2015

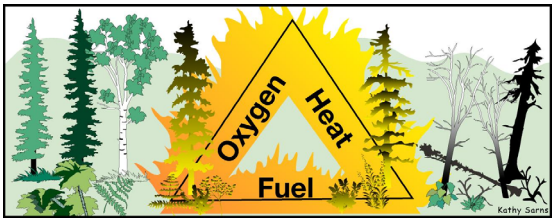
Fire Ecology / Firewise Plants

Nevada County
Resource Conservation District

Fire Ecology

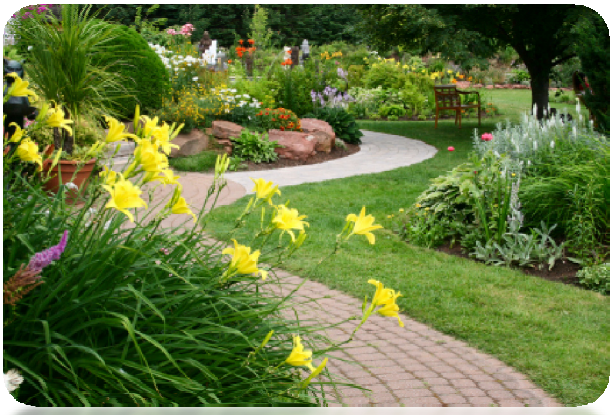
Most of our homes reside on the western slope of the Sierra Nevada, a Mediterranean climate, fire-evolved ecosystem. Our climate consists of a rainy season followed by a dry (fire) season with the added bonus of periodic episodes of high winds. Furthermore, our mostly nutrient rich soils provide plants the ability to annually produce vast amounts of biomass (vegetation). Since our winters stay too wet and cold and our summers remain too hot and dry for rapid fungal decay, this biomass accumulates creating an ever increasing fuel load and fire danger. Historically, lightning, volcanic eruptions, Native Americans, and early Europeans started fires to keep the ever-increasing fuel load in check. These repeated mostly low-to-moderate intensity fires maintained cleaner forest floors.

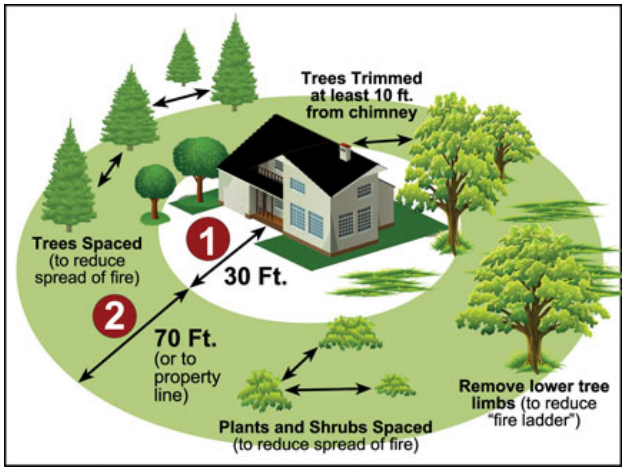
All of Nevada County's native plants and animals evolved under this pattern of periodic fire events. Repeated fire left forests much more open with fewer trees spaced further apart and periodically consumed brush and small trees thickets. But most importantly, these fires cleansed the forest floor of accumulations of dead biomass (ground fuel). A wildfire cannot maintain itself or its intensity without sufficient continuous ground fuel.



Today's forests contain conditions far different than historic forests. Through fire exclusion policies and poor land management practices, we Humans have sent forests down a completely new and destructive evolutionary path. Some native plants and animals prefer this new direction and thrive; however, most do not. Our forest ecosystems exist as unhealthy fuel loaded powder kegs prone to catastrophic fire. Our forests are weak and sickly due to too many trees growing too closely together. The unnaturally dense brush and small trees provide a fuel ladder for fire to climb into the crowns of trees. The huge amounts of dead vegetation on forest floors provide the perfect medium to perpetuate high intensity fires.

Human's created most of this fuel-loaded condition and Humans must respond appropriately to correct this imbalance. Historically, this relatively new, heavy fuel loaded vegetation type was never a large component of forests before fire exclusion. Cleaning by cutting and removing decadent brush, thinning trees and pruning the branches of the remaining trees up eight or ten feet high helps greatly. However, most importantly, removing most of the accumulated dead ground fuel around your home will mimic a periodic fire regime and create a forest setting more similar to what originally existed, a setting where catastrophic wildfire was the rarity not the norm.





Is a 30-foot clearance around your home adequate protection from a wildfire? **Absolutely not!** In fact, Public Resource Code 4291, the 30-foot clearance rule, was originally written to ***protect forestland from individual structure fires,*** not the other way around. The law was designed to provide firefighters a 30-foot clearance around homes to help confine structure fires to just the building and not spread to the surrounding forest. A wildfire racing towards a home presents much greater challenges and risks to firefighters than simply containing a structure fire. Firefighters need more room to safely maneuver and fight an oncoming wildfire.

All other wildfire protection and prevention measures mean little if homeowners do not create adequate fuel reduction perimeters. For most homes, a buffer of dramatically reduced burnable vegetation, 100 feet wide, vastly improves the probability that firefighters can save both your life and your home. The better landowners prepare for the inevitable fire event, the safer and more aggressive firefighters can push their protection and suppression efforts. The faster firefighters gain control, the less loss of life, destruction of property, and damage to existing wildlife habitat.

We must all accept biological realities and biological responsibilities to live in and fit into our fire evolved ecosystem. Ignore these biological realities and responsibilities and you risk becoming a casualty with no one to blame but yourself.

Firewise and Fire Safe does not mean Fire Proof!!!

Firewise Plants for Western Nevada County

Alder	*Alnus spp.*
Arroya Lupine	*Lupinus succulentus*
Baby Blue Eyes, Five Spot	*Nemophilia spp.*
Birds Eye	*Gilia spp.*
Blanket Flower	*Gaillardia aristata*
Bloomers Tiger Lily	*Lilium humboldtii var.bloomerianum*
Blue Elderberry	*Sambucus caerulea/Mexicana*
Blue Flax	*Linum lewisi*
Blue Oak	*Quercus douglasii*
Blue Wildrye	*Elymus glaucus*
Box Elder	*Acer negundo var. californicum*
Brodiaea	*Brodiaea spp.*
Butterfly Weed	*Asclepias speciosa*
Buttonwillow	*Cephalianthus occidentalis*
California Barberries	*Berberis spp.*
California Bells, Chinese Lantern	*Phacelia spp.*
California Black Oak	*Quercus kelloggii*
California Blue-Eyed Grass	*Sisyrinchium bellum*
California Fuchsia	*Epilobium canum*
California Huckleberry	*Vaccinium ovatum*
California Melica	*Melica californica*
California Mock Orange	*Philadelphus lewisii var. californica*
California Poppy	*Eschscholzia californica*
California Snowdrop Bush	*Styrax officinalis var. californica*
California Wood Fern	*Dryopteris arguta*
Camas	*Camassis spp.*
Chia	*Salvia columbariae*
Chinese Houses	*Collinsia spp.*
Chocolate Lily	*Fritillaria biflora*
Chocolate Lily, Yellow Bells	*Fritillaria spp.*
Coyote Mint	*Monardella villosa*

Creeping Wildrye	*Elymus triticoides*
Crimson Columbine	*Aguilegia formosa*
Deergrass	*Muhlenbergia rigens*
Delphinium	*Delphinium spp.*
Desert Mallow	*Sphaeralcea ssp.*
Douglas Spiraea	*Spiraea douglasii/densiflora*
Douglas' Coreopsis	*Coreopsis douglasii*
Evening Primrose	*Oenothera spp.*
Evergreen Huckleberry	*Vaccinium ovatum*
Fairy Lanterns	*Calochortus spp.*
Farewell to Spring	*Clarkia spp.*
Fawn Lily	*Erythronium spp.*
Firecracker Flower	*Brodiaea ida-maia*
Five Fingered Fern	*Adiantum pedatum var. aleuticum*
Flannel Bush	*Fremontodendron californicum*
Flowering Ash / Foothill Ash	*Fraxinus dipetala*
Foothills Penstemon	*Penstemon heterophyllus*
Fremont Camas	*Zigadenus fremontii (poisonous)*
Fremont Poplar	*Populus fremontii*
Giant Chain Fern	*Woodwardia fimbriata*
Ginger	*Asarum spp.*
Goats Beard	*Aruncus vulgaris*
Golden-Eyed Grass	*Sisyrinchium californicum*
Gooseberry	*Ribes nevadense*
Gooseberry, Currant	*Ribes spp.*
Hartweg's Wild Ginger	*Asarum hartwegii*
Henderson's Shooting Star	*Dodecatheon hendersonii*
Horsemint	*Agastache urticifolia*
Hounds' Tongue	*Cynoglossum grande*
Hummingbird Sage	*Salvia spathacea*
Iris	*Iris spp.*
Jeffrey's Shooting Star	*Dodecatheon jeffreyi*
Jimson Weed	*Datura meteloides (poisonous seeds)*
Lady Fern	*Athyrium filix femina*

Lemonade Berry, Sugar, Squaw Bush	*Rhus spp.*
Leopard Lily	*Lilium pardalinum*
Tiger Lily	*Lilium humboldtii/washingtonianum*
Lupine	*Lupinus spp.*
Madrone	*Arbutus menziesii*
Manzanita	*Arctostaphylos spp.*
Maple	*Acer spp.*
Marsh Marigold	*Caltha leptosepala*
Matilija Poppy	*Romneya coulteri*
Meadow Lupine	*Lupinus latifolius/polyphyllus*
Monkey Flower	*Mimulus spp.*
Monkshood	*Aconitum spp.*
Mt. Cream Bush	*Holodiscus discolor*
Ninebark	*Physocarpus capitatus*
Nodding Stipa	*Nassella pulchra*
Onion	*Allium spp.*
Oregon Ash	*Fraxinus latifolia*
Oregon Grape	*Mahonia spp.*
Pacific Bleeding Heart	*Dicentra formosa*
Pallid Service Berry	*Amelanachier spp.*
Pine Bluegrass	*Poa scabrella*
Pitcher Sage	*Lepechinia calycina*
Purple Milkweed	*Asclepias cordifolia*
Purple Nightshade	*Solanum xanti*
Purple Stipa	*Nassella cernua*
Purple Tansy	*Phacelia tanacetifolia*
Red Elderberry	*Sambucus racemosa*
Red Ribbons	*Clarkia concinna*
Rush	*Juncus spp.*
Sage	*Salvia spp.*
Sea Thrift	*Armeria maritime var. californica*
Sedge	*Carex spp.*
Sierra Dogwood	*Cornus nuttallii*
Sierra Kinnickinnick	*Arctostaphylos uva-ursi*

Skullcap	*Scutellaria spp.*
Slender Wheatgrass	*Agropyron trachycaulum*
Smooth Dogwood	*Cornus glabrata*
Snowberry	*Symphoricarpos*
Soap Plant	*Chlorogalum pomeridianum*
St. Catherine's Lace	*Eriogonum giganteum*
Stonecrop	*Sedum spp.*
Sword Fern	*Polystichum munitum*
Thimbleberry	*Rubus parviflorus*
Tidy Tips	*Layia platyglossa*
Tree Anemone	*Carpenteria californica*
Tufted Hairgrass	*Deschampsia caespitosa*
Twinberry	*Lonicera involucrate*
Venus Hair Fern	*Adiantum capillus veneris*
Vine Hill Manzanita	*Arctostaphylus densiflora "McMimm"*
Violets	*Viola spp.*
Wake Robin	*Trillium spp.*
Western Azalea	*Rhododendron occidentalis*
Western Burning Bush	*Euonymus occidentalis*
Western Dogwood	*Cornus occidentalis/sericea*
Western Poppy	*Paeonia brownii*
Western Sword Fern	*Polystichum*
Western Sycamore	*Platanus racemosa*
White Alder	*Alnus rhombifolia*
Wind Poppy	*Achillae millefolium*
Woolly Yarrow	*Achillea tomentosa*

For more information:

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Natural Resources Conservation Service	www.ca.nrcs.usda.gov
Agricultural Commissioner of Nevada County	www.mynevadacounty.com
California Invasive Plant Council	www.cal-ipc.org
California Native Plant Society	www.cnps.org
Fire Safe Council of Nevada County	www.areyoufiresafe.com
Master Gardeners of Nevada County Western Nevada County Gardening Guide	www.ncmg.ucanr.org
Redbud Chapter of CNPS	www.redbud-cnps.org
Sierra Nevada Alliance Sierra Nevada Yard & Garden Guide	www.sierranevadaalliance.org