

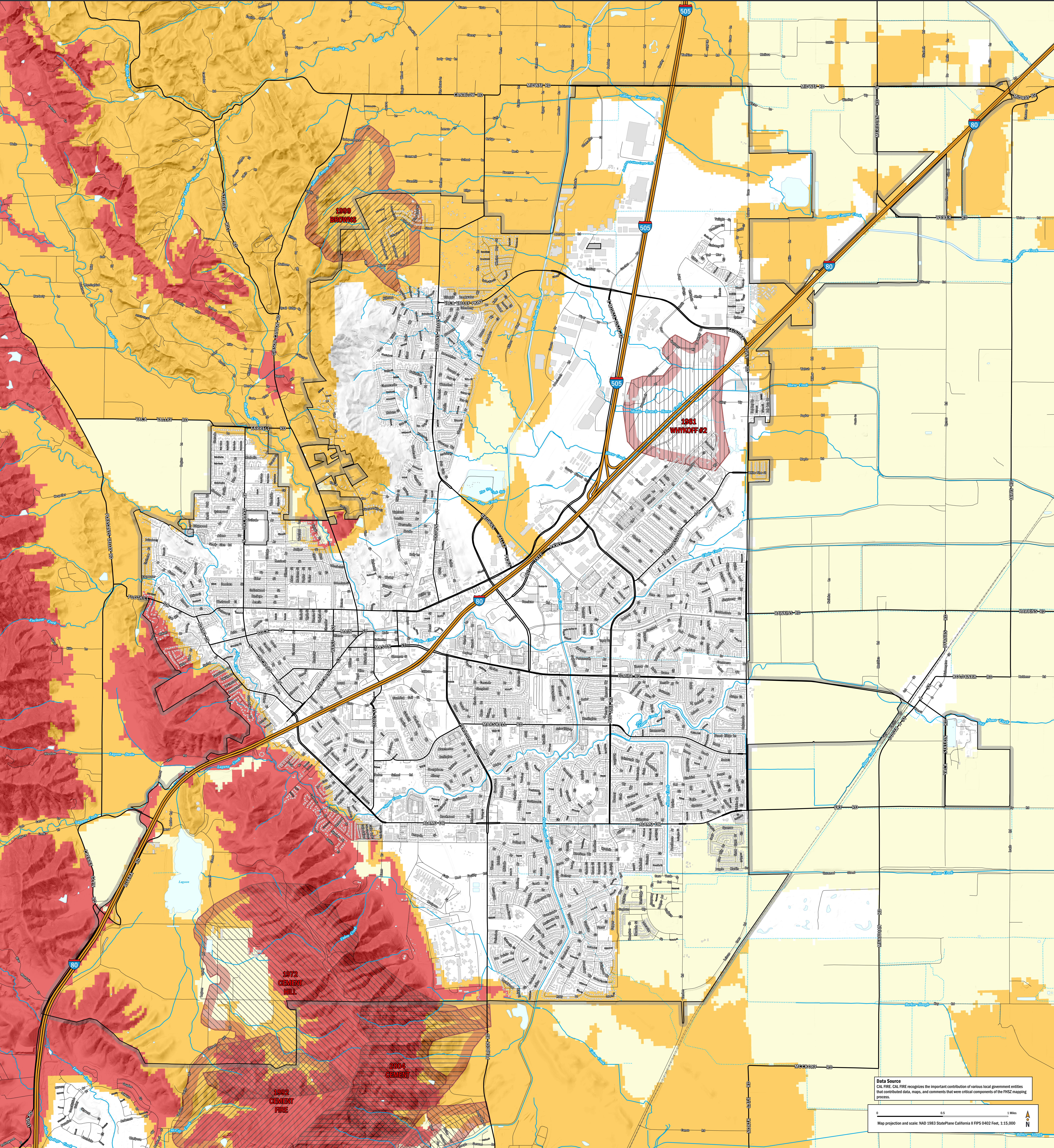
FIRE HAZARD



CITY OF VACAVILLE

SINGLE JURISDICTION LOCAL HAZARD MITIGATION PLAN

HAZARD MITIGATION PUBLIC OPEN HOUSE



EXPLANATION			

HISTORIC FIRE PERIMETERS			

FIRE HAZARD ZONES		



FRAP
The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) assesses the amount and extent of California's forests and rangelands, analyzes their conditions and identities alternative management and policy guidelines.

BACKGROUND

PRC 4201-4204 and Govt. Code 51175-89 direct the California Department of Forestry and Fire Protection (CDF) to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), then define the application of various mitigation strategies to reduce risk associated with wildland fires. State Responsibility Area (SRA) was originally mapped in 1985 and has not been updated since, except with respect to changes in SRA boundaries. Local Responsibility Areas (LRA) were originally mapped in 1996, and also has not been updated since, although many local governments have made similar designations under their own authority. Current FHSZ is available for 1985 SRA, 2007 SRA and LRA. CDF wishes to remap both SRA and LRA areas to provide updated map zones, based on new data, science, and technology that will create more accurate zone designations such that mitigation strategies are implemented in areas where hazards warrant these investments. The zones will provide specific designation for application of defensible space and building standards consistent with known mechanisms of fire risk to people, property, and natural resources.

PROJECT DESCRIPTION

The project will be driven by Geographic Information System (GIS) data in conjunction with modeling techniques designed to describe potential fire behavior and fire probability. Areas will be mapped in Moderate, High and Very High Categories. The project will run along two concurrent tracks: one designed to develop and refine the model itself regarding its scientific rigor, spatial accuracy, and data delivery mechanisms designed to facilitate use by a wide variety of clients. The other track will focus on the roll-out and implementation process whereby local CDF units and local fire agencies review/comment and adjust the zones to conform to local knowledge not captured in the draft model. Finally, the maps will follow established adoption processes required by state statute, and be made available by Jan 1,

2008, consistent with implementation of new Wildland-Urban Interface (WUI) building codes that have been adopted by the California Building Standards Commission.

MODEL DEVELOPMENT

The basic elements of the Fire Hazard Zone model will be built from existing data and hazard constructs developed by CDF's Fire and Resource Assessment Program (FRAP) used to develop Fire Threat and Communities at Risk listing in the Federal Register pursuant to the National Fire Plan (see http://frap.cdf.ca.gov/projects/wui/525_CA_wui_analysis.pdf for details). The model will work from these products as starting points, and refine characterization of the zones to directly attempt to characterize fire exposure mechanisms that cause ignitions to structures. These basic constructs follow classical quantitative risk assessment whereby probabilities of fire behaviors define the hazard component of risk analysis. CDF FRAP is partnering with researchers at UC Berkeley and the private sector to develop this model and it promises to use innovative techniques to meet the objectives and usage of the data.

Specific model components will focus on characterizing potential fire behavior arising for vegetation fuels that are by nature dynamic. Since many of the applications of the zones involve permanent engineering mitigations associated with structure construction, it is desirable that the nature of the zone reflect changes in fire behavior/exposure relative to the length of time the structure will be in place. While obviously significant land-use changes will need to be captured through periodic maintenance routines, basic vegetation dynamics and maximal hazard levels will be used to develop the model such that mitigations match potential exposure over the horizon of the mitigation design. The model will also incorporate a measure of fire probability predicated on frequency of fire weather, ignition patterns, expected rate of spread, and/or past fire history similar to techniques used to calculate fire rotation as used in the development of Fire Threat. A detailed description of components used in Fire Threat can be found here. Finally, the model will characterize flying ember (brand) production from vegetation fuels, and zoning hazard based on the area of influence that those brands are likely to land and cause potential ignitions. This functional mechanism of hazard is the principal driver of hazard in densely developed areas. A related concept already built-out areas is the relative density of vegetative fuels that can serve as receptive sites for new spot fires to initiate within the urban core, and then spread to adjacent structures. The project will explore techniques to model accurately both the brand production/reception element, as well as fire spread potential in urbanized areas.

HARDENING YOUR HOME

Flying embers destroy homes up to a mile from wildland areas. Prepare (harden) your home now before fire starts. Here are some things you can do to harden your home and make it more fire resistant:

ROOF

The roof is the most vulnerable part of your home. Homes with wood or shingle roofs are at high risk of being destroyed during a wildfire. Build your roof or re-roof with materials such as composition, metal or tile. Block any spaces between roof decking and covering to prevent embers from catching.

VENTS

Vents on homes create openings for flying embers. Cover all vent openings with 1/8-inch to 1/4-inch metal mesh. Do not use fiberglass or plastic mesh because they can melt and burn. Protect vents in eaves or cornices with baffles to block embers. (Mesh is not enough.)

EAVES AND SOFFITS

Eaves and soffits should be protected with ignition-resistant* or non-combustible materials.

WINDOWS

Heat from a wildfire can cause windows to break even before the home ignites. This allows burning embers to enter and start fires inside. Single-paned and large windows are particularly vulnerable. Install dual-paned windows with one pane of tempered glass to reduce the chance of breakage in a fire. Consider limiting the size and number of windows that face large areas of vegetation.

WALLS

Wood products, such as boards, panels or shingles, are common siding materials.

However, they are combustible and not good choices for fire-prone areas.

Build or remodel your walls with ignition resistant* building materials, such as stucco, fiber cement, wall siding, fire retardant, treated wood, or other approved materials. Be sure to extend materials from the foundation to the roof.

DECKS

Surfaces within 10 feet of the building should be built with ignition-resistant*, non-combustible, or other approved materials.

Ensure that all combustible items are removed from underneath your deck.

RAIN GUTTERS
Screen or enclose rain gutters to prevent accumulation of plant debris.

PATIO COVER

Use the same ignition-resistant materials for patio coverings as a roof.

CHIMNEY

Cover your chimney and stovepipe outlets with a non-combustible screen. Use metal screen material with openings no smaller than 3/8-inch and no larger than 1/2-inch to prevent embers from escaping and igniting a fire.

GARAGE

Have a fire extinguisher and tools such as a shovel, rake, bucket, and hoe available for fire emergencies. Install weather stripping around and under the garage door to prevent embers from blowing in. Store all combustible and flammable liquids away from ignition sources.

FENCES

Consider using ignition-resistant or non-combustible fence materials to protect your home during a wildfire.

DRIVEWAYS AND ACCESS ROADS

Driveways should be built and maintained in accordance with state and local codes to allow fire and emergency vehicles to reach your home. Consider maintaining access roads with a minimum of 10 feet of clearance on either side, allowing for two way traffic.

Ensure that all gates open inward and are wide enough to accommodate emergency equipment.

Trim trees and shrubs overhanging the road to allow emergency vehicles to pass.

ADDRESS

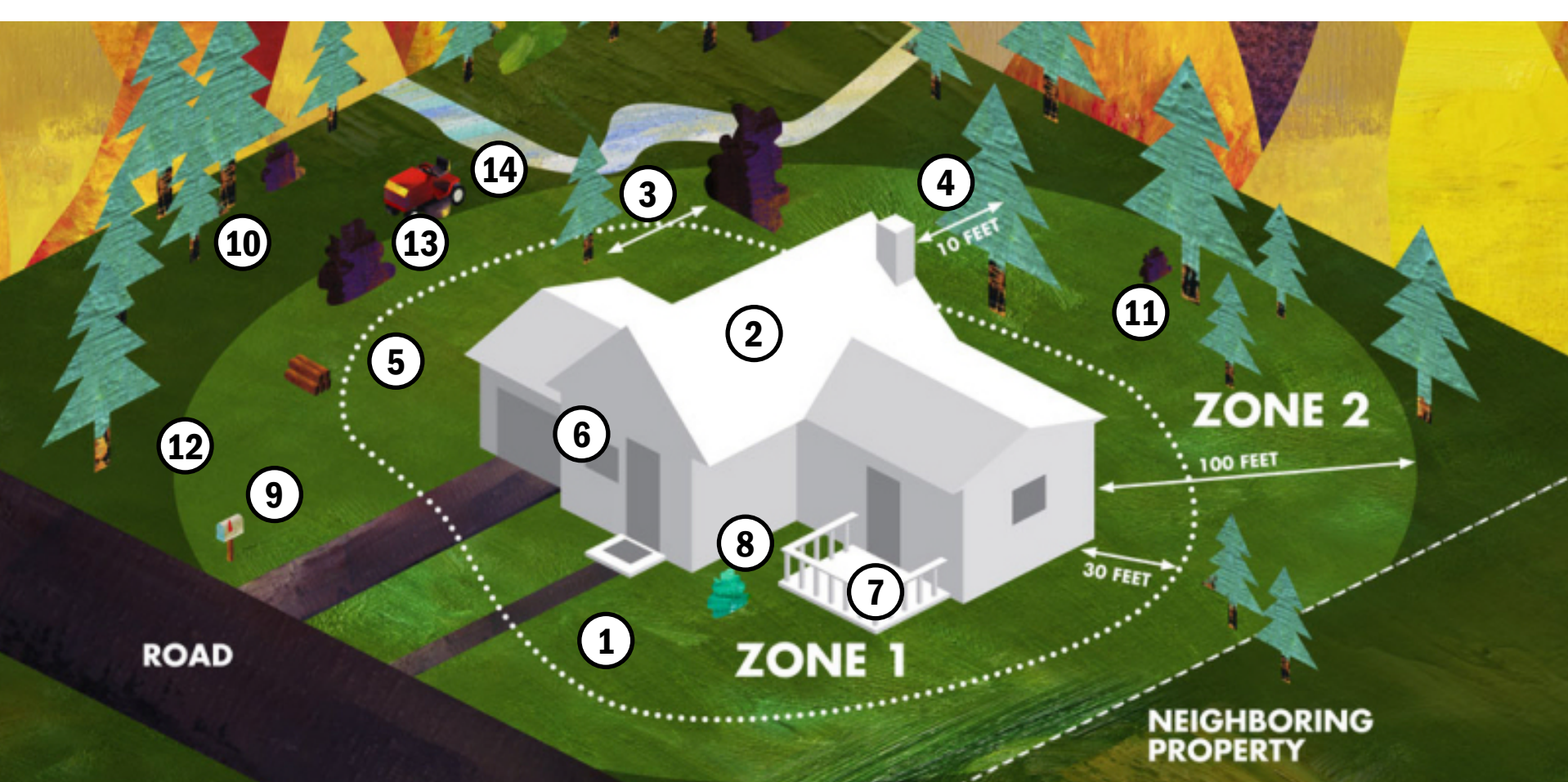
Make sure your address is clearly visible from the road.

WATER SUPPLY

Consider having multiple garden hoses that are long enough to reach all areas of your home and other structures on your property. If you have a pool or well, consider getting a pump.

*Ignition-resistant building materials are those that may be permitted to a depth of 4 inches if erosion control is an issue. Examples of ignition-resistant materials include "non-combustible materials" that don't burn, exterior grade fire-retardant-treated wood lumber, fire-retardant-treated wood shakes and shingles listed by the State Fire Marshal (SFM) and any material that has been tested in accordance with SFM Standard 12-7A-5.

WILDFIRE IS COMING. ARE YOU READY?



- 1 Remove all dead plants, grass and weeds.
- 2 Remove dead or dry leaves and pine needles from your yard, roof and rain gutters.
- 3 Trim trees regularly to keep branches a minimum of 10 feet from other trees.
- 4 Remove dead branches that hang over your roof. And keep branches 10 feet away from your chimney.
- 5 Relocate exposed woodpiles outside of Zone 1 unless they are completely covered in a fire resistant material.
- 6 Remove or prune flammable plants and shrubs near windows.
- 7 Remove vegetation and items that could catch fire from around and under decks.
- 8 Create a separation between trees, shrubs and items that could catch fire, such as patio furniture, swing sets, etc.
- 9 Cut or mow annual grass down to a maximum height of 4 inches.
- 10 Create horizontal spacing between shrubs and trees.
- 11 Create vertical spacing between grass, shrubs and trees.
- 12 Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of 4 inches if erosion control is an issue.
- 13 Mow before 10 a.m., but never when it's windy or excessively dry.
- 14 Protect water quality. Do not clear vegetation near waterways to bare soil. Vegetation removal can cause soil erosion-especially on steep slopes.