

Southern Wildfire Risk Assessment

Using the Assessment Results

This document is an excerpt from the SWRA Final Report. It describes how the Southern Wildfire Risk Assessment (SWRA) can be applied to enhance communication, prevention and mitigation planning efforts.

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Goals and Objectives

The primary intent of the SWRA is to quantify and document the current fire problem in the South. By completing a scientifically robust assessment that provides results that are repeatable, consistent and comparable across geography and time, the SWRA provides baseline information for Southern fire managers to move forward with proactive fire management planning.

The objectives of the project are to provide the information necessary to support the following key priorities:

- Identify those areas that are currently most prone to wildfire,
- Identify areas that may require additional tactical planning, specifically related to mitigation projects and Community Wildfire Protection Planning;
- Provide the information necessary to justify resource, budget and funding requests and allocation
- Allow agencies to work together to better define priorities and improve emergency response, particularly across jurisdictions
- Increase communication with local residents and the public to address community priorities and needs
- Plan for response and suppression resource needs

- Plan and prioritize hazardous fuel treatment programs, and
- Establish a data repository and a series of software tools to support continued analysis and monitoring of wildfire risk across the South.

The SWRA Published Results allow the Southern States to prioritize areas in a relative manner for serious or catastrophic fires near or within each community, county, congressional district, fire response zone, state and/or region. This provides the information necessary to help each Southern State prioritize those areas where tactical analyses and community interaction or treatments may be necessary to reduce risk from wildfire.

Use of the Assessment Results

The final deliverables from the SWRA are referred to as the Published Results. The Published Results are the data developed by the project team of experts that describes fire risk across the South. These maps and data define the current situation. These outputs provide a data platform for use by operational staff, as well as other fire management collaborators, in mitigation planning and communication activities.

The Published Results data was delivered with a GIS software application, the [Southern Fire Risk Assessment System](#) (SFRAS), as the primary mechanism for reviewing the outputs and using the results for further analysis. SFRAS provides capabilities to use the Published Results data to analyze mitigation measures, such as proposed fuel treatments and the addition or removal of initial dispatch locations. Using SFRAS you can evaluate the impact on wildfire risk based on these efforts. Together the Published Results and SFRAS provide a valuable set of tools and a process to facilitate:

1. Communication
2. Decision Support, and
3. Program Planning

Communication

One of the primary uses of the SWRA Published Results will be to communicate to others the current wildland fire risk for areas. In addition, the SWRA outputs provide intermediate outputs, such as Rate of Spread, that can also be of value in communicating with others. Actions in communicating with the public can generally be separated into three categories:

1. Awareness Actions
2. Education and Motivational Actions
3. Regulatory Actions

1. Awareness Actions

The first step in communicating with others is to assist them in becoming aware of a problem. Many fire prevention activities including the use of the image of Smokey Bear, provide an awareness to someone that there is a need to exercise caution when using fire in any manner.

2. Education and Motivational Actions

Once a person is aware, then the opportunity exists to provide information and instruction in a manner to promote a desired behavior. Desired behaviors can be the proper disposal of an

ignited cigarette or the proper type of clearing around a home. For people to be receptive to these educational messages, they must be aware of the problem and also be aware of the benefits and consequences of their actions. The SWRA products and the analyzing of mitigation measures can assist individuals in understanding that in reality, there are only “choices and consequences.” In the many areas of the South where fire dependent ecosystems exist, the question is not “will fire visit an area” but “when”. When that time occurs, the effects on the public will most likely depend on the choices. The fire’s effects will detail the consequences of the choices.

3. Regulatory Actions

At times, educational measures are not sufficient to initiate voluntary compliance and statutory rules, regulations and laws are needed. Development of these regulatory measures, where necessary, should not be viewed as negative but as a necessary part of a coordinated fire management program. Examples of regulations include restrictions on open burning and when industrial activities can continue in the wildland.

Using SWRA/SFRAS Products to Work with Others

SWRA and SFRAS products can support the ability to work with many groups including:

1. The Public
2. Elected Officials
3. Government Officials including County Planners
4. Business

1. Working with the Public

Through articles in the printed media, brochures and presentations to community groups, the SWRA products can communicate to the general public the current wildland fire risk. The highest value in the use of the SWRA will be to communicate products from the assessment relating to wildland fire risk to the general public. Support for community assessment and the FIREWISE program can be facilitated once the public better understands the likelihood of wildland fire effects.¹

2. Working with Elected Officials

Gaining legislative understanding for initiatives and budget requests will facilitate agency to legislator communication and potential support for agency requests. In the short-term, allocation of current or near-term budgets can be based on the likelihood for the highest benefit if products from the SWRA and SFRAS are utilized.

3. Working with Government Officials including County Planners

All agencies and organizations perform some sort of programmatic planning to guide the mid-term to long-term goals and objectives of the agency or organization. Communication facilitating analysis of alternatives can be accomplished using the SWRA and SFRAS.

Development of Land Use Planning Guidelines

Analysis to support land use planning decisions can be supported by products from the SWRA and SFRAS. Products from the SWRA and SFRAS can be used in the development of best

¹ For more information about the National Fire Protection Association FireWise program visit their web site at <http://www.firewise.org>.

management practice measures and of statutory mitigation measures for land use and development.

Data Repository for Use in Fire Management Economic Efficiency Models

The SWRA provides a wealth of data and information that can support analysis of:

- Fuels Management Options
- Resource Location Options
- Defensible Space Options

4. Working with Business

Businesses will be better able to structure their activities if they understand the likelihood and potential impacts from wildland fire. For example, insurance companies will be able to develop a more appropriate and actuarially correct rate structure. The tourist industry can better prepare itself to deal with impacts from wildland fires, such as smoke, destruction to scenic viewing areas, etc.

Using SWRA/SFRAS Products to Support Decisions in Wildland Fire Suppression

Personnel with wildland fire protection responsibilities make decisions to support initial attack and large fire support. Products from the SWRA and SFRAS can be utilized to support these decisions.

Initial Attack Decisions

Decisions depend on the information available. Quick access to data can provide information to support decisions on logistics and prioritization. Data layers within the SWRA which can provide this support on initial attack decisions include Fire Behavior Prediction System 1982 FBPS fuel model, values impacted, suppression difficulty, fire effects, wildland urban interface, and roads to name a few. The basis for all computer-aided dispatch (CAD) systems are base data layers and the SWRA provides many of these key layers.

Large Fire Support Decisions

As with initial attack decisions, large fire support decisions depend on the information available. The data layers mentioned to support initial attack decisions will also be valuable aids to large fire support Incident Management Teams (IMT), particularly if the IMT is from out of the area. As a minimum, the SWRA products will provide access to:

- Values at risk
- Fuels and weather information
- Data for statewide use of the Fire Area Simulator (FARSITE 4+) and FSPro (Fire Spread Probability).²

² Fire Spread Probability (FSPro) is a new spatial model that maps the probability of fire spread in the absence of suppression or the affects of segments of secured fire line (barriers) over a set period of time (generally 7/14/30 days). This prototype model has been developed by the Rocky Mountain Research Station's Missoula Fire Lab to support mid and long term assessments.