

# WILDFIRE HAZARD & RISK ASSESSMENT

The process for assessing your subdivision or neighborhood can be divided into five distinct steps. Each is necessary to efficiently and accurately perform the assessment. The steps should be completed in order; however, Step 5 can be completed separately from the rest of the assessment. In completing your assessment, you will need to use the **WILDLAND FIRE RISK AND HAZARD SEVERITY ASSESSMENT FORM** found on this CD-ROM.

## Step 1 – Identify Areas to be evaluated

There are two types of subdivisions that are at risk from a wildfire – boundary interface subdivisions and intermix interface subdivisions. Fully developed subdivisions whose lots form a distinct boundary with wildlands are called *boundary interfaces*. Subdivisions where undeveloped lots (wildlands) are interspersed with developed lots are referred to as *intermix interfaces*.

If the number of undeveloped lots within an intermix interface subdivision are few, the danger of a wildfire burning into the subdivision is greatly reduced. This usually occurs once the subdivision is more than 75% built out (three out of four lots are developed). Subdivisions where this occurs need not be assessed unless they also have a boundary interface component **or** the vegetation found on the undeveloped lots is rated extreme hazard.

Wildlands less than 5 acres in size and completely surrounded by development are referred to as “occluded interface” areas and need not be assessed unless it is felt that the undeveloped parcels pose a high risk to neighboring structures because of high fuel loads or high flammability characteristics of the structures.



**An intermix interface home**

Once the wildland/urban interface area to be assessed has been determined, give it a name (like “Oak Woods Unit South”) and delineate the area on a map. If the subdivision is very large, divide it into neighborhoods, especially if the characteristics of the

subdivision are not uniform throughout (for example: an area of the subdivision with five- to seven-acre lots may be assessed as a unit).

## **Step 2 – Identify the Risk**

Determine if the immediate area (within five miles) has had a higher than average occurrence of wildfires. This can mean either a history of wildfires burning into the subdivision or a higher than average number of wildfires starting in the area. Your local Tennessee Division of Forestry office can help you determine how this compares with the average for the county. If the immediate area does indeed have a higher than average occurrence of wildfires, you will need to assign risk points on the Wildfire Hazard and Risk Assessment Scoresheet found on the CD-ROM.

## **Step 3 – Identify the Fuel Hazard Type**

Use the pictorial guide (Fuel Models Representative of Tennessee) to determine the vegetation types or fuel models within intermix areas and along the interface boundary. If there is a mixture of vegetation types in the area, you should select the vegetation type most likely to do structural damage. This will probably be the vegetation type that is closest to the structures. Be sure to look beyond the edge of the vegetation boundary. Plants tend to be bigger along the edge of open areas in response to increased sunlight. You will get a better picture of the average vegetation heights by looking past the edge into the interior of the undeveloped area.

Once the vegetation type has been determined, assign the characteristic (light, medium, heavy or slash) that accurately describes the fuel. Convert your selected vegetation type to points in Section B of the Wildfire Hazard and Risk Assessment scoresheet.

## **Step 4 – Complete the Wildfire Hazard & Risk Assessment Scoresheet** (Included on this CD-ROM)

Evaluate the following factors on the scoresheet:

- A. Means of Access
- B. Vegetation (Fuel Models – evaluated in Step 3)
- C. Topography
- D. Additional Rating Factors
- E. Roofing Assembly
- F. Building Construction
- G. Available Fire Protection
- H. Placement of Gas and Electric Utilities
- I. Totals for Home or Subdivision (Total of All Points)

## **Step 5 – Identify Critical Facilities to be protected**

Critical facilities are those facilities that will need special protection from wildfire. This may be because the facilities are necessary to maintain infrastructure function, are smoke sensitive or would be very hazardous if ignited by an encroaching wildfire. A power substation, for example, may need additional brush clearance to provide adequate defensible space. In the case of a nursing home, a wildfire evacuation plan may also be necessary in order to quickly and efficiently transport patients out of smoky conditions. *This process can be completed at any stage of the assessment.*

**Seek the help of local fire service professionals and community leaders in identifying critical facilities and developing a plan to eliminate hazards that threaten these facilities.**

The below-listed facilities will need special consideration for protection from wildfire in order to maintain infrastructure function:

- Power plants/substations
- Power transmission lines
- Water plants/well fields
- Water treatment plants/lift stations
- Fire and law enforcement stations
- Communication towers

The below-listed facilities will need special protection due to their flammability:

- Flammable liquid storage tanks
- Landfills/dumps/junk yards
- Sawmills and lumberyards
- Hazardous materials storage areas
- The below-listed facilities are smoke-sensitive:
- Schools/day care centers
- Nursing homes/assisted living facilities
- Medical facilities
- Airports
- Correctional facilities
- Roadways