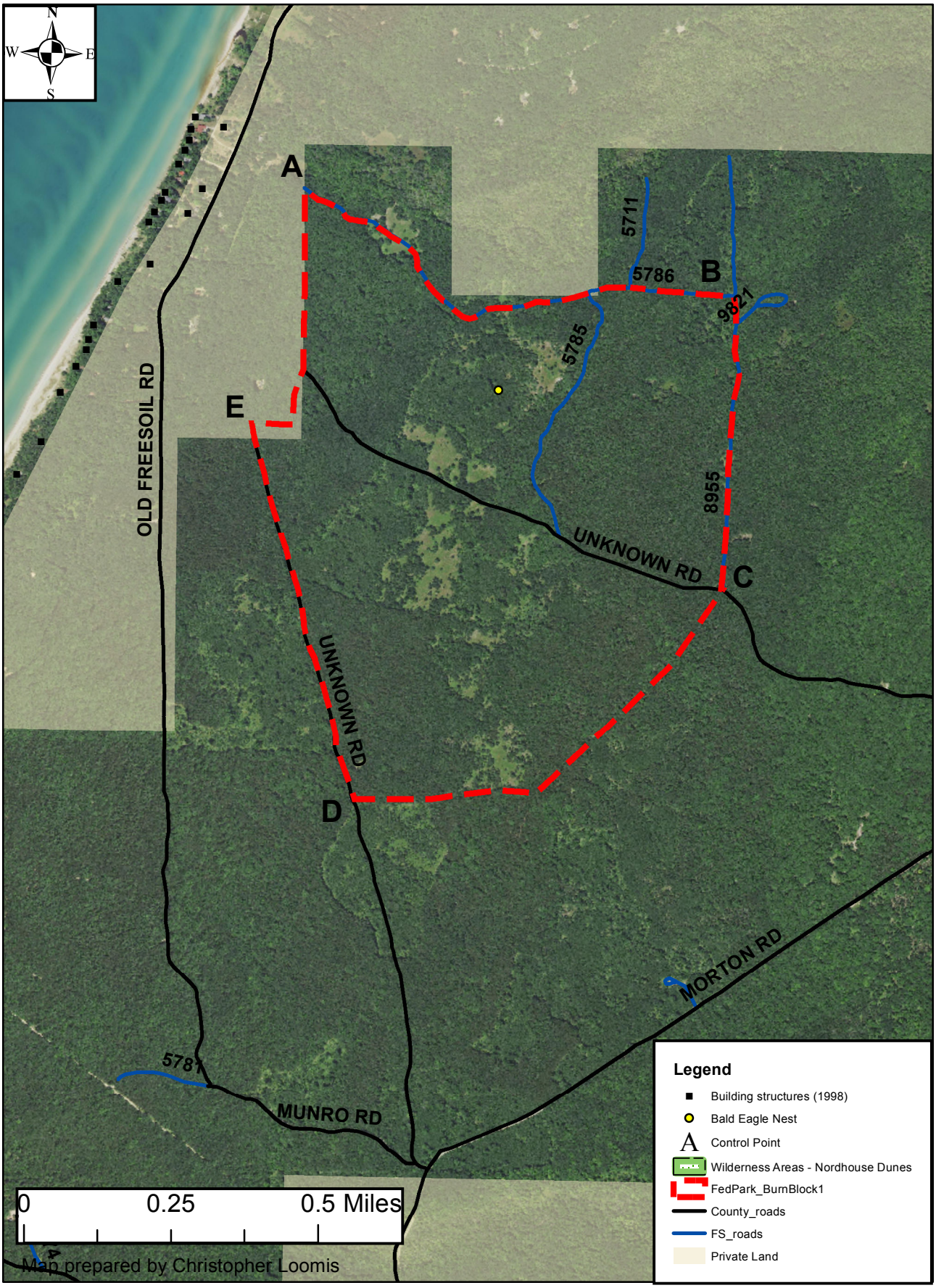
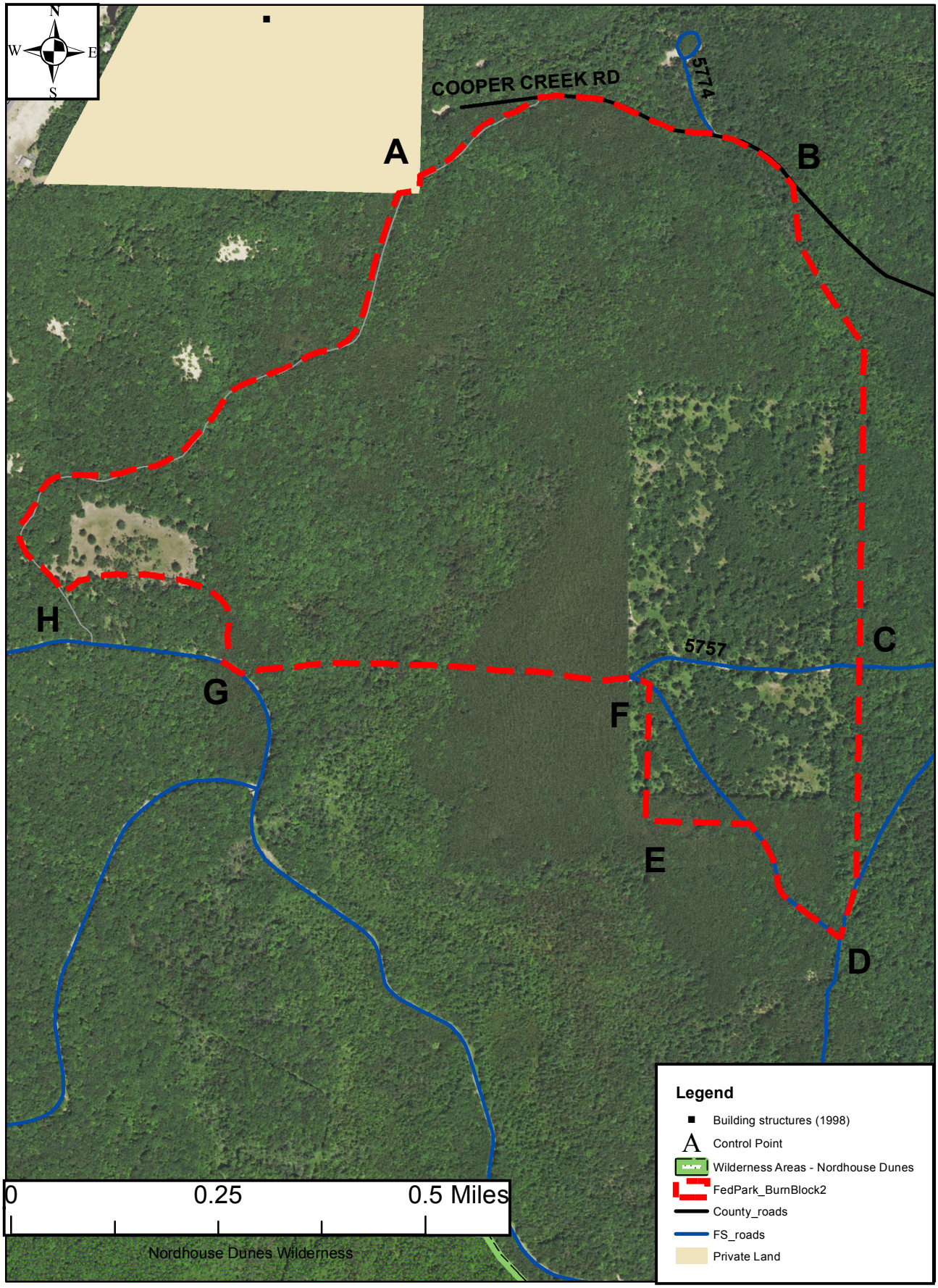
Fed Park Block 1 (376 Acres)

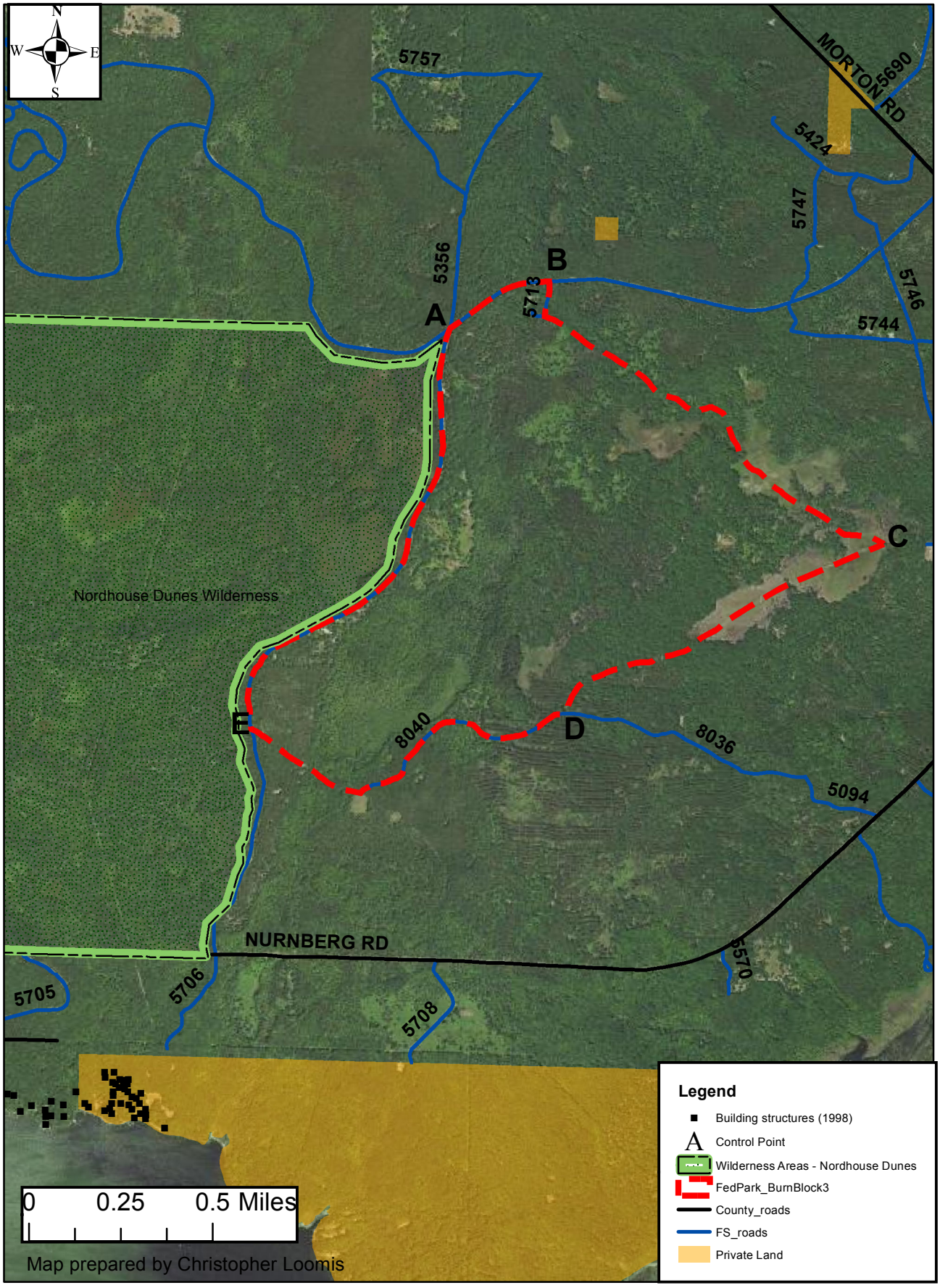


Fed Park Block 2 (334 Acres)

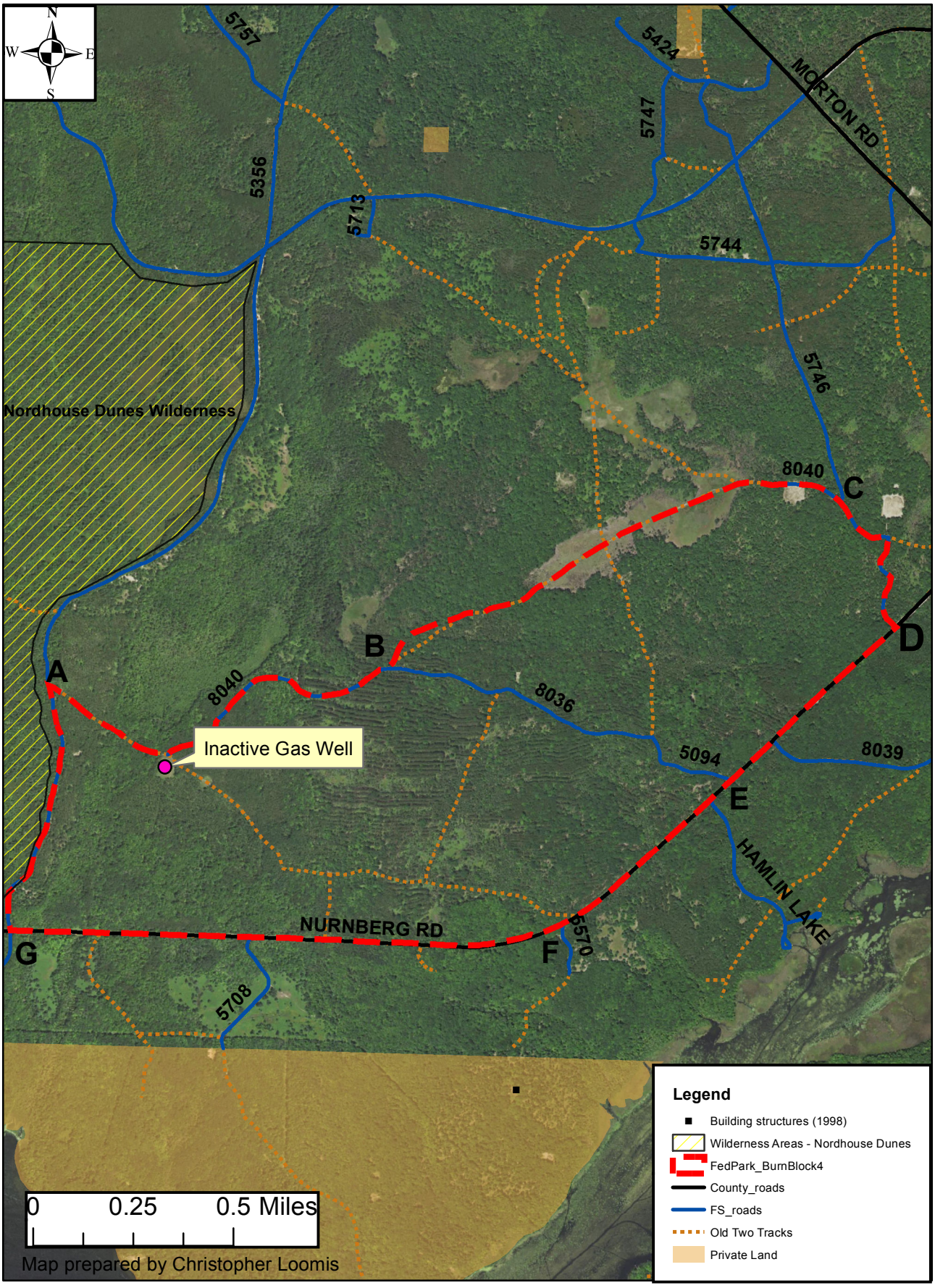


Map prepared by Christopher Loomis

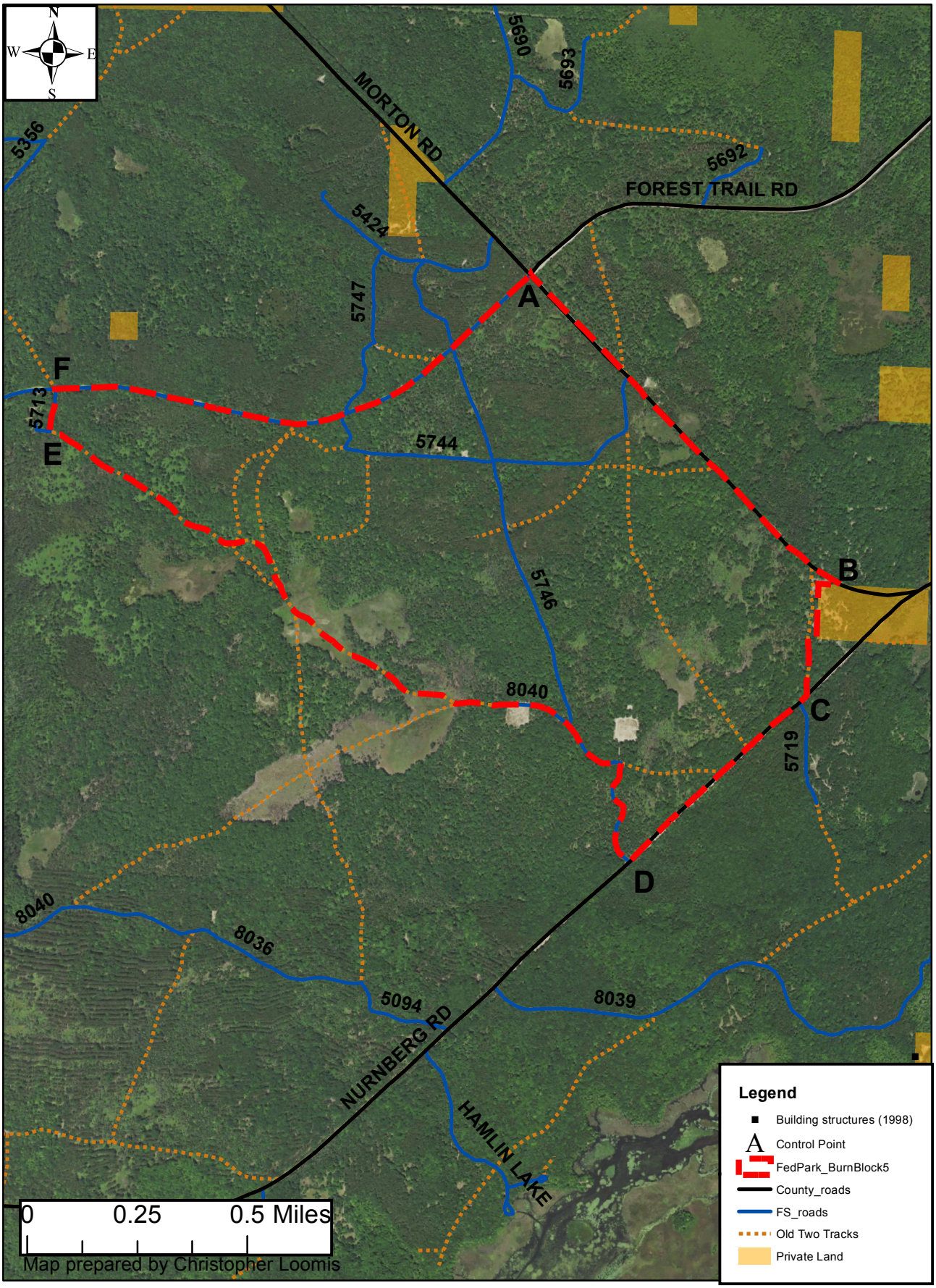
Fed Park Block 3 (673 Acres)



Fed Park Block 4 (894 Acres)



Fed Park Block 5 (645 Acres)



NWCG 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.
The Summary and Final Complexity tab is inserted as Element 3 into the Prescribed Fire Plan. The Values, Preliminary Risk, Post-Plan Risk, and Post-Plan Technical Difficult tabs become Appendix C of the Prescribed Fire Plan.

Print Instructions

There are several ways to insert the Summary and Final Complexity sheet into the Prescribed Fire Plan. The following options are possible with standard software such as Adobe Reader and Microsoft Word.

1. PDF: Save documents as PDFs and use the Organize Pages option to insert Element 3 and Appendix C in the appropriate locations. Utilize Fill & Sign option for signatures.

2. Hard Copy: Print all documents and arrange appropriately. Route for hand signature.

3. Image: Save Summary and Final Complexity tab as PDF then export to Image. Under Element 3 in the Prescribed Fire Plan, insert image. Resize as necessary to fit to page. **OR** Highlight content of Summary and Final Complexity tab and copy. In Prescribed Fire Plan, right click where content will be inserted under Element 3 and choose Paste as Picture. Resize as necessary to fit to page.
When inserting as an image, either apply a signature to the Excel file first or route for signature as a hard copy.

Type the Prescribed Fire Plan Name Here		Quantity	Significance	Values Description: Describe the identified off-site, on-site, and political values
Values	On-Site	**Few**	**Mod**	On site values consist of timber values as well as six identified archeological sites. Addidtional on-site values at risk include RFSS species of concern including: piping plover, bald eagle, northern goshawk, red shouldered hawk and turtle. There are specific mitigations in place to protect each of these species. Also, there is an inactive gas well head located within the burn unit. All fire personnel will be made aware of its location prior to the burn.
	Off-Site	**Multiple**	**Mod**	Off site values include adjacent private property, private residential structures, outbuildings, powerlines and roads. Adjacent NFS lands and the Nordhouose Dunes Wilderness Area is within close proximity to the burn. Also the Lake Michigan Recreation Area, visitor use area, trailhead, and associated inferstructure.is located nearby. A number of road systems including US-31 and US-10 are within a ten mile distnace from the burn. Additionally, Mason County Airport is located approximately nine miles to the southwest of the burn. There are mitigations in place to account for these off-site values and allow for the successful implemation of the burn.
	Public/Political Interest	**Multiple**	**Mod**	There is potential for public or political interest due to the possibility of impact(s) to traffic and nearby residents. Smoke may produce some public curiosity/interest but has not presented any serious problems or complaints to date. The local fire department & 911 center are always notified prior to burn implementation. These entities routinely assist in the positive relay of information to the public concerning the source, duration and purpose of the smoke/burn. Prior prescribed burns in this area including the Grant Burn have been favorably received by the public. Implementation of this project will require some information sharing with the public.

Element	Preliminary Risk	Risk Rating Descriptors	Agency Administrator/ Preparer Discussion Completed
Safety	**Mod**	• Safety issues are pronounced and require detailed briefings, with certain hazards requiring special caution. • A small organization with a single branch results in modest exposure of personnel to hazards. • Adverse impacts to public health and safety are possible. • At least one activity is low frequency/high risk. • Fatigue and extended exposure to hazards are anticipated. The identified site specific hazards include but are not limited to: General forest/public, road user traffic, and hazard trees. Mitigations include safety briefings, LCES, maps, and identifying and prepping/mitigating hazardous trees.	**No**
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. The fuels within the project area vary slightly in fuel model categories, loadings and arrangement. Medium loadings are present. There are some mild terrain differences present in some of the burn blocks, however the overall topography is mostly flat. There may be some periodic torching in the burn units and spotting is expected to be short range.	**No**
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. The fuels within the project area vary slightly in fuel model categories, loadings and arrangement.The fuels within the project area vary slightly in fuel model categories, loadings and arrangement. Generally low fuel loadings are present and low fire intenisty is expected based on current fuel modeling. There may be some periodic torching in the burn units and spotting is expected to be short range.	**No**
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. Portions of the project area may not be readily visible to the ignition specialist and burn boss. Ignition sequence and fire behavior created will need to be monitored to meet project's objectives. Some units contain pine species which can require conservative firing techniques. Aerial ignition may be utilized which would require additional coordination and communication among resources. Flights over the Nordhouse Dunes Wilderness Area are prohibited and any air traffic in this area needs to be mitigated.	**No**

Element	Preliminary Risk	Risk Rating Descriptors	Agency Administrator/ Preparer Discussion Completed
Prescribed Fire Duration	**Mod**	• 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. Weather conditions and predicted forcast will dictate the time frame for burning the unit. Timeframes could extend into multiple operational periods if burn blocks are burned separately due to weather and/or forcast.	**No**
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. The state of MI Smoke Management Plan will be followed to ensure smoke management parameters are met. Fuels are primarily a mix of needlecast and leafl litter (TU2, TL6) which will consume quickly. There are a number of areas within relative proximity to the burn unit including US31, US10, Ludington, and Nordhouse Dunes Wilderness Area that have a small potential to be impacted by smoke. The burn boss will monitor smoke production and have the ability to pause or cease operations if negative conditions are observed.	**No**
Number and Dependence of Activities	**Mod**	• Several activities depend on achievement of previous or concurrent actions. • Several activities are interactive. • Communication is routine for coordination of activities and project success. • The project involves another land management agency, ownership or jurisdiction but project completion is not dependent on coordinated implementation. • Adjacent ownership supports the implementation of the prescribed fire. Timng and coordination for completing blocks one thru five is critial but straightforward. Burn plan will require coordination with the Timber Department regarding any planned timber sales. Additionally, the plan will require coodiantion with the Wildlife Department regarding any RFSS species as well as the Botany Department regarding any potential botany surveys. The burn plan does not involve any outside land management activities. Some additional coordination and planning will be required if aerial ignition is utilized for the burn.	**No**
Management Organization	**Mod**	• Two levels of supervision are needed (i.e. Burn Boss, Ignition Specialist, and/or Holding Specialist, plus lighters and holders). • Special skills or supervision required for one function (RXB2 is suggested). This plan requires a moderate level of supervision typical if of RXB2 operation. Two levels of supervision may be required including a burn boss and a serparate firing boss and/or aerial ignation boss.	**No**
Treatment/ Resource Objectives	**Mod**	• Issues are present that hamper or may prevent meeting treatment resource objectives. • Failure to meet objectives could have short-term adverse impacts. • Associated resources could be damaged if the prescribed fire did not meet resource objectives. • Few critical holding points. Low to moderate fire behavior is optimal to achieve project objectives. The fire behavior needed is easily created and managed. There are red pine stands in some of the burn blocks that need to receive a low to moderate prescribed fire to reduce mortality and maintain the stand. Failure to meet objectives could possibly result in tree mortality. Critical holding points consist of adjacent private property.	**No**
Constraints	**High**	• Significant and/or competing constraints exist and impose limits on implementing the prescribed fire or achieving objectives. There are a number of senstive plant and wildlife species that are in the project vicinity and will need to be mitigated for in the plan. Burn objectives and the prescription take into consideration restrictions. Fire behavior and implementation scheduling should align with accomplishment of these objectives therefore mitigating the constraints.	**No**
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 requires minimal logistical support. Supplies needed to conduct the burn are readily available and can be obtained the day of the burn.	**No**

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Decriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Safety	**Mod**	**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. The pre-burn briefing, incident within an incident plan and prescribed burn incident organizers will help all burn personnel understand hazards, mitigations and actions they can take to conduct safe operations.	Safety mitigations will be addressed during the briefing using the checklist provided in Element 10. The briefing will address among other things safety concerns, safety zones, hazards and mitigations, descriptions of unique features (element 4) and emergency medical plans (element 13).
Fire Behavior	**Mod**	**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. No change. The fuels within the project area vary slightly in fuel model categories, loadings and arrangement. Medium loadings are present. There are some mild terrain differences present in some of the burn units. The rest is generally flat. There may be some periodic torching within the burn unit and spotting is expected to be short range.	Elements 4,5,7 & 11 are all linked. These elements describe the fuel models, the acceptable weather and fuel parameters and the subsequent fire behavior derived from the weather and fuels. The parameters are set to provide for favorable accomplishment of objectives while providing for safety and controllability.

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Decriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
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. No change. Adjacent fuels will present shaded or partially shaded conditions allowing for the probability of ignition to be low. The majority of the control lines for the unit are existing roads and easily traversed by holding resources. Minimal ladder fuels or large concentrations of fuel exist near critical holding points. A variety of low to moderate intensity ignition patterns will be used to meet objectives.	Element 11 provides the link between acceptable fire behavior and the minimum workforce/staffing requirements needed to implement a burn. Element 17, the contingency plan, is correlates to forecasted fire behavior and the burn's contingency level in order to provide a contingency resource reflective of the day's fire behavior potential.
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. The above statements accurately describe ignitions on these units. Particular attenention must be paid to jack pine and red pine stands so as to not to generate too much heat and intensity in order to reduce tree mortality. The possibility of aerial ignition may add a degree of complexity but will be mitigated by an aerial ignition plan and pre-briefing.	Element 11 provides the link between acceptable fire behavior, fuels, weather, and the minimum workforce/staffing requirements needed to implement a burn. As forecasted fire behavior increases, staffing does as well. The acceptable fire behavior is generated by conducting the burn during the parameters described in element 7 prescription parameters, and using accurate weather forecasts & fuel model descriptions. The ignition plan and methods will be tailored to be in alignment with the burn plan objectives and acceptible fire behavior.

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Decriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Prescribed Fire Duration	**Mod**	**Mod**	• 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. The above statements accurately describe ignitions on these units. Ignition operations could extend into multiple days if burn blocks are burned on separate occasions in order to meet plan objectives and constraints.	Elements 4,7,9,11 all combine to affect duration. Accurate fuel model descriptions, acceptable weather parameters, spot forecasts, on site weather and fuel conditions, forecasted and observed fire behavior and the corresponding workforce all will determine if the duration of the burn will exceed 1 shift in order to accomplish all burn blocks. In the case of unfavorable circumstances these elements would dictate if ignition operations were paused or terminated early.
Smoke Management	**High**	**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. There is a small potential for unanticipated event and/or smoke impact to affect the local community, major roads, and local residents. The risk of impact is mitigated by the burn plan which stipulates wind constraints for individual burn blocks so as to reduce smoke impacts.	Per element 19 this plan will adhere to the state of MI Smoke Management plan. Element 7 also provides a permitted wind direction and minimum ventilation index table that is specific to each burn block. This table was developed directly from the MI SMP.

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Decriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Number and Dependence of Activities	**Mod**	**Mod**	• Several activities depend on achievement of previous or concurrent actions. • Several activities are interactive. • Communication is routine for coordination of activities and project success. • The project involves another land management agency, ownership or jurisdiction but project completion is not dependent on coordinated implementation. • Adjacent ownership supports the implementation of the prescribed fire. Although this project does not specifically involve another land management agency coordination does take place between local VFDs, 911 centers and DNR fire staff to ensure everyone is aware of the time and location of planned burning. An additional level of coordination would be needed to support aerial ignition operations.	Element 9 Pre-burn considerations addresses on and off site tasks such as smoke sign placement and notifications that must take place prior to starting a burn.

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Decriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Management Organization	**Mod**	**Mod**	• Two levels of supervision are needed (i.e. Burn Boss, Ignition Specialist, and/or Holding Specialist, plus lighters and holders). • Special skills or supervision required for one function (RXB2 is suggested). The above description accurately post plan risk. Organizations are tied to forecasted fire behavior and will expand to account for increased fire behavior.	Element 11 provides the required minimum workforce that is correlated to forecasted fire behavior (base all actions on current and expected behavior of the fire). These organizations are developed to provide the right resources and people to manage the work force necessary based on the expected fire behavior.
Treatment/ Resource Objectives	**Mod**	**Mod**	• Issues are present that hamper or may prevent meeting treatment resource objectives. • Failure to meet objectives could have short-term adverse impacts. • Associated resources could be damaged if the prescribed fire did not meet resource objectives. • Few critical holding points.	Objectives are described in element 5. The prescription parameters in element 7 were established to accomplish these objectives. Prescribed fire has been sucessfully introduced in this area in pervious years under the direction of the Grant Burn Plan using similar objectives and parameters.
Constraints	**High**	**Mod**	• Constraints exist with some constraints imposing limits on implementing the prescribed fire or achieving objectives. Burn objectives and the prescription take into consideration restrictions. Fire behavior and implementation scheduling should align with accomplishment of these objectives therefore mitigating the constraints. There are multiple botany, wildlife, archeological restrictions, however these restricts are straightforward and easily mitigated. The implementation of the burn will create curiosity with the local residents and forest users. This will create some political and social impacts to the overall project but there have been previous burns in the area and have been readily accepted by the public. Mitigation measures include contacting and informing the adjacent land owners. There are additonal constraints that exist when burning with a PL4 & 5.	Element 4 (Description of Prescribed Fire Area) addresses wildlife, botany and recreational concerns related to the burn and specifies risk mitigations such as time of year when the burn can be sucessfully implemented. Archaeological impacts and mitigations are also addressed in Element 4. Element 7 (Prescription Parameters) specifies that mitigations must be in place prior to burning with a wind direction that could impact resident, major roads, and towns. Element 19 (Smoke Management and Air Quality) specifies mitigations to reduce smoke impacts to the burn area.

Element	Preliminary Risk	Post-Plan Risk	Risk Rating Decriptors	Elements and Actions in the Prescribed Fire Plan that Address Risk Mitigation
Project Logistics	**Low**	**Low**	• Minimal logistical support is needed to safely meet prescribed fire objectives. • No special equipment, support or communications needs are required. No change. The burn requires minimal logistical support. Supplies needed to conduct the burn are readily available and can be obtained the day of the burn.	Element 11 provides the minimum workforce, equipment and supplies required for implementation. These are minimums and may be supplemented as needed/desired.

Element	Post-Plan Risk	Technical Difficulty	Rating Descritors
Safety	**Low**	**Mod**	• Potential serious accidents/injuries or multiple accidents/injuries to personnel or public are mitigated by standard safety briefings and identified in existing risk assessments/JHA. • Special emphasis is needed for some elements of LCES. Some standard preparation work and/or project design features are required.
			The pre-burn briefing, medical plan, incident within an incident plan and prescribed burn incident organizers will help all burn personnel understand hazards, mitigations and actions they can take to conduct safe operations. Additionally, fire personnel working on the project are primaily and famililar with hazards related to local fuels, weather and topography.
Fire Behavior	**Mod**	**Mod**	• Some special provisions for safety are needed to protect personnel. • Fire behavior variations are minimal and do not require multiple fuel models to account for the fire behavior. • At least one barrier or containment opportunity exists. • Fire behavior is such that holding resources may need to use indirect tactics to control some spot fires and slopovers. • Occasional on-site fire behavior assessments or calculations may be needed and can be performed as a collateral duty. • Emission Reduction Techniques (ERTs) and Smoke Management Techniques (SMTs) require a close adherence to the prescription in the Rx plan.
			Standard fire safety precautions are adequate to ensure personnel safety. Fire behavior will need to be monitored and documented to compare forecasted fire behavior with observations and prescription requirements. This will need to occur in each of the representative fuel models. Some additional consideration will need to be given to ensure fire behaviour does not adversely impact sensitive plant and wildlife species in the project area.
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.

Element	Post-Plan Risk	Technical Difficulty	Rating Descritors
Resistance to Containment	**Mod**	**Low**	The boundries of the unit are primarily roads that are easily accessable and would limit spotting potential. Parameters are set to allow for low to moderate fire behavior generating flame lengths 3.5 ft or less. This generally provides for direct attack of fire with hand tools. Element ll provides the minimum number of required staff and equipment to provide for fire containment under forecasted/expected conditions.
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.
			Planned ignitions will require direct oversight of lighters to achieve project objectives and maintain safety. The unit may require multiple firing devices, sequences and techniques to achieve desired results. However, the overall firing operation is straight forward and will be covered in detail in the pre-briefing. The potential use of aerial ignition would add a degree of complexity to the ignition plan.

Element	Post-Plan Risk	Technical Difficulty	Rating Descritors
Prescribed Fire Duration	**Mod**	**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.
			The above description is accurate. Burn blocks one thru five may be burned separately in order to accomplish plan objectives and mitigate constraints. This could create the possibility of a multiple day ignition scenario in order to complete the entitre unit.
Smoke Management	**Mod**	**Mod**	• ERTs and SMTs require skilled application of the prescribed fire prescription. • Some considerations are needed in the prescription or ignition portions of the plan to employ ERTs, and SMTs. • Wind parameters are constrained but easy to achieve. • Sensitive receptors exist. • Burn window/opportunities are reduced by the required weather/dispersion conditions. • Normal coordination with air quality officials is required. • Some mitigation measures or additional smoke modeling may be needed to address potential concerns with smoke impacts. • Specific smoke monitoring may be required to determine smoke plume heights and directions. • Rotating project personnel out of dense smoke may be necessary but easy to accomplish. • Daily smoke management forecasts are adequate.
			The above descriptors accurately portray the unit in regard to smoke management technical difficulty. In order to meet the state of MI SMP the the unit will have minimum ventilation index requirements. Additionally, individual burn blocks will have wind vector requirements in order to mitigate for wildlife in the burn area.
Number and Dependence of Activities	**Mod**	**Mod**	• Holding and lighting require close coordination and are dependent on each other to prevent spots or slopovers. • Continuous communication is necessary for successful project completion. • Some pre-burn considerations are required before ignition.
			Communication and coordination is necessary for successful completion of the projects. There is a significant amount of pre-burn considerations and notifications/contacts to make.

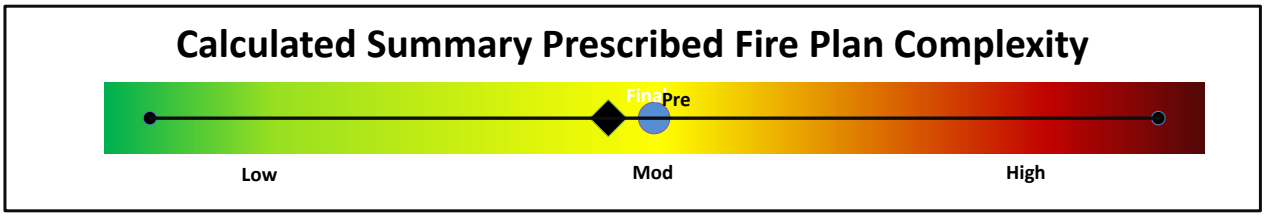
Element	Post-Plan Risk	Technical Difficulty	Rating Descritors
Management Organization	**Mod**	**Mod**	• At least one primary team member may need to come from outside of the local unit and may not be familiar with local factors. • The numbers of qualified personnel available on the local unit are limited. • 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 pre-planning may be required for implementation of the burn. The use of personnel from off unit is common practice. Special skills and supervision which will be required for two functions (RXB2) and (Single Resource Boss). The use of aerial ignition may require additional supervision.

Element	Post-Plan Risk	Technical Difficulty	Rating Descritors
Treatment/ Resource Objectives	**Mod**	**Mod**	• There are several resource objectives to meet. • Measures to achieve the objectives are either 1) easy to complete but there are restrictions on the techniques or 2) moderately difficult to complete and there are few or no restrictions on techniques. • Additional monitoring of fire behavior and weather is needed to determine if prescribed fire objectives are being met. • Other opportunities to meet objectives are very limited in a given year.
			The above description is accurate. The measures needed to achieve objectives are moderately difficult to complete but there are no resrictions on techniques. Monitoring of fire behavior and weather is extremely important to determine if objectives are being met, especially when burning in the pine. Fire monitoring will be crucial to ensure mortality within any red pine stand is minimal.
Constraints	**Mod**	**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.
			There are a number of constraints related to wind direction and smoke impacts to wildlife and public that will need to be monitored throughout the burn. The implementation of the burn will create curiosity with the local residents and forest users. This will create some political and social impacts to the overall project but there have been previous burns in the area and have been readily accepted by the public. Mitigation measures include contacting and informing the adjacent land owners. See National Interagency Mobilization Guide for burning at National Preparedness Levels 4 & 5.
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 requires minimal logistical support. Supplies needed to conduct the burn are readily available and can be obtained the day of the burn.

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

Type the Prescribed		Quantity	Significance
Values	On-Site	**Few**	**Mod**
	Off-Site	**Multiple**	**Mod**
	Public/Political Interest	**Multiple**	**Mod**

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



Final Complexity Determination	Final Complexity Determination Rationale
Mod	**This project rates as a moderate complexity due the proximity of the project to private land and residences (e.g. smoke concerns, off-site values and public/political interest) as well as contraints and coordination required to meet project objectives. The burn blocks are directly adjacent to the Nordhouse Dunes Wilderness Area which is a Class 2 airshed as well as the Lake Michigan Recreation Area. Both of these sites have a high degree of public interest and recreational based activity. Prescribed fire and smoke on burn days will create curiosity with the local residents and forest users. This will create some political and social impacts to the overall project but there have been previous burns in the area and have been readily accepted by the public. Mitigation measures include contacting and informing the adjacent land owners. In terms of constraints there is a degree of sensitivity related to wildlife and plant species in the project area. The burn plan allows for blocks one thru five to be burned separately if necessary in order account for and mitigate these constraits. Additionally, a higher than average degree of coordination and communications will be needed to safely conduct ignition operations This higher level of coordination and communication is driven by the size of the unit as well as the possibility of aerial ignition. Both the safety risks and escaped fire risks are mitigated by low fuel loading arrangements and generally low intensity fire behavior. The technical complexity of holding operations is straightforward and within normal parameters and the burn units are easily accessible for ignition and holding resources. The fire behavior needed to meet the objectives is easily created and environmental parameters are set for controllability by holding resources. In conclusion, a moderate complexity rating is befitting of the Fed Park plan when considering all factors relevant to project.**

Signatures	Rx Burn Plan Preparer's Name	Preparer's Signature	Date
	Technical Reviewer's Name	Technical Reviewer's Signature	Date
	Agency Administrator's Name	Agency Administrator's Signature	Date