



CLIENT ADVISORY | California Wildland-Urban Interface Code, Title 24, Part 7

RISK AND RESILIENCY: THE NEW CALIFORNIA WILDFIRE CODE

California just changed the rules. Here's what commercial property owners and developers need to know.

On January 1, 2026, California's approach to wildfire-resistant construction was fundamentally reorganized. What was previously a patchwork of requirements scattered across the California Building Code has been consolidated into a single, dedicated statute: the California Wildland-Urban Interface Code (CWUIC), Title 24, Part 7. The change will have significant repercussions for commercial developers, land owners and portfolio managers considering projects in the designated areas.

This is not simply a repackaging of existing rules. The CWUIC introduces new minimum standards, tightens defensible space requirements, and — critically for commercial property owners — creates a multi-code compliance challenge that demands early, integrated coordination across architecture, landscape design, structural engineering, mechanical/electrical/plumbing (MEP) engineering, and fire protection engineering.

This advisory is written for retail, banking, hospitality, healthcare, manufacturing, and industrial clients considering new construction, major renovations, or site acquisitions in California. It explains what has changed, what it may mean for your project, and the due diligence you should take before committing to a site or design.

What is the *Wildland Urban Interface* (WUI)?



The WUI is where human development and the wildlands meet. Knowing if you're located within this area will help you better understand the risks impacting your building.

Why This Matters for Commercial Properties

Wildfire is no longer a residential concern. Commercial, institutional, and industrial facilities throughout California — from suburban retail centers to edge-of-metro distribution warehouses — now face a significantly more demanding regulatory environment.

POTENTIAL IMPACT

The consequences extend beyond code compliance:

- **Insurance availability and premium costs** are increasingly tied to WUI (Wildland Urban Interface) compliance status and California statewide fire hazard zone classification.
- **Lenders are beginning to factor wildfire exposure into underwriting decisions**, particularly for properties in State Responsibility Areas (SRAs) and Very High Fire Hazard Severity Zones (VHFHSZs).
- **Operational continuity risk**, including Public Safety Power Shutoff (PSPS) events, smoke intrusion, and evacuation disruptions, directly affects mission-critical and customer-facing facilities.
- **Construction cost premiums** should be anticipated for projects triggering WUI requirements, depending on building type and site conditions.

Beyond the direct cost impact, the structural change in the code framework — from Chapter 7A to a standalone Part 7 — means that teams accustomed to older compliance workflows will need to update their approach. The familiar Chapter 7A now contains only a placeholder directing the user to the new CWUIC.

The New Regulatory Framework: From Chapter 7A to Title 24, Part 7

The new CWUIC is modeled on the 2024 *International Wildland-Urban Interface Code (IWUIC)*, aligning California with national model code formatting while preserving the state’s characteristically rigorous testing and material standards.

Here’s a quick review of where you can find information on specific areas:

PREVIOUS LOCATION	CURRENT LOCATION
CBC Chapter 7A — Wildland-Urban Interface	Deleted, placeholder only. All technical content moved to CWUIC
Residential Code Section R337	Consolidated into CWUIC Chapter 5
Fire Code Chapter 49	Integrated into CWUIC scope and enforcement provisions
Scattered local amendments	Local jurisdictions must now align amendments to CWUIC framework

When Wildland Urban Interface Requirements are Triggered

WUI standards apply when a project involves any of the following on a site located in a designated hazard zone:

- New structure construction;
- Replacement of exterior elements (roof, siding, windows, decks);
- Modifications or additions affecting the exterior building envelope;
- Changes to building footprint or site conditions

Minor, interior-only renovations may not trigger WUI requirements; however, any work that touches the building envelope (including re-roofing, window replacement, or deck reconstruction) will bring the project into the WUI compliance framework.

Hazard Severity Classification: How Zones are Determined

California does not make WUI determinations on a project-by-project basis. Zone classification is established through CAL FIRE’s Fire Hazard Severity Zone (FHSZ) mapping methodology using a multi-variable model to determine the likelihood of an area burning and its expected fire behavior over a 30 to 50-year period. Factors include:

- Historical fire behavior and fire weather data;
- Vegetation type, fuel load, and fuel continuity;
- Slope topography and aspect;
- Wind exposure patterns and wind corridor analysis;
- Ember transport potential (spotting distance);
- Proximity to wildland-urban interface boundaries.

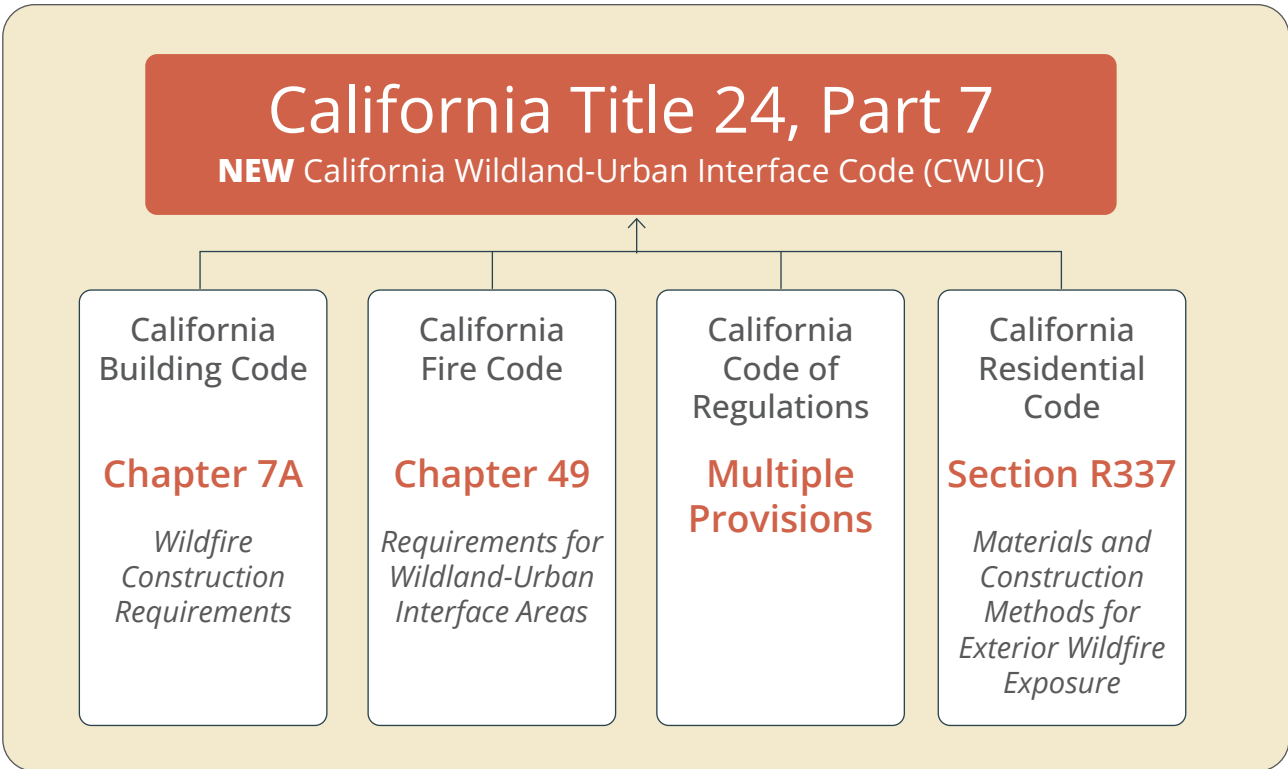


Figure 01: Code Transition Diagram — From Chapter 7A to Title 24, Part 7

The resulting designations — Moderate, High, and Very High Fire Hazard Severity — determine which requirements apply. For commercial properties, High and Very High FHSZ designations trigger full CWUIC compliance. Local jurisdictions may further

designate Local Responsibility Areas (LRAs) as Very High, extending the code's reach into more urbanized settings than historically covered. *These zones also determine full hazard disclosure to both tenants and future owners when the property is sold.*

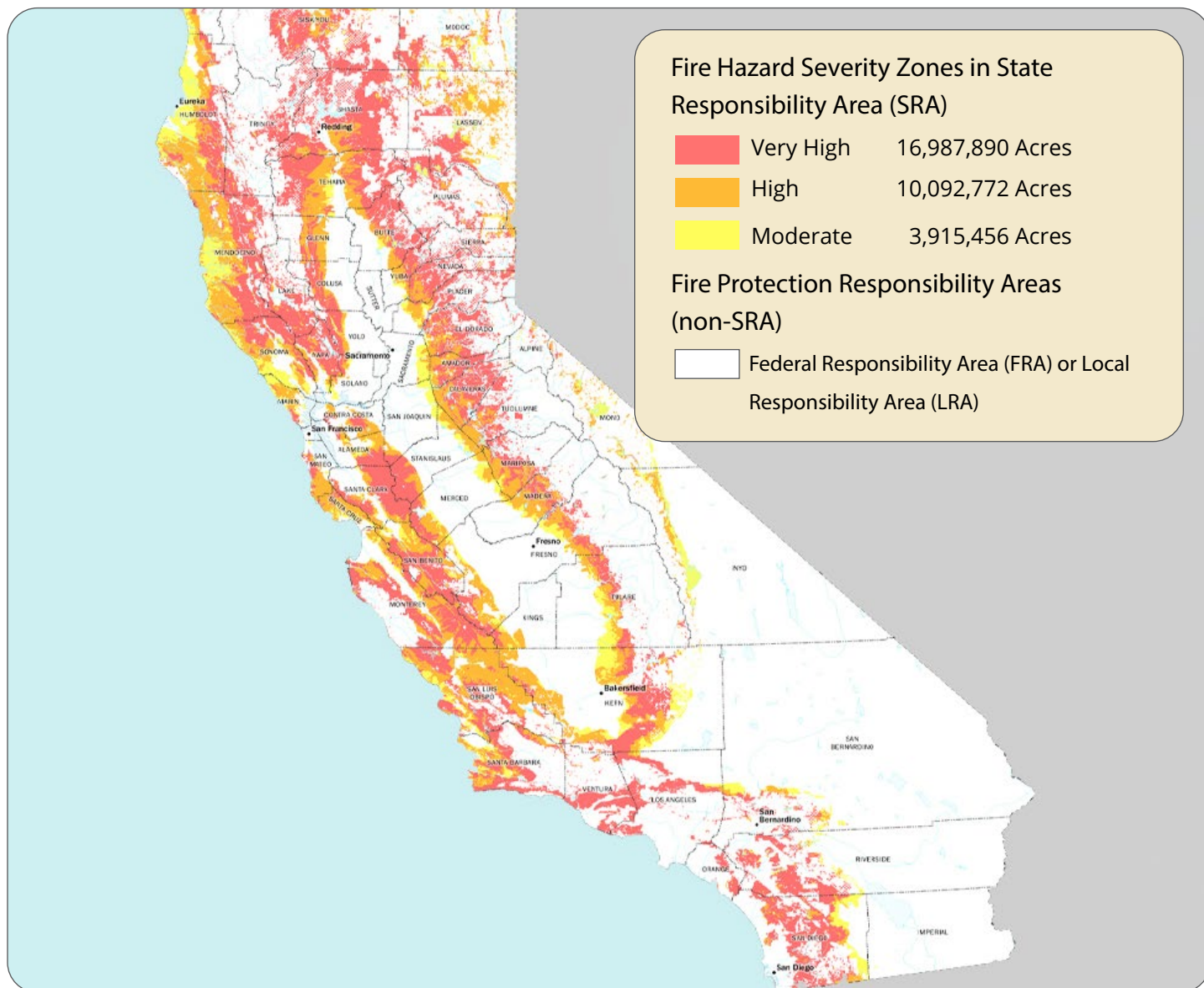


Figure 02: California Fire Hazard Severity Zone Map

SOURCE: [Fire Hazard Severity Zones](#) | OSM

Defensible Space Zone Diagram | Commercial Building Context

Plan and Section | Coordination Landscape Architecture and Architecture Teams

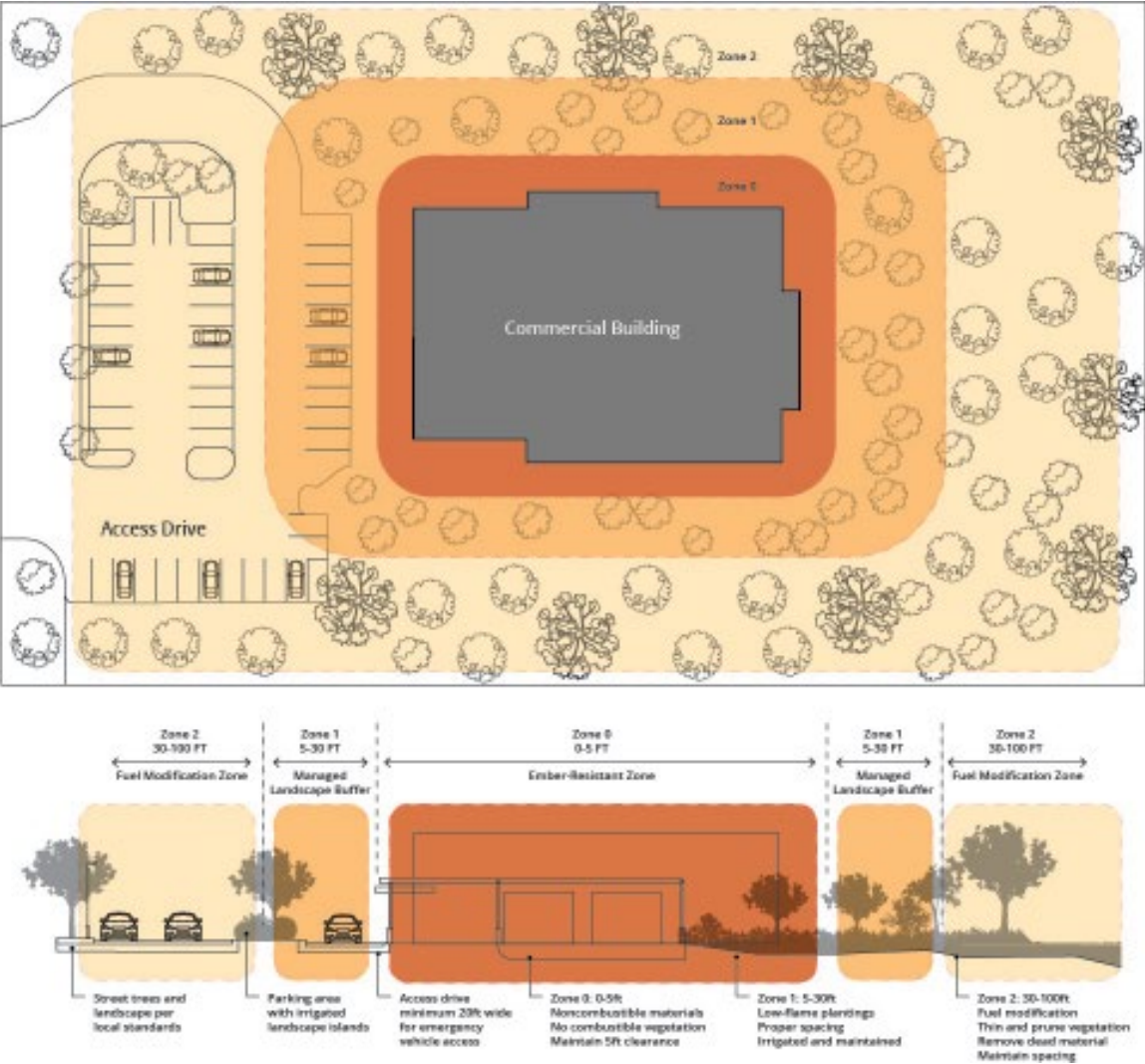


Figure 03: Defensible Space Zone Diagram — Commercial Building Context. NTS

ZONE	REQUIREMENT	IMPACT
Zone 0 (0–5 ft perimeter)	No combustible mulch, wood chips, firewood, vines, artificial/synthetic turf	Affects landscape and site design for all project types
Zone 1 (5–30 ft)	Detailed vegetation plan required; specific plant life-forms, mature sizes, irrigation	Requires early landscape architect coordination
Zone 2 (30–100 ft)	Fuel modification zone with reduced vegetation density	May affect parking and perimeter landscaping, site coverage

Key Construction and Material Requirements

The CWUIC mandates ignition-resistant or noncombustible construction for exterior building components most vulnerable to wildfire intrusion, including radiant heat, direct flame contact, and wind-

driven ember penetration. Why does this matter? **Because first costs, insurance availability, and rates are impacted.** The following summarizes requirements relevant to commercial project types.

BUILDING COMPONENT	REQUIREMENT	COMMERCIAL RELEVANCE
Roofing Assembly	Class A fire-rated assembly required	Applies to all building types; interacts with energy code PV requirements (see Section 5)
Exterior Walls & Siding	Must pass CSFM tests for surface burning and weathering; ignition-resistant or noncombustible only	Impacts facade system selection for retail, hospitality, healthcare, and office
Vents & Soffits	Ember-resistant vents with 1/16" to 1/8" mesh screening	Critical for warehouses and industrial buildings with large soffit areas
Windows & Glazing	Tempered glass or specified multi-pane assemblies resistant to radiant heat shattering	Important for retail storefronts and healthcare with large glazed areas
Doors	Specified assemblies for radiant heat resistance	Applies to exterior entries and loading dock areas
Decks & Projections	ASTM E84-tested ignition-resistant materials; no combustible storage or vegetation underneath	Relevant to healthcare courtyards, restaurant patios, building canopies

CASE STUDY

Four Codes, One Roof

Perhaps the most significant operational implication of the new CWUIC is that it does not exist in isolation. Projects in WUI zones must simultaneously satisfy requirements from multiple, often over-lapping code regimes; from energy code requirements, structural, fire protection

and mechanical codes. Because of this, early multidisciplinary integrated design coordination is incredibly important. The clearest illustration of this challenge, though certainly not the only one, is the design of a roof on a commercial building.

Mechanical Code

- Equipment selection and capacity
- Ventilation and outdoor air
- Duct and piping design
- Equipment clearances
- Refrigerant safety
- Firefighter and service access and clearance

Energy Code

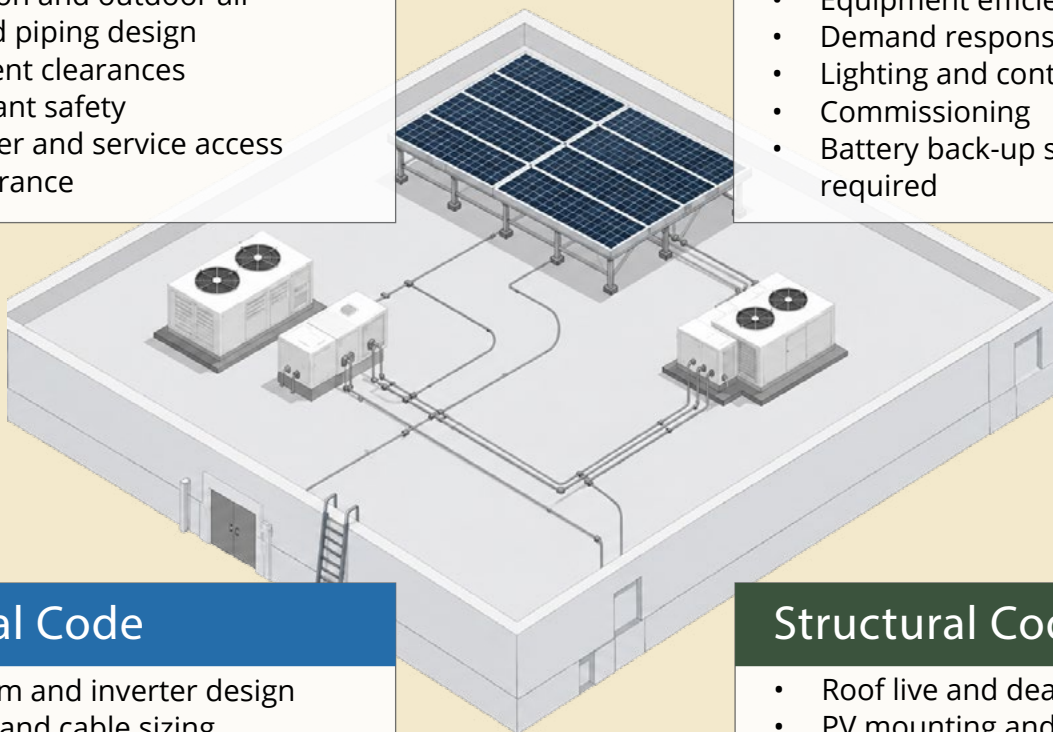
- PV system sizing and performance
- Building envelope requirements
- Equipment efficiency
- Demand response readiness
- Lighting and controls
- Commissioning
- Battery back-up storage (BESS) required

Electrical Code

- PV system and inverter design
- Conduit and cable sizing
- Over-current protection
- Disconnects and rapid shutdown
- Grounding and bonding
- Labeling and access
- Battery back-up storage (BESS) required

Structural Code (CBC)

- Roof live and dead load capacity
- PV mounting and attachment
- Wind uplift and lateral loads
- Seismic design criteria
- Structural analysis and details
- Deflection criteria
- Firefighter and service access and clearance



CASE STUDY (CONT'D)

Four Codes, One Roof

A new commercial building in a High Fire Hazard Severity Zone must reconcile a series of requirements on a single roof assembly, including:

- **Title 24, Part 7 (CWUIC):** Class A fire-rated roofing assembly. Materials tested to resist direct flame contact and wind-driven ember penetration. Roof-to-wall intersections, penetrations, and drainage details must meet ignition-resistance standards.
- **Title 24, Part 6 (California Energy Code):** Photovoltaic (PV) solar systems are now required on all new commercial buildings depending on California climate zone, use type, and project size. The new energy code not only mandates minimum PV system capacity, it also includes a requirement for a BESS (Battery Energy Storage System).
- **California Mechanical Code / California Fire Code:** Rooftop mechanical equipment (HVAC units, cooling towers, exhaust fans, make-up air units) must maintain required clearances from PV arrays, from roof edges, and from each other. Fire access pathways (minimum 4-foot-wide clear pathways at ridges, hips, and valleys for firefighter access) must be preserved.
- **California Structural Code (CBC):** The roof structure must carry the combined loads of the PV system, dead load of panels and racking, rooftop mechanical equipment, maintenance personnel, and firefighting personnel (live load

of 300 lbs minimum point load for firefighter access per IBC provisions). In addition, roof loads must take into account the following:

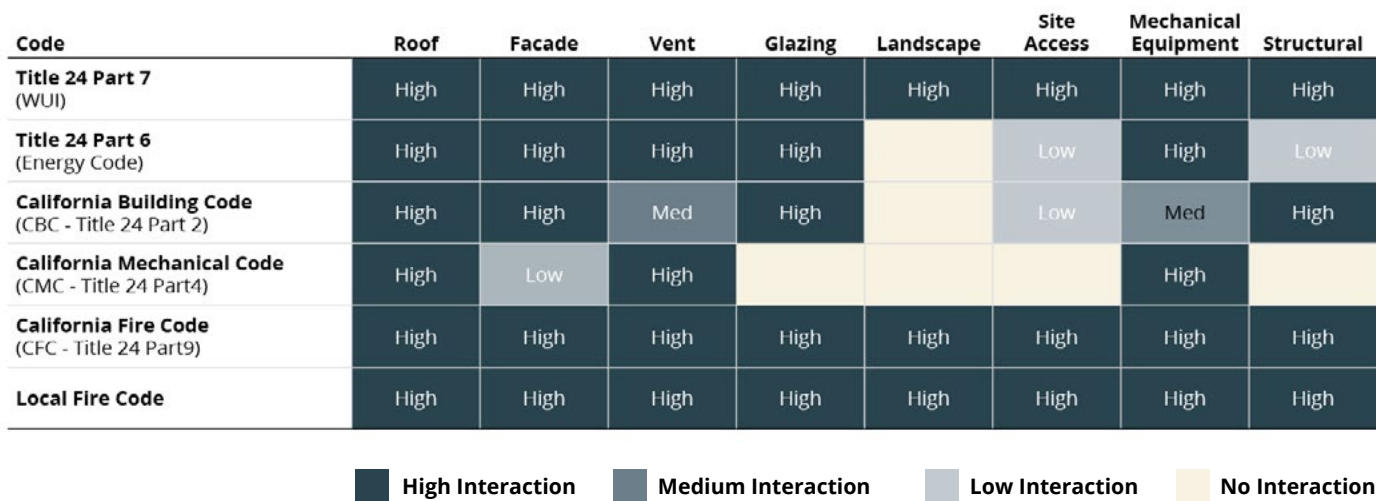
- Snow load (S) — applicable in mountainous regions; governed by ground snow load maps in CBC §1608 and ASCE 7-22.
- Wind load (W) — determined by the building's exposure category, risk category, and the basic wind speed maps in CBC §1609.
- Seismic load (E) — lateral forces affecting roof diaphragm design, addressed in CBC §1613 by reference to ASCE 7-22.

The practical consequence of these overlapping requirements is that roof design cannot be treated as a downstream exercise. PV layout, equipment placement, fire access pathways, structural loading, and WUI assembly selection must all be coordinated in schematic design — not after the structural or mechanical systems have been sized. Failure to coordinate these systems early would likely result in one of three outcomes, all costly:

1. PV systems that cannot achieve code-required capacity due to equipment crowding;
2. Structural upgrades when roof loading is reassessed later in design or, worse, mechanical system relocation when code-required clearances are not met;
3. WUI assemblies that are redesigned after mechanical penetrations have been detailed.

Multi-Code Interaction Matrix by Building System

Interaction intensity for specific building systems based on major California Building Standards Codes



Multi-Code Intersections by Building Type

BUILDING TYPE	CRITICAL MULTI-CODE EXAMPLES	EARLY COORDINATION PRIORITIES
Retail	Storefront glazing (WUI + energy efficiency), entry canopy structures (WUI + wind/ seismic), loading dock walls (WUI + fire separation), rooftop mechanical and photovoltaic coordination with fire protection	Site perimeter landscaping plan; facade system selection; canopy material testing
Bank Branch	Generator enclosures (WUI + mechanical clearances), data/comm equipment rooms (WUI + smoke intrusion), backup power continuity during PSPS	Site exposure scoring; emergency power strategy; redundant access routes
Healthcare	Smoke intrusion into HVAC (WUI + mechanical), courtyard plantings (WUI Zone 0/1), healing garden features (WUI prohibitions vs. patient experience goals),	Landscape and site design for WUI requirements; HVAC filtration upgrade planning; patient emergency egress planning
Manufacturing / Industrial	Large soffit and vent areas (ember-resistant requirements), loading dock and truck court combustible material management (Zone 0/1), rooftop equipment density (WUI + mechanical + structural)	Early roof area analysis for PV vs. equipment vs. fire access; vent specification; fuel management plan for exterior operations; redundant power; site evacuation routes



The 2025 Palisades and Eaton fires started in Los Angeles County killed at least 28 people and destroyed more than 16,000 structures.

DETAILS:

Soffit Vents

Because the California Building Code (CBC) requires fire-resistant venting systems in WUI zones, all soffit vents must be specifically tested to resist flame and ember intrusion. Standard vents are prohibited; all vents must be CalFire/California State Fire Marshal (CSFM) listed and comply with ASTM E2886 standards. Other requirements include:

Ventilation Rate (The 1:150 Rule): California Residential Code (CRC) Section R806 requires at least one square foot of Net Free Ventilation Area (NFA) for every 150 square feet of attic floor space. Half of this ventilation should be positioned at the soffit/eave level to ensure intake.

Mesh Screen Size: Vents must be covered with a noncombustible mesh with openings between 1/16-inch and 1/8-inch to block wind-blown embers.

Eave & Soffit Materials: All eaves and soffits in WUI zones must be constructed of noncombustible materials like aluminum, steel, copper, or fiber cement. This will have cost implications.

Prohibited Designs: Traditional open-louvered eave or cornice vents are prohibited in WUI areas unless they carry a specific fire-tested rating.

Local code officials and enforcing agencies retain the authority to approve alternative designs that offer equivalent fire-resistive effectiveness

WUI Site Due Diligence:
A Step-by-Step Assessment to Help
Minimize Risk

As part of our typical planning process, RSP relies on a structured evaluation exercise that also applies to WUI-related sites. The following steps are a solid foundation for any site selection and due diligence effort — ideally before lease execution, land purchase, or design authorization. The most effective way to prevent costly code compliance hiccups is by selecting sites that minimize risk.

STEP ONE | Fire Hazard Map Verification

Confirm the wildfire hazard designation from two independent sources:

- CAL FIRE Fire Hazard Severity Zone Map (official state determination): [Fire Hazard Severity Zones | OSFM](#)
- Local city or county hazard map (local amendments may extend designation boundaries)

Trigger: If either source designates the site as High or Very High, CWUIC Title 24 Part 7 construction requirements apply. Proceed immediately to Steps 2 through 8.

STEP TWO | Site Wildfire Exposure Scoring

Score the site against five quantitative exposure factors to determine the actual risk level beyond map designation alone:

- Adjacent to wildland vegetation (0–2 points)
- Located on slope greater than 10% (0–2 points)
- Wind corridor or ridge exposure (0–2 points)
- Nearby wildfire history within 10 years (0–2 points)
- Urban edge or low-density context (0–2 points)

EXPOSURE SCORE (OUT OF 10)	RISK LEVEL
0–2	Low
3–5	Moderate
6–8	Elevated
9–10	High

A High Exposure score on a Moderate-designated site may warrant treating the project as if it were in a Very High zone from a design resilience standpoint, even if not strictly required by the map designation.

STEP THREE | Insurance and Financial Risk Assessment

Engage your insurance broker early in the due diligence process to determine:

- Wildfire insurance availability for the specific APN and zone designation (some carriers have withdrawn from California WUI markets)
- Expected premium levels and deductible structures for properties in High or Very High FHSZ designations
- Whether the lender’s insurance requirements can be satisfied given the site’s wildfire classification

Wildfire risk is increasingly influencing lender underwriting. Properties in Very High FHSZ zones should be evaluated for potential impact on loan-to-value ratios and debt service coverage requirements.

STEP FOUR | Operational Continuity Risk Assessment

Evaluate ongoing operational exposure beyond the construction phase:

- Power reliability and the operational continuity planning required to manage PSPS event exposure
- Smoke exposure probability during wildfire season and its impact on building HVAC, air quality, and occupant health (particularly critical for healthcare)
- Evacuation or access disruption risk during active wildfire events in the region
- For data centers and cold storage: cooling system performance during smoke events and extended power outages

Mitigation strategies for operational continuity may include microgrids and battery energy storage (BESS), which is now required new commercial properties (see Part 6 of Title 24 California Energy Code), increased energy use, enhanced smoke filtration (MERV-16 or HEPA), hardened infrastructure and redundant communications, and formalized emergency response and evacuation plans.

STEP FIVE | Defensible Space and Site Design Feasibility

Evaluate whether the site geometry can physically accommodate the required wildfire mitigation zones:

- Are hardscape fire break opportunities (concrete aprons, paving, gravel) available to substitute for vegetated buffers where space is constrained?

- Can a 0–5 FT ember-resistant Zone 0 be established around all building perimeters? (Challenging on zero-lot-line sites, shared-wall commercial buildings, or dense urban infill)
- Is a 5–30 FT defensible landscape buffer (Zone 1) achievable? (May increase maintenance costs and conflict with parking, setbacks, or property lines)
- Is ongoing vegetation management operationally and financially aligned with the client's property management resources and budget?

Sites where defensible zone requirements cannot be met without significant site redesign or variance should be flagged for cost-benefit analysis before proceeding.

STEP SIX | Infrastructure and Utility Resilience Assessment

Particularly critical for banks, data centers, healthcare, and manufacturing, evaluate:

- Reliable water supply for fire suppression (confirm flow rates with the local water authority)
- PSPS (Public Safety Power Shutoff) vulnerability — utility infrastructure in high-fire-risk areas is subject to preemptive de-energization during high-wind and high-fire-danger conditions
- Backup power feasibility — can the site accommodate a generator, fuel storage, or microgrid? Local planning and fire code requirements for fuel storage add complexity in WUI zones.
- Redundant data infrastructure (entry point diversity)
- Fire station proximity (target within 5 miles for insurance rating purposes)

Due Diligence: Risk Factors

INITIAL RISK ASSESSMENT	RECOMMENDATION
LOW Outside hazard zones, minimal exposure	Proceed with standard commercial design process
MODERATE Moderate FHSZ or manageable exposure score	Budget for WUI compliance premium; coordinate WUI consultant early in SD phase
ELEVATED High FHSZ or multiple exposure factors	Full WUI compliance required; initiate multi-code coordination with design and development team; engage insurance broker and land-use attorney before site commitment
HIGH Very High FHSZ with slope, wind, and vegetation	Consider alternative site options; if proceeding, full WUI + operational resilience planning required from project inception

STEP SEVEN | WUI Construction Cost Estimation

Once a hazard zone and exposure are defined and assessed, develop preliminary construction cost implications. Premiums will likely reflect the cost differential of compliant materials, ignition-resistant assemblies, ember-resistant venting, tempered glazing, and compliant decking versus standard commercial construction.

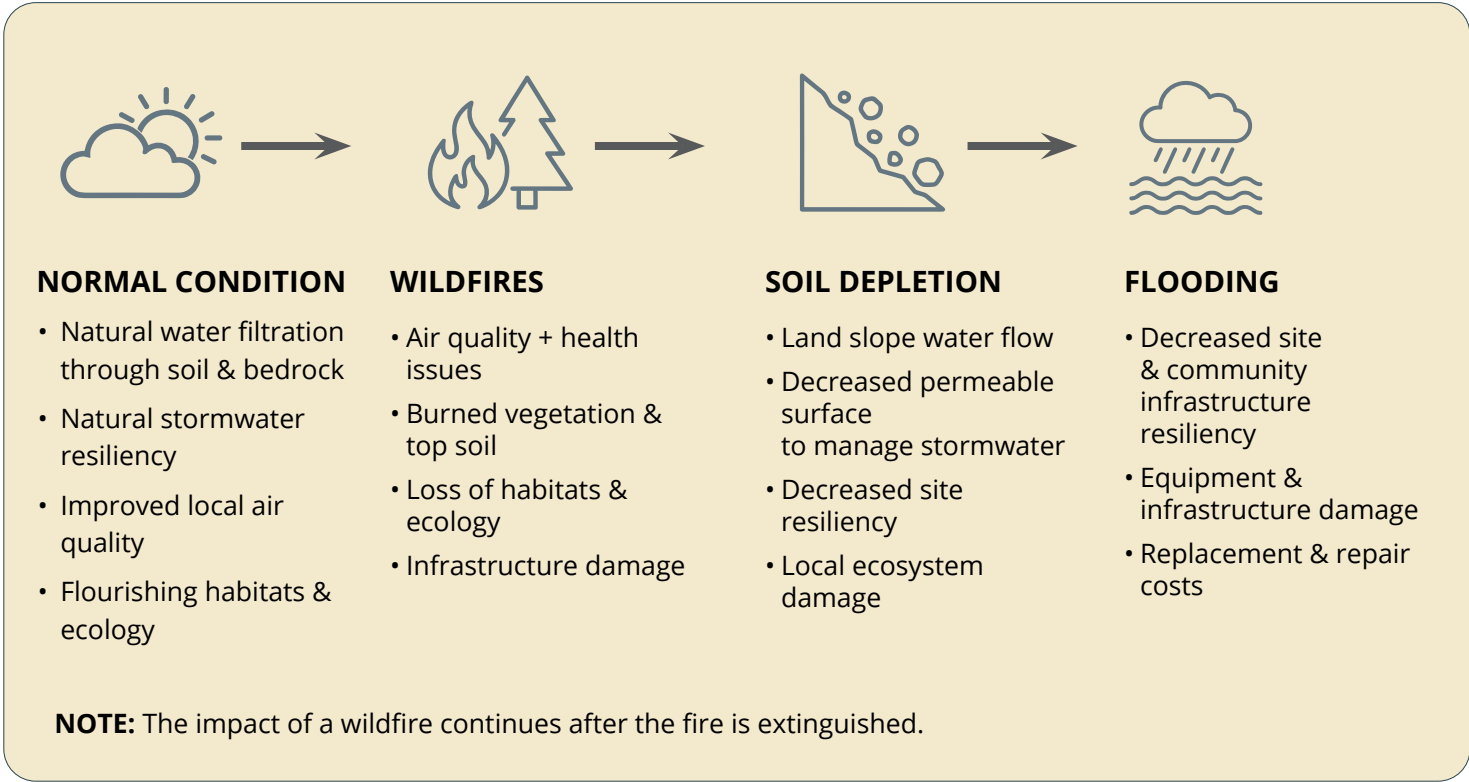
Any estimate should also account for soft costs associated with multi-code coordination (PV integration, structural upgrades, mechanical clearances, landscape compliance, climate specific loads), and should be assessed separately.

STEP EIGHT | Emergency Access and Evacuation Review

WUI sites require robust emergency access planning:

- Two or more independent vehicular access routes to the site (single-access sites face significant fire code and emergency planning constraints)
- Fire apparatus access roads compliant with width, turning radius, and weight capacity requirements for modern aerial fire apparatus
- Evacuation route redundancy — assess vulnerability of primary egress routes
- Dead-end roadways — dead ends exceeding code thresholds require turnarounds approved by the local fire authority having jurisdiction (AHJ)

After the Fire: The Downstream Effects of a Wildfire



Conclusion: A Few Take-Aways

The creation of the California Wildland-Urban Interface Code as a stand-alone Title 24, Part 7 is a signal that wildfire resilience is no longer a niche concern for solely residential construction in rural foothill communities. *It is now a foundational design and planning discipline that applies to the full spectrum of commercial construction throughout California.*

For our clients, the most important take-away is the move from reactive compliance — addressing WUI requirements as a checklist item late in the design process — to proactive integration, where wildfire resilience is part of the site selection, massing, structural, and systems coordination conversations from day one.

The multi-code complexity at the building envelope and roof plane, the site design implications of defensible space requirements, the insurance and operational continuity considerations, and the construction cost premiums all reward early, well-coordinated action.

RSP Architects is positioned to guide clients through this new framework — from initial site screening and due diligence through design, permitting, and construction administration.

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CHECKLIST: Project Team Coordination

The following best practices should be initiated at project inception for any project in or adjacent to a mapped Fire Hazard Severity Zone:

CLIENT / OWNER ACTIONS

- ☐ Engage insurance broker to evaluate wildfire insurance availability and cost before site purchase
- ☐ Confirm lender wildfire zone requirements and any disclosure obligations
- ☐ Evaluate backup power and operational continuity strategy for PSPS event exposure
- ☐ Budget for WUI construction cost premium (3–8% depending on building type and site conditions)
- ☐ Engage property management early to plan for ongoing Zone 0/1/2 maintenance obligations

ARCHITECTURE / PROJECT LEAD

- ☐ Confirm FHSZ designation from both CAL FIRE and local jurisdiction maps at project initiation
- ☐ Complete RSP WUI Site Due Diligence Screening Worksheet during due diligence phase
- ☐ Identify applicable CWUIC requirements and document in project code analysis
- ☐ Engage WUI consultant or fire protection engineer as part of design team early in design process
- ☐ Coordinate roof program (PV, mechanical, fire access, WUI assembly) in Schematic Design
- ☐ Issue multi-code coordination matrix to all consultants at SD kickoff
- ☐ Confirm AHJ interpretation of CWUIC provisions — local variation is common

MEP / MECHANICAL ENGINEER

- ☐ Coordinate rooftop equipment placement and clearances with PV layout and fire access pathways before layout is fixed
- ☐ Specify HVAC intake and exhaust locations to avoid conflict with ember-resistant vent requirements
- ☐ Design backup power systems to accommodate PSPS event duration requirements

- ☐ For healthcare and mission-critical: evaluate enhanced filtration (MERV-16 / HEPA) as smoke mitigation measure

STRUCTURAL ENGINEER

- ☐ Calculate combined roof live and dead loads incorporating PV system, rooftop mechanical, and firefighter access requirements at SD phase, as well as seismic, snow or wind loads
- ☐ Confirm roof structural framing can accommodate combined loads before M/PV design is finalized
- ☐ Review CWUIC assembly requirements for structural components at exterior walls and roof-to-wall intersections

LANDSCAPE ARCHITECT

- ☐ Prepare Zone 0/1/2 vegetation management plan per CWUIC requirements for permit submittal
- ☐ Specify only CWUIC-compliant materials in Zone 0 (no combustible mulch, synthetic grass, or chips)
- ☐ Coordinate irrigation design to support required defensible space vegetation management
- ☐ Verify plant palette complies with local fire district fuel modification standards

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