

ORDINANCE NO. 23-03

AN ORDINANCE OF THE MORAGA-ORINDA FIRE DISTRICT OF CONTRA COSTA COUNTY, CALIFORNIA, ESTABLISHING FUEL MITIGATION AND EXTERIOR HAZARD ABATEMENT STANDARDS IN ALL STATE AND LOCAL RESPONSIBILITY AREAS WITHIN THE DISTRICT, REQUIRING DOCUMENTATION OF COMPLIANCE PRIOR TO SALE OF THE PROPERTY, AND ADOPTING FINDINGS OF FACT.

The Board of Directors (“Board”), as the governing body of Moraga-Orinda Fire District (“Fire District”) does ordain as follows:

SECTION 1. AUTHORITY

This Ordinance is authorized by state statutes and regulations, including but not limited to Public Resources Code Section 4117, Health and Safety Code Sections 13801, 13804, 13861, 13862, and 13870, Government Code Section 51175, Title 24, Part 9, California Code of Regulations, Chapter 49, and Title 19, California Code of Regulations, Section 1.07.

SECTION 2. FINDINGS OF FACT

The Fire District’s adoption of stringent fuel mitigation and exterior hazard abatement standards is designed to decrease the risk of structure fires spreading to adjacent vegetation and the risk of vegetation fires and wildfires spreading to structures. The Board bases these standards, in part, upon its finding that the following climatic, vegetative, geological, and topographical conditions within the Fire District create a grave risk of wildfire and resulting loss of life and property.

Climatic Conditions

Ever-changing climatic conditions have increased the risk and severity of fires in the Fire District. Local climatic conditions of limited rainfall, low humidity, high temperatures, and high winds, along with existing building construction and landscaping, create extremely hazardous fire conditions that adversely affect the potential fire line intensity, spread rates, and size of fires in the Fire District. The same climatic conditions may result in the concurrent occurrence of multiple fires in the Fire District and throughout the region resulting in inadequate Fire District personnel to protect against and control these fires.

The Fire District is the gateway to central Contra Costa County. It is located amongst rolling hills and valleys created by the Berkeley/Oakland hills to the west and open plains of central Contra Costa County to the east. Due to its location, the Fire District’s climate is more varied than that of its neighbors. The Fire District receives slightly more rainfall than areas further inland, and often, during the summer months, portions of the Fire District are enveloped in fog as the heat in the Central Valley draws cool air in from the San Francisco Bay. However, the Fire District also experiences the hot, dry summer weather that is characteristic of central Contra Costa County. This climate has promoted the growth of native grasslands, chaparral, oaks, and other indigenous plant species in the area. The climate has encouraged development within the Fire District, with the addition of primarily residential areas surrounded by large numbers of non-indigenous plant species. Due to the systematic exclusion of naturally occurring fire for over 100 hundred years, and a reduction in historical grazing activity as pasture has been

developed, these indigenous and non-indigenous plant species have created significant fuel loads throughout the Fire District. Due to the location of the Fire District in proximity to the Oakland/Berkeley Hills, in the fall the hot dry summer weather gives way to Diablo Wind events characterized by high winds and very low relative humidity. These conditions have contributed to major fire loss in the region and throughout the state, with 17 of the 20 most destructive fires in California history occurring in the fall. The Fire District is exposed to more of these wind events as climate change has delayed the onset of the rainy season, thus increasing the risk of major fires.

In September 1923, during critical climatic fire conditions, a fire started in the wilderness lands of the Fire District's northern area. This fire spread into the city of Berkeley and within two hours was attacking houses within the City limits. A total of 130 acres of built-up territory burned. 584 buildings were destroyed, with roughly 30 others seriously damaged. At that time, this was the most destructive fire in California history.

In September 1970, during critical climatic fire conditions characterized by hot, dry winds out of the northeast, a fire started along Fish Ranch Road and Grizzly Peak. This fire rapidly spread into the surrounding neighborhoods of Oakland, burning 400 acres and destroying 37 homes. An additional 18 homes were badly damaged before the fire was brought under control.

In August 1988, during critical climatic fire conditions, a small fire started near Crestview in Lost Valley and within minutes destroyed 5 homes. This fire's spread rate was increased by the prevalence of light flashy fuels, and steep slopes in alignment with strong winds.

In October 1991, a disastrous firestorm burned through the Oakland hills from an ignition point just west of the Fire District's border. Within the first few hours, thousands of people were evacuated. Ultimately over 3,000 dwelling units were destroyed in what replaced the 1923 fire as the most destructive fire in California history.

On October 27, 2019, sustained single-digit relative humidity and 30+ mph winds created explosive fire conditions throughout the region. On the same day that the Kincadee fire burned in Sonoma County, five major fires broke out in Contra Costa County. Three of these fires burned in proximity to the Fire District in Lafayette, Crockett, and Martinez and resulted in the depletion of available mutual aid resources as available firefighting units were committed to each new fire.

Throughout the Fire District homes are surrounded by heavy vegetation with interspersed open areas, creating a semi-rural character. The resulting exposure to wildfire risk is increased by the negative effects of high wind conditions during the fire season. During May to October, critical climatic fire conditions regularly occur when the temperature exceeds 80°F, wind speed is greater than 15 mph, fuel moisture is less than or equal to 10 percent, wind direction is from north to the east-southeast, and the ignition component is 65 percent or greater. These conditions occur more frequently during the fire season, but this does not preclude the possibility that a serious fire could occur during other months of the year.

These critical climatic fire conditions create a situation conducive to rapidly moving, high-intensity fires. Fires starting in the wildland areas along the northern border are likely to move

rapidly southward into the populated areas creating the potential for significant property loss and a very challenging evacuation problem.

Vegetative Conditions

The Fire District is located in a “Chaparral Biome.” In its natural state, chaparral is characterized by infrequent fires, with intervals ranging between 10 to 15 years to over a hundred years. Mature chaparral (stands that have been allowed greater intervals between fires) is characterized by impenetrable, dense thickets. These plants are highly flammable. They grow as woody shrubs with hard and small leaves, are non-leaf dropping (non-deciduous), and are drought tolerant. After the first seasonal rains following a fire, the landscape is dominated by soft-leaved, non-woody annual plants, known as fire followers, which die back with the summer dry period. The California Interior Chaparral and Woodlands Eco-Region covers 24,900 square miles in an elliptical ring around the California Central Valley. It occurs on hills and mountains ranging from 300 to 3,000 feet in elevation. It is part of the Mediterranean forests, woodlands, and scrub biome. Many of the plants are pyrophytes, or “fire-loving,” adapted to (or even depending on) fire for reproduction, recycling of nutrients, and the removal of dead or senescent vegetation. Many plant and animal species in this ecoregion are adapted to periodic fire.

The Fire District’s chaparral vegetation includes chamise, manzanita, buckeye, and ceanothus. Oak woodlands is the most widespread, with blue oak dominating, but the chaparral vegetation also includes scrub oak, coast live oak, canyon live oak, valley oak, and interior oak. Open grasslands are the primary understory within the oak savannah woodlands. In areas with interlocking tree canopy, primarily north and east facing slopes, the understory is primarily tree duff and litter.

All vegetation in the Fire District reaches some degree of combustibility during the dry summer months, and under certain conditions, during the winter months. For example, as chaparral and other brush species age, twigs and branches within the plants die and are held in place, increasing the decadent material component. A stand of 10 to 20-year-old brush typically contains enough dead material to produce rates of spread equivalent to fully cured grass. Due to the higher fuel load, fires in brush fields also yield much higher fire line intensity.

In severe drought years, additional plant material may die, contributing to the fuel load. There will normally be enough dead fuel load that has accumulated in 20 to 30-year-old brush to give rates of spread about twice as fast as the rates of spread in a grass fire. Under moderate weather conditions that produce a spread rate of a one-half foot per second in grass, a 20- to 30-year-old stand of brush may have a rate of fire spread of approximately one foot per second. Fire spread in old brush (40 years or older) has been measured at eight times faster than grass (4 feet per second). Under extreme weather conditions these rates can be much higher, with the fastest fire spread rate in grass at up to 12 feet per second or about eight miles per hour. Residential structures within the wildland intermix or interface near mature brush fields are thus at greater threat from wildfire.

Geological Conditions

Local geological conditions include high potential for seismic activity. The Fire District is made up of built-up suburban areas having buildings and structures constructed near three major fault systems capable of producing major earthquakes. The Hayward fault runs just west of its border,

the San Andreas fault is farther to the west, and the Calaveras Fault to the east. All three faults are known to be active, as evidenced by the damaging earthquakes they have produced in the last 100 years, and they can be expected to do damage in the future. Of primary concern to the Fire District is the Hayward Fault, which has been estimated to be capable of earthquakes exceeding a magnitude of 7.0 on the Richter scale. Many underground utilities cross the fault, including major water supply lines. Intensified damage during an earthquake may be expected in slide areas, as well as residential hillside areas located within or near the fault zone.

Additional potential events following an earthquake include broken natural gas mains and ensuing fires in the streets, building fires as the result of broken service connection, trapped occupants in collapsed structures, and requirements to render first aid and other medical attention to many residents.

Topographical Conditions

Local topographical conditions include hillside housing with many narrow and winding streets, and landslide potential for blocking roads and limiting firefighting water supply. These conditions create the potential for delays in responding when a major fire or earthquake occurs. The result may be limited or eliminated Fire District emergency vehicular traffic, overtaxed Fire District personnel, and a lack of resources for the suppression of fire in both structures and vegetated areas in the Fire District. To mitigate the conditions that hinder the rapid response of suppression resources to a fire, enhanced fuel mitigation requirements are necessary over and above state code requirements. These requirements will buy time for residents to execute an orderly evacuation while allowing for access by firefighting resources.

The Fire District has many homes that are reached by narrow and winding paved streets that hamper access for fire apparatus and provide limited evacuation routes for residents. In addition, many of the hillside homes are in outlying areas that require longer response times for the total required firefighting force. El Toyonal, Sleepy Hollow, the Downs, Canyon, and other areas with limited access via narrow and winding streets may face the problem of isolation from the rest of the Fire District and will suffer from the need for two-way traffic as evacuation and suppression response travel in opposite directions over limited roadways.

Effective road widths are further reduced by encroaching vegetation and mid-slope roads built without shoulders. This is particularly pronounced in older neighborhoods of North Orinda, some of which were laid out in the 1920s when vehicles were smaller, codes less stringent, and population density much lower.

Due to steep slopes that characterize many areas of the Fire District, the establishment of infrastructure to support adequate fire protection needs is not feasible. It is difficult to widen existing streets to meet present standards for emergency operations, and fire hydrants, especially in the hillside areas, often have less than optimum water pressure levels.

In summary, portions of the Fire District have limited water supplies or roadways that delay the response of emergency equipment to carry out the extinguishment of a fire, allowing the fire to increase in area. In order to mitigate the above situation, which hinders the quick response to a fire, more stringent fuel mitigation and exterior hazard abatement standards are required over and

above state code requirements. These standards will operate to slow or stop a fire's advance, thus allowing residents to evacuate, and buying time for the aggregation of an effective firefighting response. These standards also reduce the potential for fire to spread beyond the parcel of origin.

SECTION 3. DEFINITIONS

COMBUSTIBLE MATERIAL. Rubbish, litter, or material of any kind other than Hazardous Vegetation, that is combustible and endangers the public safety by creating a Fire Hazard as determined by the Fire Code Official.

DEFENSIBLE SPACE. The areas, including Zone 0, Zone 1, and Zone 2, extending 100 feet from any Structure.

FIRE APPARATUS ACCESS ROAD. A road that provides fire apparatus access from a fire station to a facility, building, or portion thereof. This is a general term that includes, but is not limited to, a fire lane, public street, public right of way, private street, driveway, parking lot lane, and access road.

FIRE CODE OFFICIAL. The Fire Chief or their duly authorized representatives.

FIRE HAZARD. Any condition, arrangement, or act that will increase, or may cause an increase of, the hazard or menace of fire to a greater degree than customarily recognized as normal by persons in the public service of preventing, suppressing, or extinguishing fire, or that may obstruct, delay, or hinder, or may become the cause of obstruction, delay, or hindrance, to the prevention, suppression, or extinguishment of fire.

LADDER FUELS. Fuel that provides vertical continuity between surface fuel and canopy fuel strata, increasing the likelihood that fire will carry from surface fuel into the crowns of shrubs and trees.

HAZARDOUS VEGETATION. Vegetation that is combustible and endangers the public safety by creating a Fire Hazard, including but not limited to bark, mulch, seasonal and recurrent grasses, weeds, stubble, non-irrigated brush, dry leaves, dry needles, dead, dying, and diseased trees, or any other vegetation identified by the Fire Code Official.

LOCAL RESPONSIBILITY AGENCY AREA. An area of the state that is not a State Responsibility Area or federal property, and where the financial responsibility for preventing and suppressing fires is primarily the responsibility of the city, town, county, city and county, district, or other local public agency.

MODIFICATION. Where there are practical difficulties involved in carrying out the provisions of this Ordinance, the Fire Code Official, shall have the authority to grant Modifications for individual cases, provided that the Fire Code Official shall first find that special individual reasons make the strict letter of this Ordinance impractical and that the Modification is in compliance with the intent and purpose of this Ordinance. The details of actions granting a Modification shall be recorded and entered in the files of the Fire District.

OUTBUILDING. Buildings or Structures that are less than one hundred-twenty square feet in size and are not used for human habitation, and buildings or Structures with a roof but no walls.

PARCEL. A portion of real property of any size, which may be identified by an Assessor's Parcel Number, the area of which is determined by the legal lot of record.

PERSON. Includes any agency of the state, and any county, city, special district, or other local public agency, and any individual, firm, association, partnership, business trust, corporation, nonprofit corporation, limited liability company, or company.

STATE RESPONSIBILITY AREA. An area of the state identified by the Board of Forestry and Fire Protection pursuant to Public Resources Code Section 4125 where the financial responsibility for preventing and suppressing fires is primarily the responsibility of the state.

STRUCTURE. A building that has walls and a roof and an area of 120 square feet or greater.

ZONE 0. Referred to as the Ember-resistant Zone or Home Ignition Zone, it extends from 0 to 5 feet from any Structure, attached deck, or Outbuilding on the Parcel. Zone 0 requires the most stringent wildfire fuel reduction. This Ember-resistant Zone is designed to ensure that fire or embers from igniting materials cannot spread to the Structure.

ZONE 1. Referred to as the Lean, Clean, and Green Zone, it extends from 5 feet to 30 feet from any Structure or attached deck, or from 5 feet from the Structure or attached deck to the property line, whichever is closer.

ZONE 2. Referred to as the Reduced Fuel Zone, it extends from 30 feet to 100 feet from any Structure or attached deck, or from 30 feet from the Structure or attached deck to the property line, whichever is closer.

SECTION 4. FUEL MITIGATION REQUIREMENTS

(a) Prohibition. No Person who has any ownership or possessory interest in or control of a Parcel within any State Responsibility Area or Local Responsibility Area within the Fire District shall allow to exist thereon any Hazardous Vegetation or Combustible Material that constitutes a Fire Hazard as determined by the Fire Code Official.

(b) Defensible Space For Structures and Attached Decks. All Persons who have any ownership or possessory interest in or control of any Parcel within the Fire District shall maintain Defensible Space adjacent to all Structures and attached decks on the Parcel as follows:

(1) Zone 0.

(A) Maintain all ground areas within 2 feet of any Structure or attached deck free of combustible ground cover, including combustible mulch and bark. Hardscape materials, such as gravel, pavers, concrete, and other noncombustible mulch materials are permitted.

Exception: Ornamental vegetative fuels or cultivated ground cover that are irrigated or have a high moisture content, such as green grass, ivy, succulents or similar plants used a ground cover are allowed if, in the opinion of the Fire Code Official, they do not form a means of readily transmitting fire.

(B) All native and nonnative plant species within two feet of a Structure or attached deck must maintained such that foliage, twigs, and branches create a minimum one-foot clearance above the ground or the ground cover.

(C) Remove all Hazardous Vegetation and Combustible Material capable of being ignited and endangering the Structure or attached deck as determined by the Fire Code Official.

(D) Annual grasses, which are not permitted within 2 feet of a Structure or attached deck must be removed or cut to less than 3 inches no later than 1 June of each year.

(E) Monterey Pines (*Pinus radiata*) and Eucalyptus (Genus *Eucalyptus*) are not permitted.

(F) Maintain 6 feet of vertical clearance between branches and all other parts of trees overhanging the roof or other portion of any Structure or attached deck.

(G) Maintain any tree, shrub, or other plant adjacent to or overhanging any Structure or attached deck free of branches, dead limbs, or other Combustible Material.

(H) Maintain the roof and roof gutters of any Structure, and the surface of any attached deck free of leaves, needles, Hazardous Vegetation, and Combustible Materials.

(I) Maintain trees to remove Ladder Fuels so that foliage, twigs, or branches are greater than 6 feet above the ground or surface fuels.

(J) Remove all branches within 10 feet of any chimney or stovepipe outlet.

(K) Storage of firewood, lumber, or other Combustible Material is not permitted.

(L) Non-irrigated brush is not permitted.

(2) Zone 1.

(A) Remove all Hazardous Vegetation and Combustible Material capable of being ignited and endangering the Structure as determined by the Fire Code Official.

- (B) Annual grasses must be removed or cut to less than 3 inches no later than 1 June of each year.
- (C) Maintain trees to remove Ladder Fuels so that foliage, twigs, or branches are greater than 6 feet above the ground or surface fuels.
- (D) Non-irrigated brush is not permitted.
- (E) New trees shall be planted and maintained so that the tree's drip line at maturity is a minimum of 10 feet from any Structure.
- (F) The horizontal distance between crowns of new trees and crowns of adjacent trees shall not be less than 10 feet.
- (G) Liquid Propane Gas (LPG) storage tanks, Outbuildings, firewood, lumber, and other Combustible Material shall be surrounded by 10 feet of bare mineral soil and no Hazardous Vegetation is permitted within 20 feet of LPG storage tanks, Outbuildings, firewood, lumber, or other Combustible Material.

(3) Zone 2.

- (A) Remove all Hazardous Vegetation and Combustible Material capable of being ignited and endangering the Structure as determined by the Fire Code Official.
- (B) Annual grasses must be removed or cut to less than 3 inches no later than 1 June of each year.
- (C) Maintain trees to remove Ladder Fuels so that foliage, twigs, or branches are greater than 6 feet above the ground.
- (D) Non-irrigated brush is not permitted.
- (E) New trees shall be planted and maintained so that the tree's drip line at maturity is a minimum of 10 feet from any Structure.
- (F) The horizontal distance between crowns of new trees and crowns of adjacent trees shall not be less than 10 feet.
- (G) Any Structure or covering over a pile of lumber or firewood must be constructed or made of fire resistant material
- (H) Liquid Propane Gas (LPG) storage tanks, Outbuildings, firewood, lumber, and other Combustible Material shall be surrounded by 10 feet of bare mineral soil and no Hazardous Vegetation is permitted within 20 feet of LPG storage tanks, Outbuildings, firewood, lumber, or other Combustible Material.

(c) Defensible Space For Outbuildings. All Persons who have any ownership or possessory interest in or control of any Parcel within the Fire District shall comply with the Zone 0 Defensible Space requirements of Section (b)(1), above, with respect to any Outbuildings on the Parcel that are within 100 feet of a Structure or attached deck on the Parcel.

(d) Roadside Vegetation. All Persons who have any ownership or possessory interest in or control of any Parcel within the Fire District that abuts a Fire Apparatus Access Road shall:

(1) Remove all Hazardous Vegetation that is within three feet, measured horizontally, from the paved edge of the Fire Apparatus Access Road.

(2) Ensure that all portions of any tree overhanging a Fire Apparatus Access Road has at least 15 feet, measured vertically, of clearance from the roadway surface.

(3) By December 31, 2023, remove all Junipers (genus juniperus) and Bamboo (genus bambusa) from within 10 feet of the paved edge of Fire Apparatus Access Road.

(e) Fences. No Person who has any ownership or possessory interest in or control of any Parcel within the Fire District shall construct or allow to be constructed or placed on the Parcel any screen, fence or other Structure made, in whole or in part, of bark, mulch, or wood chips within 100 feet of a Structure or within 10 feet of the paved edge of a Fire Apparatus Access Road.

(f) Conflicting Requirements. If any portion of any Parcel is subject to both the fuel mitigation requirements of this Ordinance 23-03 and the fuel break requirements of Ordinance 23-04 or its successor ordinance, thereby creating overlapping or conflicting requirements, the more restrictive requirements, as determined by the Fire Code Official, shall apply.

(g) Environmental Concerns. Compliance with the fuel mitigation requirements of this Ordinance shall not result in the taking of endangered, rare, or threatened plant or animal species, significant erosion, or sedimentation of surface waters. When these or other conditions make it impractical to comply with the fuel mitigation requirements, the person who owns, leases, or controls the Parcel or Parcels shall request that the Fire Code Official grant a Modification of the requirements.

SECTION 5. SALE OR TRANSFER OF PROPERTY.

Before the close of escrow on the sale of any Parcel within the Fire District, the seller shall provide to the buyer documentation from the Fire Code Official stating that the property is currently in compliance with the fuel mitigation requirements of this Ordinance 23-03 and the fuel break requirements of Ordinance 23-04 or its successor ordinance. The Fire Code Official shall have the discretion to accept alternate means and measures to achieve compliance if completion of the required work will delay the sale or transfer of the property.

SECTION 6. PENALTIES.

Failure to comply with the fuel mitigation requirements of this Ordinance may result in the issuance of an Administrative Citation under Ordinance 21-01 or its successor ordinance, or a declaration by the Board that the conditions on the property constitute a public nuisance to be

abated at the property owner's expense, provided, however, that nothing in this Section 6 shall limit the Fire District from pursuing other available legal remedies for violations of this Ordinance, including but not limited to civil penalties. In addition, any Person who violates any provision of this Ordinance shall be guilty of an infraction or a misdemeanor in accordance with Health and Safety Code Section 13871.

SECTION 7. SEVERABILITY.

If any section, subsection, paragraph, sentence, or clause of this ordinance is determined in a final ruling by a court of competent jurisdiction to be invalid or unenforceable, such finding shall not invalidate any remaining portions of the ordinance. The Board hereby declares that it would have adopted this ordinance, and each section, subsection, sentence, or clause thereof, irrespective of the fact that any portion of the ordinance be declared invalid.

SECTION 8. DATE OF EFFECT.

This ordinance shall become effective on , 2023, and within fifteen (15) days of passage shall be published once with the names of the Directors voting for and against it, in the Contra Costa Times, a newspaper of general circulation in this District. Passed and Adopted on , 2023, by the following vote:

PASSED, APPROVED and ADOPTED this XXth day of , 2023 at the regular meeting of the Board of Directors held virtually on , 2023, on a motion made by Director , seconded by Director , and duly carried with the following roll call vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ORDINANCE 23-03

ATTEST:

John Jex, President
Board of Directors

ATTEST:

Marcia Holbrook
District Secretary/District Clerk

APPROVED AS TO FORM:

Jonathan V. Holtzman
District Counsel