



## Wildfire Worksheet

For preliminary Benefit-Cost Analysis conducted by the State Mitigation Technical Team

Applies to the following mitigation activities: **WILDFIRE projects which include defensible space, hazardous fuels reduction, ignition resistant construction, and other activities related.** For assistance, contact the State of Florida Mitigation Technical Unit.

**IMPORTANT:** This worksheet is required as part of your application. The State of Florida Mitigation Technical Unit will conduct a Benefit-Cost Analysis (BCA) for your project and the following information is needed to evaluate cost-effectiveness. Once a preliminary BCA is completed, the reviewer will contact you to collect support documentation.

**NOTE:** A complete worksheet will expedite the Technical Review.

### Requirements

To complete a successful project application, a minimum amount of technical information is required for review. Data collected in this worksheet will provide reviewers with preliminary information necessary to evaluate project eligibility, feasibility, and cost-effectiveness. Carefully review and confirm that you are aware of the following information.

#### Wildfire Projects:

Eligible wildfire mitigation projects must demonstrate mitigation of the risk from wildfire to residential and non-residential buildings and structures, including public and commercial facilities. Projects must be in a Wildland-Urban Interface, must be adjacent to or intermingled with the built environment, and must provide protection to life and the built environment from future wildfires.

According to FEMA's current wildfire policy, there are three wildfire mitigation activities that are eligible for FEMA mitigation funding:

Defensible Space Activities: Activities that involve the creation of perimeters in and around both residential and non-residential structures through the removal or reduction of flammable vegetation.

\* Creating defensible space should either be in accordance with your local jurisdiction code(s) or default values from the International Code Council (ICC) or its International Wildland-Urban Interface Code.

Hazardous Fuels Reduction Activities: Hazardous Fuels Reduction is the action to remove vegetative fuels that if ignited pose significant threat to human life and property. Vegetation management reduces hazardous fuels, vegetation thinning, and the reduction of flammable materials to protect life and property beyond defensible space perimeters but proximate to at-risk structures.

\* Vegetation management within two miles of home/structure.

Ignition Resistant Construction Activities: Structural protection activities that involve the use of non-combustible materials on new and existing buildings. Non-combustible materials are materials that will not ignite and burn when subjected to fire.

\* Ignition-resistant construction is not an eligible activity on its own and must be combined with defensible space. This is because wildfires may burn hot enough that items inside buildings may spontaneously combust if allowed to burn right up to the structure.

Other: If the proposed mitigation type please make sure to provide a brief description. If need, additional documentation will be requested to justify the project.

All activities shall be implemented using current codes and best practices and shall be completed in strict compliance with Federal, State, and Local applicable Rules and Regulations.

*I confirm that I have reviewed the requirements listed above (signature):*

For additional resources, please refer to [FEMA Technical Review Job Aid](#) for Wildfire projects.



# MITIGATION

## Wildfire Worksheet

### Section I – Project General Information

Project Name:	Worksheet completed by: Name: Title:
Sub-Applicant:	
	Phone:
	Email:

### Section II – Project Cost Information

Mitigation Project Cost:	Annual Maintenance Cost:
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### Section III – Project Specific Information

Project Location: (Address)		
<b>Type of mitigation measures you are proposing for this project:</b> (Select all that apply)	<b>Percentage of the effectiveness of this mitigation measure (%)</b>	
<input type="checkbox"/> Defensible Space Activities	10 %	
<input type="checkbox"/> Hazardous Fuels Reduction Activities <sup>1</sup>	10 %	
<input type="checkbox"/> Ignition Resistant Construction Activities & Defensible Space <sup>2</sup>	20 %	
<input type="checkbox"/> Other (please provide a brief description):	_____ %	

<sup>1</sup> Vegetation management within two (2) miles of home/structure(s).

<sup>2</sup> Ignition-resistant construction is not an eligible activity on its own and must be combined with defensible space.

### Section IV – Benefits Information

Please attach a table listing the buildings that will be protected by the proposed project. Building information must include property address, building type and building replacement value (BRV). Based on the collected data, answer the following questions:

How many buildings will this project protect?	BRV summary of all buildings this project will protect:
Value of infrastructure vulnerable to fire within the project area:	Value of timber to be sold within the proposed area:
Fire suppression costs for one typical fire event within the proposed area:	Other costs associated with fire-related losses:
Number of residents within the proposed area:	Source used to calculate the number of residents:



### **Section V – Additional Information**

*Please use this page to expand on the information provided above or to include any additional information relevant to the proposed mitigation project.*



### WILDFIRE WORKSHEET INSTRUCTIONS

Refer to the instructions below to complete the Wildfire Worksheet using the best available data.

#### Section I – Project General Information

**Project Name:** Enter the name of the project title. The title should be short but descriptive (e.g., City of Orlando, Westridge Community Center, Wildfire).

**Sub-Applicant:** Enter your organization's legal name.

**Worksheet completed by:** Enter name, title, phone number, and email of the person completing this Worksheet. This person must have the knowledge and/or the resources to accurately answer all questions and provide supporting documentation, as needed. Information may come from multiple credible sources.

#### Section II – Project Cost Information

**Mitigation Project Cost:** Enter the total cost of the project. A lump sum on this worksheet is acceptable for preliminary BCA, but a detailed breakdown attached to your application is required.

**Annual Maintenance Cost:** Enter the cost associated with maintaining the effectiveness of the components installed as part of the mitigation project. Project-specific maintenance costs can be obtained from the project engineer, if necessary. Additional resources for this information may include a forester assisting in project design and implementation or local firefighters who oversee fire response for the project area.

#### Section III – Project Specific Information

**Project Location:** Provide a full description of the specific geographical location(s) of the project.

**Type of mitigation measures you are proposing for this project** (Select all that apply):

Defensible Space Activities: Activities that involve the creation of perimeters in and around both residential and non-residential structures through the removal or reduction of flammable vegetation. Specifically, it includes projects such as:

- Minimizing the volume of vegetation.
- Replacing flammable vegetation with less flammable species.
- Clearing all combustibles in the safety zone surrounding the structure.

Hazardous Fuels Reduction Activities: Hazardous fuels reduction is the action to remove vegetative fuels that if ignited pose significant threat to human life and property. Vegetation management reduces hazardous fuels, vegetation thinning,

and the reduction of flammable materials to protect life and property beyond defensible space perimeters but proximate to at-risk structures. Activities may include:

- Vegetation management or the removal of vegetative fuels, that if ignited, pose significant threat to human life and property within two miles of home/structure.
- Vegetation clearing or thinning.
- Slash removal.
- Vertical clearance of tree branches.
- Chemical treatments such as herbicide applications.
- Grazing or biomass conversion.
- Mechanical treatments such as mulching, grinding, mowing, chopping, and removal of such material.
- Biomass removal, including clearing straw and dead or dry vegetation, thinning, and removal of brush, pine straw, or blown-down timber.

Ignition Resistant Construction Activities and Defensible Space: Structural protection activities that involve the use of non-combustible materials on new and existing buildings. Non-combustible materials are materials that will not ignite and burn when subjected to fire. Examples include brick, stone, stucco, rock, metal siding or concrete block, solid exterior doors, window screening that is constructed of aluminum, galvanized steel, stainless steel, copper, etc. Ignition-resistant construction projects include:

- Installation of an ignition-resistant roof comprised of non-combustible technologies used in the roof covering, roof underlayment, chimney, gutters, sky windows, insulation, vents, soffits, and eaves.
- Installation of an ignition-resistant wall assembly comprised of noncombustible technologies used in the siding or stucco with ceramic windows, window glazing, doors, window frames, and insulation.
- Installation of external sprinklers or an external hydration system with a dedicated power source and a dedicated cistern when no water source is available.

The protection of structures through the use of ignition-resistant construction techniques or non-combustible building materials must meet or exceed local codes and should be in conformance with the following:

- International Code Council (ICC) Publication: International Wildland-Urban Interface Code.
- National Fire Protection Association (NFPA) 1144: Standard for Reducing Structure Ignition Hazards from Wildland Fire.



# MITIGATION

## Wildfire Worksheet

- NFPA 1141: Stand for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas.
- NFPA 703: Standard for Fire-Retardant Treated Wood and Fire-Retardant Coatings for Building Materials.
- NFPA 914: Code for Fire Protection of Historic Structures.

\* Ignition-resistant construction is not an eligible activity on its own and must be combined with defensible space. This is because wildfires may burn hot enough that items inside buildings may spontaneously combust if allowed to burn right up to the structure.

Other: If "Other" was selected, describe type of mitigation measures you are proposing.

Percentage of effectiveness of this mitigation measure: Only enter the percentage of effectiveness if you selected "Other" as the type of mitigation measure. For all other project types, the default value will be applied. Project effectiveness refers to the extent to which the project will reduce wildfire damages, losses, and casualties. Large and intense wildfires are capable of producing their own micro-weather systems, including fire devils, lightning, and gust fronts that can blast glowing embers and firebrands ahead of the advancing fire. Because of this, it is not possible to assume that a wildfire mitigation project will eliminate wildfire damages and losses, but only reduce them.

### Section IV – Benefits Information

**To complete this section, please attach a table listing the buildings that will be protected by the proposed project. Building information must include property address, building type and building replacement value (BRV).**

**How many buildings will this project protect:** Enter the total number of structures that are within the proposed wildfire mitigation project area only. As for any mitigation project, function and occupancy levels are important factors for evaluating wildfire mitigation projects. Documentation may be obtained via municipal maps, by contacting your local tax assessor or city planner, identifying structures on aerial photographs, using a Geographic Information System (GIS), or other techniques.

**Building Replacement Value (BRV) of all buildings this project will protect:** Enter the total BRV cost of all buildings protected by the project. The BRV is the cost per square foot to replace the building with a functionally equivalent building, based on the current cost of labor and materials. The BRV is not the same as the current market value of the building. Acceptable documentation for the BRV includes a letter from a construction or contracting firm or local building inspector, or a photocopy of pages from a standard cost reference manual. If tax records are used, the source must be an assessor.

**Value of the infrastructure vulnerable to fire within the project area:** Enter the value of vulnerable infrastructure that typically refers to assets that support an economy or an area, for example roads, water supply systems, wastewater systems, stormwater systems, and power supply systems. Users are required to document the value of the infrastructure and how the value was determined.

**Value of timber to be sold within the proposed area:** Enter the value of potential lumber in the project area that could be destroyed by wildfire. Sources of data that can be used to determine this value include the U.S. Department of Agriculture (USDA) Forest Service or other qualified agency; a forester or qualified timber company representative; or the owner of the property. Detailed documentation must be provided to support the timber value entered and should be supported by a signed estimate.

**Fire suppression costs for one typical fire event within the proposed area:** Enter the fire suppression estimated costs for responding to and fighting a wildfire. Sources of these estimates include the local, county, State, or Federal fire-fighting agency that fights wildland fires; U.S. Department of Agriculture (USDA) Forest Service; or owner of the property. Detailed documentation must be provided to support the fire suppression costs entered and should be supported by a signed estimate.

**Other costs associated with fire-related losses:** Enter the value of other costs associated with fire-related losses, which may include costs related to vehicle losses, cleanup costs for the structure or property, or displacement costs. Detailed documentation must be provided to support the value entered in this field and how the project will cause these future costs to be avoided.

**Number of residents within the proposed area:** The number of residents entered here should reflect the number of residents who reside in all the buildings protected by this project. If the exact number of residents cannot be determined, the number of residents within the project area can be estimated using the Census value for the average number of persons per household. Supporting documentation must be provided.

**Source:** Specify the source or methodology used to estimate the number of residents.