

City of Calabasas, Council Meeting

October 13, 2021

Preparing for Wildfire

Home Hardening and Fire-wise Landscaping Programs



Antoine Kunsch - Community Resilience Coordinator

Resource Conservation District of the Santa Monica Mountains

akunsch@rcdsmm.org



Resource Conservation District of the Santa Monica Mountains

www.rcdsmm.org

Special District of the State of CA

Promote land stewardship and resource conservation

Current services and projects:

Restoration services

Biological inventory

Environmental education

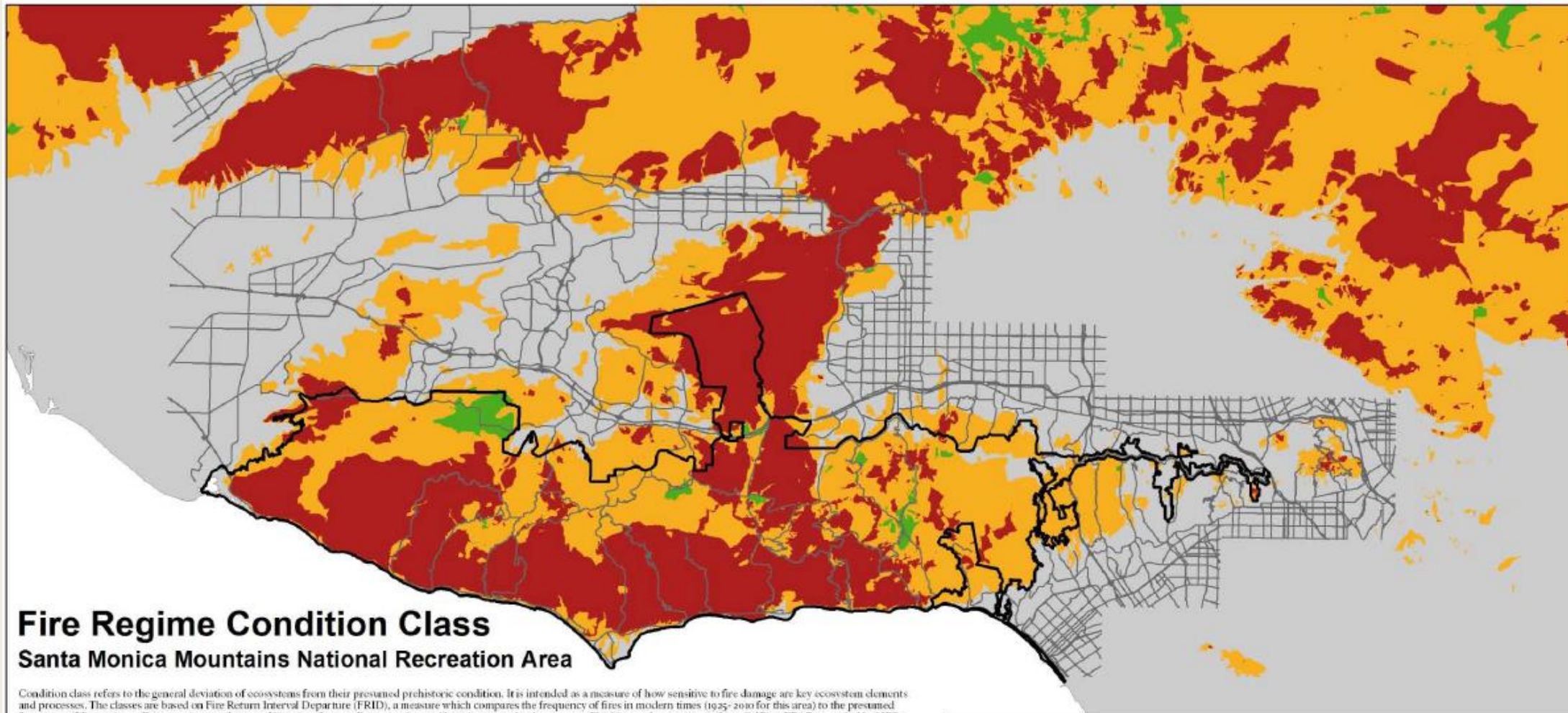
Place-based journalism (distance learning)

Community resilience and sustainable land-use

Consider supporting the RCD with a [tax-deductible donation](#).
Thank you!



The green areas are burning about as often as they're supposed to.

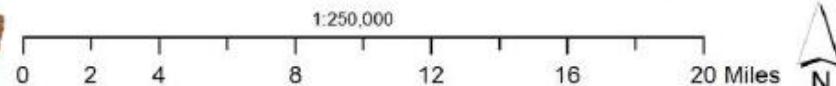


Fire Regime Condition Class Santa Monica Mountains National Recreation Area

Condition class refers to the general deviation of ecosystems from their presumed prehistoric condition. It is intended as a measure of how sensitive to fire damage are key ecosystem elements and processes. The classes are based on Fire Return Interval Departure (FRID), a measure which compares the frequency of fires in modern times (1925-2010 for this area) to the presumed frequency of fires prior to Euroamerican settlement. Historic reference fire return interval here is assumed to be 70 years. Fire history data 1925-2010 from CalFire-FRAP, amended by NPS-SAMO. Prescribed fires were excluded from this analysis.

The Santa Monica Mountains generally experience more wildfire in modern times than they did before settlement. This threatens the ecological sustainability of native species in many areas. Resulting damage will be ongoing without more effective fire prevention.

For more detailed information on methods of calculating FRID and Condition Classes, see: Safford, H.D., K. van de Water, and D. Schmidt. 2011. California Fire Return Interval Departure (FRID) map, 2010 version. USDA Forest Service, Pacific Southwest Region and The Nature Conservancy- CA. <http://www.fs.fed.us/r5/rs/clearinghouse/rsgis/frid>



Recreation Area boundary
major roads

Fire Regime Condition Class

- 3 (-67% and beyond departure from historic fire return interval)
- 2 (-33% to -67% departure from historic fire return interval)
- 1 (+33% to -33% departure from historic fire regime interval)

Guidance for Sustainable Defensible Space Landscaping in the SMMNRA and southern California

How to **increase wildfire resilience and maintain habitat quality** in the southern California Wildland Urban interface?

- Reduce human ignitions and the frequency of large fires
- **Manage the WUI to maintain or re-establish native vegetation.**



**Sustainable
Defensible Space**

Eco-appropriate Homescaping
for Wildfire Resilience

Acknowledgments



Funding for **Guidance for Sustainable Defensible Space Landscaping in the SMMNRA and Southern California** was provided by the California Department of Forestry and Fire Protection as part of the California Climate Investments Program – a statewide program that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment, particularly in disadvantaged communities.

TECHNICAL ADVISORY COMMITTEE



BRAND, WEB AND PRODUCTION

RIOS



What is available on defensiblespace.org?



Home hardening

- Start with the home
- Fire-resistant materials
- Prevent ember-intrusion



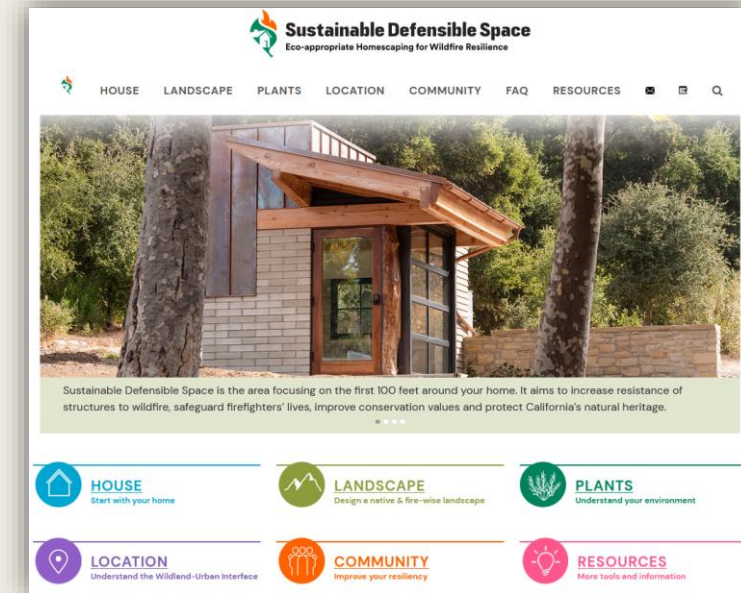
Defensible Space

- Ember-resistant zone
- Fire-wise landscaping
- Maintenance and spacing



Community Preparedness

- Community planning
- Wildfire Action Plan
- Sign-up for emergency alerts



What is available on defensiblespace.org?



Location: Understand the WUI

- Understand the wildfire risk
- Identify habitat type
- Emergency resources



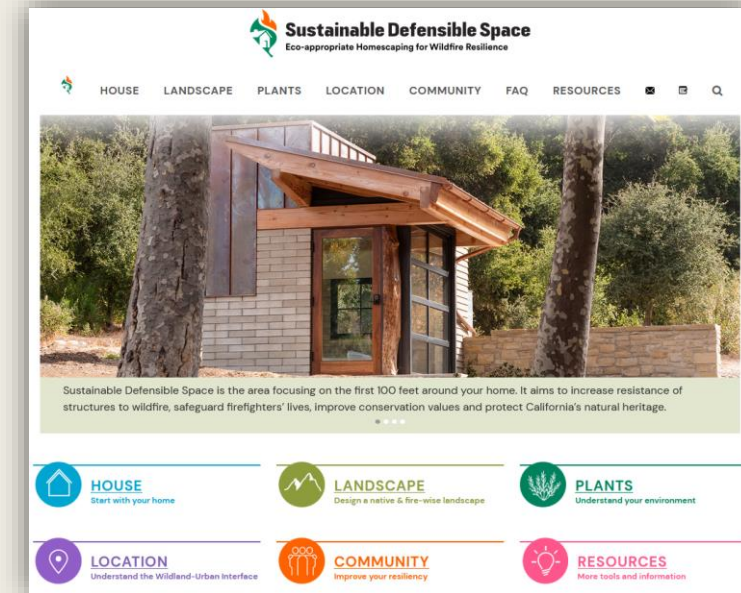
Plants: Understand the environment

- What is a “fire-resistant” plant?
- The benefits of native plants
- Creating a sustainable landscape



Resources and FAQ

- Sources and additional resources





Home Hardening

Start with the home





- Differentiate new construction and retrofit

NEW	UPGRADE	MAINTAIN
-----	---------	----------

< Roof Eaves, Overhangs, Soffit Gutters Vents Windows, Skylights Doors Walls, Sidings, Coatings Fence >

The roof is the most vulnerable component of your home! During a wildfire it must be able to resist wind-blown embers and other wildfire exposures. Complex roofs, where the roof meets vertical walls and/or includes dormers, present additional vulnerabilities.

RELATIVE COST AND PRIORITY LEVEL OF HOME HARDENING FEATURES FOR FIRE-RESISTANCE

Relative cost: Indicates the relative cost of upgrading the listed features to ember-resistant materials and design.
Priority level: Indicates the features most vulnerable to wildfires and embers. Keep in mind each situation is unique and may change your priority level.

ENLARGE CHART

ENLARGE DIAGRAM

Roof Covering and Assemblies: Install Class A Roof

STAND-ALONE CLASS A CLASS A ASSEMBLY RATED CLASS A CLASS B,C or UNRATED

Roof covering fire ratings are Class A, B, C, or unrated; with Class A providing the best performance. Common Class A roof coverings include asphalt fiberglass composition shingles, concrete and flat/barrel-shaped tiles. A roof can achieve a Class A rating on its own (stand-alone Class A) or when combined with other fire-resistant elements (assembly-rated Class A).

1. Stand-alone Class A

Common stand-alone Class A roof coverings include:

- Clay tiles
- Slate
- Asphalt fiberglass composition shingles
- Concrete and flat/barrel-shaped tiles

2. Assembly-rated Class A

Some materials have a "by assembly" Class A fire rating which means, additional materials must be used between the roof covering and sheathing to attain that rating.

Examples of roof coverings with a "by assembly" fire rating include aluminum:

- Aluminum (metal) roofs
- Fire-retardant treated wood shakes (with Class B fire rating, approved by the California Office of the State Fire Marshal as a result of passing the required natural weathering test).
- Some recycled rubber and or plastic composite materials.



- Differentiate new construction and retrofit
- Divide content by architectural features

NEW	UPGRADE	MAINTAIN					
< Roof	Eaves, Overhangs, Soffit	Gutters	Vents	Windows, Skylights	Doors	Walls, Sidings, Coatings	Fence >

The roof is the most vulnerable component of your home! During a wildfire it must be able to resist wind-blown embers and other wildfire exposures. Complex roofs, where the roof meets vertical walls and/or includes dormers, present additional vulnerabilities.

RELATIVE COST AND PRIORITY LEVEL OF HOME HARDENING FEATURES FOR FIRE-RESISTANCE

Relative cost: Indicates the relative cost of upgrading the listed features to ember-resistant materials and design.
Priority level: Indicates the features most vulnerable to wildfires and embers. Keep in mind each situation is unique and may change your priority level.

ENLARGE CHART

ENLARGE DIAGRAM

Roof Covering and Assemblies: Install Class A Roof

Roof covering fire ratings are Class A, B, C, or unrated; with Class A providing the best performance. Common Class A roof coverings include asphalt fiberglass composition shingles, concrete and flat/barrel-shaped tiles. A roof can achieve a Class A rating on its own (stand-alone Class A) or when combined with other fire-resistant elements (assembly-rated Class A).

- 1. Stand-alone Class A**
Common stand-alone Class A roof coverings include:
 - Clay tiles
 - Slate
 - Asphalt fiberglass composition shingles
 - Concrete and flat/barrel-shaped tiles
- 2. Assembly-rated Class A**
Some materials have a "by assembly" Class A fire rating which means, additional materials must be used between the roof covering and sheathing to attain that rating.
Examples of roof coverings with a "by assembly" fire rating include aluminum:
 - Aluminum (metal) roofs
 - Fire-retardant treated wood shakes (with Class B fire rating, approved by the California Office of the State Fire Marshal as a result of passing the required natural weathering test).
 - Some recycled rubber and or plastic composite materials.



- Differentiate new construction and retrofit
- Divide content by architectural features
- Help people prioritize based on their budget

NEW **UPGRADE** **MAINTAIN**

< **Roof** Eaves, Overhangs, Soffit Gutters Vents Windows, Skylights Doors Walls, Sidings, Coatings Fence >

The roof is the most vulnerable component of your home! During a wildfire it must be able to resist wind-blown embers and other wildfire exposures. Complex roofs, where the roof meets vertical walls and/or includes dormers, present additional vulnerabilities.

RELATIVE COST AND PRIORITY LEVEL OF HOME HARDENING FEATURES FOR FIRE-RESISTANCE

Relative cost: Indicates the relative cost of upgrading the listed features to ember-resistant materials and design.
Priority level: Indicates the features most vulnerable to wildfires and embers. Keep in mind each situation is unique and may change your priority level.

ENLARGE CHART

Roof Covering and Assemblies: Install Class A Roof

Roof covering fire ratings are Class A, B, C, or unrated; with Class A providing the best performance. Common Class A roof coverings include asphalt fiberglass composition shingles, concrete and flat/barrel-shaped tiles. A roof can achieve a Class A rating on its own (stand-alone Class A) or when combined with other fire-resistant elements (assembly-rated Class A).

1. Stand-alone Class A
Common stand-alone Class A roof coverings include:

- Clay tiles
- Slate
- Asphalt fiberglass composition shingles
- Concrete and flat/barrel-shaped tiles

2. Assembly-rated Class A
Some materials have a "by assembly" Class A fire rating which means, additional materials must be used between the roof covering and sheathing to attain that rating.

Examples of roof coverings with a "by assembly" fire rating include aluminum:

- Aluminum (metal) roofs
- Fire-retardant treated wood shakes (with Class B fire rating, approved by the California Office of the State Fire Marshal as a result of passing the required natural weathering test).
- Some recycled rubber and or plastic composite materials.

ENLARGE DIAGRAM



- Differentiate new construction and retrofit
- Divide content by architectural features
- Help people prioritize based on their budget
- Provide recommendations and background information

NEW UPGRADE MAINTAIN

< Roof Eaves, Overhangs, Soffit Gutters Vents Windows, Skylights Doors Walls, Sidings, Coatings Fence >

The roof is the most vulnerable component of your home! During a wildfire it must be able to resist wind-blown embers and other wildfire exposures. Complex roofs, where the roof meets vertical walls and/or includes dormers, present additional vulnerabilities.

RELATIVE COST AND PRIORITY LEVEL OF HOME HARDENING FEATURES FOR FIRE-RESISTANCE

Relative cost: Indicates the relative cost of upgrading the listed features to ember-resistant materials and design.
Priority level: Indicates the features most vulnerable to wildfires and embers. Keep in mind each situation is unique and may change your priority level.

ENLARGE CHART

Roof Covering and Assemblies: Install Class A Roof

STAND-ALONE CLASS A ASSEMBLY RATED CLASS A

CLASS A

CLASS B, C or UNRATED

Roof covering fire ratings are Class A, B, C, or unrated; with Class A providing the best performance. Common Class A roof coverings include asphalt fiberglass composition shingles, concrete and flat/barrel-shaped tiles. A roof can achieve a Class A rating on its own (stand-alone Class A) or when combined with other fire-resistant elements (assembly-rated Class A).

1. Stand-alone Class A
Common stand-alone Class A roof coverings include:

- Clay tiles
- Slate
- Asphalt fiberglass composition shingles
- Concrete and flat/barrel-shaped tiles

2. Assembly-rated Class A
Some materials have a "by assembly" Class A fire rating which means, additional materials must be used between the roof covering and sheathing to attain that rating.

Examples of roof coverings with a "by assembly" fire rating include aluminum:

- Aluminum (metal) roofs
- Fire-retardant treated wood shakes (with Class B fire rating, approved by the California Office of the State Fire Marshal as a result of passing the required natural weathering test).
- Some recycled rubber and or plastic composite materials.

ENLARGE DIAGRAM



Landscape

The defensible space





NEW

UPGRADE

SEASONAL MAINTENANCE

House

Zone 0

Zone 1

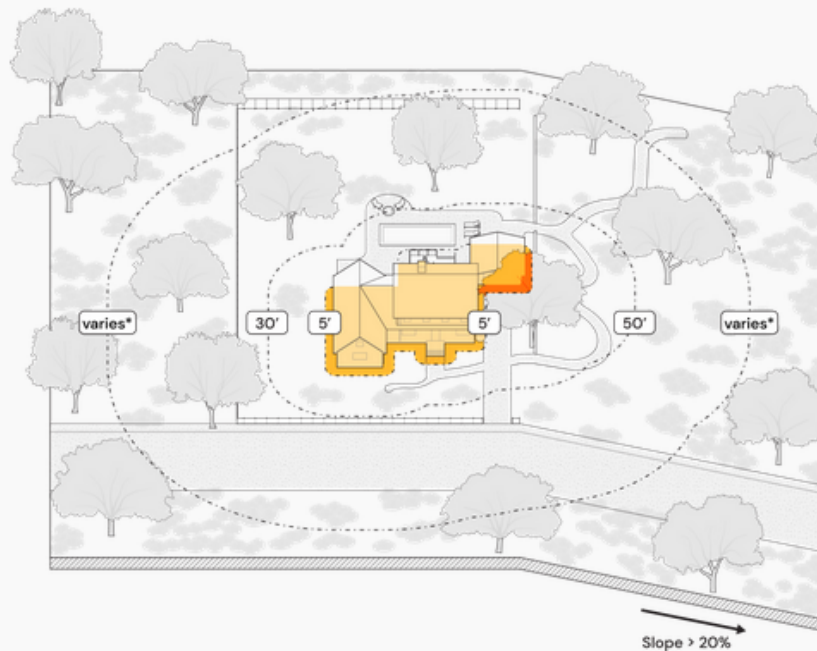
Zone 2

Surrounding Wildland

The Ember-Resistant Zone (ERZ)

The Ember-Resistant Zone is the first 5 feet around your home, including the structure itself. The objective in this zone is to avoid ignitions from windblown embers landing on or near the direct surroundings of the house and starting a fire. **Ember ignitions are responsible for the majority of homes lost or damaged in wildfires.** In the Ember-resistant Zone, all home building materials, vegetation, equipment, outdoor furniture, toys or anything else that could be ignited by embers must be removed or replaced. Research from the Insurance Institute for Business and Home Safety (IBHS) shows that **the first 0 to 5 feet around the house has the greatest impact on reducing the risk of losing a home to wildfire.**

No vegetation is recommended within 5 feet of any structure. No landscape mulch or wood chips. Use clear soil, rocks, gravel or concrete. No Trees.



ENLARGE THE DIAGRAM

* The size of the zones shown above are supported by research into home losses in wildfires, and are consistent with most local regulations at the time of publication. Based on this evidence and current CalFire standards, we show a maximum distance for native vegetation modification of 100' from the house. However, the type of vegetation, terrain, and local regulations may require additional thinning beyond 100'. The Los Angeles County Fire Department may require up to 200' of defensible space. [Contact your local Fire Department for specific](#)

Recommendations

-  No vegetation is recommended within 5 feet of any structure
-  Keep surrounding area of your structures clear of combustible materials
-  Install hard surfaces, such as concrete walkways, or use noncombustible mulch products such as rocks and gravels
-  Maintain a 5-foot zone free of dead plant materials
-  Include footprint of any attached structure, such as a deck, within the Ember-Resistant Zone
-  Keep 6 inches of non-combustibility above ground at the base of your walls to prevent ignition of the

- Differentiate new construction and existing



NEW

UPGRADE

SEASONAL MAINTENANCE

House

Zone 0

Zone 1

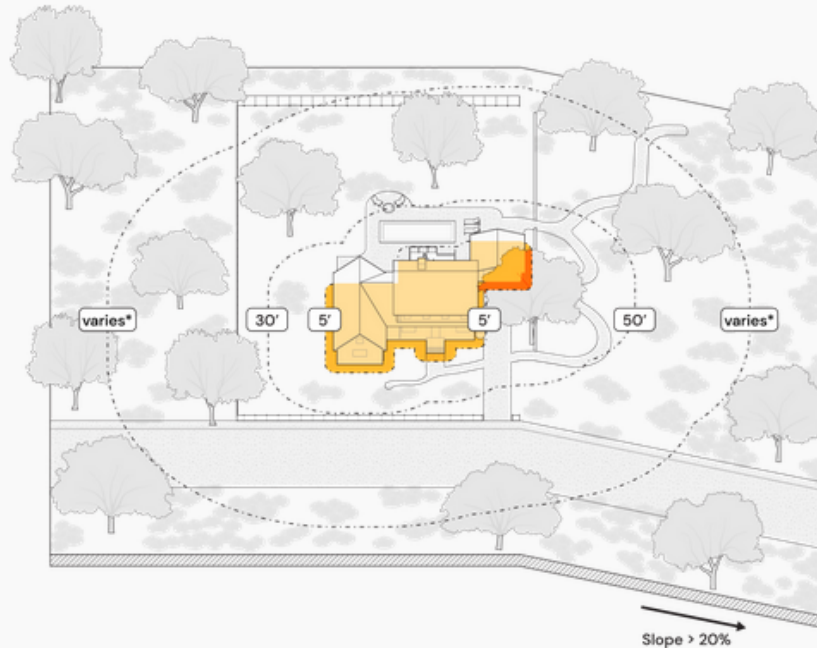
Zone 2

Surrounding Wildland

The Ember-Resistant Zone (ERZ)

The Ember-Resistant Zone is the first 5 feet around your home, including the structure itself. The objective in this zone is to avoid ignitions from windblown embers landing on or near the direct surroundings of the house and starting a fire. **Ember ignitions are responsible for the majority of homes lost or damaged in wildfires.** In the Ember-resistant Zone, all home building materials, vegetation, equipment, outdoor furniture, toys or anything else that could be ignited by embers must be removed or replaced. Research from the Insurance Institute for Business and Home Safety (IBHS) shows that **the first 0 to 5 feet around the house has the greatest impact on reducing the risk of losing a home to wildfire.**

No vegetation is recommended within 5 feet of any structure. No landscape mulch or wood chips. Use clear soil, rocks, gravel or concrete. No Trees.



ENLARGE THE DIAGRAM

* The size of the zones shown above are supported by research into home losses in wildfires, and are consistent with most local regulations at the time of publication. Based on this evidence and current CalFire standards, we show a maximum distance for native vegetation modification of 100' from the house. However, the type of vegetation, terrain, and local regulations may require additional thinning beyond 100'. The Los Angeles County Fire Department may require up to 200' of defensible space. [Contact your local Fire Department for specific](#)

Recommendations

-  No vegetation is recommended within 5 feet of any structure
-  Keep surrounding area of your structures clear of combustible materials
-  Install hard surfaces, such as concrete walkways, or use noncombustible mulch products such as rocks and gravels
-  Maintain a 5-foot zone free of dead plant materials
-  Include footprint of any attached structure, such as a deck, within the Ember-Resistant Zone
-  Keep 6 inches of non-combustibility above ground at the base of your walls to prevent ignition of the

- Differentiate new construction and existing
- Divide content by zone



NEW

UPGRADE

SEASONAL MAINTENANCE

House

Zone 0

Zone 1

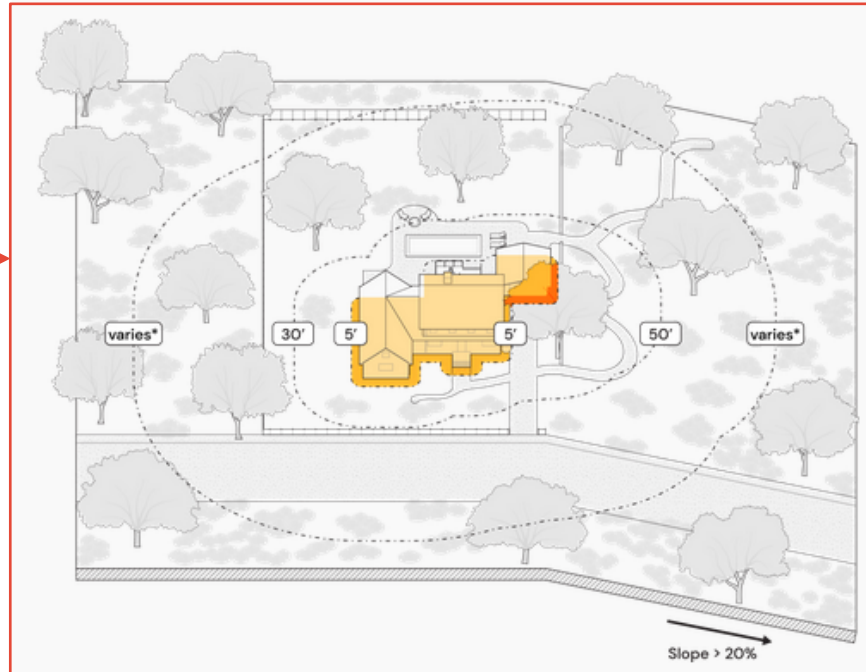
Zone 2

Surrounding Wildland

The Ember-Resistant Zone (ERZ)

The Ember-Resistant Zone is the first 5 feet around your home, including the structure itself. The objective in this zone is to avoid ignitions from windblown embers landing on or near the direct surroundings of the house and starting a fire. **Ember ignitions are responsible for the majority of homes lost or damaged in wildfires.** In the Ember-resistant Zone, all home building materials, vegetation, equipment, outdoor furniture, toys or anything else that could be ignited by embers must be removed or replaced. Research from the Insurance Institute for Business and Home Safety (IBHS) shows that **the first 0 to 5 feet around the house has the greatest impact on reducing the risk of losing a home to wildfire.**

No vegetation is recommended within 5 feet of any structure. No landscape mulch or wood chips. Use clear soil, rocks, gravel or concrete. No Trees.



ENLARGE THE DIAGRAM

* The size of the zones shown above are supported by research into home losses in wildfires, and are consistent with most local regulations at the time of publication. Based on this evidence and current CalFire standards, we show a maximum distance for native vegetation modification of 100' from the house. However, the type of vegetation, terrain, and local regulations may require additional thinning beyond 100'. The Los Angeles County Fire Department may require up to 200' of defensible space. [Contact your local Fire Department for specific](#)

- Differentiate new construction and existing
- Divide content by zone
- Provide diagrams with built-in messages

Recommendations

-  No vegetation is recommended within 5 feet of any structure
-  Keep surrounding area of your structures clear of combustible materials
-  Install hard surfaces, such as concrete walkways, or use noncombustible mulch products such as rocks and gravels
-  Maintain a 5-foot zone free of dead plant materials
-  Include footprint of any attached structure, such as a deck, within the Ember-Resistant Zone
-  Keep 6 inches of non-combustibility above ground at the base of your walls to prevent ignition of the



NEW

UPGRADE

SEASONAL MAINTENANCE

House

Zone 0

Zone 1

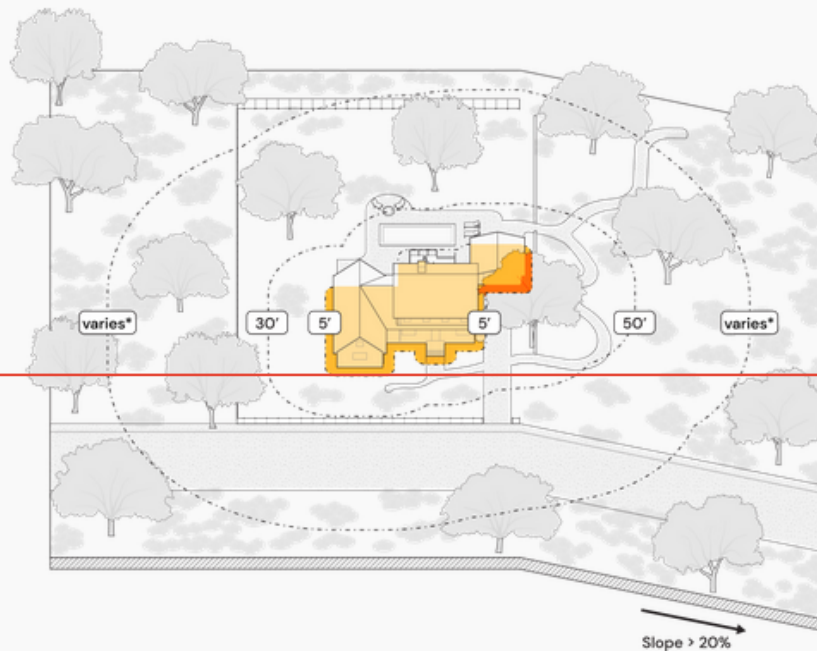
Zone 2

Surrounding Wildland

The Ember-Resistant Zone (ERZ)

The Ember-Resistant Zone is the first 5 feet around your home, including the structure itself. The objective in this zone is to avoid ignitions from windblown embers landing on or near the direct surroundings of the house and starting a fire. **Ember ignitions are responsible for the majority of homes lost or damaged in wildfires.** In the Ember-resistant Zone, all home building materials, vegetation, equipment, outdoor furniture, toys or anything else that could be ignited by embers must be removed or replaced. Research from the Insurance Institute for Business and Home Safety (IBHS) shows that **the first 0 to 5 feet around the house has the greatest impact on reducing the risk of losing a home to wildfire.**

No vegetation is recommended within 5 feet of any structure. No landscape mulch or wood chips. Use clear soil, rocks, gravel or concrete. No Trees.



ENLARGE THE DIAGRAM

* The size of the zones shown above are supported by research into home losses in wildfires, and are consistent with most local regulations at the time of publication. Based on this evidence and current CalFire standards, we show a maximum distance for native vegetation modification of 100' from the house. However, the type of vegetation, terrain, and local regulations may require additional thinning beyond 100'. The Los Angeles County Fire Department may require up to 200' of defensible space. [Contact your local Fire Department for specific](#)

Recommendations

1.



No vegetation is recommended within 5 feet of any structure

2.



Keep surrounding area of your structures clear of combustible materials

3.



Install hard surfaces, such as concrete walkways, or use noncombustible mulch products such as rocks and gravels

4.



Maintain a 5-foot zone free of dead plant materials

5.



Include footprint of any attached structure, such as a deck, within the Ember-Resistant Zone

6.



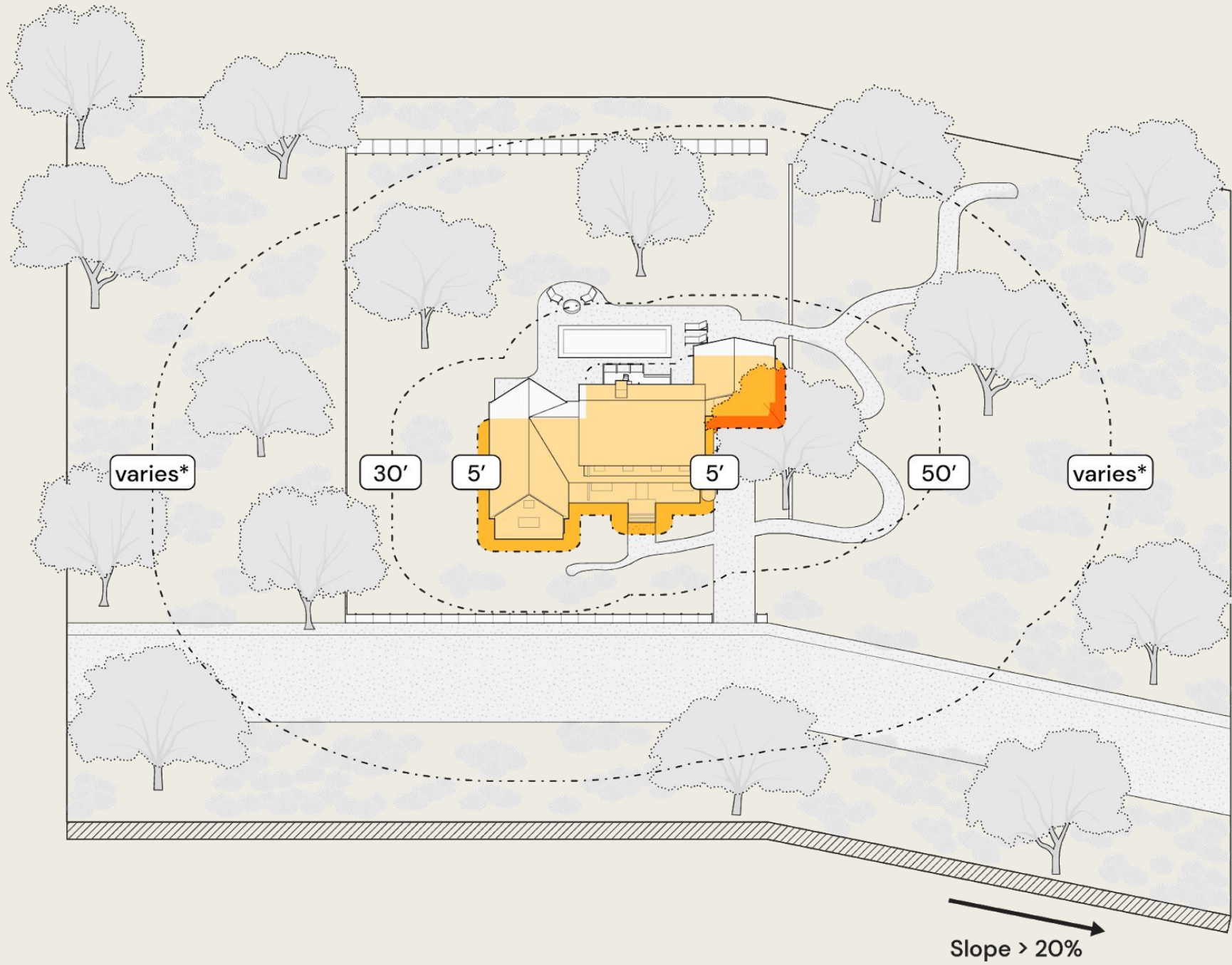
Keep 6 inches of non-combustibility above ground at the base of your walls to prevent ignition of the

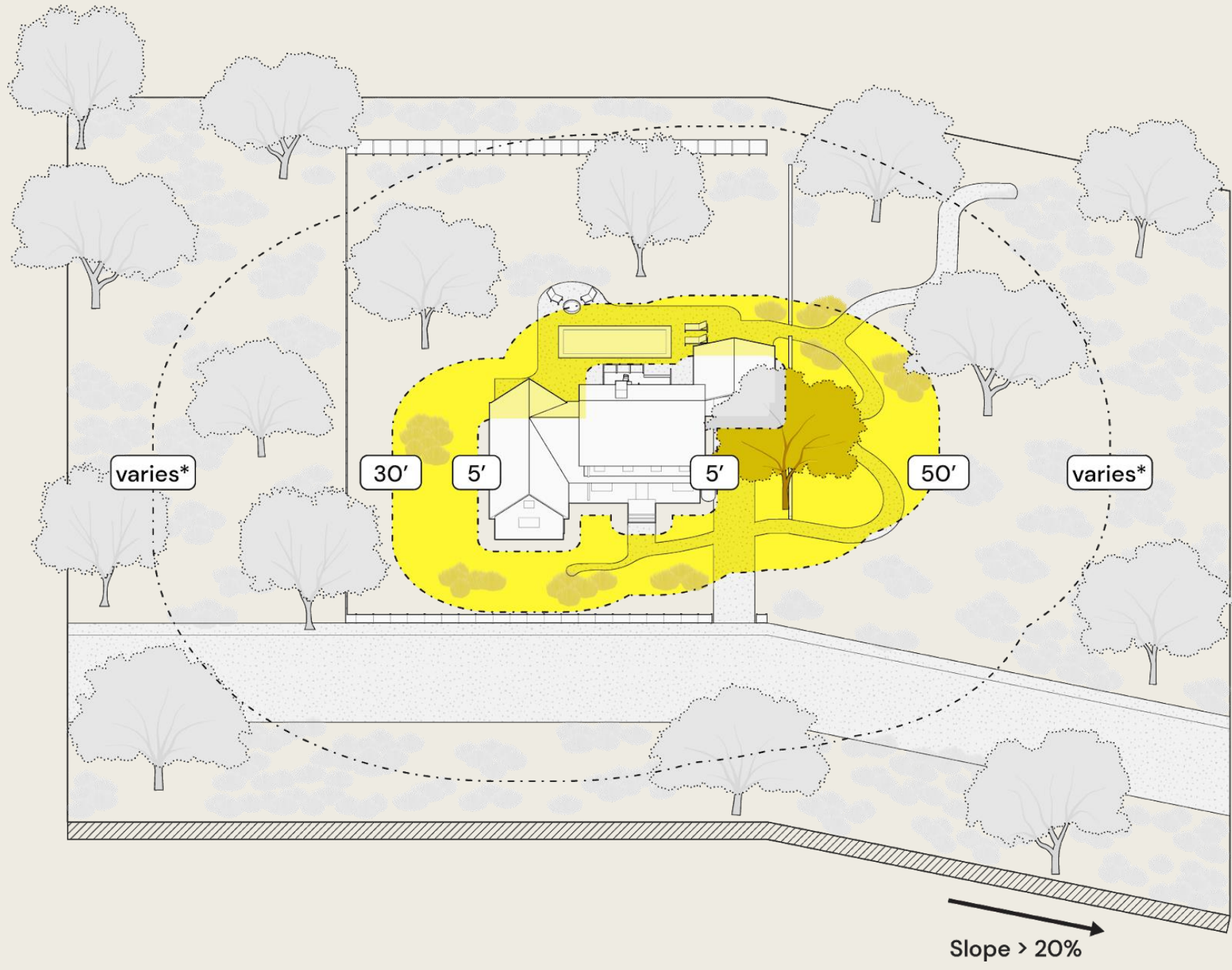
• Differentiate new construction and existing

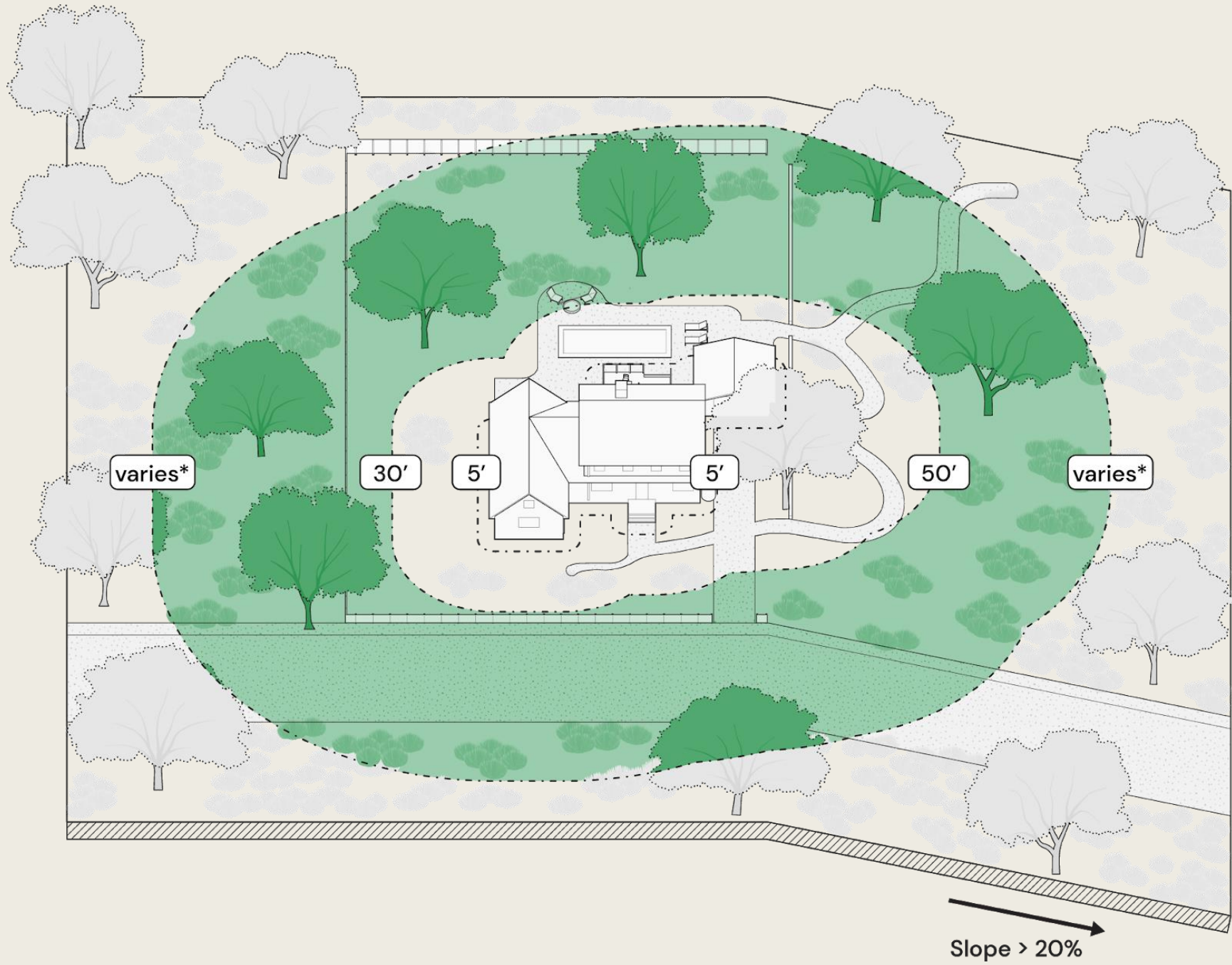
• Divide content by zone

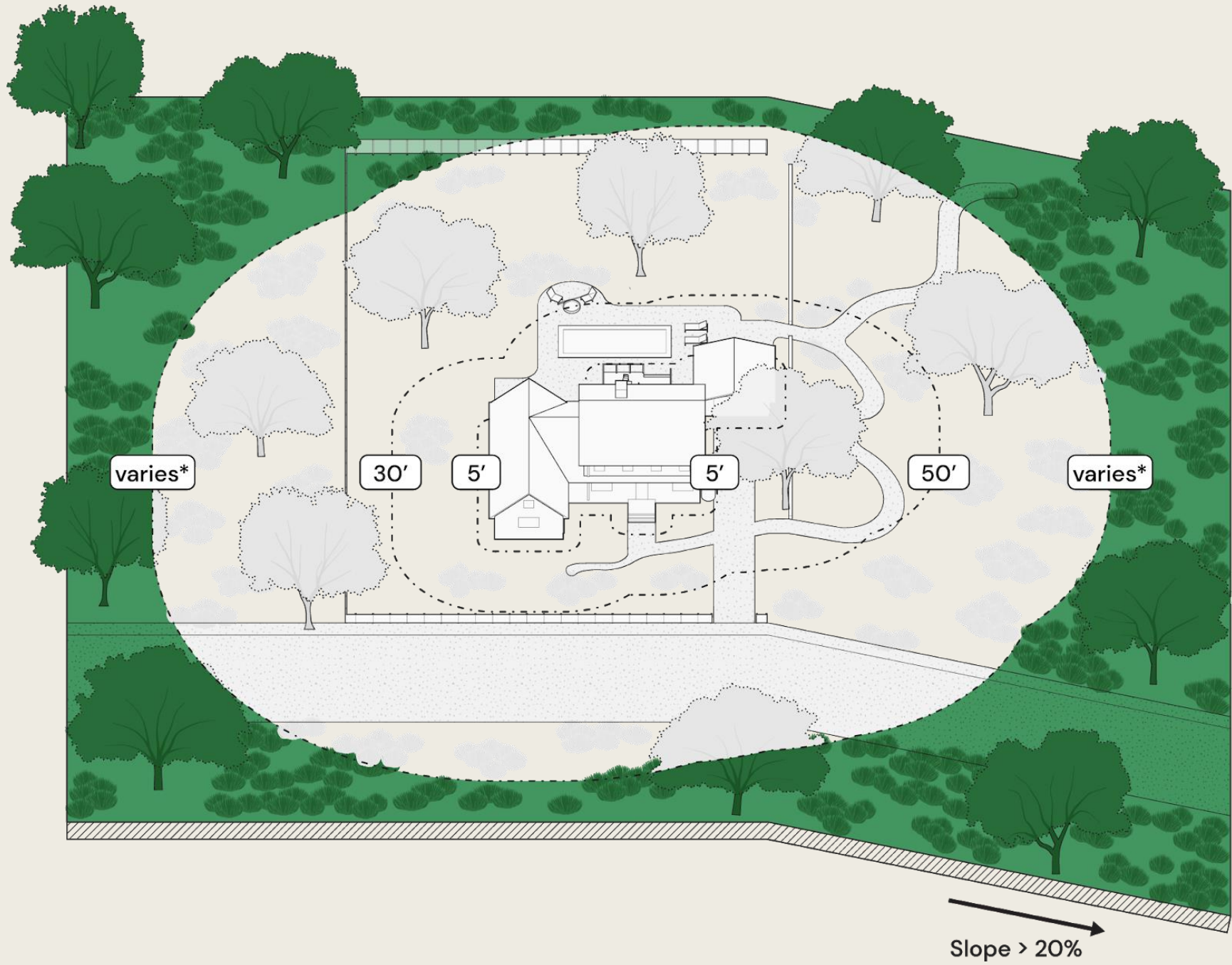
• Provide diagrams with built-in messages

• Recommendation list

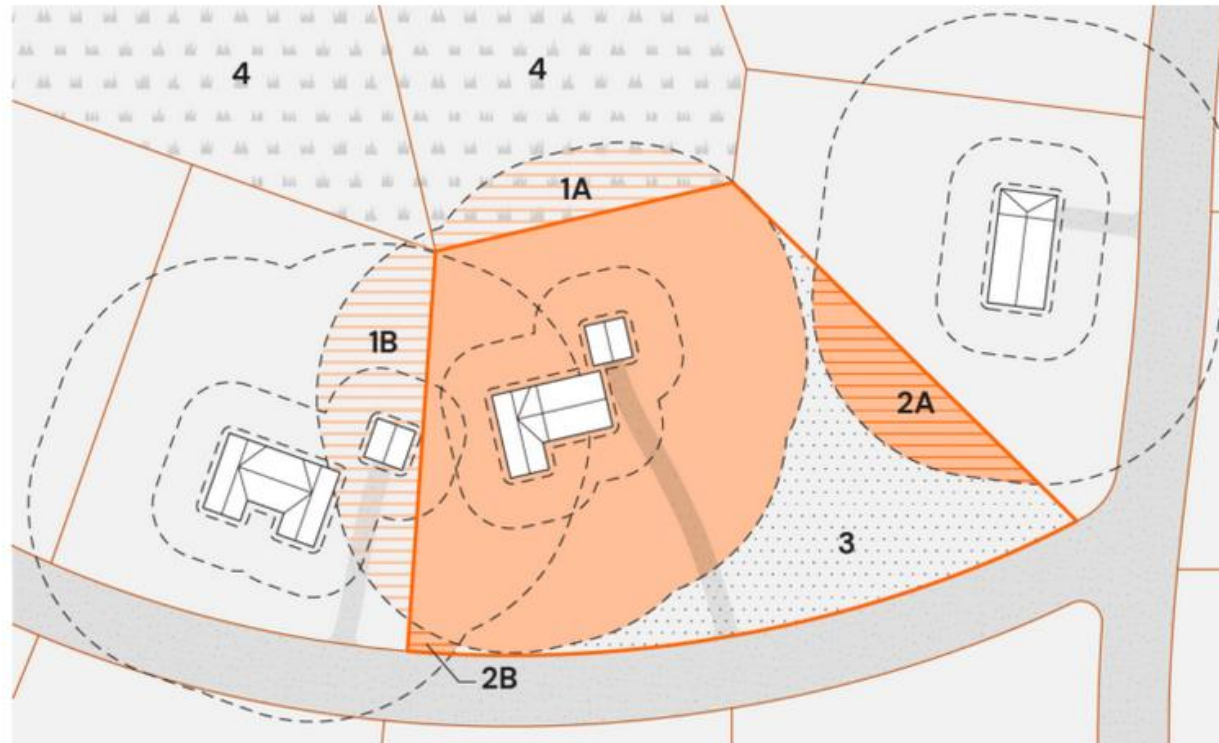








Community Planning is key to reducing vulnerability to wildfires. Your defensible space in the home ignition zone within the first 100' of your home may overlap with neighbors' properties in small lot neighborhoods. You may find your home ignition zone overlaps into adjacent properties or neighbors' properties onto yours. To maximize the benefits of your work, it is extremely important to work collaboratively with neighbors to understand how fire is likely to reach your community, to understand the nature of your shared risks, and to work together to reduce those risks.



Your home itself is the greatest source of potential threat to your neighbors if it ignites. The heat and embers from a structure fire are greater than any vegetation area of similar size. Protect your home from ignition to help protect your community.



Property Line



The defensible space on your property



FREE Programs **by the RCDSMM**

Home Ignition Zone Evaluation

Chipping and Composted Mulch Assistance

Defensible Space Consultation

Post-fire Native Vegetation Restoration

Home Ignition Zone Evaluations

A home evaluation is a **45-min review** of the vulnerability of the **house** and the **landscape** to wildfire and ember-ignition.

During this assessment, a trained evaluator will:

- review defensible space and home hardening principles
- make specific recommendations for the property
- discuss sustainable fire-wise landscape with CA native plants.

Participating homeowners receive a **detailed evaluation report** identifying 5 top priorities.

REGISTER AT <https://www.rcdsmm.org/what-we-do/home-ignition-zone-evaluations/>



Defensible Space Consultations

A defensible space consultation is a **2-hour fire-wise landscaping consultation** performed by a qualified landscape professional.

During this consultation, the homeowner will receive:

- a **review of defensible space concepts and the benefits of planting California native plants** to support biodiversity and reduce outdoor water use as appropriate in each of the fire zones
- a printed **plant list** generated by the Calscape online Garden Planner specific to the location
- a simple, site-specific **design plan** integrating sustainable defensible space guidelines about plant locations and spacing in selected areas of the site.

Registrations open soon!



Community Chipping and Mulch Program

This program aims at **reducing wildfire risk** by removing hazardous vegetation and **improving habitat quality** by using a **mulch/compost mix** in landscaping.

- **FREE** chipping services
- Participants are responsible for preparing chipping piles
- Resulting mulch left on site **to be mixed with Grade A compost** from the Las Virgenes Municipal Water District
- **Compost is FREE** for program participants

Assistance available for compost delivery for participants unable to pick-up compost.

REGISTER AT <https://www.rcdsmm.org/what-we-do/community-chipping-program/>



Post-Fire Native Vegetation Restoration

Homeowners and residents who have been impacted by wildfires may be eligible for fire recovery funding to restore native habitat on their property.

The RCD can provide **habitat design plans** and assist homeowners in the **restoration of burned areas**.

CONTACT COMMUNITY RESILIENCE AT akunsch@rcdsmm.org





THANK YOU

**Antoine Kunsch -
Community Resilience
Coordinator**

Resource Conservation District
of the Santa Monica Mountains

akunsch@rcdsmm.org