

## Prescribed Fire Complexity Worksheet & Rating Guide

| Complexity Element                                     | Weighting Factor | Complexity Factor | Total Value |
|--|------------------|-------------------|-------------|
| Safety   | 5                |                   |             |
| Threats to Boundaries                                  | 5                |                   |             |
| Fire Behaviour   | 5                |                   |             |
| Objectives   | 4                |                   |             |
| Size of Burn Organization                              | 4                |                   |             |
| Improvements within Burn Area or Adjacent to Burn Area | 3                |                   |             |
| Environmental/Timber/Cultural or Social Values         | 3                |                   |             |
| Air Quality Values/Issues                              | 3                |                   |             |
| Logistic Considerations                                | 3                |                   |             |
| Political Considerations                               | 2                |                   |             |
| Tactical Operations                                    | 2                |                   |             |
| Multiagency Involvement                                | 1                |                   |             |
| <b>Project Total</b>                                   |                  |                   |             |

Type III Burn Boss Required for Projects with Rating of 40 - 51

Type II Burn Boss Required for Projects with Rating of 52 - 84

Type I Burn Boss Required for Projects with Rating of >84

The Prescribed Fire Complexity Analysis provides a method to assess the complexity of the planned prescribed fire project. The analysis incorporates an assigned numeric rating complexity value for specific complexity elements that are weighted in their contribution to overall complexity.

The weighted value is multiplied by the numeric rating value to provide a total value for that element. All elements are then "added to generate the total project complexity value. Breakpoint values are provided for low & moderate and high complexity elements." This complexity worksheet is accompanied (on the following pages) by a guide to numeric values for each complexity element shown.

## Guide to Numeric Rating

| <b>Complexity Element</b>                               | <b>1</b>   | <b>2</b>   | <b>3</b>  |
|---|--|--|---|
| Safety<br>Weighting Factor 5                            | Safety issues are easily identified and mitigated.   | Number of significant safety issues have been identified. All safety hazards have been identified on the LCES worksheet and mitigated.   | Complex safety issues exist No vehicle access or remote access only.  |
| Threats to Boundaries<br>Weighting Factor 5             | FFMC of 80 - 85<br>Low threat to boundaries. Low risk of spotting. Boundaries naturally defensible.  | FFMC of 86 - 90<br>Moderate threat to boundaries. Moderate risk of spotting. Boundaries need modification to strengthen fuel breaks, lines etc.  | FFMC of > 90<br>High threat to boundaries. High risk of spotting. Boundary modification necessary to compensate for continuous fuels.   |
| Fire Behaviour, Wx, Fuel & Topog.<br>Weighting Factor 5 | Low variability in slope or aspect. Wx uniform & predictable. Surface fuels only (grass, needles) Uniform fuel type/load. No drought conditions present. | Moderate variability in slope or aspect. Wx variable but predictable. Ladder fuels present. Moderate variability in fuel type or loading. BUI indicates normal to moderate drought conditions exist. | High variability in slope or aspect. Wx variable & difficult to predict. Highly variable fuel types or loading. BUI indicates severe drought conditions exist. Altered fire regime, hazardous fuel or stand density conditions exist. Extreme fire behaviour potential. |
| Objectives<br>Weighting Factor 4                        | Maintenance objectives Easily achieved objectives. Broad prescription.   | Restoration objectives Reduction in both live & dead fuels Objectives judged to be moderately hard to achieve. Objectives may require moderately intense fire behaviour.                             | Restoration objectives in altered fuel situations. Precise treatment of fuels & multiple ecological objectives. Conflicts between objectives & constraints. Requires high intensity fire or a combination of fire intensities that are difficult to achieve.            |

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| Size of Project Organization<br>Weighting Factor 4            | Single resource project < 12 people on site.   | Multiple resource project 13 - 24 people on site. Short term need for specialized resources.  | Multiple branches, divisions or groups. > 24 people on site. Specialized resources required to accomplish objectives.   |
| Improvements<br>Weighting Factor 3                            | Very little risk to people or property or improvements within or adjacent to project.  | Several values to be protected Mitigation through planning and/or preparations is adequate. May require some commitment of specialized resources.       | Numerous values and/or numerous values to be protected. Severe damage likely without commitment of specialized resources with appropriate skill levels.                               |
| Timber/Natural/Cultural & Social Values<br>Weighting Factor 3 | Very little risk to values within or adjacent to project.  | Several values to be protected Mitigation through planning and/or preparations is adequate. May require some commitment of specialized resources.       | Numerous values and/or numerous values to be protected. Severe damage likely without commitment of specialized resources with appropriate skill levels.                               |
| Air Quality<br>Weighting Factor 3                             | Few smoke sensitive areas near project. 95% Smoke is produced for less than 1 burning period. No potential for scheduling conflicts with other agencies. | Multiple smoke sensitive areas, but smoke impact mitigated in plan. 95% Smoke produced for 2 - 4 burning periods. Low potential for scheduling conflict | Multiple smoke sensitive areas with complex mitigation actions required. 95% Smoke produced longer than 4 days. Class 1 smoke sensitive areas. High potential for scheduling conflict |
| Logistics<br>Weighting Factor 3                               | Easy Access<br>Less than 4 day project, not including patrol status.   | Difficult Access<br>Support required for 4 - 10 days. Logistics Officer required. Anticipated difficulty in obtaining resources.                        | No vehicle or remote access only.<br>Duration of project is greater than 10 days. Large logistics section required. Remote camps.   |
| Political Considerations<br>Weighting Factor 2                | Minimal impact on neighbours or visitors.<br>Minimal controversy.<br>Minimal media interest.   | Some impact on neighbours or visitors. Some controversy but mitigated. Press release or communications plan required                                    | High impact on neighbours or visitors. High internal or external concerns Media present during operations, media contact on site.   |

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|--|---|--|---|
| <p>Tactical Operations</p> <p>Weighting Factor 2</p>                     | <p>Simple ignition pattern.<br/>Single ignition method.<br/>Holding requirements minimal.</p> | <p>Multiple ignition methods or sequences. Use of specialized ignition methods. Holding actions required to check, direct, or delay fire spread. Simultaneous use of hand and aerial ignition methods.</p> | <p>Complex ignition patterns. Simultaneous use of multiple ignition patterns or methods. Success of actions critical to accomplishment of objectives. Aerial support for mitigation actions desirable or necessary.</p> |
| <p>Multiagency Coordination or Involvement</p> <p>Weighting Factor 1</p> | <p>No major involvement with other agencies.<br/>No major concerns</p>                        | <p>Simple joint agency project. Some concerns.</p>   | <p>Complex multiagency project. High Concerns</p>   |