CITY OF
ASHLAND

PROTECTION FROM WILDFIRE: A GUIDE FOR THE MANAGEMENT OF WILDFIRE RISK FOR PROPERTIES WITHIN THE URBAN-WILDLAND FIRE ZONE OF ASHLAND

FIRE HISTORY OF THE ASHLAND AREA

Hudson's Bay Company fur trader Peter Skene Ogden, arriving in the Rogue Valley in 1827, noted the vegetative differences between north-aspect and south-aspect slopes in his journal. Later in 1828, American trappers led by Jedediah Smith, observed an elderly Native American woman setting fire to brush on the hillsides of present-day Ashland. The purpose of this practice was not clear to these early explorers, but later study has revealed that this practice most likely enhanced the collection of edible seeds and acorns, stimulated grass reproduction for forage for animals of prey, and were in some cases connected with certain religious practices among Native Americans. Later, many local settlers followed the Native American practice of using fire to remove brush to establish farming plots. Unfortunately, their efforts were less controlled and in some cases large conflagrations resulted.

Summer weather patterns within the Rogue Valley are typically dominated by Pacific High Pressure, which means that moisture-laden storm fronts are frequently pushed northward and enter the state north of the southwest Oregon area. Typically, fire seasons within the Rogue Valley are hot, dry and long in duration. In addition to those fires that have been human-caused, the Ashland area has experienced a natural fire return interval (on a landscape-wide basis) of eight to fifteen years, where fire starts are primarily due to lightning strikes. Organized fire protection efforts began in the Ashland area about 1902. The area has sustained numerous wildland fires since 1902 when recordkeeping began. A few that bear mentioning are as follows:

1910	Ashland Watershed Fire	Over 6000 acres burned
1959	Ashland Canyon Fire	4,500 acres burned
1973	Hillview Fire	350 acres burned

The majority of large fires that have burned into the Ashland Watershed have originated at lower elevations and burned southward in response to slope, with upvalley winds and upslope canyon winds. Today, following over 90 years of aggressive fire suppression within the Ashland area, the landscape has "missed" four to nine fire cycles, depending on the specific landscape of concern. This has resulted in dense overstocked forest stands, with a high percentage of shade

tolerant and fire intolerant species present across the landscape. Heavy dead and down fuel loads on the forest floor have been produced as a result of fire exclusion.

FIRE HAZARD AND RISK ASSESSMENT

Fire hazard is defined as vegetation that creates a threat for fire ignition, rate of spread, and resistance to prompt control. The factors which affect the degree of fire hazard are based the following characteristics of the vegetation or fuel load: type, volume, condition, physical arrangement and location.

Fire risk is defined as the potential of various ignition sources causing a fire that threatens life, property, and/or valuable resources such as vegetation and airshed.

Firefighters recognize three important components of the fire environment: fuel, weather and topography. Fuel is the material available, ie: grass, brush and timber, for a fire to consume. Weather is typically hot and dry, with low humidity during the months of summer fire season. Topography is the “lay of the land”, where steeper slopes produce more rapid fire spread characteristics. These three components determine how a fire is likely to behave. Of these variables, fuel is the only component that we can modify or change. Thus the basis for our wildfire prevention and mitigation strategy is the effective manipulation of the fuel load available for a fire to consume.

The City of Ashland has completed fire risk survey mapping of wildfire risk areas inside the city and also some forested parcels located outside, but adjacent to, the city limits. To obtain a copy of this report please contact Nancy Slocum at the Ashland Public Works Department at (541) 552-2420.

FUEL REDUCTION METHODS

Hand Removal - Hand removal of unwanted brush, dead or over-stocked trees and tall grass may be accomplished by residents who seek to reduce their wildfire risk. Care should be taken to avoid denuding the landscape entirely of vegetation that serves to maintain soil stability. This is especially a concern in areas of steep unstable terrain. In most cases, a general thinning of dense vegetation is sufficient to substantially reduce wildfire risk. Potential fuel treatment areas that are adjacent to the banks of a natural course of water are referred to as riparian areas. Tree and brush removal in riparian areas requires special study. This work may require a special permit from the Department of Fish & Wildlife, or may be prohibited entirely by state law, depending on the riparian area and nature of work to be performed. Residents should contact regulatory authorities prior to engaging in riparian work. In all cases, wildfire fuel reduction work should be guided by a competent authority on silvicultural treatments.

Mechanical / Heavy Equipment - On larger parcels it may be more economical to remove brush by mechanical methods. When considering the use of heavy machinery, residents should evaluate the potential impact of heavy machinery use on the landscape, and its potential consequences of erosion and slope destabilization. Operating from existing roads may be a better solution and reliance on equipment utilizing rubber tires, instead of metal tracks which can compact the soil.

Use of livestock - Within the city limits of Ashland, livestock may be utilized to remove certain types of wildfire fuel. The use of livestock , which are usually goats, but may also include sheep and cattle, are restricted to properties of one acre or more in size. Properties must be adequately fenced and the number of livestock utilized for this purpose is restricted to two animals.

Use of fire - City ordinance regulates the use of fire for wildfire fuel removal. A permit must be obtained from the fire department prior to burning inside the city limits of Ashland. In all cases, vegetation to be burned must be cut, piled and dry in accordance with fire department regulations. The fire department will conduct a site inspection of the materials to be burned prior to issuing a permit. The period during which burning may be authorized is March 1st until fire season is declared, which is typically in early June. Residents desiring to conduct burning activities should obtain a copy of the burning regulations from the fire department prior to creating burn piles.

Chipping - The use of power chippers is encouraged wherever feasible. Typically, chipping is of greatest advantage where wildfire fuels are accessible by existing roads. It is not recommended to create new roads for chipper access, or to transport chippers off of existing roads and across steep erosive slopes for use in the disposal of brush.

PRIMARY & SECONDARY FUEL BREAKS TO PROTECT STRUCTURES

Primary Fuel Break - A primary fuel break is a 30 foot wide wildfire prevention perimeter encircling your home, where vegetation that comprises wildfire fuel has been substantially thinned. In this area, vegetation types which consist of fire-resistive species have been selected for landscaping plant materials. Trees and shrubbery have also been thinned to avoid interlocking canopies that might otherwise propagate wildfire from one tree or shrub to the next. The accumulation of dead leaves, pine needles and tall dry grass have been removed to prevent wildfire from moving through these combustible materials to exterior walls of structures on the property.

Secondary Fuel Break - A secondary fuel break is a 100 foot wide area which circumferences the structures on the property and extends beyond the 30 foot

primary fuel break. In this area a general thinning of vegetation is completed, but often does not include the complete removal of native vegetation in favor of the planting of fire resistive vegetation. Dead, diseased and dying vegetation is removed and the branches on mature trees are removed to a height of five to six feet to prevent a wildfire on the ground's surface from gaining access to tree tops. These lower branches are often referred to as ladder fuels.

The amount of wildfire fuel reduction work required must be adjusted based on the slope and aspect of the property adjacent to structures to be protected. A general guideline is as follows:

Percent Slope	**Uphill**	**Sides**	**Downhill**
Level to 20%	100 feet	100 feet	100 feet
21-41%	150 feet	150 feet	200 feet
41-60%	200 feet	200 feet	400 feet

To determine the level of slope on your property, use a hand level or clinometer. If you do not have access to these tools you can determine slope using a 60" straight board, a carpenter's level, and a steel tape measure. Place the board level with one end lying upslope. Measure the distance from the downslope end of the board to the ground. Hold the tape measure perpendicular to the board . Divide the distance to the ground in inches by 60 and multiply by 100 to determine the percent of slope.

AREA-WIDE THINNING OF WILDFIRE FUELS

Area-Wide Thinning - In applications where no structures are present within 100 feet of untreated wildfire fuels, an area-wide thinning is recommended. Work should be planned after a careful evaluation of the site. This evaluation should include an assessment to determine if the following conditions are present: dead fuels, continuous horizontal layers of vegetation, and ladder fuels.

Dead fuels: Dead fuels include dead trees, shrubs and branches lying on the ground, cured grasses which exceed 6" in height , leaves and pine needles. Of particular concern are dead fuels that are less than one inch in diameter.

Continuous horizontal fuel layers: Horizontal continuity of vegetation refers to areas where plants provide an uninterrupted, uniform layer of fuels, as opposed to growing in patches or widely spaced individual plants. The more continuous the fuel layer, the more rapidly a fire will spread, the greater potential for fire to move upward into the tops of trees and the higher the intensity of the fire.

Ladder fuels: Fuels are frequently arranged naturally in varying heights, similar to the steps on a ladder. Under ladder fuel conditions, flames can move from

fuels burning on the ground surface upward into the tops of trees. Once this has occurred, fire can move very quickly through tree tops on the property to adjacent properties. This problem can be addressed by reducing the height of ground fuels or raising the height of the upper fuel layer. The removal of lower tree branches should generally not exceed one third of the tree height. Lower branches should be removed up to five to six feet in height when no understory vegetation is present. Lower branches on shrubs should be removed, providing at least twelve inches of separation from the ground.

FIRE-RESISTIVE PLANTS SUITABLE FOR SOUTHWEST OREGON CLIMATE

Ground Covers:

Wooly Yarrow	(Achiiea tomentosa) full sun, requires very little water
Dwarf Coyote Brush	(Baccharis pilularis) full sun, requires monthly watering
African Daisy – Cape Marigold	(Dimorphotheca) full sun, requires little water
Creeping Rosemary	(Rosmarinus officinalis) full sun, requires little water
Vinca, Periwinkle, Myrtle	(Apocynaceae) shade, moderate watering
Madagascar Periwinkle	(Catharanthus) full sun to part shade, requires little water
Sunrose	(Helianthemum) best in full sun, do not over water
Iceplant	(Mesembryanthemum) full sun, water during growth & bloom
Gazania	(Asteraceae compositae) full sun, water occasionally

Shrubs:

Rockrose	(Cistus) full sun, requires little water
Carmel Creeper	(Griseus horizontalis) full sun to part shade, water as needed
Italian Buckthorn	(Rhamnus alatemus) exposure needs vary, water as needed
Coffeeberry	(Rhamnus californica) exposure needs vary, water as needed
Cascara Sagrada	(Rhamnus purshiana) exposure needs vary, water as needed
Saltbush	(Atriplex) full sun, requires little water
Oleander	(Nerlum Oleander - dwarf) full sun, loves heat, little water

Trees:

Quaking Aspen
Cherry
Canyon Live Oak
Maple
Paper Birch
Poplar

It is important to note that a plant's natural fire-resistiveness can be seriously compromised if not maintained. Plants that are not properly irrigated or pruned, or that are planted in climate areas not generally recommended for the plant, will have

increased fire risk and will likely make the mature plant undesirable for landscaping in high fire hazard areas.

FIREWISE LANDSCAPING

Plant Materials For Defensible Space

Fundamental to making the residential landscape an effective defensible space is the proper selection of plant materials. In addition to addressing characteristics of providing shade, adding color, controlling erosion, fruit production, etc., and being adaptive to local growing conditions, plants used in high wildfire hazard areas should possess desirable fuel characteristics.

Unfortunately, there are NO fireproof plants. All plants will burn when exposed to the right fire conditions. There are, however, plants that are more difficult to ignite, burn slower, produce lower temperatures when burning, and produce shorter flame lengths than most other plants.

High Moisture Content

Plants with high moisture content are usually more difficult to ignite and they burn slower. Green, healthy , and actively growing herbaceous (grasses and forbs) have a much greater percent moisture content than woody plants (trees and shrubs). When cured the herbaceous plants possess a much lower percent moisture content than woody plants. Consequently, herbaceous plants, if kept green throughout fire season by irrigation, are usually more desirable than woody plants in the defensible space surrounding your home.

Low Growing Habit

Plants which are low-growing usually produce shorter flame lengths and have less fuel volume than tall plants. Select plants that grow to a height of less than 18 inches at maturity, or can be maintained at this height by pruning.

Low Fuel Volume

There is variability between plant species regarding the amount of fuel produced. Select plants which produce relatively small amounts of vegetation, especially plant parts that are less than one-half inch in diameter.

Desirable Chemical Content

Avoid selecting plants with resinous, oily, or waxy plant parts. These characteristics are often associated with plants which possess an undesirable chemical content that increases their flammability.

Maintain Your Landscape

The manner in which plants are maintained is as important as the species of plants selected. For example, plants which are considered to be low fire hazard can become high hazard plants without proper care (irrigation, removal of dead branches and leaves, etc.). Likewise, the risk of high hazard plants can be reduced through maintenance practices.

Pyrophytes

Plants which are high in resins and oils are extremely flammable, and should be avoided in defensible space landscaping. Examples of pyrophytes include pampas grass and junipers. Also avoid plants which are listed as noxious weeds.

HOME DESIGN AND MAINTENANCE

The manner in which a house is designed, the location on which it is built, and the type of materials utilized in the construction all have considerable influence on the defensibility from wildfire. Use the following guidelines to increase the wildfire protection for your home:

Roof: The roof is the most vulnerable feature of a structure to wildfire. Replacing wood shake or shingles with fire-resistive class “A” or “B” roof coverings are recommended to reduce the wildfire threat to roof structures.

Rain Gutters: Gutters must be cleared of leaves and pine needles.

Siding: Combustible siding reduces the survivability of the structure.

Vents: Cover all exterior vents with one-half inch or smaller wire mesh. This prevents burning embers during a wildfire event from entering attic areas.

Chimneys: Chimneys are required to have a screen of ¼ “ or smaller wire mesh.

Windows: Install dual-paned or tempered glass and have fire resistive draperies. Pre-cut plywood panels can be used to cover windows on any exposures of the home most likely to experience wildfire. Trim all vegetation away from windows.

Decks: The area below decks should be screened, or enclosed, or should not be used for combustible storage.

Trash: The property should be clear of accumulations of combustible trash.

Combustible Material: Firewood should be stored a minimum of 30 feet from structures, preferably uphill.

Smoke Detectors: Install smoke detectors in all sleeping & living areas in the home.

Property Address: Property addresses should be easily visible from the street or access point, and should be of a contrasting nature from surrounding background. Post address at all intersections along driveway. Reflective material for numbers can be easily seen at night and during heavy smoke.

Propane Tanks: Propane tanks should be kept free of flammable vegetation.

Tree Limbs: Tree limbs should be pruned at least ten feet from chimneys, powerlines, and rooftops.

Firefighting Tools: A shovel, a ladder tall enough to reach roof areas, garden hoses, water buckets, and a fire extinguisher should be readily accessible.

Hiring a Vegetation Management Service

Wildfire fuel reduction work is normally performed by Urban Foresters, Arborists, Tree and Pruning Services, and brush removal services.

The International Society of Arborculture has listed tips for selecting a tree service or arborist. These may be found through the Internet at **http://www2.champaign.isa-arbor.com**

Check in the phone directory, usually under Trees, Tree Service, Tree-Care Service. Although anyone can list themselves in the yellow pages, a listing at least indicates some degree of permanence.

Beware of "door knockers". Most reputable companies have all the work they can handle without going door-to-door.

Never be rushed into bargains such as "If you sign an agreement today, I can take 10% off the price." Never pay for work in advance. Ask for a certificate of insurance, including proof of liability for personal and property damage insurance. Make sure the policy is current.

Ask for local references from other customers that the company has served. Contact these references and assess the quality of work performed and the competence of the company that performed the work.

Determine if the arborist is a member of organizations such as the American Forestry Association, American Society of Consulting Arborists, International Society of Arboriculture, or the National Arborist Association.

Have more than one company provide estimates for the work. Assure that each maintains a license to conduct business in the local area.

Work Agreements

It is recommended that you prepare a written agreement which will govern the work to be completed. If you are using the company's form, read it carefully before you sign it. The agreement should establish the following:

- The dates that the work will begin and end.
- A description of the work to be completed and to what standard of performance.
- The clean-up to be done and when it is to be completed.
- The total cost of the project.

PRE-FIRE PLANNING

- Plan at least two evacuation routes from your neighborhood to a designated meeting place outside of your neighborhood.
- Meet with your neighbors and discuss their evacuation plans
- Plan to assist neighbors who will need help evacuating.
- Identify what you will take with you when you evacuate.
- Store photograph negatives at another location. Families who have lost their homes to wildfire most regret the loss of family photographs.
- Plastic waterlines used for irrigation should not be exposed on top of the soil.
- See that the amount of combustible storage is minimized and not stored against the house or under decks.
- Have emergency supplies on hand that can be quickly taken with you when you leave.
- Post your address in an easily visible location on the street access side of your home. If your home is located on a flag drive, also post your address at the entrance to your driveway.
- Video-tape all valuables and keep an inventory list. Keep a duplicate video and list off site at another location.

EMERGENCY PREPAREDNESS KIT

There are six basics that you should gather and place in your emergency preparedness kit: water, food, first aid kit, clothing and bedding, tools and personal hygiene items. These items should be stored in an easy to transport container.

Water

Store one gallon of water per person per day. Keep at least a three-day supply.

Food

Ready-to-eat canned meats, milk, juices, soup, vitamins, vegetables and fruits, food for infants, persons with special diets, high-energy foods, sugar, salt, pepper, jelly, trail mix, crackers, and granola bars should be kept in your emergency preparedness kit.

First Aid Kit

Assemble a first aid kit for your home and one for each car. A kit should include: non-prescription drugs, moistened towelettes, thermometer, tongue blades, triangular bandages, 2 inch sterile gauze pads, petroleum jelly, antiseptic, 2 inch roller bandages, 4 inch sterile gauze pads, adhesive tape, needle, 3 inch roller bandages, safety pins, sunscreen, insect repellent, burn ointment, Q-tips, band-aids, sterile water, tweezers and latex gloves.

Clothing and Bedding

Prepare for cold weather and power outages by packing sturdy shoes or work boots, blankets or sleeping bags, hat, gloves, sunglasses, rain gear and thermal underwear.

Tools and Supplies

The following items will assist you in any emergency situation, and should be included in your emergency preparedness kit: battery-operated radio, medicine droppers, plastic sheeting, aluminum foil, manual can opener, utility knife, needle & thread, pencil and paper, storage containers, pliers, area map, tube tent, matches in waterproof container, a whistle, flashlight, some cash and travelers checks, utility shut-off wrenches, soap or detergent, water purification tablets, fire extinguisher, compass, plastic garbage bags, disinfectant, personal hygiene items, mess kits, and toilet tissue.

Special Items

You should also include in your emergency preparedness kit, items such as baby formula, diapers, bottles, medications, denture needs, contact lenses, eyeglasses, entertainment, telephone numbers, important documents & family records.

WHEN A FIRE IS APPROACHING

Should your house be threatened by a wildfire, you may be advised to evacuate by a fire or law enforcement official. The purpose of the evacuation is to protect people from life-threatening situations. Homeowners to have the right to stay on their property as long as their activities do not hinder firefighting efforts. If you do decide to stay, the following suggestions will assist in protecting lives and property:

- ✓ Evacuate, if possible, all family members and pets. Contact a friend or relative and relay your plans. Make sure family members are aware of the pre-arranged meeting place.

- ✓ Wear cotton long pants, long-sleeved shirts and boots. Carry gloves, handkerchief, water and goggles.

- ✓ Place vehicles in the garage, pointing out, and roll up the windows. Be sure to park where you will not interfere with any emergency vehicle if you need to leave in a hurry. Place valuable papers and momentos in the car. Close garage door, leaving it unlocked. Disconnect electric door opener. Place patio furniture inside.

- ✓ Fill bathtubs, sinks, trash cans, buckets, and other containers with water. Soak rags and towels for beating out embers and small fires.

- ✓ Close all interior and exterior doors, windows and vents.

- ✓ Close the fireplace damper and place a screen over the hearth.

- ✓ Remove lightweight non-fire-resistant curtains. Close fire-resistant window coverings. Attach pre-cut plywood panels to the exterior side of windows and glass doors. Move furniture to the center of each room and leave the light on.

- ✓ Turn off pilot lights. Shut off propane at the tank, or natural gas at the meter.

- ✓ Prop a ladder against the house so that firefighters have easy access to the roof. Keep wood shake or shingle roofs moist. Place a sprinkler on the roof, but do not turn on until embers begin to fall on the roof.

- ✓ Attach garden hoses to faucets and attach a nozzle set on spray.

- ✓ If a fire should occur within the house, call 9-1-1. Then solicit the help of neighbors to fight the fire until firefighters arrive. Go outside if you can’t immediately put the fire out. Most importantly, STAY CALM!

ESCAPING WILDFIRE

During the year 2000 fire season, the United States experienced its most intense fire season in over 50 years. Evacuations became common, and wildfire smoke prompted many health alerts in the west. Remember that the easiest, safest, most cost-effective way to fight fires is to prevent them from ever starting. Unfortunately, not all fires can be easily prevented.

Most fire seasons within the Rogue Valley include a period of extreme fire danger. During these periods fire protection agencies encourage everyone to make getting their families out and away from an approaching wildfire their highest priority. When wildfire threatens, DON'T STAY AND TRY TO FIGHT THE FIRE, fire conditions may become explosive without warning.

If a wildfire is threatening your home or family, please consider the following:

General Safety –

- DON'T PANIC.
- Keep family members together.
- Gather pets and secure them in a safe location – ready to go.
- Wear long pants, long sleeved shirts, and boots or sturdy shoes for protection from the heat.
- Identify escape routes and safety zones – stay away from flammable vegetation.
- Arrange temporary housing at a friend or relative's home outside the threatened area. Leave a note telling where and how you can be located.
- Prepare for a safe, rapid, organized evacuation.
- Listen to a battery-operated radio for reports and evacuation information.
- Follow instructions of law enforcement and fire personnel.
- If advised to evacuate, DO SO IMMEDIATELY – Exit safely and watch for changes in speed and direction of fire and smoke.

ONLY IF YOU'RE SURE YOU HAVE TIME:

Inside the Home –

- Close windows, vents, doors, venetian blinds or non-combustible window coverings. Remove lightweight curtains.
- Shut gas off at the meter. Turn off pilot lights.
- Move flammable furniture away from windows and sliding glass doors.
- Turn on a light in each room to increase your home's visibility in heavy smoke.

Outside the Home –

- Park vehicles in open areas facing the direction of escape.
- Roll-up vehicle windows. Leave car doors unlocked but closed.

- Move flammable and combustible materials away from the home.
- Seal unscreened attic and foundation vents with pre-cut plywood or commercial seals, if you have them available.
- Turn off propane tanks.
- Place combustible patio furniture inside the home or garage.
- Connect garden hoses to outside faucets.
- Wet-down shrubbery within 25 feet of your house – start on the downhill side of the house.

IMPORTANT NOTE: IF EVACUATED, DON'T RETURN UNTIL INSTRUCTED TO DO SO BY FIRE OR LAW ENFORCEMENT PERSONNEL.

In a wildfire emergency, life safety is your key concern. Don't try to fight the fire. Now is the time to get prepared for the wildfire we hope it never happens. Start planning now. Plan to get out alive.