

Draft Broughton Landing Fire Protection Guidelines

The Broughton Landing site is located in an area known for its exceptionally hot, dry, windy conditions considered to be ideal for spreading wildfire. The old mill complex is constructed almost entirely of wood and the site is cluttered with desiccated vegetation and bone-dry lumber scraps creating what Skamania County Fire Marshall Marlon Morat refers to as a classic “fire trap”. Redevelopment of this high-risk site as a successful resort built to current codes, supported by regular maintenance, and protected by security personnel offers an opportunity to significantly reduce the risk of fire in eastern Skamania County. As the Broughton mill is redeveloped as a resort, the following measures should be taken to ensure that fire risk is diminished through redevelopment and occupancy of Broughton Landing.

1. Fuel Load Management

In a fire situation, dead trees and shrubs surrounding buildings provide fuel sources for fire, thus removing flammable vegetation reduces the threat of fire. As described below, Broughton Landing management will take the following actions to manage natural fuel sources:

- All dead plants, trees and shrubs will be removed from within 100’ of developed portions of the site.
- Beyond 30 feet from each building, dead wood, debris and tree branches below 10 feet will be removed on a regular basis.
- Dense flammable plants will be replaced with fire-resistant plants.
- The choice of plants, spacing and maintenance are crucial elements in any defensible space landscaping plan.
- To serve as a green belt and protect against fire, the resort’s landscape will remain irrigated and well-pruned during the dry season.
- Plants will be kept green during the dry season through supplemental irrigation, if necessary.
- Grass within 100 feet of buildings will be trimmed on a regular basis.
- No firewood or other exposed fuel sources will be stored within 30 feet of buildings.

2. Fire-safe Landscape Design

The building layout and landscape design will include the following provisions:

- No smoking and fire hazard signs will be posted at trail heads to discourage smoking, open fires and other unsafe behavior.
- A perimeter of defensible space will be created by thinning trees and brush within 30 feet surrounding each building.
- To prevent ground fires from jumping into tree crowns, small trees and plants growing under trees will be removed on a regular basis.
- New trees will be spaced 30 feet apart and pruned to a height of 8 to 10 feet.
- Shrubs will be planted no closer than 20 feet from structures and pruned regularly.
- To prevent ignition, only the most drought-tolerant vegetation will be selected for planting within three feet of structures.
- To effectively break-up continuity of vegetation, at least 10 to 15 feet of separation will be maintained between islands of shrubs and plant groups.
- Fire-safe zones free of fuel sources such as masonry walls, patios, swimming pools, decks and roadways will be used to divide vegetated areas.
- Rock, mulch, flower beds and gardens will be used as ground cover for bare spaces to serve as effective firebreaks.

3. Fire-resistant Vegetation

To prevent fire from spreading quickly, plants with fire-resistant characteristics will be selected for ground cover, shrubs and trees:

- High moisture plants that grow close to the ground and have a low sap or resin content will be used as ground cover.
- Fire-resistant species including hedging roses, bush honeysuckles, currant, cotoneaster, sumac and shrub apples will be used as shrubs.
- Hardwoods, such as Garry Oak and big leaf maple are less flammable than pine, fir and other conifers.

4. Fire-resistant Building Design

The following building design considerations will address fire safety, not just resort aesthetics:

- New and renovated buildings will be constructed in compliance with applicable provisions of the International Fire Code (IFC), International Residential Code (IRC), and International Building Code (IBC) including the use of sprinkler systems and proximity of fire hydrants.
- New buildings will be located no closer than within 30 feet from vegetated slopes.
- Only roof covering assemblies rated Class A, B, or C shall be used.
- Vents shall be screened with a corrosion-resistant, noncombustible ¼ inch wire mesh
- Overhanging projections, porches, decks, balconies, and similar overhanging projections shall be constructed of heavy timber.
- The underside of overhanging buildings shall be constructed of heavy timber, 2-hour fire-resistive-rated material, or noncombustible materials.
- Exterior vertical walls potentially exposed to wildland fires shall be constructed of heavy timber, or by a 20-minute fire-resistive-rated assembly.
- Exterior windows, doors, and skylights shall utilize tempered glass, multilayered glazed panels, glass block, or have a fire resistance rating of no less than 20 minutes.
- Exterior doors shall be approved noncombustible construction, solid core wood no less than 1.75 inches thick, or have a fire protection rating of no less than 20 minutes.
- Every fireplace and wood stove chimney and flue shall be provided with an approved spark arrestor and vegetation shall not be allowed within 10 feet of a chimney outlet.

5. On-site Fire Equipment

- Broughton landing will provide a space for fire apparatus in the resort's operations and maintenance facility. This equipment, to be operated by the Underwood Firer District will be centrally-located providing minimal response times to anywhere on the resort as well as to locations along the base of Underwood Bluff via SR-14.

Sources

1. Chapter 8 Building Design, Location, and Construction, NFPA No.299
2. U.S. Fire Administration, Department of Homeland Security
3. Marlon Moran, Skamania County Fire Marshall