



Managing Long Term Fires: A Reference Guide and Checklist



Guidance for Indian Country Wildland Fire Management

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I. Long Term Guide Objectives

The purpose of this guide is to provide a quick overview, reference, and checklist for developing a strategic level long term plan for a wildfire incident. For long term fires (fire spread exceeding 3 days), alternatives and objectives must consider not only possible threats to values but also potential long lasting benefits of fire. Although in some instances fire needs to be suppressed at the smallest size possible, in others, fire management can include both capturing benefits for natural resources as well as protecting values (human-made or natural) that may be threatened by fire.

This guide does not intend to replace the more comprehensive *Decision Making for Wildfires: A Guide for Applying a Risk Management Process (RMRS GTR-298)* at the Incident Level; it focuses on the elements necessary for developing a strategic long term assessment.

Nothing herein establishes, alters, or substitutes for policy, nor does it establish any additional requirements or standard practices for the BIA.

II. Managing Long Term Fires

The current landscape of widespread drought, large fuel accumulations, desire for cost containment, and limited resource availability lower the probability of success during wildfire operations. These factors often result in long duration incidents, and an associated increase in firefighter exposure, in spite of the best efforts of fire managers.

Additionally, more Indian Country programs are managing fire for resource benefit and for returning ecosystems back to more natural fire regimes. Wildfire decision making during long term fires is complex, yet processes have been developed to assist the fire manager during the incident decision making process.

The 2009 Guidance for Implementation of Federal Wildland Fire Management Policy allows more flexibility for fire managers in developing the most appropriate response to a wildfire. This flexibility has also increased the responsibility on managers to determine the most appropriate response to every unplanned ignition.

Fire managers are responsible for developing and implementing safe, effective, and defensible fire management strategies based on sound, risk-based, well-documented analyses.

This guide is intended to complement *Decision Making for Wildfires: A Guide for Applying a Risk Management Process (RMRS GTR-298)* for strategic planning at the incident level. Decisions made during the risk management assessment process are documented in the Wildland Fire Decision Support System (WFDSS).

The following checklist summarizes considerations during the early stages of a long term fire which may assist fire managers in the identification and development of risk, opportunities, and strategies. Some of these items can be performed pre-season or pre-incident to improve decision space and capitalize on opportunities that may become available. Subsequently, incident personnel will have access to pre-developed data and local knowledge to assist in the implementation of those strategies. These items should be re-evaluated on a periodic basis and updated as considered necessary to reflect changing conditions.

III. Long Term Guide Checklist

1. OBJECTIVES

Identify Objectives for Long Term Management. Develop specific Incident Objectives, Course of Action, and Rationale within the framework of the Unit's approved strategic objectives and management requirements, constraints, Annual Operating Plan (AOP), and/or guidelines. Document these in WFDSS.

2. COMMUNICATION STRATEGY

Consider the need for an enhanced or extended communication strategy to ensure (Internal and External) stakeholders and community are informed.

3. RISK ASSESSMENT

All items included on this checklist provide a focused collection of products, processes and analyses which organize information and assign values (relative, qualitative or quantitative) to risks for the purpose of informing priorities, developing or comparing courses of action, and informing decision making.

4. VALUES

Develop a Values Inventory. Include Name, Type, Location, Ownership, Response to fire or smoke, and the probability and range of dates of potential impact (from fire behavior analysis).

5. FIRE ENVIRONMENT

Assess fuel conditions - Live and dead fuel moisture conditions in relation to key thresholds associated with extreme fire behavior and large fire growth, departures. Utilize local knowledge of fuel moisture thresholds that may be known locally but not captured in formal documents. (i.e.: Gambel oak brush becomes active when below 120% live FM.) Break down occurrence by fuel model if applicable and make adjustments when necessary during modeling. Identify fuel treatment polygons and recent fire perimeters.

- **6. LONG TERM WEATHER and CLIMATE OUTLOOK**
Obtain long term weather and climate outlooks from local, regional, and national products such as Predictive Services, NOAA, Western Regional Climate Center. Identify Seasonality: Show current level of fire danger index compared to historical climatology for similar years with large fires or high danger.
- **7. FIRE DANGER**
Identify the historic length of fire season and critical thresholds of fire danger. Reference the Unit NFDRS Plan and identify which fire danger indices are applicable to the planning unit (Preparedness levels, BI, ERC, etc). Identify specific, known thresholds which produce acceptable fire effects (i.e. FM G ERC<64, 89th percentile).
- **8. FIRE SLOWING EVENT**
Develop an assessment of season ending climatological probabilities and fire slowing events. Review past precipitation history and seasonal drought outlooks.
- **9. FIRE HISTORY AND LARGE FIRE GROWTH DAYS**
Determine likelihood of a large-spread weather event: Identify when large fires occur through historic fire records, how they are distributed throughout the season and when they subside. Identify those conditions (parameters such as wind, temperature, relative humidity, ERC) that are critical during historic large fires and extreme fire behavior runs. Analyze historic wind data to determine patterns and trends of speed and direction over defined time periods.
- **10. PREDICTED FIRE BEHAVIOR**
Analyze weather and fire behavior potential, especially long term fire spread probability (FSPRO) to identify probability of impact to values and near term projections to help identify how quickly a fire will reach critical values and at what fire intensity.
- **11. SMOKE MANAGEMENT / AIR QUALITY**
Coordinate with smoke management regulatory agencies for daily smoke management forecasts. Identify smoke dispersion trajectories and air quality impacts. Identify mitigation strategies and controls to reduce impacts.
- **12. COURSE OF ACTION**
Develop controls to address identified risk and opportunities to reduce risk and meet management objectives. Utilize defined strategies and Management Action Points (MAP's) to develop the Course of Action. Identify known suppression opportunities between fire and values such as breaks in vegetation, fuel treatments, or vegetation types which may alter fire spread, etc. (Preseason MAP's developed by the home unit in planning and operation documents give incoming resources a clear idea of priorities and opportunities).

□ **13. ADDITIONAL STAFFING CONSIDERATIONS**

Additional organizational positions may also provide technical support for the incident- level Risk Management Cycle, particularly in long-duration incidents (greater than 3 days) that require a more complex risk assessment and course of action. These support positions include:

- Strategic Operational Planner (SOPL)
- Long Term Fire Behavior Analyst (LTAN)

These positions provide robust analysis and evaluation of strategic alternatives and opportunities to best meet incident objectives while considering costs and firefighter exposure.

Additional positions to consider as you develop incident objectives, strategic requirements, and course of action based on incident; scope, scale, complexity, and potential values are:

- Fire Effects Monitor (FEMO) or Field Observer (FOBS)
- Geospatial Analyst (GSAN)
- Public Information Officer (PIO)
- Wildland Fire Module (WFM)

□ **14. REASSESSMENT**

Periodic reassessment is warranted when significant changes in weather or fire behavior occur or are forecast, or when the time period for particular analyses is exceeded (for example, eight days have passed since a 7-day FSPro model was run).

IV. Reference Documents

U.S. Department of Agriculture; U.S. Department of the Interior. 2009. Guidance for Implementation of Federal Wildland Fire Management Policy. U.S. Department of Agriculture; U.S. Department of the Interior.

http://www.nifc.gov/policies/policies_main.html

Decision Making for Wildfires: A Guide for Applying a Risk Management Process at the Incident Level, RMRS GTR-298WWW http://www.fs.fed.us/rm/pubs/rmrs_gtr298.pdf

Interagency Standards for Wildland Fire Module Operations sponsored for NWCG publication by the NWCG Fuels Management Committee. Prepared and maintained by the Fire Use Subcommittee. PMS 430 <http://www.nwcg.gov/sites/default/files/products/pms430.pdf>

Strategic-Level Risk Assessment for Fire Behavior Specialists video series, WFDSSSupportVideos on YouTube. <https://www.youtube.com/watch?v=y-kXyW3MoGE>

WFDSS Examples of Long Term Assessment Reports:

Whitetail Fire – AZSCA 2015

Skunk Fire - AZSCA 2014

Mission Falls – MTFHA 2013

Note: for access to these reports, log into WFDSS, search for the incident, navigate to Reports section.