Beverly Hills Fire Department

Fuel Modification Guideline

Introduction:

Fuel modification has proven to be a major factor in reducing fire spread onto structures from wildfires. When combined with special building requirements set forth in CBC Chapter 7A, the ignition of structures is further reduced.

Purpose:

The intent of this document is to provide the necessary information to meet the requirements for fuel modification in the Very High Fire Hazard Severity Zone. The requirements are per CFC Chapter 49, California Code of Regulations Title 14 and BHMC. The Fuel Modification Plan brings fire safe landscaping to improve public safety and reduce property loss during wildfire emergencies.

Scope:

Fuel modification is required for the following types of projects:

1. Any project involving a combined total area of new landscaping or relandscaping of twenty-five hundred square feet (2,500 sq. ft) or more within a 12-month period.
2. The construction of a new dwelling unit
3. The construction of an addition, alteration, or repair that requires the installation of fire sprinklers per Section 903.2.
4. Any structure that changes occupancy classification from any other class to Group R (residential) occupancy.

4906.3 Mandatory Requirements

1. Areas of new planting shall comply with Section 4906.8
2. Targeted vegetation as shown in Appendix W, within 30 feet of any structure shall be removed
3. Areas of existing vegetation shall comply with the maintenance requirements of Section 4907.3.1.
4. Relocate or remove combustible materials, such as organic mulch, non-fire resistive vegetation, and wood fences within 5 feet of any structure

4906.4 Additional Requirements

In addition to meeting the mandatory requirements for fuel modification, projects such as new construction, additions, and/or remodels with a building permit valuation of $1,000,000 or more, shall be required to implement additional measures intended to reduce the spread of fire. Examples of such measures include:

5. Replacement of any existing exterior building element(s) to comply with CBC Chapter 7A.

6. Removal of existing targeted vegetation listed in Appendix W, beyond 30 feet from any structure and replacing existing vegetation with new planting using native, drought tolerant, and fire resistant species.
7. Other improvements to buildings, structures, landscape materials, vegetation, defensible space, or other devices or safeguards intended to further the objectives of this Section and based on recognized principles.

The proposed measure(s) to meet this Section should be recommendations by the licensed design professional for the project intended to those elements that provide the greatest level of fire protection for structures and be based on factors such as site conditions, effectiveness, and feasibility. The cost of compliance for the additional requirements shall be limited to 10% of the building permit valuation and shall be in addition to any costs for compliance with the mandatory measures.

The Fire Code Official is authorized to grant modifications for individual cases where there are documented practical difficulties in carrying out the provisions of this Section.

Requirements:

A fuel modification plan and all supporting documentation shall be prepared by a licensed landscape architect and/or qualified professional and submitted to the Fire Code Official for review and approval. The fuel modification plans shall be submitted with an application and all required fees.

Fuel modification plans shall show compliance with the minimum Mandatory Requirements in Section 4906.3 and if required, all Additional Requirements in Section 4906.4. The applicant is responsible for coordinating the fuel modification plans with landscaping plans for compliance with the Model Water Efficient Landscaping Ordinance.

4906.5.1 Contents of Plans

Fuel modification plans shall be drawn to scale, dimensioned, and include all main and accessory structures and new and existing vegetation on the property and identify each of the following:

1. Delineation of 5 foot, 30 foot, 100 foot, and 200 foot fuel management areas from all structures.
2. All property lines, setbacks, utility poles, easements, fire department access
3. The topography of any slopes
4. All vegetated and hardscaped areas
5. Location and type of any public or private trees within 10 feet of property line
6. A plant legend with common and scientific names and expected height and width at maturity of all new and existing vegetation
7. Proposed irrigation systems
8. Tree canopy distances from structures and other canopies
9. Confirmation that no prohibited vegetation will be placed on the site.
10. Confirmation that existing trees listed in Appendix W, within 30 feet of any structure are to be removed.
11. Signed Fuel Modification Affidavit

4906.6 Verification

The Fire Code Official has the authority to inspect the site as deemed necessary and prior to final approval to verify implementation and maintenance of the approved Fuel Modification Plan. Prior to final approval of the permit or certificate of occupancy, a landscape architect or qualified individual must certify the installation of all vegetation complies with the approved Fuel Modification Plan and this code.

The required removal of targeted vegetation will be verified prior to final approval of the permit and issuance of a Certificate of Occupancy. Any exceptions to the removal of targeted vegetation listed in Appendix W, may only be granted by the Fire Chief.

4906.7 Cost

The applicant shall pay all fees for plan review in accordance with the adopted schedule of fees and charges. The applicant will be assessed additional costs should the Fire Code Official require a third-party peer review or seek additional clarification, information and/or supporting documentation from another licensed or qualified arborist, botanist, horticulture expert, or other expert in a similar field, to substantiate submitted documentation.

4906.8 New Vegetation

Prohibited vegetation listed in Appendix V shall not be planted on any property within the Very High Fire Hazard Severity Zone. The following requirements shall be met when planting or placing any new vegetation on the site:

4906.8.1 Vegetation (Ground Fuels)

1. All new vegetation shall be fire resistant as identified by a licensed landscape architect or equivalent professional with supporting documentation, or be listed in an approved publication from an approved organization.

4906.8.2 Shrubs (Ladder Fuels)

All new plantings of shrubs shall comply with the following:

1. Privacy hedges/shrubs shall not exceed 7 feet in height, and shall maintain a minimum of 5 feet horizontal clearance to all structures. Trees shall not be used as privacy walls in the VHFHSZ area.
2. Groupings of shrubs are limited to a maximum aggregate diameter of 10 feet (3048 mm).
3. Shrub groupings shall be separated from other groupings a minimum of 15 feet (4572 mm).
4. Shrub groupings shall be separated from structures a minimum of 30 feet (9144 mm).
5. Where shrubs are located below or within a tree's drip line, the distance between the lowest tree branches shall be a minimum of one-third of the height of the tree. For trees taller than 18 feet, the minimum separation shall be 6 feet.

4906.8.3 Trees (Aerial Fuels)

Trees shall be managed on the site as follows:

1. New trees shall be planted and maintained so that the tree's drip line at maturity is a minimum of 10 feet (3048 mm) from any structure.
2. The horizontal distance between crowns of new trees and crowns of adjacent trees shall not be less than 10 feet (3048 mm).
3. No new trees shall be planted that are listed in Appendix V as prohibited.

Prohibited Vegetation:

Certain plants are considered to be undesirable and invasive due to their characteristics. These characteristics can be either physical or chemical. Physical properties that would contribute to high flammability include large amounts of dead material retained within the plant, rough or peeling bark, and the production of copious amount of debris. Chemical properties include the presence of volatile substances such as oils, resins, wax and pitch. The following vegetation listed in appendix V is prohibited and shall not be planted.

Replanting existing vegetation that becomes dead or diseased shall be replaced with an alternate tree, shrub, or grass that is not prohibited.

Planting prohibited vegetation indicated on Appendix V can be ordered to be removed and at the expense of property owner.

Additional Requirements:

Organic mulch, woodchips or similar combustible products shall not be placed within 5 feet of any structure or within 5 feet of any combustible perimeter fence.

Inorganic mulch such as rock, gravel, or similar noncombustible mulch is highly recommended.

Prior to Certificate of Occupancy or final approval of a permit, a landscape architect or qualified individual must certify the installation in accordance with this code and approved plans.

Maintenance:

The property owner shall retain all approved fuel modification plans. The plans shall be used to perform maintenance.

Maintenance of vegetation on private property shall be ongoing and the responsibility of property owner per BHMC 4907.3.1

FIRE DEPARTMENT
445 N. REXFORD DR.
BEVERLY HILLS, CA 90210

COMMUNITY RISK REDUCTION
PHONE: (310) 281-2703
FAX: (310) 278-8561

CITY OF BEVERLY HILLS FUEL MODIFICATION AFFIDAVIT

Project Name: _____

Address: _____

Permit Number: _____

*Please initial each box to confirm you have read, agreed and understand the following:

☐ I hereby understand that said address is located in the Very High Fire Hazard Severity Zone and said property shall be maintained year round per BHMC 4907.3.1

☐ I hereby understand the prohibited species per BHMC Appendix V, shall not be planted on said address.

☐ I hereby understand that any target species per BHMC Appendix W located on said property shall comply with the requirements of the fuel modification.

☐ I hereby certify and agree to all the requirements set forth in the BHMC for Fuel Modification. We further agree that any changes from the original approval of the Fuel Modification permit can require a resubmittal of entire process.

☐ I hereby understand and agree that a certified report from the hired / permitted landscape architect will be forwarded to the fire department. Certified report will confirm the property landscape and species are in compliance with Fuel Modification requirements and prohibited species list.

Landscape Architect Signature: _____ Lic # _____

Property Owner Signature: _____ Date: _____

Property Owner Print Name: _____

CITY OF BEVERLY HILLS FIRE DEPARTMENT FIRE-PRONE / PROHIBITED VEGETATION

Some plants are particularly susceptible to fire due to their characteristics. These characteristics can be either physical or chemical. Examples of physical properties would be large amounts of dead material retained within the plant, rough peeling bark, and the production of copious amounts of litter. Examples of chemical properties would be presence of volatile substances such as oils, resins, wax, and pitch. Certain native plants are notorious for containing these volatile substances.

Any vegetation with these characteristics shall not be planted on properties located in the Very High Fire Hazard Zone. Should these species listed below exist within the VHFHSZ, they should be removed or aggressively maintained. Replanting prohibited existing vegetation that becomes dead or diseased shall be replaced with vegetation that is not indicated below. The prohibited vegetation list comprises information from surrounding fire departments such as Santa Barbara, Ventura, Orange County, Montecito, and Rancho Cucamonga.

Species	Common Name(s)
Archonphoenix cunninghamiana	King Palm*
Archonphoenix alexandrae	King Palm*
Abies Spp.	Firs
Acacia Spp.	Acacia species
Adenostoma fasciculatum*	Chamise, Greasewood*
Adenostoma sparsifolium*	Red Shank*
Agonis juniperina	Juniper Myrtle
Agropyron repens	Quackgrass
Anthemis cotula*	Mayweed*
Araucaria citrinus	Araucaria Monkey Puzzle Tree
Araucaria bidwillii	Araucaria Bunya Bunya
Arbutus menziesii	Madrone
Arctostaphylos Spp.	Manzanita
Arenga engleri	Formosa Sugarpalm
Artemisia abrotanium	Southernwood Sagebush
Artemisia absinthium	Wormwood Sagebush
Artemisia californica*	California Sagebrush*
Artemisia caucascia	Silver Sagebush
Artemisia dracunculus	True tarragon Sabebush
Artemisia tridentata	Big Sagebush
Artemisia pynocephala	Sandhill Sagebush
Arundo donax	Giant Reed
Avena fatua	Wild Oat
Bambusa Spp.*	Bamboo*
Baccharis pilularis	Coyote Brush
Bougainvillea Spp.	Bougainvillea
Brahea armata	Blue Hesper Palm
Brahea brandegeei	San Jose Hesper Palm
Brahea edulis	Guadlupe Palm
Brassica nigra*	Black Mustard*
Brassica rapa*	Yellow Mustard, Field Mustard*
Bromus rubens	Foxtail, Red Brome

Butia capitata	Jelly or Pindo Palm
Callistemon citrinus	Bottlebrush Lemon
Callistemon rosea	Bottlebrush Rose
Callistemon viminalis	Bottlebrush Weeping
Cardaria draba*	Noary Cypress, Peppergrass*
Casuarina cunninghamiana	River She-oak
Castanopsis chrysophylla	Giant Chinquapin
Cedrus Spp.*	Cedars*
Chamaecyparis Spp.	False Cypress
Chamaerops humilis	Mediterranean Fan Palms
Cinnamomum camphora	Camphora
Cirsium vulgare*	Wild Artichoke*
Conyza Canadensis*	Horseweed*
Coprosma pumila	Prostrate Coprosma
Cortaderia jubata	Chinquapin,Giant
Cortaderia selloana*	Pampas Grass*
Cryptomeria japonica	Japanese Cryptomeria
Cupressus Spp.*	Cypress*
Cynara cardunculus*	Artichoke Thistle*
Cytisus scoparius	Scotch Broom
Delosperma "alba"	White Trailing Ice Plant
Drosanthemum floribundum	Rosea Ice Plant
Dodonea viscose	Hopseed Bush
Eriodictyon californicum	Yerba Santa
Erigonum fasciculatum*	Common Buckwheat*
Eucalyptus Spp.*	Eucalyptus*
Fremontodendron	Flannel Bush
Helix canariensis	English ivy
Heterothaca grandiflora*	Telegraph Plant*
Hordeum leporinum	Wild Barley
Howea forsteriana	Sentry Palm
Jubaea chilensis	Chilean Wine Palm
Juniperus Spp.*	Juniper*
Lactuca serriola*	Prickly Lettuce*
Lamprathus aurantiacus	Bush Ice Plant
Lamprathus spectabilis	Trailing Ice Plant
Larix Spp.	Larch
larrea tridentata	Creosote Bush
Leptospermum laevigatum	Australian Tea
Leptospermum petersonii	Tea Tree
Livistona chinensis	Chinese Fan Palm
Lolium multiflorum	Ryegrass
Lonicera japonica	Japanese Honeysuckle

Mahonia Spp.	Mahonia
Melaleuca Spp.	Melaleuca
Mimulus aurantiacus	Sticky Monkeyflower
Miscanthus	Eulalia Grass
Muhlenbergia	Deer Grass
Nassella / Stipa tenuissima*	Mexican Feathergrass*
Nicotania bigelevil*	Indian Tobacco*
Nicotania glauca*	Tree Tobacco*
Pennisetum Spp.	Fountain Grass
Perronskia atriplicifloria	Russian Sage
Phoenix canariensis	Canary Island Date Palm
Phoenix dactylifera	Date Palm
Phoenix reclinata	Senegal Date Palm
Phoenix roebelenii	Pygmy Date Palm
Phoradendron atroplicifolia	Mistletoe
Pickeringia montana	Chaparral Pea
Picea Spp.	Spruces
Pinus Spp.*	Pines*
Platycladus orientalis	Oriental Arborvitae
Pseudotsuga menziesii	Douglas Fir
Rhus Spp.*	Sumac*
Ricinus communis*	Caster Bean Plant*
Rosmarinus officinalis	Rosemary
Sabal pametto	Cabbage Palm Tree
Sacsola austails*	Russian Thistle / Tumbleweed*
Salvia mellifera*	Black Sage*
Schinus molle	California pepper tree
Schinus terebenthifolius	Brazilian pepper tree
Silybum marianum*	Milk Thistle*
Syagrus romanzoffiana	Queen Palm
Tamarix Spp.	Tamarix
Taxus Spp.	Yew
Thuja Spp.	Abborvitae
Trachycarpus fortunei	Windmill Palm
Trachycarpus wagnerianus	Dwarf Chusan Palm
Trithrinax campestris	Bluse Needle Palm
Tsuga Spp.	Hemlock
Urtica Urens*	Burning Nettle*
Washingtonia filifera*	California Fan Palm*
Washingtonia robusta*	Mexican Fan Palm*

*Identified as target species. Existing target vegetation species located in the fuel modification zone shall be removed due to the potential threat they pose to any structure in the Very High Fire Hazard Severity Zone as identified in Appendix W.

Target Vegetation Species

Along with prohibited vegetation as referenced on Appendix V, indicated below is a list of target vegetation species that requires removal. Should any of the listed species below exist on the property that triggers a fuel modification permit/plan, the target vegetation species shall be removed. They are referred to as target vegetation species since their complete removal is a critical part of hazard reduction. These fire-prone vegetation species include (but not limited to):

Fire Prone Plant Species (Mandatory Removal)

Archonphoenix cunninghamiana	King Palm
Archonphoenix alexandrae	King Palm
Adenostoma sparsifolium	Red Shank
Anthemis cotula	Mayweed
Artemisia californica	California Sagebrush
Bambusa Spp.	Bamboo
Brassica nigra	Black Mustard
Brassica rapa	Yellow Mustard, Field Mustard
Cardaria draba	Noary Cypress, Peppergrass
Cedrus Spp.	Cedars
Cirsium vulgare	Wild Artichoke
Conyza Canadensis	Horseweed
Cortaderia selloana	Pampas Grass
Cupressus Spp.	Cypress
Cynara cardunculus	Artichoke Thistle
Erigonum fasciculatum	Common Buckwheat
Eucalyptus Spp.	Eucalyptus
Heterothaca grandiflora	Telegraph Plant
Juniperus Spp.	Juniper
Lactuca serriola	Prickly Lettuce
Nassella / Stipa tenuissima	Mexican Feathergrass
Nicotania bigelevil	Indian Tobacco
Nicotania glauca	Tree Tobacco
Pinus Spp.	Pines
Rhus Spp.	Sumac
Ricinus communis	Caster Bean Plant
Sacsola austails	Russian Thistle / Tumbleweed
Salvia mellifera	Black Sage
Silybum marianum	Milk Thistle
Urtica Urens	Burning Nettle
Washingtonia filifera	California Fan Palm
Washingtonia robusta	Mexican Fan Palm