Low	• 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. Minimal difficulty in coordinating the required activities. Communication and operations will be consistent with other burns around the district.
Management Organization	Low	Mod	• At least one primary team member may need to come from outside of the local unit and may not be familiar with local factors. • The numbers of qualified personnel available on the local unit are limited. • Special skills or supervision required for one function (RXB2 suggested). • Some pre-burn preparation work may require special organizational planning and/or coordination. • Protection of resource values requires extra considerations when developing certain elements of the prescribed fire plan. • Few resources are required for mop-up and patrol. Some team members may need to come from outside of the local unit (refuge) because the number of qualified personnel from the local unit is limited. An RXB2 is required. Coordination with both neighboring agency and interagency is important. Previous experience and partnerships with cooperators has been established which should help in getting the needed additional resources.
Treatment/Resource Objectives	Low	Low	• 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. There are few or no restrictions on techniques to achive fire objectives.
Constraints	Low	Mod	• Some constraints are not easily accommodated and increase the difficulty of completing the project or achieving objectives. • Some prescribed fire parameters are dependent upon marginal environmental conditions. • The length of time to complete the project and the size of the organization may need to be increased. Constraints could significantly increase the difficulty in completing the project due to the increased minimal staffing requirements, and narrower window for weather prescription parameters. If weather or fuel conditions increase fire behavior and holding concerns, a step up of equipment and personnel will be implemented to lessen chance of escape.
Project Logistics	Low	Low	• 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. The burn boss, FIRB, and engine bosses will handle most support needs. Additional equipment might be required (water tender, sprinkler system, etc...) increasing logistical planning.

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

This worksheet is supplemental to the *Prescribed Fire Complexity Rating System Guide*, PMS 424. It is designed to enable effective risk management. The *Interagency Prescribed Fire Planning and Implementation Procedures Guide,* PMS 484, provides further explanation. This becomes Element 3 of the Prescribed Fire Plan.

Chase Lake WPA Unit 3		Quantity	Significance
Values	On-Site	None	Low
	Off-Site	Nominal	Mod
	Public/Political Interest	None	Low

Element	Preliminary Risk	Post-Plan Risk	Technical Difficulty	Calculated Rating
Safety	Low	Low	Low	Low
Fire Behavior	Mod	Low	Low	Low
Resistance to Containment	Mod	Mod	Low	Mod
Ignition Procedures and Methods	Mod	Mod	Mod	Mod
Prescribed Fire Duration	Low	Low	Low	Low
Smoke Management	Mod	Low	Low	Low
Number and Dependence of Activities	Low	Low	Low	Low
Management Organization	Low	Low	Mod	Mod
Treatment/Resource Objectives	Low	Low	Low	Low
Constraints	Mod	Low	Mod	Mod
Project Logistics	Low	Low	Low	Low

Calculated Summary Prescribed Fire Plan Complexity

Final Complexity Determination	Final Complexity Determination Rationale
Mod	This project requires a moderate rating due to fact that the final rating is a moderate. There is a moderate risk of escape which would in all cases affect private land. The higher level of coordination and communication required to conduct the burn adds to the risk of escape.

Signatures	Rx Burn Plan Preparer's Name:_____ X_____ Date:_____ Preparer Technical Reviewer's Name:_____ X_____ Date:_____ Technical Reviewer Agency Administrator's Name:_____ X_____ Date:_____ Agency Administrator

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This worksheet is supplemental to the *Prescribed Fire Complexity Rating System Guide*, PMS 424. It is designed to enable effective risk management. The *Interagency Prescribed Fire Planning and Implementation Procedures Guide*, PMS 484, provides further explanation. This becomes Element 3 of the Prescribed Fire Plan.

Chase Lake WPA Unit 3		Quantity	Significance
Values	On-Site	None	Low
	Off-Site	Nominal	Mod
	Public/Political Interest	None	Low

Element	Preliminary Risk	Post-Plan Risk	Technical Difficulty	Calculated Rating
Safety	Low	Low	Low	Low
Fire Behavior		Low	Low	Low
Resistance to Containment			Low	
Ignition Procedures and Methods				
Prescribed Fire Duration	Low	Low	Low	Low
Smoke Management		Low	Low	Low
Number and Dependence of Activities	Low	Low	Low	Low
Management Organization	Low	Low		
Treatment/Resource Objectives	Low	Low	Low	Low
Constraints		Low		
Project Logistics	Low	Low	Low	Low

Calculated Summary Prescribed Fire Plan Complexity

Final Complexity Determination	Final Complexity Determination Rationale
Mod	This project requires a moderate rating due to fact that the final rating is a moderate. There is a moderate risk of escape which would in all cases affect private land. The higher level of coordination and communication required to conduct the burn adds to the risk of escape.

Signatures

Rx Burn Plan Preparer's Name: Terry Gwilliams TG Date: 3-3-20
Preparer

Technical Reviewer's Name: Dominick Date: 3.23.20
Technical Reviewer

Agency Administrator's Name: Paul Halko PAUL HALKO Digitally signed by PAUL HALKO Date: 2021.03.02 16:00:55 -06'00' Date:
X
Agency Administrator

JOB HAZARD ANALYSIS

ACTIVITY: Prescribed Fire

(Certification of Hazard Assessment – 29 CFR 1910.133)
U.S. FISH AND WILDLIFE SERVICE

STATION: Valley City Wetland Management District

DATE: 12-15-09

PREPARED BY: Terry Gwilliams

CERTIFIED BY: Jeff Dion

PERSONAL PROTECTIVE EQUIPMENT REQUIRED:

X Eyes/Face	Eye Protection
X Foot	Leather Boots
X Hand	Leather Gloves
X Head	Hard Hat
X Leg	Nomex Pants
X Body	Nomex Shirt
X Ear	Ear Protection
X Other	Fire Shelter

QUALIFICATIONS, EXPERIENCE, OR TRAINING REQUIRED:

Experience with water pump and roll operations with a Type 6 Engine.
Experience firing with a hand held drip torch.

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.?
*Travel to, from and on Project.	Motor vehicle accidents Slippery road surfaces,soft shoulders,unimproved and narrow roadways. Dusty road conditions Weather Darkness,smoke.	Driving Defensively. Use seat belts. Identify road conditions during briefings. Post Road Guards. Mark hazards. Use Headlights. Perform pre-use inspections on equipment. Scout roads and identify turnouts before ignition of project. Maintain communications. Provide road system map for project. Use Backers and chock vehicle tires. Have vehicles facing out. Driving engines off refuge trails should be avoided as areas may be wet causing vehicles to get stuck.
*Briefing	Lack of communications	Provide project briefing before burning will clarify firing order, organization responsibilities, communications, hazards, weather, and expected fire behavior.

BASIC JOB STEPS	HAZARDS	SAFE JOB PROCEDURE
*Qualifications For assigned Position	Lack of Experience Injuries	Workers recruited for burn assignments shall meet age,health, and physical requirements established for regular firefighting duties. Also meet Prescribed Burn qualifications.
*Protective Clothing and equipment	Injuries,burns and death	Wear Hard hat with chin strap, safety glasses, Nomex Fire resistant pants and shirts NFPA 1977 compliant. Keep sleeves rolled down. Wear leather, lace type, boots with skid resistant soles, and tops at least 8 inches high. Carry drinking water and fire shelter. Wear OSHA approved firefighting gloves. wear hearing protection when working around equipment where noise level exceeds 90 dba. Wear additional protective equipment as dictated by local conditions and exposure to special equipment.
*Lighters	Injuries and death falls,snags,bees, snakes,smoke, burns, rolling material.	Always have an escape route . Maintain LCES. Follow the Standard Fire Orders and Watch Out Situations. Maintain communications with other Lighters and RX Fire Ignition specialist. Hand held radios shall be provided to all lighters. Do not fill drip torches near ignition sources. Do not spill burn mix on clothing.
*Fuel Mixing	Burns, spills, fuel saturated clothing and boots.	No smoking within 25 feet of mixing and filling area. Do not fill or mix in pick up beds with bed liners. Avoid the use of cellular telephones in and around fill or mixing area. Avoid fuel contact with bare hands, clothing and boots. Provide pour spouts. Use only approved fuel containers.
*ATV Operations	Injuries and death Rolling, Side hills, Holes, hidden equipment in grass	Avoid operating machine on side hills. Travel at speeds suitable to environmental conditions. Always read and follow operating procedures in the manual. Make predetermined routes prior to the beginning of the burn. Flag any hazards within the unit. Inspect machine prior to use.

Holding/Mop Up/Patrol Crews	**Smoke,burns,Falls, back injuries, bees, posion oak,snags, rolling material,eye injuries. Heat Stress. Dehydration CO Poisoning**	**Wear PPE's listed above. LCES, Follow Standard Fire Orders and Watch out Situations. Receive briefing from Holding and Mop Up Boss. Identify hazards in work area. Flag hazards for others. Use warning lights and provide traffic control on roadways during smoky and nights operations. Maintaining a high level of aerobic fitness is one of the best ways to protect yourself against heat stress. Drink lots of fluids before,during and after work. Periodically rotate crews from work sites with high smoke levels to areas of less smoke or smoke free areas. Protective clothing and equipment shall be the same as required for firefighting. Crews shall follow all guidelines in the NWCG 2005 Red Book. Maintain communications with the Dispatch.**
Emergency Evacuation Procedures (EEP)	**Serious illness Injuries**	**Notify Dispatch, request medical response from the responsible medical first responders. Provide type of injury,location,access, number of patients. Identify EMT's and available medical equipment on project during briefing**

FUEL MODEL 3 HEAD FIRE

RATE OF SPREAD, CH/H (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	97.	162.	234.	312.	395.	482.
6.0	89.	148.	214.	286.	361.	441.
7.0	82.	137.	198.	264.	335.	409.
8.0	77.	129.	186.	248.	313.	383.
9.0	73.	122.	176.	234.	296.	362.
10.0	70.	116.	167.	223.	282.	345.
11.0	67.	111.	161.	214.	271.	331.

FIRELINE INTENSITY, BTU/FT/S (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	1398.	2329.	3363.	4481.	5672.	6926.
6.0	1212.	2019.	2916.	3886.	4919.	6006.
7.0	1076.	1792.	2588.	3449.	4365.	5330.
8.0	975.	1625.	2346.	3126.	3957.	4832.
9.0	901.	1500.	2167.	2887.	3655.	4463.
10.0	844.	1407.	2031.	2707.	3426.	4184.
11.0	800.	1333.	1925.	2565.	3247.	3965.

FLAME LENGTH, FT (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	12.6	15.9	18.9	21.5	24.0	26.3
6.0	11.8	14.9	17.7	20.2	22.5	24.6
7.0	11.2	14.1	16.7	19.1	21.3	23.3
8.0	10.7	13.5	16.0	18.2	20.3	22.3
9.0	10.3	13.0	15.4	17.6	19.6	21.5
10.0	10.0	12.6	15.0	17.1	19.0	20.9
11.0	9.7	12.3	14.6	16.6	18.6	20.3

RATE OF SPREAD, CH/H (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	7.	7.	7.	7.	6.	6.
6.0	6.	6.	6.	6.	6.	6.
7.0	6.	6.	6.	6.	5.	5.
8.0	6.	6.	5.	5.	5.	5.
9.0	5.	5.	5.	5.	5.	5.
10.0	5.	5.	5.	5.	5.	4.
11.0	5.	5.	5.	5.	4.	4.

FIRELINE INTENSITY, BTU/FT/S (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	100.	101.	99.	95.	92.	88.
6.0	87.	88.	86.	83.	79.	76.
7.0	77.	78.	76.	73.	70.	67.
8.0	70.	71.	69.	67.	64.	61.
9.0	65.	65.	64.	61.	59.	56.
10.0	61.	61.	60.	58.	55.	53.
11.0	57.	58.	57.	55.	52.	50.

FLAME LENGTH, FT (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	3.7	3.8	3.7	3.7	3.6	3.5
6.0	3.5	3.5	3.5	3.4	3.4	3.3
7.0	3.3	3.3	3.3	3.2	3.2	3.1
8.0	3.2	3.2	3.2	3.1	3.0	3.0
9.0	3.1	3.1	3.0	3.0	2.9	2.9
10.0	3.0	3.0	3.0	2.9	2.8	2.8
11.0	2.9	2.9	2.9	2.8	2.8	2.7

RATE OF SPREAD, CH/H (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	13.	14.	13.	13.	13.	12.
6.0	12.	12.	12.	12.	11.	11.
7.0	11.	11.	11.	11.	11.	10.
8.0	10.	11.	11.	10.	10.	10.
9.0	10.	10.	10.	10.	9.	9.
10.0	9.	10.	10.	9.	9.	9.
11.0	9.	9.	9.	9.	9.	8.

FIRELINE INTENSITY, BTU/FT/S (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	187.	194.	192.	187.	180.	173.
6.0	162.	169.	167.	162.	156.	150.
7.0	144.	150.	148.	144.	139.	133.
8.0	131.	136.	134.	130.	126.	121.
9.0	121.	125.	124.	120.	116.	112.
10.0	113.	117.	116.	113.	109.	105.
11.0						

RATE OF SPREAD, CH/H (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	64.	143.	255.	297.*	297.*	297.*
6.0	61.	135.	242.	270.*	270.*	270.*
7.0	57.	127.	228.	242.*	242.*	242.*
8.0	52.	117.	199.*	199.*	199.*	199.*
9.0	45.	101.	136.*	136.*	136.*	136.*
10.0	35.	65.*	65.*	65.*	65.*	65.*
11.0	13.*	13.*	13.*	13.*	13.*	13.*

* MEANS YOU HIT THE WIND LIMIT.
FUEL MODEL 1 HEAD FIRE

FIRELINE INTENSITY, BTU/FT/S (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	109.	242.	433.	504.*	504.*	504.*
6.0	101.	224.	402.	449.*	449.*	449.*
7.0	93.	206.	369.	392.*	392.*	392.*
8.0	81.	179.	305.*	305.*	305.*	305.*
9.0	62.	138.	186.*	186.*	186.*	186.*
10.0	37.	70.*	70.*	70.*	70.*	70.*
11.0	9.*	9.*	9.*	9.*	9.*	9.*

* MEANS YOU HIT THE WIND LIMIT.
FUEL MODEL 1 HEAD FIRE

FLAME LENGTH, FT (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	3.9	5.6	7.3	7.9*	7.9*	7.9*
6.0	3.8	5.4	7.1	7.5*	7.5*	7.5*
7.0	3.6	5.2	6.8	7.0*	7.0*	7.0*
8.0	3.4	4.9	6.3*	6.3*	6.3*	6.3*
9.0	3.0	4.3	5.0*	5.0*	5.0*	5.0*
10.0	2.4	3.2*	3.2*	3.2*	3.2*	3.2*
11.0	1.2*	1.2*	1.2*	1.2*	1.2*	1.2*

* MEANS YOU HIT THE WIND LIMIT.
FUEL MODEL 1 HEAD FIRE

RATE OF SPREAD, CH/H (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	5.	6.	8.	8.	8.	8.
6.0	4.	6.	7.	7.	7.	7.
7.0	4.	6.	7.	7.	7.	7.
8.0	4.	5.	6.	6.	6.	6.
9.0	3.	4.	5.	5.	5.	5.
10.0	2.	3.	3.	3.	3.	3.
11.0	1.	1.	1.	1.	1.	1.

FUEL MODEL 1 BACKING FIRE

FIRELINE INTENSITY, BTU/FT/S (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	8.	11.	13.	13.	13.	13.
6.0	7.	10.	12.	12.	12.	12.
7.0	7.	9.	11.	11.	11.	11.
8.0	6.	8.	9.	9.	9.	9.
9.0	4.	6.	7.	7.	7.	7.
10.0	3.	3.	3.	3.	3.	3.
11.0	1.	1.	1.	1.	1.	1.

FUEL MODEL 1 BACKING FIRE

FLAME LENGTH, FT (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	1.2	1.3	1.5	1.5	1.5	1.5
6.0	1.1	1.3	1.4	1.4	1.4	1.4
7.0	1.1	1.2	1.3	1.4	1.4	1.4
8.0	1.0	1.2	1.3	1.3	1.3	1.3
9.0	.9	1.0	1.1	1.1	1.1	1.1
10.0	.7	.8	.8	.8	.8	.8
11.0	.4	.4	.4	.4	.4	.4

FUEL MODEL 1 BACKING FIRE

RATE OF SPREAD, CH/H (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	9.	12.	15.	15.	15.	15.
6.0	8.	11.	14.	14.	14.	14.
7.0	8.	11.	13.	13.	13.	13.
8.0	7.	10.	12.	12.	12.	12.
9.0	6.	8.	9.	9.	9.	9.
10.0	5.	6.	6.	6.	6.	6.
11.0	2.	2.	2.	2.	2.	2.

FUEL MODEL 1 FLANK FIRE

FIRELINE INTENSITY, BTU/FT/S (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	15.	20.	25.	26.	26.	26.
6.0	14.	19.	23.	24.	24.	24.
7.0	12.	17.	21.	22.	22.	22.
8.0	11.	15.	18.	18.	18.	18.
9.0	8.	11.	13.	13.	13.	13.
10.0	5.	7.	7.	7.	7.	7.
11.0	1.	1.	1.	1.	1.	1.

FUEL MODEL 1 FLANK FIRE

FLAME LENGTH, FT (V4.4)

1_HR MOIS (%)	MIDFLAME WIND, MI/H 4.0	6.0	8.0	10.0	12.0	14.0
5.0	1.5	1.8	2.0	2.0	2.0	2.0
6.0	1.5	1.7	1.9	1.9	1.9	1.9
7.0	1.4	1.7	1.8	1.8	1.8	1.8
8.0	1.3	1.6	1.7	1.7	1.7	1.7
9.0	1.2	1.4	1.5	1.5	1.5	1.5
10.0	.9	1.1	1.1	1.1	1.1	1.1
11.0	.5	.5	.5	.5	.5	.5

FUEL MODEL 1 FLANK FIRE

(ALL SMOKE SIGNS WILL BE DOT APPROVED IN ACCORDANCE WITH THE MUTCD SECTION 6l)

Smoke Management Contingency Plan:

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

1) 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 area of the unit still on fire. Mop-up will also be initiated in order to eliminate as much smoke production as possible.
2) If additional resources are needed to extinguish the burn and eliminate further smoke production, they will be called in through the refuge dispatch system and may include fire departments, personnel from other refuges or other state and federal agencies.
3) 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 to assist with local traffic control, including temporary closure of area roads if deemed necessary.
4) 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 sensitive individuals away from the impacted area can occur.
5) The burn boss will remain on site until the smoke problems are resolved or until relieved by an individual appointed by the line officer.

Mop-up will begin as needed when firing is completed. If warranted, mop-up will continue after the burn until all smokes are extinguished. The amount of mop-up needed will be determined by the burn boss depending upon weather and other factors. Engines used in the vicinity of the fire lines where personnel are working will travel slowly and have their headlights on at all times. Communications between engine operators and fire line personnel will be maintained for the duration of the burn, and all line personnel will be made aware of equipment movements.

U.S. Department of the Interior
U.S. FISH AND WILDLIFE SERVICE

ENVIRONMENTAL ACTION STATEMENT

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 Perscribed burning on Chase Lake WPA in Stutsman Co. .

- X 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):

PAUL HALKO

Digitally signed by PAUL HALKO
Date: 2021.03.02 16:03:21 -06'00'

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 Categorically 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 WPA		Treatment Location: Stutsman County		
NFPORS Project # (if applicable)	Planned Start Date:	Planned Completion Date:	Estimated Duration:	Estimated Costs $
Project Coordinator:	Phone No:			
	E-Mail:			

Categorical Exclusion(s) (CE) for this treatment: *(check all that apply)*

516 DM 8.5	**X**	Note: 516 DM 8.5 are Service specific CEs;
43 CFR 46.210	_____	Note: 43 CFR 46.210 are DOI specific CEs and includes Hazardous Fuel Reduction and Burned Area Rehab;
43 CFR 46.150	_____	Note: 43 CFR 46.150 addresses Emergency Responses (such as Emergency Stabilization).

1. <u>Proposed Action and Alternatives:</u>

a.) Briefley 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 Stablization (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 futher 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].

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 ___	No X	1.	The proposed action will have significant adverse affects on public health.
Yes ___	No X	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 ___	No X	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 ___	No X	4.	The proposed action will have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.
Yes ___	No X	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 ___	No X	6.	The proposed action will have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.
Yes ___	No X	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 ___	No X	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 ___	No X	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 ___	No X	10.	The proposed action will have a disproportionately high and adverse effect on low income or minority populations (EO 12898).
Yes ___	No X	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 ___	No X	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).