

A Guidance Document for Developing



Community Wildfire Protection Plans

In Accordance with Title I of The Healthy Forest Restoration Act of 2003



A collaborative approach to help protect life, property and natural resources through community-based planning

Overview

Wildfires are nothing new to the State of Texas. They are a part of our natural history and have shaped many of our native Texas ecosystems. What is new is the unprecedented growth and development that is occurring in locations across the state that were once rural. It is in this area where development meets native vegetation that the greatest risk to public safety and property from wildfire exists.



The **Urban Wildland Interface (UWI)** is most commonly described as a zone where human developments and improvements meet and intermix with wildland fuels. The intermingling of homes and wildland fuels is a volatile mix and under the right conditions can have catastrophic results.

The good news is many of the risks associated with living in wildland areas can be mitigated. The solutions to these problems should originate from the communities at risk, not just state and federal agencies. Texas is unique in that ninety-seven percent of land is privately owned, and most Texans would not have it any other way. Along with ownership comes the shared responsibility of all members of the community to take steps to reduce the risks associated with wildfires. One of the best strategies for reducing that risk is the development of a **Community Wildfire Protection Plan (CWPP)**.



This Guide and associated CWPP template are intended to give communities a framework for developing a Community Wildfire Protection Plan that complies with the **Healthy Forest Restoration Act (HFRA)**. This template is just one example of the many approaches that communities can take when developing a CWPP. There are several guides and templates listed in an appendix of this document.

The most important factor to take into consideration is that the CWPP is developed in a collaborative context.

What is a Community Wildfire Protection Plan?

- A CWPP is a written document, mutually agreed upon by local, state and federal representatives and stakeholders that identifies how a community will reduce its risks from wildland fire.
- Community Wildfire Protection Plans are authorized and defined in Title I of the Healthy Forest Restoration Act (HFRA). It was passed by Congress on November 21, 2003 and signed into law on December 3, 2003.
- The HFRA established unprecedented incentives for communities to take the lead role in community wildfire protection planning.

Why have a CWPP?

- The HFRA gives communities the opportunity to define their respective Urban Wildland Interface boundaries. Fifty percent of federal funds for fuels reduction must be spent in these areas.
- A CWPP gives communities an opportunity to influence the treatments used to reduce wildland fuels and restore ecosystem health.
- Communities that develop a CWPP are given priority when funding opportunities for fuels reduction on private and public lands are available.
- A CWPP determines strategies for reducing the risk wildfires pose to communities, critical watersheds, and natural resources.

When should a CWPP be developed?

If the answer is yes to any of the following questions, then the county and/or community should consider developing a CWPP.

- Is the county/community in proximity to wildland fuels?
- Is the county/community listed as an (at-risk) community in the Federal Register or State Risk Assessment?
- Is the county/community in or adjacent to federal lands?

What are the minimum requirements for a CWPP?

- **Prioritized Fuels Reduction** - Identify and prioritize wildland areas for hazardous fuels reduction treatments, as well as recommending methods for achieving hazardous fuels reductions on both private and public lands.
- **Treatment of Structural ignitability** – The CWPP must recommend measures for reducing structural ignitability throughout the at-risk community.
- **Collaboration** - The most important aspect of developing a CWPP is that the process used in achieving the first two objectives is a collaborative effort.

Who needs to be part of the planning process?

- Community wildfire protection planning should be spearheaded by local interests with support from state and federal agencies and non-governmental stakeholders.
- The HFRA requires that the local government, local fire authority, and a state forestry representative mutually agree to the contents and actions recommended in the CWPP.
- Federal land managers should be included in the planning process whenever planning areas are adjacent to federal lands. Their technical expertise can be extremely valuable to the CWPP development process.

Where do the guidelines for developing a CWPP come from?

- Healthy Forest Restoration Act of 2003 (P.L. 108-148)
- *Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities* (Communities Committee, Society of American Foresters, National Association of Counties, National Association of State Foresters 2004) (*Foresters' Handbook*)
- *The Healthy Forests Initiative and Healthy Forests Restoration Act Interim Field Guide* (USDA Forest Service and Bureau of Land Management 2004) (*Field Guide*)
- Healthy Forests Initiative, 2002

How to use the CWPP Template

The template that accompanies this guidance document is intended to give you a process in which you can develop a CWPP that meets all of the requirements of Title I of the Healthy Forest Restoration act of 2003. It is organized into sections that break down the development of a CWPP step by step. The main categories are discussed individually and instructions are provided in the template portion of the guide. There is no requirement to fill out all the boxes of the template. Use the parts of the template that work for you. Keep in mind that the community wildfire protection planning and development process does not have to be overly complex. As long as it addresses the requirements outline in the following excerpt then your plan will be a success.

¹ *Excerpt from Healthy Forests Restoration Act – HR 1904.* The term ‘community wildfire protection plan means a plan for an at-risk community that

1. Is developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council and agreed to by the applicable local government, local fire department, and State Agency responsible for forest management, in consultation with interested parties and the Federal land management agencies managing land in the vicinity of the at-risk community.
2. Identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on Federal and non-Federal land that will protect one or more at-risk communities and essential infrastructure.
3. Recommends measures to reduce structural ignitability throughout the at-risk community.

Section Overview

Section 1.0- Introduction

- Outlines who the core decision making team will be for the plan and addresses the overall objective the plan will accomplish.

Section 2.0- Community Profile

- Provides a physical description of the community and its current wildfire response capabilities.

Section 3.0- Community Risk Assessment

- This section includes various components to consider when determining the risk wildfire poses to a community's assets. This portion of the plan helps establish an objective wildfire hazard rating for the communities in the planning area. A link to the community risk assessment rating form is included in appendix of this guide.

Section 4.0- Community Prescription/Mitigation Plan

- The community prescription and mitigation portion of this plan includes the specific goals of the plan, strategies for achieving those goals, and individuals that can assist in attaining project objectives.

Section 5.0- Implementation Time Table/Monitoring

- This portion of the template assists communities with tracking and monitoring progress and accomplishments.

Section 6.0 - Declaration of Agreement and Concurrence

- This signature sheet indicates that the members of the planning team agree with the plans contents and are prepared to move forward with implementing the plan.

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1.0 Introduction

Give a brief overview of what the community would like to accomplish in the process of developing and implementing a Community Wildfire Protection Plan.

1.1 Collaboration

It is a good idea to indicate in the beginning of the document that the intent of the planning team is to be open and collaborative in its effort to improve the safety of the community and its resources. Below is an example of an opening statement that shows that collaboration is a driving force behind the plans development.

This Community Wildfire Protection Plan is a collaborative effort between the following entities. The representatives listed below comprise the core decision-making team responsible for this report and mutually agree on the plan's contents.

Community Representative(s):

This would most likely be someone from local government, Emergency Management Coordinator, elected official or concerned citizen

Name	
Address	
Telephone Number(s)	
Other Contact Information	

Name	
Address	
Telephone Number(s)	
Other Contact Information	

Local Fire Department Representatives:
(The Fire Chief, member of FD, or the Fire Marshal)

Name	
Address	
Telephone Number(s)	
Other Contact Information	

Name	
Address	
Telephone Number(s)	
Other Contact Information	

Name	
Address	
Telephone Number(s)	
Other Contact Information	

Texas Forest Service UWI Representatives:

Name	
Address	
Telephone Number(s)	
Other Contact Information	

Name	
Address	
Telephone Number(s)	
Other Contact Information	

Federal Agency Representative:
(USFS Fire Management Officer, District Ranger or designee, USFWS, NPS, BIA, DOE, DOD)

Name	
Address	
Telephone Number(s)	
Other Contact Information	

Name	
Address	
Telephone Number(s)	
Other Contact Information	

1.2 Statement of Intent

This is the overall intent of the plan.

Example:

The purpose of this plan is to position fire protection agencies, county/community leaders, and natural resource professionals to be better prepared to protect the community's residents and natural resources from the negative impacts of wildfire.

1.3 Historical Fire Occurrence

This section can be emphasized with maps of historical fire occurrence, fire managers can provide you with this info.

Example:

The county has experienced several large wildfires over the last decade. These fires have threatened or damaged homes and valuable natural resources.

1.4 Existing Situation/Current Risks

Discuss how current conditions like drought, mortality to trees and vegetation due to insect infestation or overcrowding has resulted in an increased risk to the community from wildfire.

Example:

Many individual homes and subdivisions have been built in areas that are prone to experiencing wildfires. Some developments lack fire hydrants or water sources for fire service to utilize. In addition, the county is currently experiencing a long term drought that has increased the probability of extreme fire behavior.

1.5 Goals and Objectives

This section covers specific goals that you plan to accomplish.

Example:

Improve fire suppression and prevention capabilities
Determine appropriate hazardous fuels reduction projects
Restore ecosystem health
Promote measures to reduce structural ignition potential
Encourage economic development in the community through utilization

1.6 Planning Process

It is important to the success of the plan that the processes for developing the plan are considered beforehand.

For an example of a checklist see the CWPP Summary and checklist located in the appendices

2.0 Community Profile

This section can be a combination of a written description supported by maps which highlight areas that need attention in community wildfire planning and mitigation. A community is defined in the HFRA as a group of homes that share basic infrastructure.

2.1 Community Location

County	<i>Plans can be completed at the watershed, county or community level.</i>
Latitude/Longitude	<i>This section is for individual communities; plans at county level can list the communities at risk within the county.</i>
Plan Area and Unit Boundaries	<i>This section is very important. It allows you to delineate where the UWI exists in your community. If you skip this step you will be assigned a default boundary.</i>
Frontage and/or Perimeter Road(s)	<i>This section gives you an opportunity to reference your location if you are not an incorporated community. Example: The community is located in Lonestar county at the intersection of hwy 220 and FM 1398 .</i>
Additional Landmarks	

2.2 Community Size

This information can be obtained through your county tax assessors.

Acreage	<i>Smaller communities can use acreage to determine size of communities.</i>					
Square Miles	<i>Counties would most likely use square miles as a reference to size.</i>					
Number of Lots	TOTAL		Developed		Undeveloped	

2.3 Structures

Depending on the size planning area, an estimated number will suffice.

Type	Number or Percentage
Homes	<i>Estimated number of site built homes.</i>
Mobile Homes	<i>Estimated number of manufactured homes.</i>
Outbuildings	<i>This field would be storage building, shops, barns and structures of that nature.</i>
Commercial Buildings	<i>Estimated Number and potential types of commercial buildings.</i>
Other Structures	

2.4 Population

Total Population: _____
 Full Time Residents: _____ %
 Part Time Residents: _____ %

2.5 Community Legal Structure

In this section list the government bodies within the planning area and a point of contact i.e. county, cities, towns, and homeowners associations.

Organization	Contact, Title	Phone Numbers	Email Address

2.6 Utilities

Describe and discuss the various utilities in the area. I.e. Are the power lines above ground or below ground? Are there any drilling rigs, gas pipelines or storage facilities in the area? Size and condition of water mains? Location and type of hydrants?

2.7 Emergency Response Capabilities

List the local, state, and federal fire, resources, their respective response times and what their capabilities are.

<i>Local</i>	<i>Department Name Address</i>	<i>Contact Name Title Email</i>		<i>Phone Numbers</i>
Resources			Response Time	
<i>Engines Type / ID / Capacity</i>	<i>Dozers & Tractor Plows Type / ID /</i>	<i>Misc. (Tankers/Tenders, Etc.) / Capacity</i>		<i>Aviation Type / ID / Capacity</i>

<i>State</i>	<i>Department Name Address</i>	<i>Contact Name Title Email</i>		<i>Phone Numbers</i>
Resources			Response Time	
<i>Engines Type / ID / Capacity</i>	<i>Dozers & Tractor Plows Type / ID /</i>	<i>Misc. (Tankers/Tenders, Etc.) / Capacity</i>		<i>Aviation Type / ID / Capacity</i>

<i>Federal</i>	<i>Department Name Address</i>	<i>Contact Name Title Email</i>	<i>Phone Numbers</i>
<i>Resources</i>		<i>Response Time</i>	
<i>Engines Type / ID / Capacity</i>	<i>Dozers & Tractor Plows Type / ID /</i>	<i>Misc. (Tankers/Tenders, Etc.) / Capacity</i>	<i>Aviation Type / ID / Capacity</i>

2.8 Schools

Discuss local schools, their proximity to wildland fuels, and potential mitigation needs. Determine if sheltering potential exists and how these facilities will respond to a wildfire. It is often the case that the safest place to be during a wildfire event is inside a structure so evacuation may not be the safest alternative.

2.9 Emergency Medical Facilities

Discussions of local medical facilities, proximity to wildland fuels, potential mitigation needs and activities. Discuss any sheltering potential and how these facilities could be incorporated for educational outreach, etc.

2.10 Regulative Issues

Discuss local restrictions that need consideration when addressing fuels reduction projects and measures to reduce structural ignitability.

3.0 Community Risk Assessment

It is very important to establish what the risk level is for communities within the planning area. This allows you to focus your efforts on the areas most at risk from wildfire and prioritize your mitigation activities.

3.1 Access

Discuss the ability of fire service to respond to the community and the ability of residents to leave the community if evacuation is necessary. The County or city Emergency Management Coordinator will have an evacuation plan on file. Evaluate the load capacity of bridges, the width of community gates if present, and the turnaround needs of emergency response vehicles. Pay special attention to areas with only one way to exit the community. Roads need to be wide enough for fire personnel to respond and residents to evacuate.

3.2 Topography

Topography increases the intensity of fire behavior and reduces a fire department's ability to respond in some cases. You may want to focus special attention in areas with steep topography, especially if they border or are adjacent to escape routes.

3.3 Fuels

In this section you would evaluate the fire regime and condition class of vegetation in your planning area. Fire regime is classified by the departure from historical fire occurrence. Examine how often the area burned historically, what types of fuels are present now and how a fire would behave under current conditions.

3.4 Construction

What exterior construction materials are predominately used in the community? Are they flammable or fire resistant? What percent of homes are vulnerable to ignition from firebrands or direct flame contact?

3.5 Water Sources

Identify existing water sources, and potential water sources. This can be accomplished through the use of GIS based maps or aerial photography. Texas Forest Service has completed profiles for East Texas counties that identify the locations of dry hydrants and drafting sources. Local fire department will also be able to provide this information.

3.6 Expected Fire Behavior

Given the existing fuel, evaluate fire behavior in the planning area under both normal and extreme fire condition. Compare how a fire would behave after fuels modifications.

3.7 Community Hazard Rating

Low / Medium / High/Extreme

Based on the assessment of risk, assign an overall hazard rating for the community. Local fire services and the Texas Forest Service will be able to assist you in determining the community risk rating. A risk assessment form will be included in the appendices of this document.

3.8 Assets at Risk

This section includes community assets like schools, hospitals, economic centers, recreation areas, watersheds, etc. which can all be threatened by a wildfire. Compare your fuels reduction recommendations with habitat needs. They may be compatible or need consideration. With plants and animals, specify if they are listed on the Threatened & Endangered Species register and what their status is. Consider rating these assets with a priority of high, medium, or low.

3.8.1 Natural Resources

Your local Texas Forest Service official, or local natural resource management agency representative, i.e. USDA Agriculture Extension Agent, USFWS representative, TPWD representative, etc. can assist you with this section. When threatened and or endangered species are present within a fuels treatment area, consult with USFWS.

PLANT Name (Common/Scientific)	T & E Status	Priority
Discussion:		

ANIMAL Name (Common/Scientific)	T & E Status	Priority
Discussion:		

Watershed/Wetland Considerations	Priority
Discussion:	

3.8.2 Commercial & Industrial Resources

List and discuss any industrial sites that are essential to the community or that could pose a risk if threatened or damaged by wildfire.

Resource	Priority
Example	
Oil refineries	
Chemical plants	
Discussion:	

3.8.3 Community Values & Cultural Assets

List and discuss any community values and cultural assets i.e., historical sites, local parks, etc. that need consideration when implementing mitigation or suppression activities.

Resource	Priority
Example	
Historic buildings	
Historically significant or pre-Columbian sites	
Discussion:	

3.8.4 Estimated Values at Risk

Provide an approximate value for residential and commercial properties in the planning area.

Resource	Estimated value
Commercial	\$
Residential	\$
Natural	\$
Discussion:	

4.0 Community Prescription/Mitigation Plan

In this portion of the plan a community has the opportunity to determine what mitigation activities are appropriate for that community. This is an excellent point to conduct public meetings that provide an opportunity for feedback.

4.1 Hazardous Fuels Reduction Projects

List specific priorities for hazardous fuels reduction and forest restoration. It would be beneficial to determine the types of fuels reduction treatments that are acceptable to the community before this stage of planning. Public input is very important at this point in the CWPP process.

Example:

Implement hazardous fuels reduction to remove ladder fuel and small diameter trees on 280 acres of USFS lands adjacent to the community of Easter Cove.

4.2 Treatment of Structural Ignitability

This section must be addressed in order for a CWPP to comply with the HFRA. This can be achieved through advocating defensible space, retrofitting existing structures with nonflammable materials, and ensuring future developments are fire resistant.

4.3 Public Outreach and Education

Texas Forest Service and USFWS developed a program to provide local libraries with educational materials on wildfire prevention and mitigation. The USFS also has resources available for wildfire prevention and mitigation.

4.4 Emergency Facilities/Equipment Enhancement

Discuss any improvements (past, current, future) to local wildfire and emergency response capabilities. Texas Forest Service Regional Fire Coordinators can assist with improving the response capacity among local fire departments. More information on the various assistance programs can be found at <http://www.tamu.edu/ticc/coordinators.htm>

4.5 Emergency Response Plan/Evacuation Plan/Wildfire Response Plan

- *Discuss any plans developed for emergency response, wildfire response and evacuations. Local Emergency Management Coordinators should have records of any plans developed for that area.*
- *Check to see if the local fire department has a Wildfire Pre-Attack plan in place. If not, work to develop one.*
- *Look closely at communities with difficult access (1-way in/out, steep terrain, rough/narrow roads, etc.) and consider developing or improving evacuation plans for these communities.*

4.6 Evaluation of Restrictive Covenants and Ordinances

Determine if community/neighborhood covenants or ordinances allow for adequate defensible space around homes and within common areas.

4.7 Enhancement of Utilities and Infrastructure

Work with local community planners and utility companies to address any concerns with infrastructure.

4.8 Evaluate, Update and Maintain Planning Commitments

It is important to have a system for monitoring plan development. Use the check list provided in this guide, or develops one that suits your community's unique needs.

4.9 Development and Review of Memorandums of Understanding

In this section, determine what cooperative agreements exist between local, state and federal agencies with fire protection responsibilities. Encourage the development and use of MOUs to build additional cooperative networks and relationships, if needed.

4.10 Biomass/Utilization

Look for opportunities to enhance local economies through the use of natural resources produced or harvested by mitigation and restoration activities.

5.2 Tracking of Progress/Fire Planning Checklist

Section	Category	Completed (√)	Date
1.	Introduction		
1.1	Collaborative/Planning Committee Members		
1.2	Statement of Intent		
1.3	Background		
1.4	Existing Situation/Current Risks		
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2.6	Utilities		
2.7	Emergency Response Capabilities		
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3.2	Topography		
3.3	Fuels		
3.4	Construction		
3.5	Water Sources		
3.6	Expected Fire Behavior		
3.7	Community Hazard Rating		
3.8	Assets at Risk		
4.0 Community Prescription			
4.1	Hazardous Fuels Reduction Projects		
4.2	Treatment of Structural Ignitability		
4.3	Public Outreach and Education		
4.4	Emergency Facilities/Equipment Enhancement		
4.5	Emergency Response Plan/Evacuation Plan/ Wildfire Response Plan		

4.6	Evaluation of Restrictive Covenants and Ordinances		
4.7	Enhancement of Utilities and Infrastructure		
4.8	Evaluate, Update and Maintain Planning Commitments		
4.9	Develop/Review/Revise Memorandums of Understanding		
4.10	Biomass/Utilization		
5.0	Implementation Tables		
5.1	Media Release		
5.2	Tracking of Progress/Fire Planning Checklist		
6.0	Declaration of Agreement and Concurrence		
7.0	Appendices		

6.0 Declaration of Agreement and Concurrence

The following partners in the development of this Community Wildfire Protection Plan have reviewed and mutually agree on its contents:

Signature Date

Name, Title, Agency/Organization

Signature Date

Name, Title, Agency/Organization

Signature Date

Name, Title, Agency/Organization

Signature Date

Name, Title, Agency/Organization

Signature Date

Name, Title, Agency/Organization

Signature Date

Name, Title, Agency/Organization

Signature Date

7.0 Appendices

This section provides an example of a typical CWPP appendix. Use or modify this section based on your plans specific contents.

- A. Maps**
 - Area Fuels Map**
 - Risk Assessment**
 - Fire History Maps/Historical Starts/Large Fire History**
 - Project Map**

- B. Contact Lists**
 - Formal Associations**
 - Media**
 - Utilities**
 - Schools**
 - Emergency Medical Facilities**
 - Funding Opportunities**

- C. References & Acknowledgements**
 - CWPP Summary and Checklist**
 - Community Fire Planning & Funding Resources**
 - Examples of Existing Plans**
 - Acronyms**
 - Glossary**

Appendix Contact Lists

Formal Associations

List the contact information for churches, civic groups, volunteer service organizations, etc.

Name	
Contact Person	
Telephone Number	
Other Contact Information	

Name	
Contact Person	
Telephone Number	
Other Contact Information	

Name	
Contact Person	
Telephone Number	
Other Contact Information	

Name	
Contact Person	
Telephone Number	
Other Contact Information	

Name	
Contact Person	
Telephone Number	
Other Contact Information	

Name	
Contact Person	
Telephone Number	
Other Contact Information	

Media Sources

List the contact information for local media and other outlets for public awareness.

Television

Name	Call Letters	Contact (Name/Title)	Phone/Fax Number	Email Address	Website

Radio

Name	Call Letters	Contact (Name/Title)	Phone/Fax Number	Email Address	Website

Newspaper

Name	City	Contact (Name/Title)	Phone/Fax Number	Email Address	Website

Other

Name	Type	Contact (Name/Title)	Phone/Fax Number	Email Address	Website

Utilities

List local utility companies incase utilities are threatened and need to be notified or shutoff.

ELECTRIC

Company Name	City	Contact (Name/Title)	Phone/Fax Number	Email Address	Website

GAS

Company Name	City	Contact (Name/Title)	Phone/Fax Number	Email Address	Website

WATER

Company Name	City	Contact (Name/Title)	Phone/Fax Number	Email Address	Website

TELEPHONE

Company Name	City	Contact (Name/Title)	Phone/Fax Number	Email Address	Website

Schools

List all schools within the planning area, a member of the school board or the school's superintendent can provide you with this information.

Name		Shelter Use?	Y or N
Principal		Shelter In Place?	Y or N
Contact Name			
Address			
Phone Number			
Email Address			
Website			

Name		Shelter Use?	Y or N
Principal		Shelter In Place?	Y or N
Contact Name			
Address			
Phone Number			
Email Address			
Website			

Name		Shelter Use?	Y or N
Principal		Shelter In Place?	Y or N
Contact Name			
Address			
Phone Number			
Email Address			
Website			

Name		Shelter Use?	Y or N
Principal		Shelter In Place?	Y or N
Contact Name			
Address			
Phone Number			
Email Address			
Website			

Emergency Medical Facilities

List local medical and mass care facilities in the area

Name		Burn Unit?	Y or N
Distance		Shelter Use?	Y or N
Contact Name		Shelter In Place?	Y or N
Phone Number			
Address			
Email Address			
Website			
Additional Info			

Name		Burn Unit?	Y or N
Distance		Shelter Use?	Y or N
Contact Name		Shelter In Place?	Y or N
Phone Number			
Address			
Email Address			
Website			
Additional Info			

Name		Burn Unit?	Y or N
Distance		Shelter Use?	Y or N
Contact Name		Shelter In Place?	Y or N
Phone Number			
Address			
Email Address			
Website			
Additional Info			

Texas Forest Service Urban Wildland Interface Contacts

Texas Interagency Coordination Center: <http://www.tamu.edu/ticc>
UWI Personnel Contact Information: http://www.tamu.edu/ticc/UWI_contacts.pdf
UWI General E-mail: texasuwi@tfs.tamu.edu
Risk Assessment Survey: http://www.tamu.edu/ticc/risk_assessment_survey.pdf

For more information, contact:

**Texas Forest Service
Urban Wildland Interface Team
P.O. Box 1991
Bastrop, TX 78602
Phone: 512/321-2467
Fax: 512/321-4819
Email: texasuwi@tfs.tamu.edu
Website: <http://txforestservation.tamu.edu/>**

Or

**Texas Forest Service
Justice Jones UWI Coordinator/ Project Leader
1328 FM 1488
Conroe, TX 77384
Phone: 936-273-2261
Fax 936/273-2282
jjones@tfs.tamu.edu**

CWPP Summary and Checklist

✓ **Step One: Convene Decision Makers**

- Form a core operating group with representation from the appropriate local governments, local fire authorities, and the state agency responsible for forest management.

✓ **Step Two: Involve and Engage Interested Parties**

- Contact and encourage active involvement in plan development from a broad range of interested organizations and stakeholders. (NOTE: This list provides a starting point and is by no means exclusive.)
 - * City Council members
 - * County Commissioners
 - * Resource Advisory Committees
 - * Texas Department of Transportation
 - * Local and/or state emergency management agencies
 - * Water districts – to identify key water infrastructure
 - * Utilities
 - * Recreation organizations
 - * Environmental organizations
 - * Forest products interests
 - * Local Chambers of Commerce
 - * Watershed councils
- Identify and engage local representatives of any federal land management agencies (i.e. USFS, USFWS, NPS, National Guard, etc.).
- Contact and involve other state and private land management agencies or organizations as appropriate (i.e. The Nature Conservancy, Texas Parks & Wildlife Department, prescribed fire co-ops, etc.).

✓ **Step Three: Establish a Community Base Map**

- Work with partners to establish a baseline map of the community that defines the community's UWI and displays inhabited areas at risk, and areas that contain critical human infrastructure.

✓ **Step Four: Develop a Community Risk Assessment and Identify Problems to Be Addressed**

- Work with partners to identify problems to be addressed:
 - * Fuel Hazards
 - * Risk of Wildfire Occurrence
 - * Homes, Businesses, and Essential Infrastructure at Risk
 - * Other Community Values at Risk
 - * Local Preparedness and Firefighting Capability
 - *
- This “community risk assessment” can be simple or complex depending on the resources available to the community and partners.

✓ **Step Five: Establish Community Priorities and Recommendations**

- Using the base map and community risk assessment to facilitate a collaborative community discussion, identify local priorities for:
 - Fuel treatment
 - Reducing structural ignitability, and
 - Improving fire response capability

✓ **Step Six: Develop an Action Plan and Assessment Strategy**

- Consider developing a detailed implementation strategy to accompany the CWPP, as well as a monitoring plan that will ensure its long-term success.

✓ **Step Seven: Complete the Community Wildfire Protection Plan**

- When all the core members mutually agree on the plan, finalize the CWPP with a date stamp and signatures of the key representatives from the various cooperators.
- Communicate the results to the community and partners.
- Collect information to update the plan for revision the following year.

This checklist was adapted from the publication “Preparing a Community Wildfire Protection Plan: A handbook for Wildland-Urban Interface Communities” that can be downloaded from www.stateforesters.org/pubs/cwpphandbook.pdf . The checklist was modified by the Texas Forest Service Urban Wildland Interface Team for use in Texas.

Community Fire Planning & Funding Resources

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Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation Program, Federal Register Vol. 67, No. 38, (Tuesday, February 26, 2002), http://www.access.gpo.gov/su_docs/fedreg/a020226c.html

Healthy Forests Restoration Act of 2003, Community Wildfire Protection Plans, <http://agriculture.house.gov/h.r.1904confrpt.pdf>

National Fire Plan, A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy, (August 2001) <http://www.fireplan.gov/reports/7-19-en.pdf>

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Utah Community Fire Planning for the Wildland Urban Interface, Utah Division of Forestry, Fire and State Lands, (2001) www.nr.utah.gov/SLF/fmcommunityfirepln.htm
Firewise, www.firewise.org

Living with fire- "A Homeowners Guide" – www.or.blm.gov/nwfire/doc/livingwithfire.pdf

Fire Safe Council- www.firesafe.org

Firewise Funding Source- www.firewise.org/usa/funding.htm

FEMA- "At Home in the Woods-Lessons Learned in the Wildland Urban Interface."- http://www.fema.gov/regions/viii/athome_woods.shtm

Examples of Existing Plans and Guides

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- Kentucky Firewise and Kentucky Division of Forestry, An Action Plan for Wildfire Mitigation <http://www.forestry.ky.gov/>
- Utah Division of Forestry, Fire and State Lands, Community Fire Planning for the Wildland-Urban Interface Guidance Document 2002
- Applegate Fire Plan, Applegate Partnership, (2002) <http://www.grayback.com/applegate-valley/fireplan/index.asp>
- California Fire Plan Template, California Community Fire Plan Workgroup, (July 2003), <http://www.cafirealliance.org/downloads/CommunityFirePlanTemplate.pdf>
- Colorado Springs, CO Plan, City of Colorado Springs, Colorado Springs Utilities, (2001), <http://csfd.springsgov.com/wildfiremitigation.pdf>
- Rogue River Regional Wildfire Hazard Mitigation/Response Plan, Rogue Valley Council of Governments, (September 2002), <http://www.rvcoq.org/>
- Shoshone County Wildland Urban Interface Fire Mitigation Plan, Northwest Management, Inc., (October 2002)
- Trinity County Fire Management Plan, Trinity County Fire Safe Council, (February 2003), <http://users.snowcrest.net/tcrccd/>
- Colorado State Fire Plan, <http://www.dola.state.co.us/oem/PublicInformation/wildfire.htm>
- Jefferson County, Colorado Fire Plan, http://www.co.jefferson.co.us/ext/dpt/admin_svcs/emergmgmt/index.htm
- Josephine County Integrated Fire Plan, (ongoing, 2003-2004) <http://www.co.josephine.or.us/wildfire/index.htm>
- Lower Mattole Fire Plan, Mattole Restoration Council, (September 2002) http://www.mattole.org/html/publications_publication_2.html
- Southwest Community Wildfire Protection Plan Guide <http://www.swsstrategy.org> (2004)

Acronyms and Abbreviations

BMP	Best Management Practices
CR	County Road
CWPP	Community Wildfire Protection Plan
DEM	Department of Emergency Management
DOI	Department of the Interior
DOT	Department of Transportation
DPS	Department of Public Safety
DPW	Department of Public Works
EAS	Emergency Alert System
ESA	Endangered Species Act
EOC	Emergency Operations Center
DBH	diameter at breast height
EIS	Environmental Impact Statement (NEPA)
FD	Fire Department
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GPS	Global Positioning System
HFRA	Healthy Forests Restoration Act of 2003
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
ISO	Insurance Service Office
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MAA	Mutual Aid Agreement
NEPA	National Environmental Policy Act
NFP	National Fire Plan
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NWCG	National Wildfire Coordinating Group PIO Public Information Officer
PIO	Public Information Officer
RCW	Red Cockaded Woodpecker
RFA	Rural Fire Assistance
SFFMA	State Firefighters and Fire Marshals Association
SHPO	State Historic Preservation Office
SMZ	Streamside Management Zone
TCEQ	Texas Commission on Environmental Quality
TFS	Texas Forest Service
TICC	Texas Interagency Coordination Center
TNC	The Nature Conservancy
TPWD	Texas Parks & Wildlife Department
TXDOT	Texas Department of Transportation
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Survey
UWI	Urban Wildland Interface
VFD	Volunteer Fire Department
WUI	Wildland Urban Interface (alternative to UWI)

Glossary

A

Aerial Fuels: All live and dead vegetation in the forest canopy or above the surface fuels, including tree branches, twigs and cones, snags, moss, and high brush.

Air Tanker: A fixed-wing aircraft equipped to drop fire retardants or suppressants.

Agency: Any federal, state, county or city organization participating with jurisdictional responsibilities.

Aspect: Direction toward which a slope faces.

B

Blow-up: A sudden increase in fire intensity or rate of spread strong enough to prevent direct control or to upset control plans. Blow-ups are often accompanied by violent convection and may have other characteristics of a fire storm.

Brush: A collective term that refers to stands of vegetation dominated by shrubby, woody plants, or low growing trees, usually of a type undesirable for livestock or timber management.

Brush Fire: A fire burning in vegetation that is predominantly shrubs, brush and scrub growth.

Buffer Zones: An area of reduced vegetation that separates wildland fuels from vulnerable residential or business developments. This barrier is similar to a greenbelt in that it is usually used for another purpose such as agriculture, recreation areas, parks, or golf courses.

Burning Ban: A declared ban on open air burning within a specified area, usually due to sustained high fire danger.

Burning Conditions: The state of the combined factors of the environment that affect fire behavior in a specified fuel type.

Burning Index: An estimate of the potential difficulty of fire containment as it relates to the flame length at the most rapidly spreading portion of a fire's perimeter.

Burning Period: That part of each 24-hour period when fires spread most rapidly, typically from 10:00 a.m. to sundown.

C

Chipping: Reducing wood related material by mechanical means into small pieces to be used as mulch or fuel. Chipping and mulching are often used interchangeably.

Chain: A unit of linear measurement equal to 66 feet.

Closure: Legal restriction, but not necessarily elimination of specified activities such as smoking, camping or entry that might cause fires in a given area.

Command Staff: The command staff consists of the information officer, safety officer and liaison officer. They report directly to the incident commander and may have assistants.

Complex: Two or more individual incidents located in the same general area which are assigned to a single incident commander or unified command.

Condition Class: The classification system used by the Forest Service to determine the extent of departure from the natural fire regime.

Condition Class I: A forest system within its natural fire range and at low risk for catastrophic fire.

Condition Class II: A forest that has moderately departed from its historic fire occurrence and is at moderate risk of experiencing losses to a wildfire.

Condition Class III: A forest that has departed from its historic fire regime and the risk of losing key habitat is high.

Cooperating Agency: An agency supplying assistance other than direct suppression, rescue, support, or service functions to the incident control effort; e.g., Red Cross, law enforcement agency, Telephone Company, etc.

Creeping Fire: Fire burning with a low flame and spreading slowly.

Crown Fire (Crowning): The movement of fire through the crowns of trees or shrubs more or less independently of the surface fire.

Curing: Drying and browning of herbaceous vegetation or slash.

D

Dead Fuels: Fuels with no living tissue in which moisture content is governed almost entirely by atmospheric moisture (relative humidity and precipitation), dry-bulb temperature, and solar radiation.

Debris Burning: A fire spreading from any fire originally set for the purpose of clearing land or for rubbish, garbage, range, stubble, or meadow burning.

Defensible Space: An area either natural or manmade where material capable of causing a fire to spread has been treated, cleared, reduced, or changed to act as a barrier between an advancing wildland fire and the loss to life, property, or resources. In practice, “defensible space” is defined as an area a minimum of 30 feet around a structure that is cleared of flammable brush or vegetation.

Detection: The act or system of discovering and locating fires.

Dozer: Any tracked vehicle with a front-mounted blade used for exposing mineral soil.

Dozer Line: Fire line constructed by the front blade of a dozer.

Drop Zone: Target area for air tankers, helitankers and cargo dropping.

Drought Index: A number representing net effect of evaporation, transpiration, and precipitation in producing cumulative moisture depletion in deep duff or upper soil.

Dry Lightning Storm: Thunderstorm in which negligible precipitation reaches the ground. Also called a dry storm.

Duff: The layer of decomposing organic materials lying below the litter layer of freshly fallen twigs, needles, and leaves immediately above the mineral soil.

E

Energy Release Component (ERC): The computed total heat released per unit area (British Thermal Units per square foot) within the fire front at the head of a moving fire.

Engine: Any ground vehicle providing specified levels of pumping, water and hose capacity.

Engine Crew: Firefighters assigned to an engine. The Fireline Handbook defines the minimum crew makeup by engine type.

Entrapment: A situation where personnel are unexpectedly caught in a fire behavior-related, life threatening position where planned escape routes or safety zones are absent, inadequate or compromised. An entrapment may or may not include deployment of a fire shelter for its intended purpose. These situations may or may not result in injury. They include “near misses”.

Environmental Assessment (EA): EAs were authorized by the National Environmental Policy Act (NEPA) of 1969. They are concise, analytical documents prepared with public participation that determine if an Environmental Impact Statement (EIS) is needed for a particular project or action. If an EA determines an EIS is not needed, the EA becomes the document allowing agency compliance with NEPA requirements.

Environmental Impact Statement (EIS): EISs were authorized by the National Environmental Policy Act (NEPA) of 1969. Prepared with public participation, they assist decision makers by providing information, analysis and an array of action alternatives, allowing managers to see the probable effects of decisions on the environment. Generally, EISs are written for large-scale actions or geographical areas.

Escape Route: A preplanned and understood route firefighters take to move to a safety zone or other low-risk area, such as an already burned area, previously constructed safety area, a meadow that won't burn, natural rocky area that is large enough to take refuge without being burned. When escape routes deviate from a defined physical path, they should be clearly marked (flagged).

Escaped Fire: A fire which has exceeded or is expected to exceed initial attack capabilities or prescription.

Extended Attack Incident: A wildland fire that has not been contained or controlled by initial attack forces and for which more firefighting resources are arriving, en route, or being ordered by the initial attack incident commander.

Extreme Fire Behavior: “Extreme” implies a level of fire behavior characteristics that ordinarily precludes methods of direct control action. One or more of the following is usually involved: high rate of spread, prolific crowning and/or spotting, presence of fire whirls, strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment and behave erratically, sometimes dangerously.

F

Fingers of a Fire: The long narrow extensions of a fire projecting from the main body.

Fire Behavior: The manner in which a fire reacts to the influences of fuel, weather and topography.

Fire Behavior Forecast: Prediction of probable fire behavior usually prepared by a Fire Behavior Officer, in support of fire suppression or prescribed burning operations.

Fire Break: A natural or constructed barrier used to stop or check fires that may occur, or to provide a control line from which to work.

Fire Cache: A supply of fire tools and equipment assembled in planned quantities or standard units at a strategic point for exclusive use in fire suppression.

Fire Crew: An organized group of firefighters under the leadership of a crew leader or other designated official.

Fire Front: The part of a fire within which continuous flaming combustion is taking place. Unless otherwise specified the fire front is assumed to be the leading edge of the fire perimeter. In ground fires, the fire front may be mainly smoldering combustion.

Fire Intensity: A general term relating to the heat energy released by a fire.

Fire Line: A linear fire barrier that is scraped or dug to mineral soil.

Fire Load: The number and size of fires historically experienced on a specified unit over a specified period (usually one day) at a specified index of fire danger.

Fire Management Plan (FMP): A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational plans such as preparedness plans, preplanned dispatch plans, prescribed fire plans, and prevention plans.

Fire Perimeter: The entire outer edge or boundary of a fire

Fire Regime: A natural fire regime is a classification of the role that fire would play across a landscape in the absence of human intervention.

Fire Season: 1) Period(s) of the year during which wildland fires are likely to occur, spread, and affects resource values sufficient to warrant organized fire management activities. 2) A legally enacted time during which burning activities are regulated by state or local authority.

Fire Storm: Violent convection caused by a large continuous area of intense fire. Often characterized by destructively violent surface winds in drafts, near and beyond the perimeter, and sometimes by tornado-like whirls.

Fire Triangle: Instructional aid in which the sides of a triangle are used to represent the three factors (oxygen, heat, fuel) necessary for combustion and flame production; removal of any of the three factors causes flame production to cease.

Fire Weather: Weather conditions that influence fire ignition, behavior and suppression.

Fire Weather Watch: A term used by fire weather forecasters to notify using agencies, usually 24 to 72 hours ahead of the event, that current and developing meteorological conditions may evolve into dangerous fire weather.

Fire Whirl: Spinning vortex column of ascending hot air and gases rising from a fire and carrying aloft smoke, debris and flame. Fire whirls range in size from less than one foot to more than 500 feet in diameter. Large fire whirls have the intensity of a small tornado.

Firefighting Resources: All people and major items of equipment that can or potentially could be assigned to fires.

Flame Height: The average maximum vertical extension of flames at the leading edge of the fire front. Occasional flashes that rise about the general level of flames are not considered. This distance is less than the flame length if flames are tilted due to wind or slope.

Flame Length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface); an indicator of fire intensity.

Flaming Front: The zone of a moving fire where the combustion is primarily flaming. Behind this flaming zone combustion is primarily glowing. Light fuels typically have a shallow flaming front, whereas heavy fuels have a deeper front. Also called fire front.

Flanks of a Fire: The parts of a fire's perimeter that are roughly parallel to the main direction of spread.

Flare-up: Any sudden acceleration of fire spread or intensification of a fire. Unlike a blow-up, a flare-up lasts a relatively short time and does not radically change control plans.

Future Desired Conditions: The future desired conditions on federal land is a return to Condition Class I. (see Condition Class 1)

Flash Fuels: Fuels such as grass, leaves, draped pine needles, fern, tree moss and some kinds of slash, that ignite readily and are consumed rapidly when dry. Also called fine fuels.

Forbs: Plants with a soft, rather than permanent woody stem, that is not a grass or grass-like plant.

Fuel: Combustible material. This includes, vegetation, such as grass, leaves, ground litter, plants shrubs and trees, which feed a fire.

Fuel Bed: An array of fuels usually constructed with specific loading, depth, and particle size to meet experimental requirements; also, commonly used to describe the fuel composition in natural settings.

Fuel Loading: The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area.

Fuel Model: Simulated fuel complex (or combination of vegetation types) for which all fuel descriptors required for the solution of a mathematical rate of spread model has been specified

Fuel Moisture (Fuel Moisture Content): The quantity of moisture in fuel expressed as a percentage of the weight when thoroughly dried at 212 degrees Fahrenheit

Fuel Reduction: Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

Fuel Type: An identifiable association of fuel elements of a distinctive plant species, form, size, arrangement, or other characteristics that will cause a predictable rate of fire spread or difficulty of control under specified weather conditions.

G

Geographic Area: A political boundary designated by the wildland fire protection agencies where these agencies work together in the coordination and effective utilization.

Ground Fuel: All combustible materials below the surface litter, including duff, tree or shrub roots, punch wood, peat, and sawdust that normally support a glowing combustion without flame.

H

Haines Index: An atmospheric index used to indicate the potential for wildfire growth by measuring the stability and dryness of the air over a fire.

Hand Line: A fireline built with hand tools.

Hazard Reduction: Any treatment of a hazard that reduces the threat of ignition and fire intensity or rate of spread.

Head of a Fire: The side of the fire having the fastest rate of spread.

Heavy Fuels: Fuels of large diameter such as snags, logs, large limb wood, that ignite and are consumed more slowly than flash fuels.

Helibase: The main location within the general incident area for parking, fueling, maintaining, and loading helicopters. The helibase is usually located at or near the incident base.

Helispot: A temporary landing spot for helicopters.

Hotspot: A particular active part of a fire.

Hot spotting: Reducing or stopping the spread of fire at points of particularly rapid rate of spread or special threat, generally the first step in prompt control, with emphasis on first priorities.

I

Incident: A human-caused or natural occurrence, such as wildland fire, that requires emergency service action to prevent or reduce the loss of life or damage to property or natural resources.

Incident Action Plan (IAP): Contains objectives reflecting the overall incident strategy and specific tactical actions and supporting information for the next operational period. The plan may be oral or written. When written, the plan may have a number of attachments, including but not limited to: incident objectives, organization assignment list, division assignment, incident radio communication plan, medical plan, traffic plan, safety plan, and incident map.

Incident Command Post (ICP): Location at which primary command functions are executed. The ICP may be co-located with the incident base or other incident facilities.

Incident Command System (ICS): The combination of facilities, equipment, personnel, procedure and communications operating within a common organizational structure, with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident.

Incident Commander: Individual responsible for the management of all incident operations at the incident site.

Initial Attack: The actions taken by the first resources to arrive at a wildfire to protect lives and property, and prevent further extension of the fire.

J

Job Hazard Analysis: This analysis of a project is completed by staff to identify hazards to employees and the public. It identifies hazards, corrective actions and the required safety equipment to ensure public and employee safety.

K

Keech Byram Drought Index (KBDI): Commonly-used drought index adapted for fire management applications, with a numerical range from 0 (no moisture deficiency) to 800 (maximum drought).

L

Ladder Fuels: Fuels which provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. They help initiate and assure the continuation of crowning.

Light (Fine) Fuels: Fast-drying fuels, generally with comparatively high surface area-to-volume ratios, which are less than ¼-inch in diameter and have a time lag of one hour or less. These fuels readily ignite and are rapidly consumed by fire when dry.

Lightning Activity Level (LAL): A number, on a scale of 1 to 6 that reflects frequency and character of cloud-to-ground lightning. The scale is exponential based on powers of 2 (i.e., LAL 3 indicates twice the lightning of LAL 2).

Litter: Top layer of the forest, scrubland, or grassland floor, directly above the fermentation layer, composed of loose debris of dead sticks, branches, twigs, and recently fallen leaves or needles, little altered in structure by decomposition.

Live Fuels: Living plants, such as trees, grasses, and shrubs, in which the seasonal moisture content cycle is controlled largely by internal physiological mechanisms rather than by external weather influences.

M

Mineral Soil: Soil layers below the predominantly organic horizons; soil with little combustible material.

Mobilization: The process and procedures used by all organizations, federal, state and local for activating, assembling, and transporting all resources that have been requested to respond to or support an incident.

Mop-up: To make a fire safe or reduce residual smoke after the fire has been controlled by extinguishing or removing burning material along or near the control line, felling snags, or moving logs so they won't roll downhill.

Multi-Agency Coordination (MAC): A generalized term which describes the functions and activities of representatives of involved agencies and/or jurisdictions who come together to make decisions regarding the prioritizing of incidents, and the sharing and use of critical resources. The MAC organization is not a part of the on-scene ICS and is not involved in developing incident strategy or tactics.

Mutual Aid Agreement: Written agreement between agencies and/or jurisdictions in which they agree to assist one another upon request, by furnishing personnel and equipment.

N

National Environmental Policy Act (NEPA): NEPA is the basic national law for protection of the environment, passed by Congress in 1969. It sets policy and procedures for environmental protection, and authorizes Environmental Impact Statements and Environmental Assessments to be used as analytical tools to help federal managers make decisions.

National Fire Danger Rating System (NFDRS): A uniform fire danger rating system that focuses on the environmental factors that control the moisture content of fuels.

National Wildfire Coordinating Group: A group formed under the direction of the Secretaries of Agriculture and the Interior and comprised of representatives of the U.S. Forest Service, Bureau of Land Management, Bureau of Indian Affairs, National Park Service, U.S. Fish and Wildlife Service and Association of State Foresters. The group's purpose is to facilitate coordination and effectiveness of wildland fire activities and provide a forum to discuss, recommend action, or resolve issues and problems of

substantive nature. NWCG is the certifying body for all courses in the National Fire Curriculum.

Normal Fire Season: 1) A season when weather, fire danger, and number and distribution of fires are about average. 2) Period of the year that normally comprises the fire season.

O

Operational Period: The period of time scheduled for execution of a given set of tactical actions as specified in the Incident Action Plan. Operational periods can be of various lengths, although usually not more than 24 hours.

Overhead: People assigned to supervisory positions, including incident commanders, command staff, general staff, directors, supervisors, and unit leaders.

P

Peak Fire Season: That period of the fire season during which fires are expected to ignite most readily, to burn with greater than average intensity, and to create damages at an unacceptable level.

Preparedness: Condition or degree of being ready to cope with a potential fire situation.

Prescribed Fire: Any fire ignited by management actions under certain, predetermined conditions to meet specific objectives related to hazardous fuels or habitat improvement. A written, approved prescribed fire plan must exist, and NEPA requirements must be met, prior to ignition.

Prescribed Fire Plan (Burn Plan): This document provides the prescribed fire burn boss information needed to implement an individual prescribed fire project.

Prescription: Measurable criteria that define conditions under which a prescribed fire may be ignited, guide selection of appropriate management responses, and indicate other required actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social, or legal considerations.

Prevention: Activities directed at reducing the incidence of fires, including public education, law enforcement, personal contact, and reduction of fuel hazards.

R

Radiant Burn: A burn received from a radiant heat source.

Rate of Spread: The relative activity of a fire in extending its horizontal dimensions. It is expressed as a rate of increase of the total perimeter of the fire, as rate of forward spread of the fire front, or as rate of increase in area, depending on the intended use of the information. Usually it is expressed in chains or acres per hour for a specific period in the fire's history.

Reburn: The burning of an area that has been previously burned but that contains flammable fuel that ignites when burning conditions are more favorable; an area that has reburned.

Red Flag Warning: Term used by fire weather forecasters to alert forecast users to an ongoing or imminent critical fire weather pattern.

Rehabilitation: The activities necessary to repair damage or disturbance caused by wildland fires or the fire suppression activity.

Relative Humidity (Rh): The ratio of the amount of moisture in the air, to the maximum amount of moisture that air would contain if it were saturated. The ratio of the actual vapor pressure to the saturated vapor pressure.

Remote Automatic Weather Station (RAWS): An apparatus that automatically acquires, processes, and stores local weather data for later transmission to the GOES Satellite, from which the data is re-transmitted to an earth-receiving station for use in the National Fire Danger Rating System.

Resources: 1) Personnel, equipment, services and supplies available, or potentially available, for assignment to incidents. 2) The natural resources of an area, such as timber, grass, watershed values, recreation values, and wildlife habitat.

Resource Management Plan (RMP): A document prepared by field office staff with public participation and approved by field office managers that provides general guidance and direction for land management activities at a field office. The RMP identifies the need for fire in a particular area and for a specific benefit.

Retardant: A substance or chemical agent which reduced the flammability of combustibles.

Run (of a fire): The rapid advance of the head of a fire with a marked change in fire line intensity and rate of spread from that noted before and after the advance.

S

Safety Zone: An area cleared of flammable materials used for escape in the event the line is outflanked or in case a spot fire causes fuels outside the control line to render the line unsafe. In firing operations, crews progress so as to maintain a safety zone close at hand allowing the fuels inside the control line to be consumed before going ahead. Safety zones may also be constructed as integral parts of fuel breaks; they are greatly enlarged areas which can be used with relative safety by firefighters and their equipment in the event of a blowup in the vicinity.

Severity Funding: Funds provided to increase wildland fire suppression response capability necessitated by abnormal weather patterns, extended drought, or other events causing abnormal increase in the fire potential and/or danger.

Single Resource: An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work supervisor that can be used on an incident.

Size-up: To evaluate a fire to determine a course of action for fire suppression.

Slash: Debris left after logging, pruning, thinning or brush cutting; includes logs, chips, bark, branches, stumps and broken understory trees or brush.

Slop-over: A fire edge that crosses a control line or natural barrier intended to contain the fire.

Smoke Management: Application of fire intensities and meteorological processes to minimize degradation of air quality during prescribed fires.

Snag: A standing dead tree or part of a dead tree from which at least the smaller branches have fallen.

Spark Arrester: A device installed in a chimney, flue, or exhaust pipe to stop the emission of sparks and burning fragments.

Spot Fire: A fire ignited outside the perimeter of the main fire by flying sparks or embers.

Spot Weather Forecast: A special forecast issued to fit the time, topography, and weather of each specific fire. These forecasts are issued upon request of the user agency and are more detailed, timely, and specific than zone forecasts.

Spotting: Behavior of a fire producing sparks or embers that are carried by the wind and start new fires beyond the zone of direct ignition by the main fire.

Staging Area: Locations set up at an incident where resources can be placed while awaiting a tactical assignment on a three-minute available basis. Staging areas are managed by the operations section.

Strategy: The science and art of command as applied to the overall planning and conduct of an incident.

Structure Fire: Fire originating in and burning any part or all of any building, shelter, or other structure.

Suppressant: An agent, such as water or foam, used to extinguish the flaming and glowing phases of combustion when direction applied to burning fuels.

Suppression: All the work of extinguishing or containing a fire, beginning with its discovery.

Surface Fuels: Loose surface litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, forbs, low and medium shrubs, tree seedlings, heavier branchwood, downed logs, and stumps interspersed with or partially replacing the litter.

T

Tactics: Deploying and directing resources on an incident to accomplish the objectives designated by strategy.

Temporary Flight Restrictions (TFR): A restriction requested by an agency and put into effect by the Federal Aviation Administration in the vicinity of an incident which restricts the operation of nonessential aircraft in the airspace around that incident.

Torching: The ignition and flare-up of a tree or small group of trees, usually from bottom to top.

Type: The capability of a firefighting resource in comparison to another type. Type 1 usually means a greater capability due to power, size, or capacity.

U

Uncontrolled Fire: Any fire which threatens to destroy life, property, or natural resources.

Under burn: A fire that consumes surface fuels but not trees or shrubs. (See Surface Fuels.)

V

Volunteer Fire Department (VFD): A fire department of which some or all members are unpaid.

W

Water Tender: A ground vehicle capable of transporting specified quantities of water.

Wildland Fire: Any nonstructural fire, other than prescribed fire, that occurs in the wildland.

Wildland Fire Implementation Plan (WFIP): A progressively developed assessment and operational management plan that documents the analysis and selection of strategies and describes the appropriate management response for a wildland fire being managed for resource benefits.

Wildland Fire Use: The management of naturally ignited wildland fires to accomplish specific pre-stated resource management objectives in predefined geographic areas outlined in Fire Management Plans.

Wildland Urban Interface: The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.