

# Department of the Interior Risk-Based Fuels Management Program

## *Strategic Approach and Outcomes*

October 24, 2013

### Introduction

#### *Purpose:*

The purpose of the DOI fuels program is to improve the integrity and resilience of our forests and rangelands; contribute to community adaptation to fire; and improve the ability to safely and appropriately respond to wildfire. The agencies' programs are aligned with the three goals of the National Cohesive Wildland Fire Management Strategy. Fuels treatments do not eliminate fire from our landscapes. They do however result in better outcomes on the land. More resilient and healthier ecosystems provide many benefits to society, including clean water, scenic and recreational values, wood products, and biodiversity. Communities are better able to withstand wildfire. In addition, treatments provide safer conditions and more strategic options for firefighters.

#### *Goals*

- Manage fuels to reduce spread, intensity, frequency and/or severity of wildfire in order to protect values at risk and meet land use plan objectives.
- Restore and maintain resilience of natural systems to wildfire, so that when wildfire occurs, ecological impacts are positive or neutral.
- Provide strategic opportunities to increase our capability to manage wildfire for resource benefits and increase public protection and firefighter safety.

#### *Guiding Principles*

- **Federal Trust Responsibility to Tribes** - Acknowledges the federal trust responsibility of all entities to Tribes.
- **Holistic** - Fuels management investments will consider entire landscapes by complementing a number of programs, such as wildlife conservation, forestry, rangeland management, riparian management, plant conservation, and invasive species.
- **Value-based** - Values on the landscape include, but are not limited to, human communities, critical wildlife habitat, significant recreation and scenic areas, and landscapes of historical, economic, or cultural value. Determination of values must be maintained at multiple scales and organizational levels, from the individual unit to the national departmental program.

- **Flexible** - Values, opportunities, partnerships and treatment strategies are local and complex. Fuels, vegetation, development and climate are dynamic. Flexibility at multiple scales is important in ensuring buy-in and in leveraging resources. We recognize the importance of being able to collaborate, plan, prioritize, and leverage at the local level.
- **Collaborative** - Local collaborative planning efforts define the values in need of protection from wildfire. Projects focused on community protection will be given higher priority if there is significant complementary community investment, as these are more effective.
- **Science based** - Fuels treatments are designed and implemented using sound scientific findings, increasing the program's effectiveness and improving resource and cost efficiencies.
- **Landscape scale**- The program will consider landscape-scale resiliency and restoration objectives, to the extent possible. Projects and activities will be designed and implemented on a landscape scale, wherever possible.

### *Methodology*

- **Outcome-Based** - Program objectives are focused on outcomes, not outputs.
- **Risk Framework** –A risk framework will be developed and used to prioritize fuel treatment at the national, regional, and local scales.
- **Cost Effectiveness** – Methods will be developed to demonstrate outcome effectiveness and return on investment. Investments will be evaluated based on total life-cycle costs and benefits (e.g. cost avoidance), including short and long-term as well as costs of maintenance.
- **Adaptive** - Practice adaptive management, including monitoring, assessment, evaluation and adjustment.
- **Data-driven**—Investment decisions and evaluations are informed by quality data.

### *Strategic Questions*

- How to describe the nature of the fuels problem (beyond simply stating a very large number of acres that need treating)
- How priorities will be set
- How accomplishments and successes will be measured

### *Approach to Addressing the Strategic Questions*

- Characterize the problem in terms of different types and magnitudes of risk
- Prioritize based on that characterization
- Measure progress by showing change to risk profiles

## Strategic Approach Common to All Tasks

The tasks presented below are arranged in priority order, but it is understood that some aspects of multiple tasks will be undertaken simultaneously. Each task is presented in a similar format, with a succinct task statement describing the expected result; a list of outcomes or deliverables that each task team is expected to produce; a broad methodology concept to accomplish each task; a task team lead; and a due date. OWF, the bureaus, and tribes will be expected to support the outcomes of the tasks by providing team members to the extent practicable.

Task team members will be expected to consider a holistic, coherent, rational, Department-wide approach. That is, the overarching goal of all tasks and participants is to help improve and sustain an objectively defensible, fiscally viable, demonstrably effective, and transparently accountable DOI Fuels Management Program for the long-term. These tasks are a high priority for the Department, and task team members are expected to commit the necessary time to complete the tasks by their respective due dates.

Every effort will be made to complete each task in as straightforward a manner as possible, using existing and authoritative geospatial data sets, accepted analytical procedures, and previous methodologies, to the extent practicable. Task teams should consider making recommendations for future data; research or system needs to be considered as possible use of the \$2 million included in the FY14 Presidents Budget for a 'Fuels Effectiveness Study'.

Each task team will be expected to define the specific methods used to complete the task, and provide a report of their recommendations on or before the due date. Periodic progress reports will be expected.

### Task 1

**Develop the foundation for a revised DOI Fuels Program and management approach based on risk.**

**Sub-Task 1a:** Quantify the scope of the department-wide fuels treatment requirements in terms of the risk of wildfire to bureau- and tribal-defined values.

#### **Outcomes:**

1. A common, department-wide method to describe the risk of wildfire
2. Identification and spatial location of the values considered to be at risk from wildfire
3. Identification and spatial location of areas where the spread, intensity, frequency, and/or severity of wildfire would jeopardize the identified value at risk
4. Maps, graphs and tables summarizing the scope of the department-wide fuels treatment requirements through schema determined by the task team.
5. Identification of any data or method gaps that the task team encountered, and an estimate of the requirements necessary to bridge such gaps.

**Methodology Concept:** Many data sources, such as LANDFIRE, the USFS Wildfire Potential product, and bureau-specific products exist. Several risk assessments and analyses exist as well, such the Cohesive Strategy national risk analysis. A general methodology, including the introduction of the concept of Highly Valued Resources and Assets (HVRA) and listing of eight potential categories of HVRA has been outlined in the Discussion Draft from the August 2013 "Fuels Summit," and will be considered a starting point.

**Team Lead:** Russ Johnson, OWF

**Due Date:** March 3, 2014 or ten weeks from direction to proceed (assuming prompt determination of HVRA and wildfire potential product)

**Sub-Task 1b:** In close coordination with Sub-Tasks 1a 1c, develop a methodology to prioritize fuels projects on a national/sub-national scale. Provide the policy parameters for which bureaus and regions are to make subsequent prioritizations to regions and units.

**Outcomes:**

1. A common, department-wide method to prioritize and allocate fuels management funds to the DOI bureaus using the risks to values determined in Sub-task 1a.
2. Develop tools and guidance for subsequent prioritization of funds to regions and units.

**Methodology Concept:** Not all federally- and tribally-managed land needs fuels management at equal levels, as the risk from wildfire varies. Resource constraints (funding and people) require the agencies and tribes to prioritize areas that are at high risk (values are high, multiple values are present, probability of fire is high, and/or expected fire spread, intensity, frequency, and/or severity is high), as well as where risk can efficiently be mitigated. Individual agencies manage different vegetation types and have different ownership patterns on the landscape along with distinct missions. For similar reasons and aligned with the program's principle of flexibility to accommodate prioritization at multiple scales, a provision will also be included for incorporating agencies' regional and local values. However, the federal agencies will consistently use a risk-based method to determine fuel treatment priorities. These treatments should typically result from long-term, often multi-jurisdictional, locally developed strategies for reducing wildfire risk.

Expected loss is an actuarial measure of risk. For wildland fire, expected loss can be calculated as:

$$risk = \sum_j^{HVRA} \sum_i^{FL} likelihood_{ij} * susceptibility_{ij}$$

where i refers to a fire behavior descriptor (s) such as flame length class and j refers to spatially coincident HVRAs.

**Team Lead:** Russ Johnson, OWF

**Due Date:** March 31, 2014 or four weeks following completion of subtask 1a

**Sub-Task 1c:** Identify gaps in availability and/or quality of existing fuels program data, data collection methods and policies, and data systems and repositories that affect the feasibility and long-term success of other tasks and sub-tasks. Characterize the extent of identified limitations and issues and propose mitigation strategies, including an enterprise approach to improve collection, organization, and utilization of data in support of the DOI fuels management program. Identify opportunities to consolidate and integrate existing systems and applications, and standardize data management, consistent with the goals of the Wildland Fire I&T program.

**Outcomes:**

1. A proposal on the mitigation strategies that can be considered for implementation.

**Methodology Concept:** To be determined by the task team.

**Team Lead:** Susan Goodman, OWF

**Due Date:** April 21, 2014 or three to four weeks following completion of subtasks 1a and 1b.

## Task 2

**In close coordination with Task 1, develop a methodology for measuring and demonstrating program effectiveness over time.**

### **Outcomes:**

Recommendations for:

#### **1. A Measure of mitigation of fire risk to communities and their values**

*(Cohesive Strategy Goal of Promoting Fire Adapted Communities)*

- A set of indices related to the wildfire risk to communities (for example, populated areas, municipal watersheds, air quality, etc.) will be developed based on wildfire likelihood and expected behavior where values occur on or in proximity to. The change in the indices due to treatment will be used as measures of performance of fuel treatments.

#### **2. Measures of resilience of natural systems to wildfire**

*(Cohesive Strategy Goal of Restoring and Maintaining Landscapes)*

- An index of the resilience of natural systems to wildfire will be developed based on the proportion of federal lands that, if burned, would be expected to burn with normal, characteristic spread, intensity, frequency, and/or severity. The change in the index due to treatment will be used as a measure of performance of fuel treatments.
- Reducing fire severity is a main effect of fuel treatments. An index of the performance of fuel treatments in reducing fire severity--based on those actually tested by wildfire--will be developed based on comparing actual fire severity within treated areas to severity in similar untreated areas.

#### **3. Measure of the extent to which fuels program supports wildfire response**

*(Cohesive Strategy Goal of Response to Wildfires)*

Develop a method or system for documenting where fuels treatments aid fire suppression efforts or otherwise contributed to fire response decisions.

**Methodology Concept:** See above

**Team Lead:** Erik Christiansen, OWF

**Due Date:** March 3, 2014.

## Task 3

### Assess the role, purpose, and approach to Community Assistance within DOI.

#### **Outcomes:**

1. Recommendations on the role, purpose, and approach to Community Assistance within DOI, including recommended funding levels.
2. Provide recommendations to answer the open recommendations from the 2010 OIG program evaluation.

#### **Methodology Concept:**

As noted in a program evaluation conducted by the DOI Office of Inspector General (OIG) in 2010 community assistance has not received the same consideration as other parts of the fuels program. The task force will review the OIG report and provide recommendations on the size, scope, responsibilities and funding requirements for a DOI community assistance program. The task force should consider the full range of possibilities for the program, including no program at all, and recognize that funding is severely limited, and that assistance from the DOI bureaus to local communities can take a variety of forms. Include in any recommendation performance measures that should be applied to measure program effectiveness, and suggestions for data to be gathered in NFPORS. Results from this task will be instrumental in responding to the recommendations of the OIG report.

**Team Lead:** Jon Skinner, BLM

**Due Date:** January 17, 2014.

## Task 4

### Determine how best to meet the trust responsibilities and consultation requirements with tribes for the DOI fuels management program.

#### **Outcomes:**

1. Recommendations for meeting ongoing consultation obligations and trust responsibilities within the Fuels Management Program at the Department level.
2. An assessment of the impacts to the overall program and other DOI bureaus if some or all of the fuels management funding allocations to BIA are exempt from standard DOI prioritization practices and allocation procedures.

**Methodology Concept:** To be determined by the task team.

**Team Lead:** Jenna Sloan, OWF

**Due Date:** February 3, 2014.