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PRESCRIBED FIRE COMPLEXITY RATING SYSTEM GUIDE

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PRESCRIBED FIRE COMPLEXITY RATING SYSTEM

Purpose

The Prescribed Fire Complexity Rating System was developed to assist personnel in determining a relative complexity of any single prescribed fire project. The system was designed for interagency application and provides the local prescribed fire manager the opportunity to include local considerations in the decision process. The first edition was published in 1995. Based on the experience gained working with this document, an update was needed to help clarify how and when to use the document and to provide descriptors for the factors of Potential Consequences and Technical Difficulty.

The purpose of the complexity rating process is to provide:

- Management and implementation personnel a relative ranking as to the overall complexity of a specific prescribed fire project.

- A process that can be used to identify prescribed fire plan elements or characteristics that may pose special problems or concerns and where prescribed fire plan changes may be prudent to mitigate or eliminate these problems or concerns.

The analysis can be used at any of the various stages during the planning process, initial project identification level to a late stage draft of the prescribed fire plan.

The “Risk” and “Potential Consequences” ratings can be used to help determine an overall management risk associated with the project; the “Technical Difficulty” ratings can be used to facilitate the planning process and help identify prescribed fire positions and skill levels necessary to safely and successfully implement the prescribed fire.

The process is intended to serve as an aid in evaluating common elements and components of prescribed fires that contribute to their level of difficulty. Numerical rating scales were purposely avoided because these may lead to a distorted perception of the project, and different agencies and geographic areas place different values on similar resources and objects on or near the prescribed fire location. Documentation may be required at various decision points to support conclusions reached by evaluating the complexity elements.

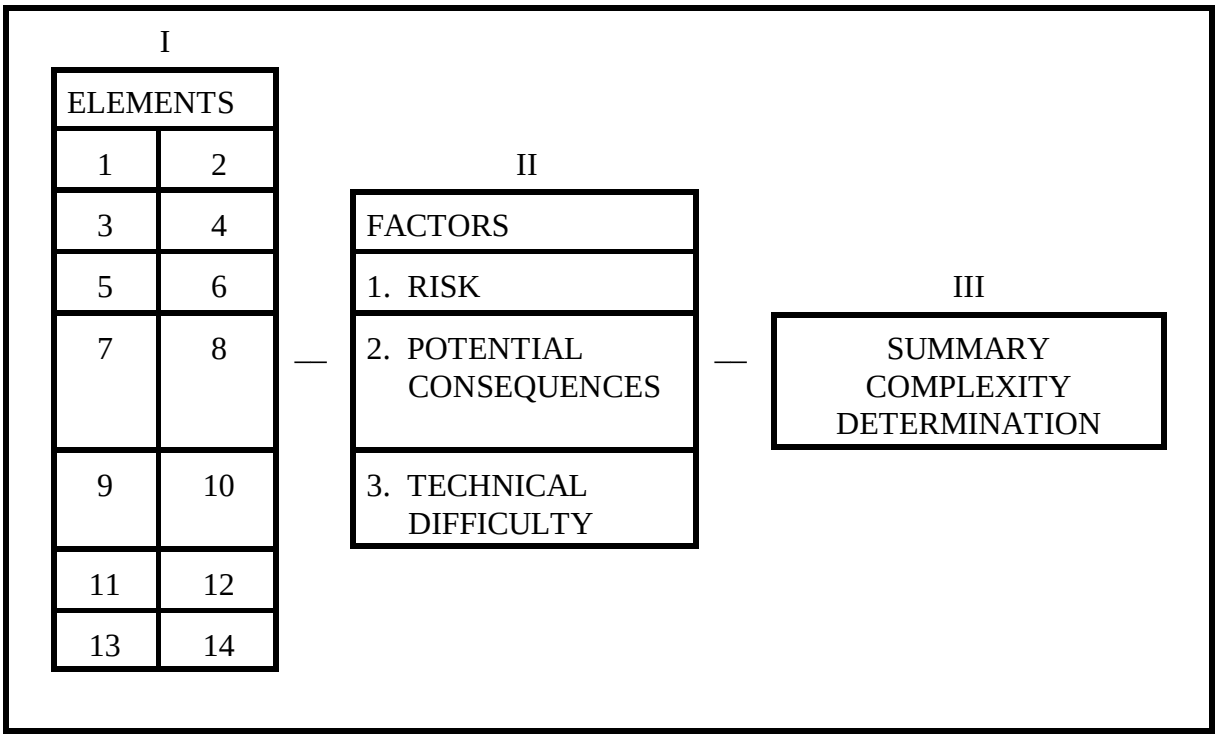
Many state and Federal agencies and geographic areas may have additional analysis criteria. These should be used to supplement the NWCG complexity rating system. The rating system is for a single prescribed fire project and is not intended to rate other stand alone operational procedures where safety and/or operational measures are in place as a normal course of business (e.g., Alaska, where most activities require significant aviation operations just to get to the site and separate standards exist that provide safety and operational procedures along with personnel qualifications).

Overview

The broad concept is to consider three fire complexity factors: (1) Risk (the probability or likelihood that an adverse event or situation will occur); (2) Potential Consequences (some measure of the cost or result of an adverse event or situation occurring); and, (3) Technical Difficulty (which indicates the skills needed to implement the project and deal with unexpected or adverse events). The system uses 14 elements that are common to most prescribed fire projects. Each element rating is determined by assigning a Low, Moderate, or High value. A rating descriptor is given for each rating level and for all elements. Each element is evaluated individually in the complexity analysis process by reading the criteria and selecting the most appropriate descriptor. The rating is documented on the Complexity Rating Worksheet. A rationale section is provided to document the decision process.

A summary rating is provided to assist in assigning an overall project complexity rating. The working part of the analysis assigns relative values to Risk, Potential Consequences, and Technical Difficulty to each of the complexity elements.

Illustration #1 - Flow Chart



Process

This process is be used to identify prescribed fire plan elements or characteristics that may pose special problems or concerns and where prescribed fire plan changes may be prudent to mitigate or eliminate these problems or concerns. It is recommended that a preliminary rating be completed during the project development stage *prior* to the development of the prescribed fire plan. In this way problem areas identified may be mitigated during the prescribed plan preparation process. When determining the complexity rating, areas outside of the project boundaries that could be impacted if the fire escaped or could be impacted by smoke should be considered. Once the prescribed fire plan is near completion, the final complexity rating is made. The final rating should take into account any mitigation included in the plan. This process should be completed on the original form with additional narration to describe the mitigation taken. Items or issues which cannot be mitigated should be clearly identified and will be highly influential in the complexity determination.

The elements and factors are not independent. Mitigating one frequently alters several others, i.e., adding more holding resources to mitigate the probability of escape increases the number and dependence of activities and project logistics.

Instructions

Step #1 - Preliminary Review of the Element Descriptors

A review of the rating descriptors prior to going on site will help to identify the elements that will be of most concern. Alternatives and/or mitigation measures that will help to reduce the final complexity rating can be considered early in the planning process.

Step #2 - Preliminary Rating Determination

The Complexity Rating Worksheet contains the 14 elements for the Risk, Potential Consequences, and Technical Difficulty factors and provides a place to record the rating. Rate the level for each element by selecting the most appropriate descriptor. Circle the low, moderate, or high rating on the worksheet and identify the rationale for that rating. In addition, if mitigation is desirable and opportunities are available, briefly identify them for further development in the planning process. This is the point where local management judgement and experience is most important. The documentation is critical to the process in that it lets the reviewer understand the thinking behind the rating and that mitigation is possible.

Some elements may not apply and should be noted on the work sheet as "N/A" to indicate they were considered, but did not apply to this project. The 14 elements may not be adequate for all or unique situations. Local issues which are not properly addressed by the standard elements can be added to the rating system. Additional elements can be added at the field office or

geographic area. If additional elements are added, specific definitions for the low, moderate and high levels of Risk, Potential Consequences, and Technical Difficulty should be prepared.

Individual element Technical Difficulty ratings provide skill position information (i.e., Prescribed Fire Burn Boss, Ignition Specialist, Fire Effects Monitor, Fire Behavior Analyst, Safety Officer, holding, etc.). Those that appear as high may indicate that high levels of skill are needed, or may be reviewed and found to be routine business for local fire managers, allowing the fire to be ranked lower than its highest individual entry.

The analysis may be halted at this point and the results used to prepare or revise the prescribed fire plan to mitigate or remove unnecessarily higher complexity issues.

Step #3 - Final Rating Determination

Near completion of the planning phase, the elements are again rated against the Risk, Potential Consequences, and Technical Difficulty factors on the same form using the same process and circling the final rating in the space provided. Again, local management judgement and experience are called for. Short justification statements are recommended to substantiate the assignment of the rating. Items rated higher than the overall average should be re-analyzed to see if mitigation opportunities were overlooked or have become available because of other actions during the plan development, changes in operational procedures, or on-the-ground preparation. Of primary concern in this step is the documentation of those items that have been changed from the preliminary rating because of the planned mitigation, site conditions, or other situations that have occurred. Again, the rationale is very important in that it documents for the manager how the rating was determined. The ratings here will provide the foundation for the Summary Rating.

Step #4 - Summary Rating Determination

Generally, since all mitigating measures have been applied, the highest rating from any single element will provide the foundation for the individual rating of Risk, Potential Consequences, and Technical Difficulty. The highest of those will provide the Summary Complexity Rating and this rating is the overall project complexity rating. This rating should take into account agency policies. The rationale for this rating should be brought forward from those elements that established that rating level, e.g., if all elements for Risk and Technical Difficulty and most for Potential Consequences are rated as low, but two elements under Potential Consequences are rated moderate, the project would normally have a moderate Summary Rating. In another situation, if one element was rated as high, the summary rating would be high.

If there is anything unique or abnormal about a project, it is recommended the agency administrator be briefed prior to submitting for approval.

Step #5 - Agency Administrator Approval

The Summary Complexity Rating and rationale for the project provides the administrator critical facts to make a decision. The administrator reviews the rating material and if in concurrence approves and dates the document.

PRESCRIBED FIRE COMPLEXITY RATING DESCRIPTORS

1. POTENTIAL FOR ESCAPE - RISK

LOW: Ranges from no potential for escape up to the likelihood of some spot fires, each comprising small areas that are readily detected, accessed, and controlled by modest holding forces available on the burn. No dangerous ladder fuels or concentrations are near critical holding points. Ignition procedures do not create intense fire. Probability of ignition in fuels outside the unit is below 60% or doesn't apply due to isolation of the unit. There is no residual fire expected beyond the day of ignition.
MODERATE: Potential for multiple spot fires that can propagate at moderate rates of spread but can be held by skilled and prompt holding actions. The fire has some limited potential to cross burn unit perimeters or allowable area boundaries and exceed the capability of holding forces to suppress it. Some fuel concentrations exist near critical holding points. The probability of ignition in fuels outside of the unit is between 60% and 80%. Some ladder fuels may be present but are mostly well inside the unit. Residual burning may last up to three days, with a moderate potential to cause escapes.
HIGH: There is a possibility of multiple spot fires or slop-overs that exceed the capability of the holding force to detect and suppress. Concentrations of dangerous fuels near critical holding points including ladder fuels that hamper holding operations. Expected fire line intensities in the primary fuel type are known to challenge standard fire lines or to produce abundant spotting. Probability of ignition in fuels outside the unit is over 80%. Residual burning may last for several days to several weeks with potential to flare up and escape the unit.

1. POTENTIAL FOR ESCAPE - POTENTIAL CONSEQUENCES

LOW: An escape could result in little damage to natural resource values or to improvements. No structures are expected to be involved. Any damage can be quickly repaired. There will be minimal impact to the public or users. Few social or political concerns from an escape are expected.
MODERATE: An escape could result in moderate damage to vegetation, habitat, or improvements. No residences are expected to be involved, but other structures might be involved. The fire could burn onto private or other agency lands. Damages to improvements would take some time to repair. There would be moderate impact to the public or users. Some social or political concerns from an escape could be expected.

HIGH: An escape could result in severe damage to vegetation, critical habitat, critical watersheds, or improvements. Residences may be involved. The fire is likely to burn onto private or other agency lands. Damages to improvements would take significant time to repair. Claims for damage to private property or resource damage on other agency lands may be expected. Restoration work or salvage of natural resources could be required to repair damage. There would be significant impact to the public or users. Considerable social or political concerns from an escape could be expected.

1. POTENTIAL FOR ESCAPE - TECHNICAL DIFFICULTY

LOW: Holding operations would normally be supervised at the Single Resource Boss level. The burn unit and allowable area is easily accessible to the holding resources identified in the plan. Weather conditions as identified in the Prescribed Fire Plan are normal for the area and season. All of the key implementation personnel from the local area.
MODERATE: Holding activities require supervision at the Strike Team/Task Force Leader level. Several types of resources are involved in the holding operation. Portions of the burn unit and allowable area are not easily accessible to the holding resources. Some key implementation personnel are from outside the local area.
HIGH: Holding activities require supervision at or above the Division Supervisor level. Several portions of the burn unit and allowable area are not easily accessible or some portions are inaccessible to the holding resources. Several types of holding resources are required. Most key implementation personnel are from outside the local area.

2. NUMBER AND DEPENDANCE OF ACTIVITIES - RISK

LOW: Activities are generally independent or only loosely dependent on other activities.
MODERATE: Several activities depend on successful achievement of previous or concurrent actions. The failure of one or more call for remedial measures within the capabilities of the management team.
HIGH: Activities are complex and highly interactive. The failure of single key activities can prevent the implementation of many subsequent actions and lead to a failure to successfully complete the project. Few opportunities to remedy failures exist and require highly skillful actions to be taken.

2. NUMBER AND DEPENDANCE OF ACTIVITIES - POTENTIAL CONSEQUENCES

LOW: Coordination issues do not result in an increased risk of escape, threaten the completion of the project, failure to meet project objectives, or create a safety issue.
MODERATE: Coordination problems could result in an increased risk of escape, threaten the completion of the project, failure to meet some project objectives, or create a safety issue. Some delay in implementation would be expected.
HIGH: Coordination failure(s) could result in a high risk of escape, failure to complete the project, failure to meet the project objectives, or serious safety issues for implementation personnel or the public. A significant delay in implementation would be expected.

2. NUMBER AND DEPENDANCE OF ACTIVITIES - TECHNICAL DIFFICULTY

LOW: Minimal difficulty in coordinating the required activities. Coordination problems or communication failures or issues will not affect the completion of the project.
MODERATE: Coordination activities require a moderate skill level. Continuous communication is necessary for successful project completion.
HIGH: Requires a highly skilled team to successfully complete the project. Continuous coordination and communication is critical to the success of the project.

3. OFF-SITE VALUES - RISK

LOW: There are few values at risk or the values identified are generally considered low or minimal or the project is expected to take place during periods of low visitor use. Minimal risk to improvements, private or other agency lands.
MODERATE: Some limited areas of high value are located adjacent or near the project area or the project is expected to take place during periods of moderate visitor use. Moderate risk to improvements, private or other agency lands. One critical protection area has been identified.
HIGH: Several areas of high value are located adjacent or near the project area or the project is expected to take place during periods of high visitor use. Substantial risk to improvements, private or other agency lands. More than one critical protection area has been identified.

3. OFF-SITE VALUES - POTENTIAL CONSEQUENCES

LOW: The vegetation potentially affected generally has rapid recovery rates or the expected fire behavior should would cause minimal or no damage to off-site values, improvements, private or other agency lands. No restrictions on visitor use are expected during project implementation.
MODERATE: Some negative impacts are expected in the event of spot fires, slopovers, and escapes. The vegetation potentially affected generally has moderate recovery rates or the expected fire behavior may cause limited damage or some other limited serious consequences to off-site values, improvements, private or other agency lands. Visitor use may be restricted during project implementation for a short period of time.
HIGH: The vegetation potentially affected generally has slow recovery rates or the expected fire behavior could cause serious damage or destruction to off-site values, improvements, private or other agency lands. Visitor use will be restricted during project implementation for an extended period of time.

3. OFF-SITE VALUES - TECHNICAL DIFFICULTY

LOW: Protection of the off-site values requires no special management, equipment or skills.
MODERATE: Protection of the off-site values requires some special management, a moderate skill level and good team coordination, particularly at the critical holding points.
HIGH: Protection of the off-site values requires special management, a high skill level and a high level of team coordination, particularly at the critical holding points.

4. ON-SITE VALUES (SPECIAL FEATURES) - RISK

LOW: Few or no special internal features are present that require special attention in planning or implementation. There are few on-site values at risk or the values identified are generally considered low or minimal.
MODERATE: Special features may be present within the unit that may need to be addressed in planning, strategies and briefings, and during project implementation. Some limited areas of high value are located within the project area.
HIGH: Special features are present within the unit. Several areas of high value are located within the project area. Strategies must address details in planning, at pre-burn briefings, and during project implementation.

4. ON-SITE VALUES (SPECIAL FEATURES) - POTENTIAL CONSEQUENCES

LOW: Implementation problems will not damage special features or adversely affect on-site resource values.

MODERATE: Implementation problems or failures will result in moderate damage to special features and some reduction or loss of on-site resource values.
HIGH: Implementation problems or failures will result in substantial damage to, or destruction of special features or on-site resource values.

4. ON-SITE VALUES (SPECIAL FEATURES) - TECHNICAL DIFFICULTY

LOW: No special skills or operating procedures are required. Resource values within the unit are easy to protect.
MODERATE: Protection of special features or on-site resource values requires the development of special ignition OR holding plans. Some pre-burn preparation work may be required.
HIGH: Protection of special features or on-site resource values requires the development of special ignition AND holding plans. Special or additional equipment will be needed. Considerable pre-burn preparation work is required.

5. FIRE BEHAVIOR - RISK

LOW: Fuels are uniform and/or loading is light and can be characterized using a single fuel model. Terrain is mostly flat or the slope and aspect are uniform, leading to a relatively unvarying fire. Winds, microclimate, and other fire conditions are relatively uniform. Fire behavior is highly predictable. Fire is primarily a two-dimensional surface fire and any vertical development is isolated and insignificant.
MODERATE: Fuels vary moderately within the unit, both in loading and arrangement. Medium loadings with some high concentrations are present. More than one fuel model may be present on significant portions of the area. 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 notable shifts in fire behavior. Periodic torching can be expected either as isolated points or limited areas at one time. Spotting is expected to be short-range.
HIGH: Major variations in the fuel complex require the use of several fuel models to account for the fire behavior. High fuel loadings and/or concentrations are present. Terrain encompasses a wide range in slope steepness, abrupt changes in slope, and several directional aspects that lead to widely variable and unpredictable local winds and microclimate differences. High intensity fire behavior may be expected with high rates of spread, torching, possible crown fire runs, and possible long-range spotting. The resulting variations in fire behavior may present major control challenges.

5. FIRE BEHAVIOR - POTENTIAL CONSEQUENCES

LOW: Fire behavior outside of the primary unit boundary would be less than the fire behavior within the unit. For landscape level projects a large “allowable area” (MMA) has been identified.

MODERATE: Fire behavior outside of the primary unit boundary would be about the same as that experienced within the unit. For landscape level projects an “allowable area” (MMA) has been identified.
HIGH: Fire behavior outside of the primary unit boundary would be higher than that experienced within the unit. For landscape level projects an “allowable area” (MMA) has not been identified, or is limited in size.

5. FIRE BEHAVIOR - TECHNICAL DIFFICULTY

LOW: Standard fire safety precautions are adequate to ensure personnel safety. The number or size of spot fires and slopovers would not require additional suppression resources. Fire behavior is such that holding forces can control most or all spot fires and slopovers using direct attack tactics. No on-site operational fire behavior assessments or calculations are needed.
MODERATE: Some special provisions for safety are needed to protect personnel. 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 are needed and can be performed as a collateral duty.
HIGH: Fire behavior may create unique safety problems or the need for special escape routes or other safety measures. Limited containment opportunities exist. Fire behavior is such that additional holding resources would be required along with indirect attack tactics. Systematic fire behavior assessments and calculations are needed by a dedicated skill position. (FBAN or LTAN suggested for short or long duration prescribed fire operation respectively)

6. MANAGEMENT ORGANIZATION - RISK

LOW: A small number of qualified people are required to implement the prescribed fire. A single person may fill several positions. A single level of supervision is all that is needed (i.e. Burn Boss plus lighters and holders).
MODERATE: May require staffing of a majority of the prescribed fire positions with qualified personnel. A single person may fill more than one position. Two levels of supervision are needed (i.e. Burn Boss, Ignition Specialist and/or Holding Specialist plus lighters and holders).
HIGH: Requires staffing of all primary prescribed fire positions by qualified persons. Multiple divisions, groups, or units may be necessary to maintain an acceptable span of control. Three levels of supervision may be needed (i.e. Burn Boss, Ignition Specialist, Holding Specialist, plus Squad Leaders and Squads) or multiple teams are needed to cover multiple shifts or a long-duration project. Other staff and technical specialists may be needed.

6. MANAGEMENT ORGANIZATION - POTENTIAL CONSEQUENCES

LOW: Problems related to supervision or communication are expected to be minimal.
MODERATE: Problems related to supervision or communication may cause failure to meet some objectives, an increased chance of escaped fire, or violation of safety standards.
HIGH: Problems related to supervision or communication will likely cause failure to meet objectives, high probability of an escaped fire, or violation of safety standards.

6. MANAGEMENT ORGANIZATION - TECHNICAL DIFFICULTY

LOW: All team members are available within the local unit and are familiar with local factors affecting project implementation. Several qualified personnel are available. No special supervision required.
MODERATE: At least one primary team member will 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)
HIGH: Numerous and varied resources, multiple ignition methods, and/or a large team of specialized positions are needed. The burn has difficult assess, complicated logistics, potentially conflicting objectives, unusual fuel complexes, and is proximate to smoke sensitive/non-attainment areas or wildland urban interface, and/or large scale/long duration. The Burn Boss and/or two or more primary team members will need to be ordered from outside the local unit and may not be familiar with local factors. Certain skills and qualified personnel are not available on the local unit. Special skills or supervision required for more than one function. (RXB1 suggested)

7. PUBLIC AND POLITICAL INTEREST - RISK

LOW: The prescribed fire is in an isolated or remote area and/or small in size. There has been little or no public or political controversy related to the project and little or no news media interest.
MODERATE: The prescribed fire is visible to some portions of the public and/or moderate in size. There has been some public or political concern about the project or the program. There is some media interest in the project.
HIGH: The prescribed fire is highly visible to the public. Public or political interest is high in either the project or the program causing high management interest in the day-to-day preparation necessary to carry out the project. Media are interested in the project and may desire to be present on-site during some phases of the project.

7. PUBLIC AND POLITICAL INTEREST - POTENTIAL CONSEQUENCES

LOW: Unexpected or adverse events would attract little public, political, or media attention.
MODERATE: Unexpected or adverse events would attract some public, political, or media attention and may delay implementation of other projects. News releases and local news briefings would be required.
HIGH: Unexpected or adverse events would attract significant public, political, or media attention and may cause a shut-down of the program. Calls for investigations into the unexpected or adverse events could be expected from the public or politicians. Heads may roll.

7. PUBLIC AND POLITICAL INTEREST - TECHNICAL DIFFICULTY

LOW: Requires no special fire information function. Routine media releases needed. No special notifications of the public are needed.
MODERATE: Requires dedicated time from the unit public affairs officer and or Agency Administrator. Public information stations or public meetings may be warranted. May require special media releases or field trips. Some specific members of the public or political entities may need to be notified directly.
HIGH: Requires a fire information officer. A political liaison may be assigned to the project. Requires considerable involvement from the Agency Administrator. Public information stations and door-to-door contacts are warranted. Extensive pre-burn public meetings may be needed. Media is expected to be on site during implementation. Multiple direct notifications are needed prior to project implementation.

8. FIRE TREATMENT OBJECTIVES - RISK

LOW: Objectives are limited to easily achieved fuel reduction or ecosystem maintenance. The necessary fire behavior is easily created, managed, and monitored.
MODERATE: Objectives may include changes in two or more strata of vegetation for ecosystem restoration or maintenance. Objectives are judged to be moderately hard to achieve. Basic monitoring of fire behavior and weather is needed to determine if prescribed fire objectives are being met.
HIGH: Objectives include changes in several strata of vegetation for ecosystem restoration or hazardous fuels reduction. Objectives are judged to be hard to achieve and may require specialized monitoring of fire behavior and weather.

8. FIRE TREATMENT OBJECTIVES - POTENTIAL CONSEQUENCES

LOW: Other opportunities to meet objectives will be available. Other management activities are not dependant on the completion of the project. Failure to meet objectives would have few or no adverse impacts on natural resources.
MODERATE: Other opportunities to meet objectives are very limited in a given year. Other management activities are dependant on the completion of the project but other management options are available. Failure to meet objectives could have short-term adverse impacts on natural resources.
HIGH: Opportunities to meet objectives are not available every year or may not be available at all. Other management activities are dependant on the success of this project and other management options are limited. Failure to meet objectives could have long-term adverse impacts on natural resources.

8. FIRE TREATMENT OBJECTIVES - TECHNICAL DIFFICULTY

LOW: Measures to achieve the objectives are easy to complete and there are few or no restrictions on techniques. Limited pre-burn monitoring is needed to determine if the unit is in prescription.
MODERATE: 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. Moderately intense fire behavior is needed to meet the resource objectives. Pre-burn monitoring is needed to determine when the unit is in prescription. During-burn monitoring is necessary to determine if the prescribed fire objectives are being met.
HIGH: Measures to achieve the objectives are both moderately difficult/difficult to achieve and there are restrictions on the techniques. High intensity fire or a combination of fire intensities are needed to meet resource objectives. Success depends on precise timing and sequence of ignition. Extensive pre-burn monitoring is required to determine when the unit is in prescription. Qualified Fire Effects Monitors are needed to determine if prescribed fire objectives are being met.

9. CONSTRAINTS - RISK

LOW: No constraints related to access, water sources, firelines, specific tactics, or equipment and aircraft use exist. There are few or no scheduling restrictions.
MODERATE: Some constraints exist on access to parts of the project area, use of some water sources or the amount of water that can be taken, types of fireline, specific tactics, heavy equipment, or aircraft use. Ignition may be restricted during some portions of the potential burn window to minimize impacts to special events or seasonal activities.

HIGH: Significant constraints exist on access to parts of the project area, use of some water sources or the amount of water that can be taken, types of fireline, specific tactics, heavy equipment, or aircraft use. Ignition will be restricted, potentially for long periods, during the potential burn window to minimize impacts to special events and seasonal activities.

9. CONSTRAINTS - POTENTIAL CONSEQUENCES

LOW: Project can be implemented whenever it is in prescription. Tactics and burn activities are not limited.
MODERATE: Some burn windows may be unavailable due to the constraints, and may cause the project to be implemented under less than optimal conditions, reducing the ability to meet resource objectives. Limitations on the available tactics may increase the risk of unexpected or adverse events.
HIGH: The constraints result in a very narrow burn window and are likely to cause the project to be implemented under less than optimal conditions, reducing the ability to meet resource objectives. Limitations on the available tactics will increase the risk of unexpected or adverse events.

9. CONSTRAINTS - TECHNICAL DIFFICULTY

LOW: Constraints do not increase the difficulty of completing the project.
MODERATE: Constraints moderately increase the difficulty of completing the project. The length of time to complete the project and the size of the organization needed may increase.
HIGH: Constraints significantly increase the difficulty of completing the project. The length of time to complete the project and the size of organization will increase and project feasibility may be in doubt.

10. SAFETY - RISK

LOW: Safety issues are easily identifiable and mitigated. Potential hazards are typical and easily addressed in briefings. There is little or no potential for adverse impacts to public health and safety. Activities can be characterized as high frequency/low risk. Fatigue and exposure to safety risks are limited.
MODERATE: Significant safety issues have been identified. Detailed briefings are needed to raise safety consciousness of all involved. Most safety hazards have been mitigated, but some remain that require special caution. There could be adverse impacts to public health and safety. At least one activity can be characterized as low frequency/high risk. Fatigue and prolonged exposure to safety risks may occur.

HIGH: Complex safety issues exist. Special safety briefings are required. Several safety hazards remain that require special cautions. Potential adverse impacts to public health and safety require special mitigation. Several activities can be characterized as low frequency/high risk. Fatigue and prolonged exposure to safety risks require special mitigation or consideration.

10. SAFETY - POTENTIAL CONSEQUENCES

LOW: Minimal potential for serious accidents/injuries to firefighters or the public.
MODERATE: Moderate potential exists for more serious accidents/injuries to firefighters or the public.
HIGH: High potential exists for serious accidents/injuries or multiple accidents/injuries to firefighters or the public.

10. SAFETY - TECHNICAL DIFFICULTY

LOW: 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.
MODERATE: Most safety concerns can be easily mitigated but some remain that require extra caution during project operations. Special emphasis is needed for some elements of LCES. The project briefing will include a safety briefing with special issues or emphasis areas. Limited mitigation to protect public health and safety are needed.
HIGH: Extra caution is needed during project mitigation to manage several safety concerns. Careful attention to all elements of LCES is required. The implementation team may include a qualified fire Safety Officer. A special safety briefing with special issues or emphasis areas is needed as part of the project briefing. Special mitigation are required to protect public health and safety.

11. IGNITION PROCEDURES/METHODS - RISK

LOW: Firing sequence and timing is not critical to meet project objectives. The entire project area is readily visible to the Ignition Specialist/Burn Boss.
MODERATE: Firing sequence and timing are somewhat critical to meet project objectives. Most of the project area is readily visible to the Ignition Specialist or Burn Boss.
HIGH: Firing sequence and timing are critical to meet project objectives. Portions of the project area are not readily visible to the Ignition Specialist and Burn Boss.

11. IGNITION PROCEDURES/METHODS - POTENTIAL CONSEQUENCES

LOW: Firing methods and procedures do not pose a safety concern to personnel, compromise project objectives, or increase the risk of an unexpected or adverse event.
MODERATE: Firing methods and procedures must be coordinated to provide for adequate safety, meet project objectives, and reduce the risk of an unexpected or adverse event. Opportunities for remedial actions or corrections are available in the event of problems.
HIGH: Firing methods and procedures must be carefully planned and well coordinated to address safety concerns, meet project objectives, and reduce the risk of an unexpected or adverse event. Opportunities for remedial actions or corrections are limited in the event of problems.

11. IGNITION PROCEDURES/METHODS - TECHNICAL DIFFICULTY

LOW: There is no need for special firing equipment, techniques, or patterns. Firing procedures are simple and ignition team is small. Use of only one type of ignition device is planned. The ignition pattern requires minimal supervision of the lighters to achieve project objectives and manage safety concerns.
MODERATE: The need for special firing equipment, techniques, or patterns has been identified. Firing procedures are somewhat complex in at least some portions of the project area and the ignition team may be broken into two or more squads. Use of 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. (RXI2 suggested)
HIGH: The need for special firing equipment, or different techniques, or firing patterns has been identified. Firing procedures are complex and the ignition function may be broken into multiple teams with more than one Ignition Specialist used. Simultaneous ignitions will occur. Use of several different ignition devices (aerial and ground) is planned. The ignition patterns and techniques to manipulate fire behavior are used and require tight control of the lighters to achieve project objectives and manage safety concerns. (RXI1 suggested)

12. INTERAGENCY COORDINATION - RISK

LOW: The project does not involve another land management agency or jurisdiction. No concerns or issues associated with interagency partners have been identified. Restrictions related to National and regional preparedness levels are not expected.

MODERATE: The project involves another land management agency or jurisdiction but project completion is not dependent on coordinated implementation. One or more interagency partners have interest or concerns with the project that are easily addressed and satisfied. Restrictions related to National and regional preparedness levels may cause minor delays in project implementation.
HIGH: The project involves other land management agencies or jurisdictions and project completion is dependent on coordinated implementation. Several interagency partners have interest or concerns with the project that may require additional attention. Restrictions related to National and regional preparedness levels may cause significant delays in project implementation or project cancellation in a given burn window.

12. INTERAGENCY COORDINATION - POTENTIAL CONSEQUENCES

LOW: Project can be completed as planned.
MODERATE: Interagency coordination issues may delay project implementation or require minor modifications to the prescribed fire plan.
HIGH: Interagency coordination issues may cause significant delays in project implementation, may cause project cancellation in a given burn window, or may require major modifications to the project.

12. INTERAGENCY COORDINATION - TECHNICAL DIFFICULTY

LOW: No interagency issues. No special agreements needed. No unusual communication or coordination issues. Interagency resources are readily available with few or no restrictions on their use.
MODERATE: Project requires use of one or two special agreements. Implementation may require special attention to certain interagency details, such as communications and standards for operations. Interagency resources are generally available but some restrictions on their use may be present.
HIGH: Project requires use of several special agreements. Implementation requires special attention to certain interagency details, such as communications and standards for operations. Interagency resources are limited in availability and several restrictions on their use may be present.

13. PROJECT LOGISTICS - RISK

LOW: The project requires minimal logistical support with no specific logistic function assigned. Supplies needed to conduct the burn are readily available and no special transportation or storage needs have been identified. No special equipment or communications needs have been identified. Project duration is 2 days or less.

MODERATE: The project requires some logistical support in certain areas, such as communications, ground transportation, or personnel support. Most supplies are readily available. Some special transportation or storage needs may exist for burning equipment. One to two pieces of special equipment or communication equipment requiring more intensive logistical support may be needed to complete the project. Project duration requires at least one resupply trip to support remotely stationed personnel.
HIGH: The project requires extensive logistical support in several areas. Certain key supplies are limited in availability or require special transportation and storage. Several pieces of equipment or a communications network is needed that require intensive logistical support. Project duration requires several resupply trips to support remotely stationed personnel.

13. PROJECT LOGISTICS - POTENTIAL CONSEQUENCES

LOW: Problems related to logistics will not increase the risk of escape, affect the completion of the project or create a safety concern.
MODERATE: Problems or failures related to logistical support will increase the risk of escape, or affect the completion of the project or create a safety concern
HIGH: Problems or failures related to logistical support will substantially increase the risk of escape, and/or affect the completion of the project and/or create a serious safety concern

13. PROJECT LOGISTICS - TECHNICAL DIFFICULTY

LOW: No special logistical support issues. Supervisors normally handle their own support needs. Supplies and personnel are readily available and easy to obtain.
MODERATE: Project implementation requires a small logistical support operation. Logistical support may be combined with other functions. Securing, transporting, or storing some supplies or equipment may require additional effort. Obtaining some personnel may require additional contacts and advanced scheduling. Additional support may be needed for out-of-area personnel.
HIGH: Project implementation requires a large logistical support operation. Logistical support will operate as a separate function. Securing, transporting, or storing several supplies and equipment requires additional effort. Obtaining the necessary personnel requires at least some additional contacts and does require careful scheduling. Additional support will be needed for out-of-area personnel.

14. SMOKE MANAGEMENT - RISK

LOW: Smoke concerns are generally few or easily mitigated. The project will produce smoke for only a short period of time or is barely visible to the public. Smoke exposure or amounts are not expected to cause health or safety concerns to project personnel or the public. Members of the public have expressed few or no concerns about smoke.
MODERATE: Smoke concerns are moderate and some concerns require special mitigation. The project will produce smoke visible to the public over several days. Smoke exposures or amounts may cause some health or safety concerns over a short period of time. Members of the public have expressed some concerns about smoke.
HIGH: Smoke concerns are high and require special and sometimes difficult mitigation. Smoke will be readily visible to the public and last several days to weeks. Smoke exposures or amounts are likely to cause some health and safety concerns that will require special mitigation. Large segments of the public are concerned about smoke.

14. SMOKE MANAGEMENT - POTENTIAL CONSEQUENCES

LOW: No impacts OR minor impacts to isolated residences, remote roads or other facilities are expected. Firefighter exposure to smoke is expected to be minimal and not cause health and safety concerns.
MODERATE: Vistas, roads, and some residences may experience short-term decreases in visibility. A few health related complaints may occur. Minor smoke intrusions may occur into smoke sensitive areas, but below levels that trigger regulatory concern. Project personnel may be exposed to dense smoke for short periods of time.
HIGH: Vistas, roads, and residences may experience longer-term decreases in visibility OR significant decreases in visibility over the short-term. Major smoke intrusions may occur into smoke sensitive areas, such as Class I airsheds, non-attainment areas, hospitals, and or major airports, at levels that trigger regulatory concern. Project personnel may be exposed to dense smoke for prolonged periods of time.

14. SMOKE MANAGEMENT - TECHNICAL DIFFICULTY

LOW: No special operational procedures are required. Limitations on wind direction, season, etc. may be present in the plan.

MODERATE: Some considerations are needed in the prescription OR ignition portions of the plan. 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 is necessary but easy to accomplish.
HIGH: Special considerations are needed in the prescribed fire plan. Special smoke management techniques will be used. Burn window/opportunities are limited by the required weather/dispersion conditions. Special coordination with air quality officials is required. Accelerated mop up may be planned to reduce smoke impacts. Some mitigation measures or additional smoke modeling are required to address potential concerns with smoke impacts. Specific smoke monitoring is required to determine smoke plume heights and directions. Rotating project personnel out of dense smoke is necessary but may be difficult to accomplish.

Complexity Rating Worksheet

Instructions: This worksheet is designed to used with the Prescribed Fire Complexity Rating descriptors on Page 6.

Project Name _____ Number _____

Complexity elements:

1. Potential for Escape

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

2. The Number and Dependency of Activities

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**

Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

3. Off-Site Values

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

4. On-Site Values

Risk	Rationale
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

5. Fire Behavior

Risk	Rationale
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**

Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

6. Management Organization

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

7. Public and Political Interest

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**

Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

8. Fire Treatment Objectives

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

9. Constraints

Risk	**Rationale**

Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

10. Safety

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	

Final Rating: ***Low Moderate High***	

11. Ignition Procedures/Methods

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

12. Interagency Coordination

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	

Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

13. Project Logistics

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

14. Smoke Management

Risk	**Rationale**
Preliminary Rating: ***Low Moderate High***	

Final Rating: ***Low Moderate High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low Moderate High***	
Final Rating: ***Low Moderate High***	

COMPLEXITY RATING SUMMARY

RISK OVERALL RATING _____

POTENTIAL CONSEQUENCES OVERALL RATING _____

TECHNICAL DIFFICULTY OVERALL RATING _____

SUMMARY COMPLEXITY RATING _____

RATIONALE:

Prepared by: _____ Date: _____

Approved by: _____ Date: _____
(Agency Administrator)

EXAMPLE
Complexity Rating Worksheet

Instructions: This worksheet is designed to be used in conjunction with the Prescribed Fire Complexity Rating System Descriptors on page 6.

GOOSEBERRY — Project Name

XXXX — Number

Complexity elements:

1. **Potential for Escape**

Risk	**Rationale**
Preliminary Rating: ***[Low]*** ***Moderate*** ***High***	The 1986 Anderson Creek fire served to break up fuel continuity on the landscape, limiting the potential spread of any escapes. While access into certain parts of the unit is minimal, generally these areas have sparse fuels outside the unit or change over to a significantly wetter aspect for a spring burn. Most ladder fuel situations occur in patches away from points of concern and critical holding points. The prescription calls for a maximum flame length of 6-7 feet. Little or no residual fire is expected.
Final Rating: ***[Low]*** ***Moderate*** ***High***	No change**.**
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***[High]***	An escape is likely to result in moderate damage to vegetation on north aspects. Up to three residences and several outbuildings could be affected, but these lie in an adverse direction from the prevailing winds. The fire could also burn onto Boise Cascade private timberlands, but these also lie in an adverse direction to the prevailing winds. Upslope, land is administered by the U.S. Forest Service. An agreement is in place for participation and identification of allowable areas should slopover or an escape occur. Some social or political concerns could be expected due to the high visibility of the project area to Crouch and Garden Valley. Some impact to the public or users can be expected should a escape occur near April 15, the open day of bear and turkey hunting seasons. Some mitigation can occur by not burning within two or three days of the 15, signing access roads, and placing notifications at local facilities.
Final Rating: ***Low*** ***[Moderate]*** ***High***	Prescribed fire plan does not authorize operations during the period April 12-18. Patrols and lookouts will be placed at key location on and adjacent private property. See map.
Technical Difficulty	**Rationale**

Preliminary Rating: ***Low*** ***Moderate*** ***High***	Because of the separation of holding personnel into 3 distinct crews in order to deal with the size of the area, holding operations will be supervised at the Single Resource Boss level. The occasions when one or both engine crews would be working directly with the hand crew are most likely to occur away from the road such that the engine crews become additional hand crew members. Portions of the burn unit are not easily accessible, but the top and bottom of the unit are accessed by roads. Expected weather conditions should be normal for the area and season and all key implementation personnel are expected to be from the local area.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.

2. The Number and Dependency of Activities

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Other than the initial burnout along the road at the top of the unit, burning of the unit will be with the use of a helitorch and requires a moderate level of coordination between the ignition specialist and the holding crews to maintain safety and hold the fire along the flanks. The Burn Boss should be stationed at a lookout point within the unit in order to see the unit well enough to direct operations.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Coordination failure(s) could result in a high risk of escape, failure to complete the project, failure to meet the project objectives, or serious safety issues for implementation personnel or the public. A significant delay in implementation would be expected. Burn Boss will need to assure all communication equipment is ready and operational prior to ignition.
Final Rating: ***Low*** ***Moderate*** ***High***	Prescribed fire plan has radio operations and checks built in.
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Continuous or nearly continuous communication between the Burn Boss, Ignition Specialist, and Holding Bosses is needed to manage the risk of escape and firefighter safety.
Final Rating: ***Low*** ***Moderate*** ***High***	Communication procedures are identified.

3. Off-Site Values

Risk	Rationale
Preliminary Rating: ***Low*** ***[Moderate]*** ***High***	Four parcels of private land are located either adjacent or near the project area. Three parcels have primary residences and outbuildings. However all parcels are located downhill from the project area and in an adverse direction from the prevailing winds. Several tree plantations are scattered throughout the entire area. Turkey season may be open during part or all of the project life, but the project area is small enough that hunters can easily avoid the area.
Final Rating: ***Low*** ***[Moderate]*** ***High***	No change.
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***[Moderate]*** ***High***	If fire were to reach any of the private parcels, at minimum claims for various types of fire damage could be filed. Loss of plantations would require replanting with a subsequent delay in full recovery of the sites intensely burned in 1986. Shrubs adjacent to the project area are generally strong resprouters or have long-lived, soil stored seed. Dominant tree species are typically considered fire resistant and burning is scheduled to take place before bud burst.
Final Rating: ***Low*** ***[Moderate]*** ***High***	No change.
Technical Difficulty	**Rationale**
Preliminary Rating: ***[Low]*** ***Moderate*** ***High***	Protection of the private parcels should require no special management, equipment or skills. Since these parcels are located downhill, backing fire spread is expected in the direction of these parcels should an escape occur. The closest plantations are accessible by engines.
Final Rating: ***[Low]*** ***Moderate*** ***High***	No change.

4. On-Site Values

Risk	Rationale
Preliminary Rating: ***[Low]*** ***Moderate*** ***High***	No special features are present within the project area.
Final Rating: ***[Low]*** ***Moderate*** ***High***	No change.
Potential Consequences	**Rationale**

Preliminary Rating: ***Low*** ***Moderate*** ***High***	There are no special features within the project area and on-site resources will not be adversely affected as long as the project stays within the prescribed fire behavior.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Resource values within the unit are easy to protect.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.

5. Fire Behavior

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Fuels vary moderately within the unit between fuel models 8 and 9, with 9 dominant. Multiple aspects are involved with resulting changes in winds, microclimate and other fire conditions, but fire behavior is highly predictable. Some torching can be expected near slope breaks and at the head of the main draw at the northern tip of the ignition area, but little spotting outside the unit is anticipated.
Final Rating: ***Low*** ***Moderate*** ***High***	No change**.**
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Fire behavior outside the unit should be similar to that inside the unit on west and south aspects and less than inside the unit on north and east aspects.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Care must be taken to ensure that the Burn Boss and lighters in the interior of the unit are adequately protected. The number and size of slopovers should not require additional suppression resources as long as conditions remain within prescription. Both Anderson Creek and Smith Creek Roads provide containment opportunities and most main ridge lines are sparsely fueled with rocky areas. Direct attack tactics should be successful on most spot fires and slopovers.

Final Rating: ***Low*** ***Moderate*** ***High***	No change.

6. Management Organization

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Medium*** ***High***	A majority of the prescribed fire positions must be staffed with fully qualified personnel with separate personnel filling the positions of Burn Boss, Ignition Specialist, and Holding Boss. Media personnel will be positioned outside the unit.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Problems related to communications may cause violations of safety standards or an increased risk of an escaped fire. Checking communications frequently will be necessary.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	At least one primary team member will 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)
Final Rating: ***Low*** ***Moderate*** ***High***	Communication checks are built into the prescribed fire plan.

7. Public and Political Interest

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	The project is moderate in size for this plant community type. Smoke will be visible to residents of Crouch and Garden Valley and if the wind was from the north or northeast it would be in town. Limit the prescription to not accept the north or northeast wind to prevent this problem.
Final Rating: *Low* ***Moderate*** *High*	The issue has been resolved, thus lowering the rating, by not allowing a north or northeast wind in the prescription and if weather conditions change, suppressing remaining areas of fire.
Potential Consequences	**Rationale**

Preliminary Rating: ***Low*** ***Moderate*** ***High***	Unexpected or adverse events would attract some public attention due to the proximity of the burn to Crouch and Garden Valley but may not attract political and media attention unless a large escaped fire occurred. Local briefings of community leaders would be required at minimum.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	During normal operations no media releases will be needed. Three homeowners and Boise Cascade need to be notified when ignition is projected to begin and kept current on fire status. An information board may be needed in Garden Valley, Crouch, or both over the life of the project.
Final Rating: ***Low*** ***Moderate*** ***High***	A media person will be placed at the road fork near the bridge near the forks in the river to talk with local area folks and hunters.

8. Fire Treatment Objectives

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	The prescribed fire objectives only require low to moderate intensity fire behavior to achieve. Both weather and fire behavior monitoring are expected to be easily conducted.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Several opportunities will exist to meet these objects. This particular burn is the last installment on a larger project. Failure to complete this particular unit will have minimal effects on overall project success.
Final Rating: ***Low*** ***Moderate*** ***High***	No change
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Measures to achieve the project objects are both easy to complete with few restrictions on the techniques. What restrictions exist are designed to mitigate any threats to the adjacent and nearby private lands. Pre-burn monitoring is needed to determine if the unit appears to be in prescription. Some during burn monitoring of fire behavior is needed to assure the limitations on large tree mortality are being met.

Final Rating: ***Low*** ***Moderate*** ***High***	No change.

9. Constraints

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Use of heavy equipment is prohibited in many areas due to slope steepness and soil type. Other that weather-related, no constraints exist on access, use of water sources, specific tactics, or aircraft use. Ignition is not expected to be restricted during any portion of the burn window or to minimize impacts to any special events or seasonal activities.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Project can be implemented whenever it is in prescription with exception of the period April 12-18. The only limitations on tactics is that use of heavy equipment to construct fireline is prohibited on slopes greater than 25%.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	The limitations on use of heavy equipment should have no impact on project difficulty.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.

10. Safety

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Special caution will be needed to protect the safety of the Burn Boss while on the lookout point while working around the center ridge line, and holders at the head of the draw at the northern tip of the unit. The risk to the Burn Boss is mitigated by sparse fuels on the center ridge line, continuous communication and the aerial platform provided by the helicopter. No firing should occur down wind of the Burn Boss's lookout location until he has been removed. Fatigue must be managed due to long drive times, the steep and narrow road accessing the top of the unit, and potentially long hours on steep slopes within unit.

Final Rating: ***Low*** ***Moderate*** ***High***	These mitigation measures have been built into the plan.
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Moderate potential exists for more serious accidents related to fatigue, such as vehicle accidents, and prolonged walking on steep slopes, such as strains and sprains. Escape routes and safety zones must be constantly updated as burning progresses.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Some extra caution is needed to manage the safety risks to lighters while within the interior of the unit and for the Burn Boss while at the lookout point; special emphasis will be needed for communications and escape routes. Safety zones will be a special emphasis for holders on the flanks on the unit, particularly at the head of the draw on the northern tip and along the eastern flank. Special mitigation to protect public health and safety are not anticipated.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.

11. Ignition Procedures/Methods

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	The firing sequence and timing are somewhat critical to meet project objectives and manage safety risks through the center of the unit on the interior ridge. The Burn Boss can see most of the project area from the center ridge. The Ignition Specialist or the Holding Boss can usually be positioned to see those portions of the unit that the Burn Boss cannot and still perform those duties.
Final Rating: ***Low*** ***Moderate*** ***High***	
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	Firing methods and procedures must be coordinated across the center ridge to provide for adequate safety and meet project objectives. In the event of problems, firing could be halted in either draw or along the center ridgeline.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.

Technical Difficulty	Rationale
Preliminary Rating: *Low* ***Moderate*** *High*	There is no need for special firing patterns, but coordination is needed when firing out the center ridge. Otherwise, standard strip-firing techniques from the upper elevation downward will be employed.
Final Rating: *Low* ***Moderate*** *High*	No change.

12. Interagency Coordination

Risk	Rationale
Preliminary Rating: *Low* ***Moderate*** *High*	This particular project is entirely on BLM-managed lands. Although the overall project involves the Forest Service, there has been excellent cooperation and coordination. Both National and regional preparedness levels are expected to be no higher than 2 and likely to be 1 at the time the burn is planned for completion.
Final Rating: *Low* ***Moderate*** *High*	No change.
Potential Consequences	**Rationale**
Preliminary Rating: *Low* ***Moderate*** *High*	An agreement is in place with the U.S. Forest Service and no interagency coordination issues are anticipated.
Final Rating: *Low* ***Moderate*** *High*	No change.
Technical Difficulty	**Rationale**
Preliminary Rating: *Low Moderate High*	There are no interagency issues, special agreements needed, or communication or coordination issues. Interagency resources should be readily available.
Final Rating: ***Low*** *Moderate High*	No change.

13. Project Logistics

Risk	Rationale
Preliminary Rating: ***Low*** *Moderate High*	No logistical support is anticipated. Supplies are readily available and no special transportation or storage needs exist. Ignition is expected to be completed in one day with rapid burnout of ignited fuels.

Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	The primary potential logistical problem that might affect ignition completion in a single day is would be centered around the helicopter, PSD unit or the operator.
Final Rating: ***Low*** ***Moderate*** ***High***	No change
Technical Difficulty	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	No logistical support operation is anticipated.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.

14. Smoke Management

Risk	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	The project is expected to produce readily noticeable smoke for 1-2 days; afterwards, nighttime smoke may be noticed by the 3 residences closest to the burn for an additional 2-3 days. Smoke exposure or amounts are not expected to cause health or safety concerns for either firefighters or the public. Procedures have been identified in the plan to deal with any possible smoke impacts to the Middle Fork Road and Payette River Highway.
Final Rating: ***Low*** ***Moderate*** ***High***	No change**.**
Potential Consequences	**Rationale**
Preliminary Rating: ***Low*** ***Moderate*** ***High***	The Middle Fork Road or Payette River Highway may experience nighttime reductions in visibility for the first 1-2 days of the project should strong nighttime inversions develop.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.
Technical Difficulty	**Rationale**

Preliminary Rating: ***Low*** ***Moderate*** ***High***	Wind directions are limited in the burn plan to address both smoke concerns and escaped fire risk. Special coordination would be needed with Idaho State Police should the weather forecast call for strong nighttime inversions during the period of highest smoke production (first 1-2 days), but no special coordination is needed with the South Idaho Airshed Group.
Final Rating: ***Low*** ***Moderate*** ***High***	No change.

SUMMARY COMPLEXITY RATING

RISK OVERALL RATING Moderate

POTENTIAL CONSEQUENCES OVERALL RATING Moderate

TECHNICAL DIFFICULTY OVERALL RATING Moderate

SUMMARY COMPLEXITY RATING Moderate

RATIONALE: This project rates a moderate complexity due to the higher than average degree of coordination and communications needed to safely conduct the ignition operations. This higher level of coordination and communication is driven by the presence of multiple aspects and a ridge through the center of the unit. While the risk of escaped fire in the direction of private lands is considered low, the consequences range from moderate to high in the highly unlikely event of a high intensity fire reaching either the Boise Cascade timberlands or the 3 residences closest to the project area. Risk to hunters has been mitigated through notifications. Both the safety risk and the escaped fire risk are mitigated by low fuel loadings, an early spring burn timing, generally low intensity prescribed fire behavior, and ability to safely halt burning at three different locations within the unit.

Prepared by: _____ **Date:** _____

Approved by: _____ **Date:** _____
(Agency Administrator)