



Fire-Reluctant Landscaping Best Practices



All plants will burn given the right conditions. To minimize the probability of wildfires igniting and spreading in the urban landscape, consider designing and maintaining landscapes as follows:

- Abide by plant siting guidelines for fire-reluctant landscaping in “home ignition zones” (HIZs) [NFPA - Preparing homes for wildfire](#)
- Remove highly flammable plants (those that readily ignite, or support fire spread) within 30-feet of structures and from under trees and shrubs in all HIZs.
- Remove bark mulch and debris and avoid planting any plants within 5-feet of structures.
- Minimize combustible mulches like bark under plants and within 5-30-feet of structures.
- Consider using only very fine compost if inorganic mulching is not an option.
- Don’t plant evergreen shrubs/trees, vines, or ornamental grasses within 10-feet of structures.
- Emphasize broadleaf plants that don’t grow over 2.5-feet high within 30-feet of structures.
- Avoid mass plantings. Separate planted areas by outlining with rock, gravel, brick, or pavers.
- Focus on keeping the soil and plants vigorous and healthy throughout fire season.
- When selecting landscaping plants, make an informed choice. Consider utilizing the Fire-reluctant Plant List Generator tool available at <https://living-with-fire.org/home/plant-list-generator-main/>

Select plants that:

- Are well-adapted to local, and anticipated warmer and drier climatic conditions;
- Do not usually retain dead leaves, except when in the process of shedding leaves;
- Do not accumulate dead twigs and branches;
- Do not have waxy, oily, resinous, or odorous leaves;
- Are not invasive or prone to disease; and
- Have high salt, soap, or latex content and high-water content throughout fire season.

Do not plant in an urban environment: pampas grass, bamboo, broom, sagebrush, rabbitbrush, arborvitae, juniper, cedar, or cypress—even dwarf varieties can be highly flammable and are not recommended. Do not plant invasive plants such as Himalayan blackberry, ivy, tree of heaven, mullein, or butterfly bush.

Landscape design considerations:

- Develop landscaping plans based on the shape of the land and plant flammability.
- Select plants that require little water to survive in a Mediterranean climate.
- Maintain plants that provide habitat or food for pollinators and birds.
- Practice gardening techniques that add nutrients to the soil and are good for wildlife.
- Produce edibles for humans and wildlife.

Cautionary Notes:

- “Where plants are placed and how they are maintained are more important than the type of plant selected.” (Valachovic et al. 2021) **Proper plant care and maintenance are critical to reduce wildfire risk!**
- Species within the same genus do not necessarily have equivalent fire-resistance. Assess each species individually. Plant size and growth form can make a difference.



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Siting and Maintenance Best Practices

- Siting recommendations are usually for flat terrain. The distance between shrubs should be 2 times the height of the shrub on a slope of 0-20%. On a 20-40% slope the distance should be 4 times greater and, on a 40+ % slope the distance should be 6 times greater.

Coniferous Trees

- During fire season, regularly remove needles from roofs, gutters, other landscape plants, and around the ground near structures. This is most critical in late summer and early fall.
- Don't plant any coniferous tree or shrub within 30-feet of structures.
- Eliminate all junipers/arborvitae regardless of location in higher density housing areas.
- Prune out dead tree branches regularly and keep lower branches at least 10-feet above ground level and canopies 10-feet apart.
- Do not prune up more than 1/3 the height of smaller trees, but prune some--1 to 2-feet off the ground is better than none!
- Plant only short (<2-feet tall) low flammability plants under conifer trees.

Deciduous Trees

- Plant trees so that at maturity their branches will not overhang a roof or touch structures.
- Avoid planting trees that have papery bark or feathery debris within 30-feet of structures.
- Regularly remove accumulations of leaves from gutters and within 10-feet of structures.
- Compost dead leaves rapidly or remove from the property.

Shrubs/Small Trees

- Within 30-feet of structures, take care to isolate every shrub/tree and remove dead materials frequently if the plant is: (a) moderately to highly flammable, (b) more than 2.5-feet tall, or (c) could serve as a ladder fuel to a structure or taller plant.
- In the 30-100/200-foot hazard ignition zone, ensure that shrubs and trees are widely spaced, no ladder fuels are present, and highly flammable species are absent or isolated.

Graminoids/Ground Covers/Perennials

- Do not mass plant ornamental grasses within 30-feet of structures and other plants.
- Maintain lawns and massed grass heights at 4-inches or less from June-November.
- Avoid planting on top of burnable mulches; water properly; remove dead materials often, and confine planted beds with nonburnable materials to prevent large areas from burning.

Key References:

- Univ of Nevada, Reno and US Dept of Agriculture. 2017. Choosing the right plants for Northern Nevada high fire hazard areas. Lake Tahoe Basin. University of Nevada Extension. Univ Nev Cooperative Extension. SP-17-01. [Choosing the Right Plants - Lake Tahoe Basin \(unr.edu\)](https://www.unr.edu/extension/SP-17-01)
- Valachovic, Y., Quarles, S.I., Swain, S.V. July 2021. Reducing the vulnerabilities of buildings to wildfire: vegetation and landscaping guidance. UC ANR Pub 8695. <https://escholarship.org/uc/item/5z80w412>