DRAFT

Conceptual Wildfire Evacuation Study

Cleveland Avenue Residential Project

SEPTEMBER 2025

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AFN	Access and Functional Needs
ARC	American Red Cross
CAL FIRE	California Department of Forestry and Fire Protection
CALTRANS	California Department of Transportation
CBC	California Building Code
CFC	California Fire Code
CEQA	California Environmental Quality Act
CERT	Community Emergency Response Team
CHP	California Highway Patrol
City	City of Escondido
County	County of San Diego
DAS	Department of Animal Services
EAS	Emergency Alert System
EFD	Escondido Fire Department
EOP	Emergency Operations Plan
EPD	Escondido Police Department
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FRAP	Fire and Resource Assessment Program
HOA	Homeowner's Association
ICS	Incident Command System
JIC	Joint Information Center
NIMS	National Incident Command System
OA	Operational Area
OES	Office of Emergency Services
Project	Cleveland Avenue Residential Project
SDCOA	San Diego County Operating Area
SDCSD	San Diego County Sheriff's Department
Study	Wildfire Evacuation Study
TEP	Temporary Evacuation Point
TRA	Temporary Refuge Area
SEMS	State Emergency Management System
VoIP	Voice over Internet Protocol
WUI	Wildland-Urban Interface

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Executive Summary

The City of Escondido in northern San Diego County is home to approximately 150,680[1] residents across 36.3-square miles[2]. The Cleveland Avenue Residential Project (Project) is a large urban in-fill project located in the northern portion of the City, east of the Interstate (I-) 15. The Project is bound by North Avenue to the north, Conway Drive to the west, Cleveland Avenue to the south, and low density residential to the east. The Project site encompasses 10.07 acres of undeveloped open space covered with vegetation that consists of non-native, invasive, seasonal weeds and grasses. The Project site is frequently mowed for fire prevention purposes. The Project proposes to develop 29 residential lots, two water quality lots, a utility lot, and a street lot. The Project would provide an ingress and egress point on Cleveland Avenue and Conway Drive. In the event of an emergency evacuation, the site is proximate to major emergency access routes including Cleveland Avenue, Conway Drive, North Avenue, Rincon Avenue, North Broadway, Jesmond Dene Road, and Country Club Lane.

The Project site is designated a Very High Fire Hazard Severity Zone (VHFHSZ) in a Local Responsibility Area. As a requirement of development in a designated VHFHSZ, as described further in the Project's Fire Protection Plan (Dudek 2025), the Project is required to comply with all applicable requirements of the California Building Code (Chapter 7A) and California Fire Code (Chapter 49). These requirements include enhanced construction features (e.g., Class A roof, vents, interior sprinklers, etc.) for ignition resistance, emergency access, and defensible space that work together to provide a systematic approach to fire protection.

Given the Project's setting in a VHFHSZ, the most likely cause of evacuation from the Project site is wildland fire. The purpose of this WES is to evaluate the Project's consistency with relevant emergency evacuation plans and emergency response plans, disclose the prevention and minimization regulations and measures applicable to the Project, and determine evacuation times for the existing and post-Project conditions, as well as provide recommendations for emergency preparedness that include information and resources to increase occupant preparedness for wildfire evacuations. Herein, information is provided addressing evacuation organization, planning and preparedness, evacuation routes, contingencies, and other related topics.

There is no existing evacuation plan for the area or pre-determined evacuation routes, therefore the Project would not eliminate or interfere with any existing evacuation routes. In an evacuation or emergency scenario, adequate emergency access would be maintained. Even though roads adjacent and near to the project are not determined evacuation routes, the Project would not result in road or lane closures, maintaining ingress and egress, and the roads could be used for emergency vehicle access. In the event of an emergency evacuation, law enforcement would control evacuations and determine the safest route for evacuees to utilize. Considering these facts and others discussed herein, the Project would not expose people to a significant risk of loss or death involving wildland fires related to evacuation, would not interfere with evacuation response planning, and would not result in inadequate emergency access.

Given that the Project would not conflict with an emergency evacuation plan or emergency response plan, and impacts would be less than significant. Further, the available roadway capacity is sufficient to safely accommodate the number of evacuating vehicles within the relevant areas with and without the Project development. Project impacts would be less than significant as this study demonstrates that evacuation times would be reasonable and would allow for safe evacuations to be conducted under all scenarios.

1 SANDAG Data Surfer Escondido Population Estimates 2020
2 https://datausa.io/profile/geo/escondido-ca/

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1 Introduction

Evacuation is defined by the State of California as the organized, phased and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas and their reception and care in safe areas (Cal OES, 2017). Evacuees who do not have or are unable to provide alternatives for short-term living accommodations are generally offered temporary shelter facilities. When the threat passes and evacuation orders are cancelled by local authorities, evacuees are able to return to their homes and businesses, or to make suitable alternative arrangements in the event that they have become victims or have otherwise experienced losses as a result of the event that necessitated the evacuation. The overarching goal of evacuation planning in the San Diego County Operational Area (SDC OA) is to maximize the preservation of life while reducing the number of people that must evacuate and the distance they must travel to seek safe refuge (County of San Diego, 2022).

As evidenced by mass evacuations during the 2003 Cedar Fire and the 2007 Witch Fire along with other San Diego County evacuations, even with roadways that are designed to the code requirements, it may not be possible, or even the best response, to move large numbers of persons at the same time as part of a mass-evacuation. Instead, informed, phased evacuations enable more streamlined evacuations where those at highest risk are moved first. Road infrastructure throughout the United States, and including San Diego County, is not designed to accommodate a short-notice, mass evacuation without some level of congestion (DHS, 2019).

The need for evacuation plans, emergency event pre-planning, and evacuations that are targeted and phased becomes very important for improving evacuation effectiveness. Among the most important factors for successful evacuations in urban settings is control of intersections downstream of the evacuation area. If intersections are controlled by law enforcement, barricades, signal control, and other means, potential backups and slowed evacuations can be minimized. Multiple evacuation points enable more evacuees the ability to evacuate with less impact on roadways.

This Wildfire Evacuation Study (Study) outlines strategies, procedures, recommendations, and organizational structures that can be used to implement a coordinated evacuation effort in the case of a wildfire emergency affecting the Cleveland Avenue Residential Project. It is noted, that the on-set of a wildfire or other emergency is generally unplanned and often, occupants will be faced with decisions that need to be made quickly and determined by on-scene first responders or by a collaboration between first responders and designated emergency response teams. Therefore, this WES is to be considered a tool that supports existing pre-incident plans and provides information and general guideline for occupants who are familiar with the evacuation protocol. The WES is subservient to emergency event-specific directives provided by public agencies managing the event.

This Study was prepared based on guidance from the County of San Diego Emergency Operations Plan (EOP) including Annex Q- Evacuation (County of San Diego 2018). The format and content of this report are consistent with the recommendations of the Evacuation Annex. A complete copy of the EOP can be downloaded here:

https://www.sandiegocounty.gov/content/sdc/oes/emergency_management/oes_jl_oparea.html.

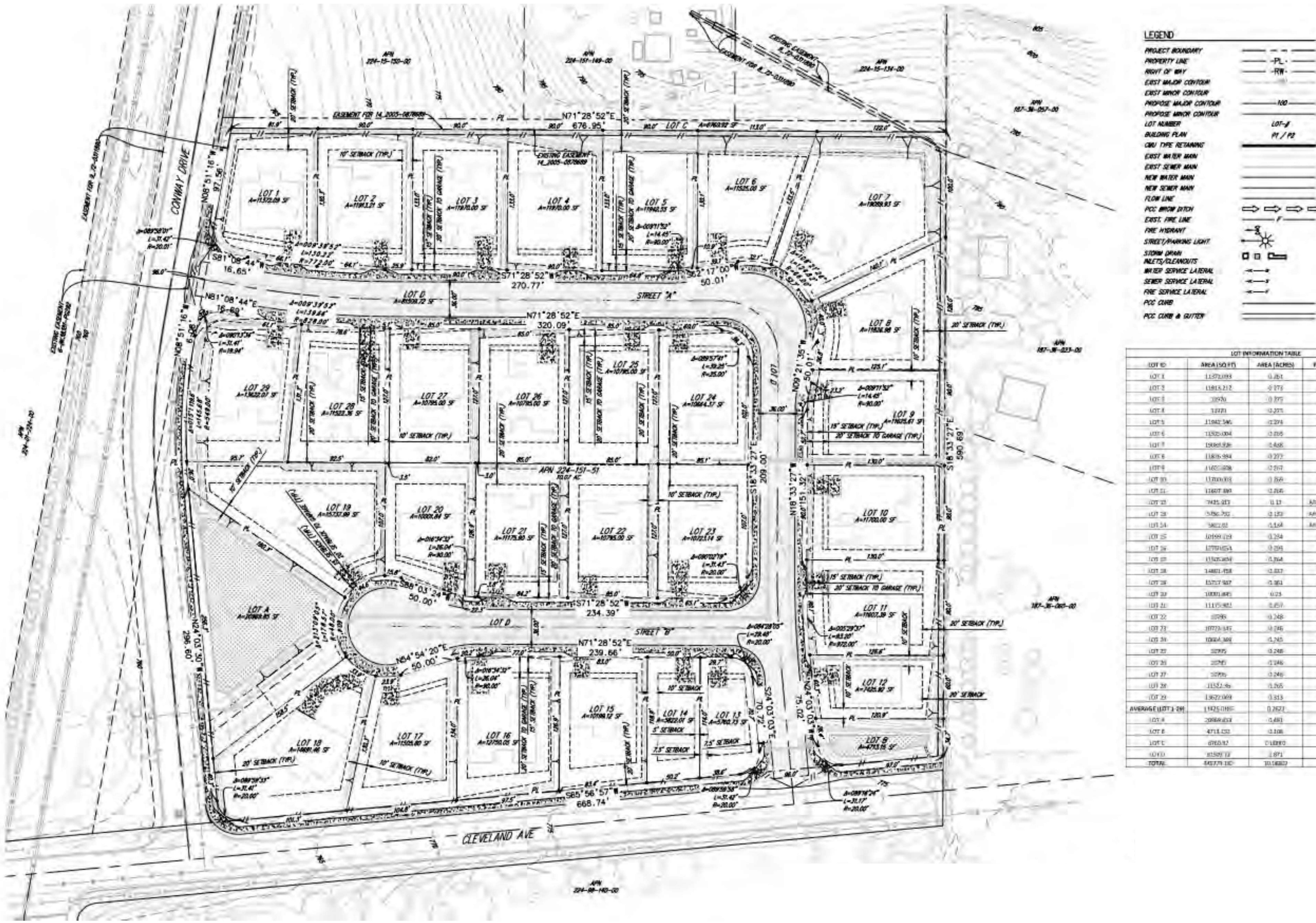
Although the Project is within the City of Escondido, the City of Escondido has adopted and relies on the County of San Diego's Operations Area Emergency Operations Plan for evacuation procedures and other emergency related policies. Depending on the emergency, the Escondido Police Department would be responsible for evacuations of the Project site. The nature of the incident and the organization of the Emergency Operations Center or the

Command Center will dictate whether the Escondido Police Department or the San Diego County Sheriff's Department will be the lead agency for an evacuation under the Incident Command System.

1.1 Project Description

The Cleveland Avenue Residential Project is an urban infill project in the City of Escondido (see Figure 1, Project Site Plan, and Figure 2, Vicinity Map). The Project encompasses 10.378 acres in northern City of Escondido at APN 224-151-51-00. The Project proposes to develop 29 residential lots, two water quality basins, a utility lot, and a street lot. The site is located north of Cleveland Avenue and east of Conway Drive. The Project site is surrounded by single-family residential development, similar to the proposed Project. Currently, the Project site consists of undeveloped open space, primarily grassland vegetation types (see Figure 3, Vegetation Community Map), that is mowed annually for fire prevention purposes.

Access to the Project would be from points on Cleveland Avenue and Conway Drive, both of which would connect to the internal "Street A". The existing Cleveland Avenue and Conway Drive are in compliance with the existing code for street width and allows for the increased capacity, safety, and evacuation efficiency. Internal circulation includes a Street "A" that connects to both Conway Drive and Cleveland Avenue and is 36-feet wide. Street "B" is a dead end cul-de-sac that is 36 feet wide, and approximately 400 feet long, that terminates in a cul-de-sac with a 48-foot turning radius bulb. All on-site fire access roads will be designed and maintained to support the imposed loads of fire apparatus (not less than 75,000 pounds) and will be consistent with code requirements for asphaltic paving surfaces.



Lot Information Table

LOT ID	AREA (SQ FT)	AREA (ACRES)	PLAN NO.	LOT DESCRIPTION
LOT 1	11372.093	0.261	P3	RESIDENTIAL
LOT 2	11813.212	0.273	P3R	RESIDENTIAL
LOT 3	11970	0.275	P3R	RESIDENTIAL
LOT 4	11970	0.275	P3R	RESIDENTIAL
LOT 5	11942.546	0.274	P2R	RESIDENTIAL
LOT 6	11525.004	0.265	P3R	RESIDENTIAL
LOT 7	19069.926	0.438	P2	RESIDENTIAL
LOT 8	11826.984	0.272	P3R	RESIDENTIAL
LOT 9	11625.608	0.267	P1	RESIDENTIAL
LOT 10	11700.003	0.269	P2	RESIDENTIAL
LOT 11	11607.389	0.266	P3R	RESIDENTIAL
LOT 12	7425.917	0.17	AFFORDABLE	RESIDENTIAL
LOT 13	5760.732	0.132	AFFORDABLE	RESIDENTIAL
LOT 14	5822.02	0.134	AFFORDABLE	RESIDENTIAL
LOT 15	10199.129	0.234	P3	RESIDENTIAL
LOT 16	12750.054	0.293	P2R	RESIDENTIAL
LOT 17	11505.804	0.264	P1R	RESIDENTIAL
LOT 18	14681.458	0.337	P3R	RESIDENTIAL
LOT 19	15737.987	0.361	P1	RESIDENTIAL
LOT 20	10001.845	0.23	P3	RESIDENTIAL
LOT 21	11175.902	0.257	P2	RESIDENTIAL
LOT 22	10795	0.248	P1	RESIDENTIAL
LOT 23	10772.145	0.246	P2	RESIDENTIAL
LOT 24	10664.369	0.245	P1R	RESIDENTIAL
LOT 25	10795	0.248	P3R	RESIDENTIAL
LOT 26	10795	0.246	P2	RESIDENTIAL
LOT 27	10795	0.248	P3	RESIDENTIAL
LOT 28	11522.96	0.265	P2	RESIDENTIAL
LOT 29	13622.069	0.313	P1	RESIDENTIAL
AVERAGE (LOT 1-29)	11425.0185	0.2623		
LOT A	20969.853	0.481		WATER QUALITY
LOT B	4713.152	0.108		WATER QUALITY
LOT C	6760.92	0.15880		UTILITY LOT
LOT D	81509.72	1.871		STREET LOT
TOTAL	443779.190	10.18802		

SOURCE: Excel Engineering 2025

DUDEK

0 500 1,000 Feet

FIGURE 1

Project Site Plan

Cleveland Residential Project

Date: 6/11/2025 User: cgardner Path: Z:\Projects\j1759101\MAPDOC\ConwayResidentialProject\ConwayResidentialProject.aprx Map: [empty] Layout: Figure 2 Project Site Plan

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1.2 Applicable Regulations, Standards and Planning Tools

1.2.1 Federal

1.2.1.1 Disaster Mitigation Act

The Disaster Mitigation Act of 2000 published by the Department of Homeland Security, requires that a state mitigation plan, as a condition of disaster assistance, add incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans: "Standard" and "Enhanced." States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Disaster Mitigation Act also established a new requirement for local mitigation plans.

1.2.1.2 National Incident Management System (NIMS)

The NIMS guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to, and recover from natural or human-caused incidents that result in significant local emergencies or large scale disasters. NIMS provides community members with a shared vocabulary, systems, and processes to successfully deliver the capabilities described in the National Preparedness System published by the Department of Homeland Security in 2020.. The National Preparedness System is a Presidential Policy Directive establishing a common goal to create a secure and resilient nation associated with prevention, protection, mitigation, response, and recovery to address the greatest risks to the nation. Core aspects of the National Preparedness System are wildfire prevention, mitigation, management, suppression, and life-safety evacuation when needed.

NIMS defines operational systems that guide how public safety and public services agencies work together during incidents and how these agencies interact cooperatively with volunteer organizations, community service organizations, and individual residents.

1.2.1.3 Pet Evacuation and Transportation Standards Act

The federal Pets Evacuation and Transportation Standards Act of 2006 amends the federal Stafford Act of 1988, and requires evacuation plans to consider the needs of individuals with household pets and service animals, prior to, during, and following a major disaster or emergency.

1.2.2 State

1.2.2.1 Fire Hazard Severity Zones

To assist each fire agency in addressing its responsibility area, the California Department of Forestry and Fire Protection (CAL FIRE) uses a Fire Hazard Severity Zone (FHSZ) classification system to identify areas or zones of wildfire hazards within the state. CAL FIRE is required to map these zones for State Responsibility Areas (SRA) and notify local officials when a Very High Fire Hazard Severity Zone (VHFHSZ) exists within a Local Responsibility Areas (LRA). The Project site is designated as a Very High Fire Hazard Severity Zone (FHSZ) within a Local Responsibility

Area (LRA) by the California Department of Forestry and Fire Protection (CAL FIRE). CAL FIRE Fire and Resource Assessment Program (CAL FIRE 2024) fire history data indicates wildfires have occurred within a 5-mile vicinity of the Project site; however, there have been no recorded wildfires on-site. The most recent wildfire in the Project vicinity was the 2014 Cocos Fire, which burned approximately 1,995 acres. The largest wildfire in the Project vicinity was the 1969 Moosa Fire, which burned approximately 6,944 acres.

1.2.2.2 California Building and Residential Codes

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the California Code of Regulations Title 24, Part 2, which is the California Building Code, (CBC) to include specific requirements for construction materials and methods for new buildings in designated Fire Hazard Severity Zones. Those emergency regulations have subsequently been included as Chapter 7A of the California Building Code and Section R337 of the California Residential Code.

1.2.2.3 California Fire Code

The 2022 California Fire Code, which is found in the (California Code of Regulations Title 24, Part 9, establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions and provide for life safety in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as fire alarm and sprinkler systems, fire service features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas. The City has adopted the California Fire Code as Chapter 11, Article 2, Division 1 of the Escondido Municipal Code (EMC), including appendices addressing fire-flow requirements for buildings.

1.2.2.4 California Emergency Services Act

The California Emergency Services Act (California Government Code §8550, et seq.) 1) provides for the creation of an Office of Emergency Services, 2) assigns and coordinates functions and duties to be performed during an emergency, and 3) facilitates mutual aid and assigning resources (including staffing and facilities) throughout the state for dealing with any emergency that may occur.

1.2.2.5 California Office of Emergency Services

The California Office of Emergency Services (OES) is responsible for the coordination of overall state agency response to disasters and for assuring the state's readiness to respond to and recover from all emergency and disaster events that occur within the state. OES is also responsible for assisting local governments in their hazard and risk mitigation planning and operations as well as their emergency preparedness, response, and recovery.

1.2.2.5.1 Standardized Emergency Management System (SEMS)

SEMS is the cornerstone of California's emergency response system and the fundamental structure for the response phase of emergency management. The system unifies all elements of California's emergency management community into a single integrated system and standardizes key elements. SEMS incorporates:

- **Incident Command System (ICS)** - A field-level emergency response system based on management by objectives.
- **Multi/ Inter-agency coordination** - Affected agencies working together to coordinate allocations of resources and emergency response activities.
- **Mutual Aid** - A system for obtaining additional emergency resources from non-affected jurisdictions.
- **Operational Area Concept** - County and its sub-divisions coordination of damage information, resource requests and emergency response.

1.2.2.6 Fire Protection Plan Consistency with Best Practices/Guidance Documents

The Guidance states that evacuation modeling and planning should be required for all projects located in Very High or High FHSZs that present an increased risk of wildfire and/or evacuation impacts. It further states that local jurisdictions should require evacuation modeling and planning to be developed prior to project approval to provide maximum flexibility in design modifications necessary to address wildfire risks and impacts. The Project site is in an area designated as a Very High FHSZ within a LRA and is proximate to open space areas, although not required under CEQA, this WES was prepared for the Project to evaluate the Project's consistency with relevant emergency evacuation plans and emergency response plans, disclose the prevention and minimization regulations and measures applicable to the Project, and determine evacuation times for the existing and post-Project conditions, as well as provide recommendations for emergency preparedness that include information and resources to increase occupant preparedness for wildfire evacuations. This WES was prepared in accordance with the Attorney General Guidance, as described below.

The California Office of the Attorney General issued (October 2022) guidance (Guidance) outlining best practices for analyzing and mitigating wildfire impacts of development projects under the California Environmental Quality Act (CEQA). The Guidance is intended to help local governments' evaluation and approval considerations for development projects in fire-prone areas, and to help project design in a way that minimizes wildfire ignition and incorporates emergency access and evacuation measures. Importantly, the Guidance does not impose additional legal requirements on local governments, nor does it alter any applicable laws or regulations.

The Guidance encourages local jurisdictions to develop thresholds of significance for evacuation times based on community-wide standards. Any conclusion that an increase in evacuation times would be considered a less-than-significant impact should be based on a threshold of significance that reflects community-wide goals and standards. The Project has the potential to minimize on-road traffic when it is considered necessary and/or safer by temporarily providing refuge on-site in protected structures, which offers a contingency not available to all communities/ developments and assists in providing flexibility and options for emergency managers.

At the time this WES was prepared, there are no adopted thresholds for evacuation times for the County or any California community to the knowledge of the authors. This is primarily because every location and fire scenario are unique. While it may take one community 20 minutes to evacuate safely, it is not a valid assumption to consider a 3-hour evacuation for another community as unsafe. The 3-hour evacuation can be very safe while the 20-minute evacuation may be unsafe due to the conditions and exposures along the evacuation routes.

1.2.3 Local

1.2.3.1 City of Escondido Multi-Jurisdictional Hazard Mitigation Plan and San Diego County Multi-Jurisdictional Hazard Mitigation Plan

The purpose of the Multi-Jurisdictional Hazard Mitigation Plans for both the City of Escondido (2023) and the County of San Diego (2017) is to identify hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and human-made hazards. An important Multi-Jurisdictional Hazard Mitigation Plan component is the Community Emergency Response Team (CERT), which educates community members about disaster preparedness and trains them in basic response skills, including fire prevention and safety.

1.2.3.2 San Diego County Emergency Operations Plan

The 2022 San Diego County Emergency Operations Plan (EOP) is adopted by the City of Escondido and describes a comprehensive emergency management system that provides for a planned response to disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents. It delineates operational concepts relating to various emergency situations, identifies components of the Emergency Management Organization, and describes the overall responsibilities for protecting life and property, which provides for the overall well-being of the population. The plan also identifies the sources of outside support that might be provided through mutual aid and specific statutory authorities by other jurisdictions, state and federal agencies, and the private sector.

1.2.3.3 Unified San Diego County Emergency Services Organization and County of San Diego Operational Area Emergency Operations Plan – Evacuation Annex

The Evacuation Annex is intended to be used as a template for the development of jurisdictional evacuation plans and will support or supplement the evacuation plans prepared and maintained by each local jurisdiction. The annex outlines strategies, procedures, recommendations and organizational structures that can be used to implement a coordinated evacuation effort in the San Diego County Operational Area (SDC OA).

1.2.3.4 County of San Diego Resilience Review Report: Wildland Fires

Prepared by the Chief Administrative Officer's Resilience Review Working Group in 2019, the *Resilience Review Report: Wildland Fires* provides recommendations for achieving community goals related to actively reducing risk of wildfire and improving efforts to respond to and recover from wildfire events. The Working Group recommends 16 principal objectives divided among three focus areas: pre-wildfire, response, and recovery.

1. Pre-Wildfire: Focus on fire preparedness at the neighborhood-level. Specific community recommendations include:
    - Implementing a cohesive County pre-fire strategy
    - Enhancing pre-fire vegetation management
    - Improving pre-fire emergency planning

- Strengthening fire safety measures in new construction
- Reducing loss from wildfires in existing structures

2. Response: Improve fire suppression capabilities and on the ground safety measures including:
   - Increase County Fire's firefighting capabilities.
   - Enhancement of accessible transportation services to include the evacuation of at-risk populations and large animals.
   - Improved operational communications among response personnel.
   - More rapid and efficient restoration of essential services and systems
   - Improved delivery of coordinated timely, reliable, and actionable information to the whole community during a wildfire.
3. Recovery: Enhance fire recovery effort including:
   - The ongoing development of a County Debris Removal Framework
   - Developing administrative tools and processes that improve the speed and efficiency in providing emergency interim housing options to victims of a wildfire.
   - Improvements in health and social services capabilities
   - Increased County capacity to coordinate large-scale recovery operations.

1.2.3.5 City of Escondido Municipal Code

Chapter 11 of the Escondido Municipal Code adopts the 2022 California Fire Code (CCR Title 24, Part 9), including Appendix Chapters 4, B, C, and D [Sections D102, D103.6, D103.6.1, D103.6.2 only], I, and N as published by the International Code Council with local amendments.

Sections 7-1 through 7-8 in Chapter 7 of the Escondido Municipal Code provides for the preparation and implementation of plans for the protection of persons and property within the City in the event of an emergency. These sections also discuss coordination of the emergency functions of the City with all other public agencies, corporations, organizations, and affected private persons. Chapter 7 of the Municipal Code requires the City's Disaster Council to be responsible for the development of the City's Emergency Action Plan for City employees, which provides for the effective mobilization of all City resources, both public and private, to meet any condition constituting a local emergency, regional disaster, state of emergency, or state of war. The Emergency Action Plan also provides for the organization, powers and duties, services, and staffing of the emergency organization.

1.2.3.6 City of Escondido General Plan

The Community Protection Element of the City's General Plan outlines goals and policies to achieve community protection standards. Goals and policies relevant to the Project include (City of Escondido 2012):

Goal 1. A prepared and responsive community in the event of disasters and emergencies.

Emergency Services Policy 1.1. Provide for emergency response during and after catastrophic events.

Emergency Services Policy 1.2. Maintain and upgrade the city's disaster response plans and continue to participate in appropriate Mutual Aid Agreements that enhance disaster preparedness and emergency response.

Emergency Services Policy 1.3. Conduct periodic emergency exercises to test and improve jurisdictional and inter-department coordination and response to emergencies brought about by catastrophes such as fire, flood, earthquakes, and hazardous spills.

Emergency Services Policy 1.4. Plan for the continued function of essential facilities such as hospitals, fire stations, and emergency command centers following a major disaster to facilitate post-disaster recovery.

Emergency Services Policy 1.5. Identify locations and facilities in the city to be used as shelters by the community during emergency situations and establish programs to quickly enable operation of these shelters and communicate access information for residents.

Emergency Services Policy 1.6. Require minimum road and driveway widths and clearances around structures consistent with local and state requirements to ensure emergency access.

Goal 2. Protection of life and property through adequate fire protection and emergency medical services.

Fire Protection Policy 2.1. Regularly review and maintain the Standards of Response Coverage and the Fire Department Strategic Plan to address staffing, facility needs, and service goals.

Fire Protection Policy 2.2. Provide Fire Department response times for no less than 90 percent of all emergency responses with engine companies by achieving the following service standard:

- Provide an initial response time of seven and one-half (7½) minutes for all structure fire and emergency Advanced Life Support (ALS) calls and a maximum response time of ten (10) minutes for supporting companies in urbanized areas of the city.

Fire Protection Policy 2.3. Provide a minimum total of seven (7) fire stations each sized and staffed with facilities, services and equipment to meet current and anticipated needs including, but not limited to, engine and truck units and crews and Advanced Life Support (ALS) staff prior to General Plan build out to the extent economically feasible.

Fire Protection Policy 2.4. Require new residential and non-residential development to be constructed consistent with the California Fire Code and the requirements set by the state.

Fire Protection Policy 2.5. Commit to the use of state-of-the-art equipment, technologies, and management techniques for fire prevention and suppression.

Fire Protection Policy 2.6. Require new development to contribute fees to maintain fire protection service levels without adversely affecting service levels for existing development.

Fire Protection Policy 2.7. Continue to include the Fire Department in the review of development proposals to ensure that projects adequately address safe design and on-site fire protection.

Fire Protection Policy 2.8. Consider provisions for adequate emergency access, driveway widths, turning radii, fire hydrant locations, and Needed Fire Flow requirements in the review of all development applications to minimize fire hazards.

Fire Protection Policy 2.9. Require mid- and high-rise development to include sprinkler systems and on-site fire suppression equipment and materials and be served by fire stations containing specialized equipment for fire and/or emergency incidents.

Fire Protection Policy 2.10. Establish and maintain an adequate fire flow in relation to structure, size, design, and requirements for construction and/or built-in fire protection.

Fire Protection Policy 2.11. Maintain and enhance an emergency vehicle traffic signal activation system to improve fire station service area coverage in conjunction with planned improvements to the city's major circulation system.

Fire Protection Policy 2.12. Maintain close coordination between planned roadway and other circulation improvements in the city to assure adequate levels of service and response times to all areas of the community.

Fire Protection Policy 2.14. Require new development in high wildfire risk areas to incorporate site design, maintenance practices, and fire-resistant landscaping to protect properties and reduce risks.

Fire Protection Policy 2.15. Continue to remove excessive/overgrown vegetation from city-owned properties and require private property owners to remove excessive/overgrown vegetation to the satisfaction of the Fire Department, to prevent and minimize fire risks to surrounding properties.

Fire Protection Policy 2.16. Require fire protection plans for mitigation of potential grass and wildland fires within designated high fire hazard areas and other areas required by the Fire Department, which address the need for fire systems, water availability, secondary emergency access routes, construction requirements, and fire-resistant landscaping and appropriate defensible space around structures.

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2 Local and Regional Evacuation Planning

Evacuation is defined by the State of California as the organized, phased and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas and their reception and care in safe areas (Cal OES, 2017). Evacuees who do not have or are unable to provide alternatives for short-term living accommodations are generally offered temporary shelter facilities. When the threat passes and evacuation orders are cancelled by local authorities, evacuees are able to return to their homes and businesses, or to make suitable alternative arrangements in the event that they have become victims or have otherwise experienced losses as a result of the event that necessitated the evacuation.

Evacuation during a wildfire is not necessarily directed by the local fire agency, except in specific areas where fire personnel may enact evacuations on-scene during a wildfire event. The local fire agency for the project area is the Escondido Fire Department (EFD). The Escondido Police Department (EPD) has primary responsibility for emergency evacuations of the Project site. Depending on the scale of the evacuation, the agency responsible for coordinating an evacuation in the Unified Incident Command System (ICS) may evolve, starting with the local jurisdiction (i.e., EPD, EFD), then coordination with the County for events that impact multiple municipalities.

Every evacuation scenario will include some level of unique challenges, constraints, and fluid conditions that require interpretation, fast decision making, and alternatives. For example, one roadway incident that results in blockage of evacuating vehicles may require short-term or long-term changes to the evacuation process. Risk is considered high when evacuees are evacuating late, and fire encroachment is imminent. The high number of variables with an evacuation highlights the importance of training responding agencies, modeling various scenarios, educating the public, providing contingency plans, and taking a very conservative approach to evacuation decision timelines.

Equally as important, the evacuation procedures should be regularly updated with lessons learned from actual evacuation events, as they were following the 2003, 2007, and 2014 San Diego County fires. At the time of this Study's preparation, there is no encompassing emergency evacuation plan available for the San Diego region. This Study is consistent with City and County evacuation planning standards and can be integrated into local and regional evacuation plans and other pre-incident plans when and if such plans are completed by the area officials and stakeholders, which includes, but is not limited to, CAL FIRE, EFD, EPD, OES, and SDCSD.

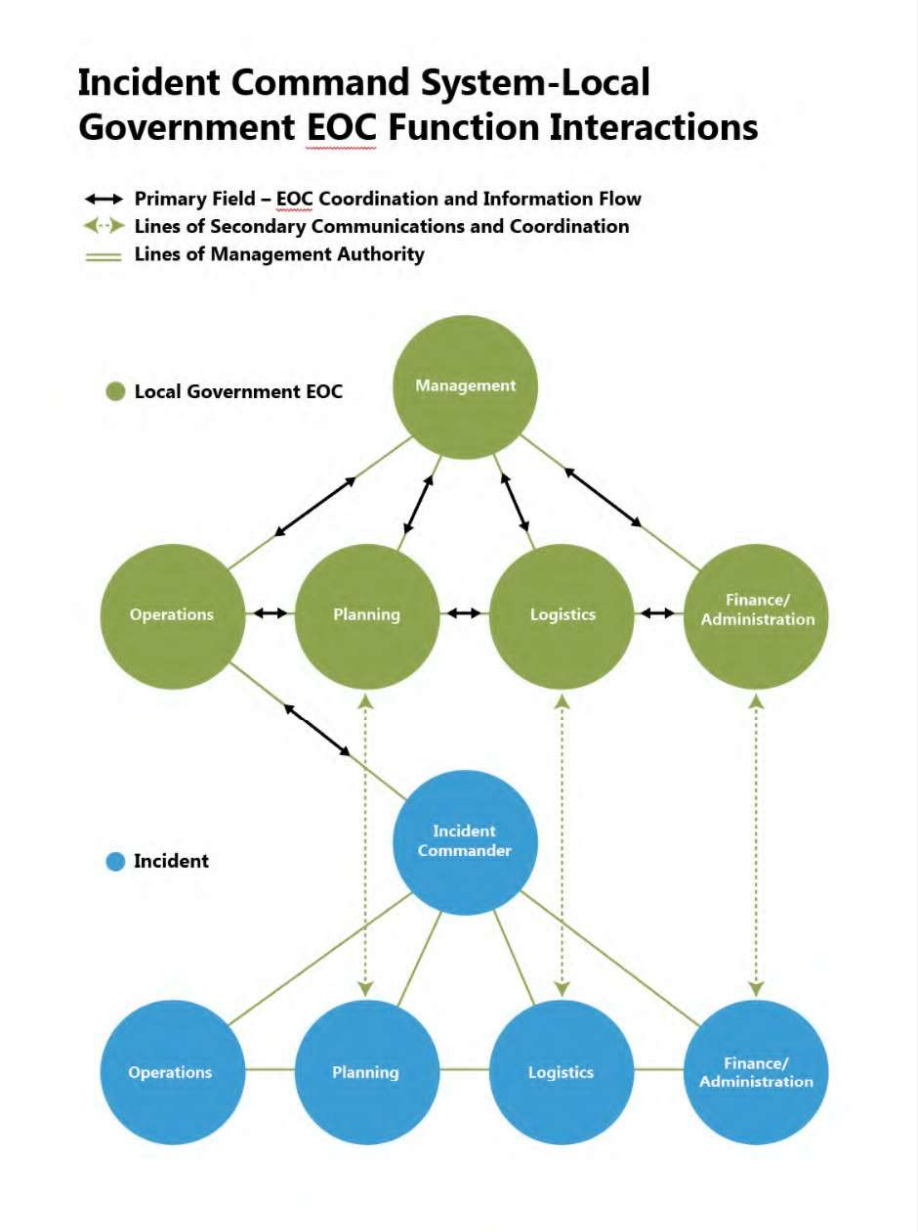
2.1 Emergency Operations

This Study incorporates concepts and protocols practiced throughout the County, including the City of Escondido. To establish a framework for implementing well-coordinated evacuations, the City and County have adopted evacuation procedures in accordance with the State of California's Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). Large-scale evacuations are complex, multi-jurisdictional efforts that require coordination between many agencies and organizations. Emergency services and other public safety organizations play key roles in ensuring that an evacuation is effective, efficient, and safe.

The City does not have a publicly available Emergency Operations Plan; therefore, this Study focuses on the procedures outlined in the Emergency Operations Plan (EOP) for the San Diego County Operational Area (SDC OA) and the California Master Mutual Aid Agreement, which sets forth basic protocols which dictate who is responsible for an evacuation effort and how regional resources will be requested and coordinated.

The following overview contains information from and is consistent with the San Diego County OA EOP, including the Evacuation Annex. First responders are responsible for determining initial protective actions before Emergency Operations Centers (EOCs) are staffed and emergency management personnel have an opportunity to convene and gain situational awareness. Initial protective actions are shared/communicated to local EOCs and necessary support agencies as soon as possible to ensure an effective, coordinated evacuation. Figure 3 summarizes the functional interactions of local government EOCs under the Incident Command System.

Figure 3. Incident Command System Local Government EOC Functional Interactions



Although several official City positions are allowed to declare evacuations, during an evacuation effort, the designated City Evacuation Coordinator is the Police Chief, who is also the Law Enforcement Coordinator. The Evacuation Coordinator will be assisted by other law enforcement and support agencies. Law enforcement agencies, highway/road/street departments, and public and private transportation providers will conduct evacuation operations. Procurement, regulation, and allocation of resources will be accomplished by those designated. Evacuation operations will be conducted by the following agencies:

- Escondido Animal Control and San Diego County Department of Animal Services.
- Escondido Department of Development Services.
- Escondido Department of Public Works.
- San Diego County Department of Planning and Development Services.
- San Diego County Department of Environmental Services.
- San Diego County Department of Public Works;
- Other City, County and state agencies, as needed.

2.2 Wildfire Risk

The historical fire record shows that most vegetation fires occur during normal, onshore weather conditions, and that such fires account for only a proportionally small amount of the land area burned. Wildfires that occur on normal, non-extreme weather days behave in a much less aggressive manner, pose fewer dangers to life and property, and are generally easier to control because they have a slower progression and growth rate. Terrain, fuel, and weather are typically the factors that determine wildfire behavior. During non-extreme weather days, vegetation generally has a higher moisture content, is usually more difficult to ignite, and does not spread fire as rapidly. While there can be on-shore wind conditions that lead to more aggressive fire behavior, generally in these normal weather situations, firefighters have a very high success rate of controlling fires and keeping them under 10 acres. Under normal conditions fires are likely to be controlled with no evacuation or possibly limited extent, focused evacuations.

Conversely, a small number of wildfires that occur during extreme fire weather (Red Flag or Santa Ana conditions) account for most of the land area burned. The data highlights that the most dangerous fire conditions are those related to a fire that moves rapidly due to high winds, low humidity, and lower moisture content in vegetation fuels. Such conditions are more likely to indicate that the evacuation of populated areas should be considered.

Fire history data provides valuable information regarding fire spread, fire frequency, most vulnerable areas, significant ignition sources, and vegetation/fuel mosaics across a given landscape. Fire frequency, behavior, and ignition sources are important for fire response and planning purposes. One important use of this information is as a tool for pre-incident planning. It is advantageous to know which areas may have burned recently and therefore may provide a tactical defense position, what type of fire burned near the Project site, and how a fire may spread. In turn, this understanding of why fires occur in an area and how they typically spread can then be used for pre-incident planning and designing defensible communities.

Wildfire risk for the Project site is believed to be from short-duration ember production from a wildfire burning in open spaces to the east within the Project's vicinity. However, if the wildfire enters the developed areas of the city and becomes and urban conflagration, the Project site could be subjected to sustained ember production from burning homes and trees.

According to available data from the CAL FIRE in the Fire and Resource Assessment Program (FRAP) database there have been eight fires recorded since 1910 within five miles of the Project site, with the most recent wildfire in the Project vicinity was the 2014 Cocos Fire, which burned approximately 1,995 acres. The largest wildfire in the Project vicinity was the 1969 Moosa Fire, which burned approximately 6,944 acres. The Escondido Fire Department (EFD) may have data regarding smaller fires (less than 10 acres) that have occurred near the Project site that have not been included herein. It should be noted that available data does not show any wildfire history on the Project site. Table 2 summarizes the fire history for the area within five miles of the site.

Due to the location of the Project in an area designated by Cal Fire as a VHFHSZ within a LRA, in order to reduce the potential for an off-site wildfire to ignite structures within the Project area, construction materials and methods are required to comply with the 2022 California Building Code, California Fire Code, and California Residential Code as adopted by the County. Those wildfire safety provisions include: an approved fuel modification plan for the entire Project area, Class A roofs, ember-resistant vents, and multi pane windows. These requirements work together to provide a system that reduces on-site wildfire risk. This same system of fire protection features also reduces the risk of structure fires within the Project area spreading to nearby vegetation fuels. This reduced fire behavior would be expected to facilitate evacuations, as well as potential on-site sheltering within ignition resistant structures, if considered safer than a short-notice evacuation.

The Project site is located within an area that is subject to ember cast caused by wildfires in nearby open space areas. However, based on the adjacent land uses and distance to open space in the vicinity, the wildfire potential is considered moderate. The fire intensity would be expected to be low within the boundaries of the Project after construction of the proposed structures and completion of the proposed landscaping given that the Project area is considered urbanized development and given that the Project site is surrounded by similar urbanized development. The reduced fire behavior on site would be expected to facilitate evacuations as well as potential sheltering-in-place contingencies within structures, if considered safer than a short-notice evacuation.

If a wildfire ignited close to the Project site during extreme fire weather conditions that could produce a long-range ember cast, it is possible some evacuation of the site may be ordered, or a different evacuation approach would need to be considered. Because it is preferred to evacuate long before a wildfire is near, and history indicates that most human fatalities from wildfires are the result of late evacuations when evacuees are overtaken on roads, it is prudent to consider a contingency option (Fire Safe Marin, 2022). For example, if a wildfire is anticipated to encroach upon the Project area in a timeframe that is shorter than would be required to evacuate all at-risk occupants, then options available to responding fire and law enforcement personnel would include: (1) partial relocation where occupants are temporarily relocated to nearby shelter sites or areas, or (2) temporary sheltering in place where occupants are instructed to remain in protected on-site structures or at a designated site, while firefighters perform their structure protection function.

2.3 Evacuation Objectives

Annex Q of the San Diego County Operational Area Emergency Operations Plan (County of San Diego, 2022) states that the overall objectives of emergency evacuation operations and notifications are to:

- Expedite the movement of persons from hazardous areas
- Institute access control measures to prevent unauthorized persons from entering vacated, or partially vacated areas

- Coordinate evacuation to appropriate transportation points, which may include temporary evacuation points (TEP), temporary safe refuge areas (TSRA), and/or shelters
- Coordinate adequate means of transportation for individuals with disabilities and others with access and functional needs, which includes, but is not limited to, older adults, children, and individuals who are transportation disadvantaged
- Coordinate the procurement, allocation, and use of necessary transportation and law enforcement resources by means of mutual aid or other agreements
- Coordinate with affected law and enforcement agencies to control evacuation traffic and road closures
- Account for the needs of individuals with household pets and service animals prior to, during, and following a major disaster or emergency
- Provide initial notification, ongoing, and repopulation communications to the public through the Joint Information Center (JIC)
- Coordinate the safe repopulation of the evacuated persons

In the incorporated cities such as Escondido, local police departments are the lead agency for conducting evacuations. The Escondido Police Department is the lead agency for evacuations in the Project area and would coordinate with San Diego County Sheriff's Department (SDCSD) and San Diego County Office of Emergency Services for larger events. During an emergency that requires coordination with multiple jurisdictions, Unified Command assesses and evaluates the need for evacuations with cooperating agencies, and SDCSD or local law enforcement orders and conducts evacuations according to established procedures, which are outlined in Annex Q of the San Diego County Operational Area Emergency Operations Plan (SDC OA EOP). Additionally, as part of the Unified Command, the SDCSD or local law enforcement will identify available and appropriate evacuation routes and coordinate evacuation traffic management with the California Department of Transportation (Caltrans), the California Highway Patrol (CHP), and other supporting agencies and jurisdictions.

The decision to evacuate an area is not made lightly and there is a significant impact to public safety and the economy. The following process describes how emergency evacuation decisions within the Operational Area (OA) will be coordinated, allowing emergency managers and other supporting response organizations to make collaborative decisions.

2.4 Evacuation Coordination Process

Annex Q of the San Diego County Operational Area Emergency Operations Plan (SDC OA EOP) also outlines an evacuation coordination process. That process is reproduced below for easy reference.

a. If the emergency only impacts the City, the decision to evacuate will be made at the local jurisdiction level. Regional coordination is required for any evacuation impacting multiple jurisdictions or when designated evacuation routes cross jurisdictional boundaries. Based on the information gathered, local jurisdictions will generally make the determination on whether to evacuate communities as the need arises, on a case-by-case basis.

b. The decision to evacuate will depend entirely upon the nature, scope, and severity of the emergency; the number of people affected; and what actions are necessary to protect the public.

c. Local jurisdictions may activate their Emergency Operations Center (EOC) and conduct evacuations according to procedures outline in their Emergency Operations Plan (EOP).

d. All evacuations from, through, or into a local jurisdiction will be coordinated with that jurisdiction's public safety partners.

e. The Operational Area (OA) EOC may make recommendations on whether a jurisdiction should evacuate and may help coordinate the evacuation effort, if requested by the jurisdiction.

f. The Evacuation Annex is automatically activated when an incident occurs requiring an evacuation effort that impacts two or more jurisdictions within the OA or when there is an evacuation in the unincorporated area necessitating response from the County.

g. If the emergency impacts multiple jurisdictions within the OA:

   i. All impacted jurisdictions may activate their EOCs.

   ii. The OA EOC may be activated, including the OA EOC Joint Information Center (JIC).

   iii. The OA EOC with begin obtaining situational awareness, understanding the severity of the incident.

   iv. Unified Command, which may consist of fire, law enforcement, public health, and other relevant support agencies, will communicate with the OA EOC as to what protective actions have been implemented. The OA EOC will coordinate with jurisdictional emergency management personnel and other public safety personnel.

   v. The Director of Emergency Services or designee, or the Policy Group, if it is established, will coordinate with City Managers and other leaders within the OA to identify strategic decisions that will:

      - Gain regional situational awareness.
      - Determine response status.
      - Review status of initial protective actions.
      - Consider additional protective actions.
      - Evaluate public information needs.
      - Determine next steps.
      - Establish a schedule for internal and external updates.

   vi. Evaluate health and welfare of affected residents. The OA EOC JIC will coordinate emergency information to the public in accordance with procedures established in Annex L Emergency Public Information of the OA EOP

   vii. The OA EOC may support the evacuation response according to the OA EOP and:

      - Coordinate transportation for those who need assistance through the activation of emergency transportation services agreements.
      - Coordinate support for individuals with disabilities and others with access and functional needs during the evacuation process, which may include, but is not limited to, the provision of assistance with wayfinding, supervision, and language interpretation.
      - Coordinate and communicate with non-governmental organizations including but not limited to the private sector, community-based organizations, and faith-based organizations to utilize services and resources available to support the response.
      - Coordinate the provision of accessible care and shelter services.

2.5 Evacuation Response Operations

An evacuation of any area requires significant coordination among numerous public, private, and community/non-governmental organizations. Wildfire evacuations will typically allow time for responders to conduct evacuation notification in advance of an immediate threat to life safety, giving residents time to gather belongings and plan for evacuation. On the other hand, wildfires igniting nearby, may occur with little or no notice and certain evacuation response operations, such as contra-flow traffic management, will not be feasible. Every attempt will be made to assist people with safe evacuation. Access for and risk to first responders are additional important considerations. People are encouraged to evacuate early and to help their neighbors, friends, and family to evacuate if doing so will not cause danger to themselves or others.

2.5.1 Emergency Communications

As demonstrated during large and localized evacuations occurring throughout San Diego County over the past 10 years, specifically during the 2017 Lilac Fire, an important component to successful evacuation is early assessment of the situation and early notification via managed evacuation declarations. The County utilizes early warning and informational programs to help meet these important factors. Among the methods available to residents for emergency information are radio, television, social media/internet, neighborhood patrol car, public address notifications, and Reverse 911 or AlertSanDiego.

The County instituted AlertSanDiego, which is a regional notification system that sends telephone notifications to occupants and businesses within areas in San Diego_County impacted by, or in danger of being impacted by, an emergency or disaster. AlertSanDiego is used by emergency response personnel to notify at-risk occupants and businesses with information about the event and/or any advisable or ordered actions, such as evacuation, shelter-in-place, gas leak, missing person, etc. The TTY/TDD capable system utilizes the region's 911 database, provided by the local telephone company(ies) to contact landline telephones whether listed or unlisted. Because the system uses the 911 database, only landline numbers are in the system. Residents who have a Voice over Internet Protocol (VoIP) or cellular telephone and would like to be notified via those means, or who would like an email notification, must register those telephone numbers and/or email address for use by the system to receive voice, text, and email messages.

Occupants of the Cleveland Avenue Residential Project should sign up to receive emergency alerts at the link below.

AlertSanDiego: http://www.readysandiego.org/AlertSanDiego/

Or download the SD Emergency App from the App Store or Google Play.

Television and radio are additional ways to receive emergency alert information. San Diego County will provide updates through radio channels KOGO AM 600 and KLSD AM 1360. Television channels include CityTV, Channel 24 and Channel 99.

Social media provides another outlet for news:

Escondido Police

- Facebook: https://www.facebook.com/EscondidoPolice
- X: https://x.com/EscondidoPolice

City of Escondido

- Facebook: https://www.facebook.com/CityofEscondido
- X: https://x.com/CityofEscondido

2.5.2 Evacuation Points and Shelters

When the Escondido Police Department (EPD) or the 'SDCSD implements an evacuation order, they will coordinate with the Incident Commander or the Emergency Operations Center (EOC) to decide on a location to use as a Temporary Evacuation Point (TEP). American Red Cross (ARC), along with the OA EOC's Care & Shelter Branch will coordinate the locations to be used as emergency shelters if necessary. The OA EOC staff may assist, as requested, in the coordination of an evacuation in an incorporated city. The SDCSD Dispatch Center in conjunction with the OA EOC and Joint Information Center (JIC) will utilize the AlertSanDiego system, social media, radio, television, Integrated Public Alert and Warning System (IPAWS), etc. to direct evacuees to the established TEP or shelter.

Local jurisdictions all have access to the same alert and warning tools as the OA and will follow their internal protocols for sharing information with the public. TEPs will serve as temporary safe zones for evacuees, but they generally do not provide any services, such as food, water, restrooms, etc. Emergency shelters are opened when at least one overnight stay is necessary. Basic services are provided at emergency shelters, which includes meals, accessible shower facilities, dormitory management, health, and behavioral health services. Some TEPs may be suitable to be converted into an emergency shelter location, if necessary and available. Possible shelters and assembly areas that can provide at least short-term refuge and that would be designated by emergency managers during an evacuation include public schools and recreation centers.

An interactive map of the active emergencies in San Diego County, that includes the locations of evacuation centers will be updated regularly and can be found at:

https://www.arcgis.com/home/webmap/viewer.html?webmap=26f7674a2ad744f3806af0c426531951

Other refuge sites are available within urbanized areas south of the Project site, such as south of East El Norte Parkway. If there are residents who are unable to evacuate or in need of transportation assistance to get to a TEP or shelter, the EPD or SDCSD may establish transportation points to collect and transport people without transportation resources to evacuation points. These transportation points should be large, well-known sites such as shopping centers, libraries, and schools. Transportation should be accessible to all populations, including people with disabilities and other access and functional needs.

2.5.3 Pet Evacuations

The federal Pets Evacuation and Transportation Standards Act of 2006 amends the federal Stafford Act of 1988 and requires evacuation plans to consider the needs of individuals with household pets and service animals, prior to, during, and following a major disaster or emergency.

The San Diego County Department of Animal Services (DAS) has plans in place to transport and shelter pets in a disaster under Annex O of the SDC OA EOP, including the Animal Control Mutual Aid Agreement. Animal Control Officers, the San Diego Humane Society, and private animal care shelters will assist in the rescue, transport, and sheltering of small and large animals. In addition, potential volunteer resources and private groups are identified

and tracked in Web EOC by the County. Only non-emergency resources and personnel, such as public and private animal services agencies, will be used to rescue and transport animals during an evacuation effort.

In most cases, DAS and the OA EOC will coordinate and attempt to co-locate animal shelters with people shelters.

2.5.4 Shelter-in-Place

When public safety officials determine that evacuation is not feasible, temporary refuge/sheltering on site may be the best option. Residents may be encouraged and allowed to stay in their homes while firefighters perform their structure protection function if it is considered unsafe to evacuate. This approach is known as shelter-in-place and is consistent with SDC OA EOP evacuation approach that states:

> The concept of shelter-in-place is an available option in those instances where physical evacuation is impractical. This procedure may be effective for residential dwellings in the immediately impacted areas, or for large facilities that house a high percentage of non-ambulatory persons (i.e., hospitals and convalescent homes). Sheltering-in-place attempts to provide a haven within the impacted area. (County of San Diego, 2022).

Shelter-in-place is the practice of going or remaining indoors during or following an emergency event. This procedure is recommended if there is little time for the public to react to an incident and it is safer for the public to stay indoors for a short time rather than travel outdoors. Sheltering-in-place also has many advantages because it can be implemented immediately, allowing people to remain in their familiar surroundings, and providing individuals with everyday necessities such as phone, internet access, radio, television, and food. However, the amount of time people can stay sheltered-in-place is dependent upon availability of food, water, medical care, utilities, and access to accurate and reliable information.

The decision on whether to evacuate or shelter-in-place is carefully considered with the timing and nature of the incident (San Diego County 2022). Sheltering-in-place is the preferred method of protection for people that are not directly impacted or in the direct path of a hazard related event. This will reduce congestion and transportation demand on the major transportation routes for those that have been directed to evacuate by police or fire personnel.

The communities adjacent to the proposed Cleveland Avenue Residential Project may include homes built prior to 2008. These homes may not have been built in accordance with the fire-resistive construction requirements of the current California Building, Fire, and Residential Codes and may not have defensible space landscaping. Unlike most new developments, which are required to incorporate ignition-resistant construction and provide defensibility throughout, responding fire and law enforcement personnel may not be able to direct residents adjacent to the Cleveland Avenue Residential Project to shelter in place. However, due to the homes proposed for the Project being designed and constructed to current codes, it would be possible for the residents of the Cleveland Avenue Residential Project to shelter in place. Maintenance of the construction materials and features intended to reduce opportunities for home ignition during a wildfire event is required in order to provide the homes and property owners within the Cleveland Avenue Residential Project with the maximum protection.

2.6 P.A.C.E. Evacuation Planning

P.A.C.E. evacuation planning is based on a military concept focused on mitigating risk by developing a strong primary plan along with three contingency plans. P.A.C.E. stands for Primary, Alternate, Contingency, and Emergency. If the

Primary plan is compromised, the Alternate plan would be activated. If the Alternate plan is considered not functional or not safe, the Contingency plan is implemented. If the Contingency plan does not mitigate the risk, then the evacuation reverts to the Emergency plan. P.A.C.E. evacuation planning is a simple and effective tool used to accomplish evacuations with flexibility and redundant contingencies. The following describes each of the elements of a P.A.C.E. plan.

Primary: The Primary plan is the overall preferred plan of action to use based on the most likely and most damaging scenario resulting from hazard analysis.

Alternate: The Alternate plan is the plan that will most likely be needed and chosen as the best option when unforeseen circumstances arise during emergency evacuations which preclude the Primary plan from being implemented. The Alternate plan should be as viable as the Primary plan.

Developing the Alternate plan includes analyzing the most likely problems that could prevent the Primary plan from being effective or the best choice under certain circumstances. Whenever possible, identify the vulnerabilities in the Primary plan and find alternatives that address those variables.

Contingency: The Contingency plan is the action that will be implemented if the Primary and the Alternate plans cannot be implemented due to compromised safety. The Contingency plan is not usually as preferred as the Primary or Alternate plans but is a viable option that doesn't rely on the same actions as the Primary and Alternate plans.

Emergency: The Emergency plan is the plan that is implemented if all three of the previous plans become impractical. In some respects, the Emergency plan is the plan of last resort and is the least preferred option, but is a viable and safe option, nonetheless. The goal in developing the Emergency plan is to create a plan that is does not rely on the types of actions in the first three options yet is a flexible plan that has the highest probability of success by utilizing reliable options with little potential for compromise. The Emergency plan may not be the most convenient and may include components that are uncomfortable.

The purpose and value of using the P.A.C.E. model is the ability to plan for the dynamic nature of emergency situations. The Cleveland Avenue Residential Project P.A.C.E. Evacuation Plans are provided in Table 1.

Table 1. P.A.C.E. Evacuation Plan for the Cleveland Avenue Residential Project

Primary:	Project will evacuate via the primary evacuation route(s) (e.g., Conway Drive, North Avenue, North Broadway, Rincon Drive, Jesmond Dene Road, and I-15, etc.) early after receiving evacuation notice utilizing the primary evacuation route(s) as directed by law enforcement/emergency managers.
Alternate:	Project will follow evacuation instructions which may include an alternate plan to utilize secondary routes or to relocate to nearby urban areas based on congested traffic conditions. Notifications that this alternate plan is being implemented will be provided via the notification systems or on-site emergency personnel, media and social media.
Contingency:	Due to primary and alternate options being compromised or undesirable, the contingency plan of evacuating smaller, highest vulnerability populations will be implemented. For the Project, this may include evacuating until direction is provided to cease evacuation and initiate on-site sheltering of a smaller on-site population.
Emergency:	When the wildfire or other emergency dictates that off-site evacuation is not advised by the primary or alternate evacuation routes, and conditions are such that open air exposure would be unhealthy or unsafe, the Cleveland Avenue Residential population will be directed to shelter in place. Sheltering in place is possible due to the ignition resistant construction

Table 1. P.A.C.E. Evacuation Plan for the Cleveland Avenue Residential Project

	materials and irrigated landscape that creates a fire hardened development. Sheltering in place may also be the preferred option for other emergencies, e.g., active shooter, earthquake. Persons sheltering in place are advised to remain aware of the situation and move out of the building to a designated safe zone if directed to do so or otherwise necessitated.

2.7 Social Aspects of an Evacuation

Orderly movement of people during an evacuation is the result of planning, training, education, and awareness, all of which are promoted in San Diego County's emergency planning and preparedness documents. Evacuation has been the standard term used for emergency movement of people and implies imminent or threatening danger. An evacuation indicates that there is a perceived threat to persons and movement out of the area is necessary but will occur according to a pre-planned and practiced protocol, reducing the potential for panic.

Resident reactions may vary during an evacuation event, although several studies indicate that orderly movement during wildfire and other emergencies is achievable. Evacuation can be made even less problematic through diligent public education and emergency personnel training and familiarity. Social science research literature indicates that reactions to warnings follow certain behavior patterns that are defined by people's perceptions (Aguirre 1994; Drabek 1991; Fitzpatrick and Mileti 1994; Gordon 2006; Collins 2004) and are not unpredictable.

In summary, warnings received from credible sources by people who are aware (or have been made aware) of the potential risk, have the effect of an orderly decision process that typically results in successful evacuation. This success is heightened when evacuations are not foreign to occupants (Quarantelli and Dynes 1977; Lindell and Perry 2004) as will occur within the Project area. Further, in all but the rarest circumstances, evacuees will be receiving information from credible sources during an evacuation. It is anticipated that law enforcement and/or fire personnel will be on site to help direct traffic and will be viewed by evacuees as knowledgeable and credible. The importance of training these emergency services personnel cannot be overstated and regular education and training regarding fire safety and evacuation events will be essential for successful future evacuations.

2.8 Wildfire Evacuation Best Practices

Orders and Warnings

When Incident Command (IC) determines certain areas to be at risk due to wildfire conditions, an evacuation order could be issued. An evacuation order should be considered when there is an actual threat to civilian life within 1 to 2 hours of such determination or when the IC deems it necessary to protect civilians. The purpose of an evacuation warning, in comparison to an evacuation order, is to alert community members in a defined area of a potential threat to life and property from an emergency incident and make them aware that an evacuation may be ordered. An evacuation warning may be issued when the potential or actual threat to civilian life is more than 2 hours away.

The Department of Homeland Security (DHS) provides supporting data for why jurisdictions have moved to the targeted evacuation approach that leverages the power of situational awareness to support decision making. According to their 2019 *Planning Considerations: Evacuation and Shelter in Place* document, DHS indicates that delineated zones provide benefits to the agencies and community members. Evacuation and shelter-in-place zones

promote phased, zone-based evacuation targeted to the most vulnerable areas, which allows jurisdictions to prioritize evacuation orders to the most vulnerable zones first and limit the need to evacuate large areas not under the threat. Zones help:

- Jurisdictions to understand transportation network throughput and capacity, critical transportation and resource needs, estimated evacuation clearance times, and shelter demand.
- Planners to develop planning factors and assumptions to inform goals and objectives.
- Community members to understand protective actions to take during an emergency.
- Shelters to limit traffic congestion and select locations suitable for the evacuated population.

Additionally, while targeted evacuation orders and warnings aim to ensure proper traffic flow and reduce stress at evacuation sites, some people may still choose to evacuate even if they are not facing an immediate threat. These individuals are known as shadow evacuees, and they increase the demand on the roadway network. The number of shadow evacuees varies from incident to incident, depending on their proximity to the actual fire and perceived risk of danger.

While the amount of time needed to evacuate the Project would vary by the type of incident, time of day, the number of people who need to evacuate, the amount of mobilization time taken by occupants, actual areas at risk, and other factors, the targeted approach would minimize the size of the area being evacuated and use a phased approach, which would likely reduce the road network congestion and evacuation time.

3 Cleveland Avenue Evacuation Procedures

In addition to the time required to evacuate, other allowances for the time needed to detect and report a fire; for fire response and on-site intelligence; for phone, patrols, and aerial based notifications; and for notifying special needs residents are all variables that could impact the opportunity for and duration of an evacuation.

Wolshon and Marchive (2007) simulated traffic flow conditions in a computer-derived wildland-urban interface (WUI) area under a range of evacuation notice lead times and housing densities. To safely evacuate a large number of people, the authors recommended that emergency services personnel: (1) provide more lead time to evacuees, and (2) control traffic levels during evacuations so that fewer vehicles are trying to evacuate a given area at the same time.

Wildfire emergency response procedures will vary depending on the type of wildfire and the available time in which decision makers can assess the situation and determine the best course of action. Based on the Cleveland Avenue Residential Project area and surrounding communities, the existing road network, and the related fire environment, the first and primary type of evacuation envisioned is an orderly, pre-planned evacuation process where people are evacuated to more urban areas further from an encroaching wildfire well before fire threatens.

Evacuation is considered by many to offer the highest level of life protection to the public in advance of many hazard related events. However, an evacuation can result in evacuees being placed in harm's way if the time available for evacuation is insufficient (Cova et al. 2011). A pre-planned evacuation is the most desirable and requires a conservative approach to initiating the evacuation process. For example, when ignitions occur and weather is such that fires may spread rapidly, evacuations should be initiated with a more conservative threshold that includes additional time allowances for unforeseen, but possible, events that would slow the evacuation process. A short-notice evacuation is an example of a highly undesirable evacuation from a public safety perspective and should occur only when a fire ignites close to vulnerable communities. This type of situation is inherently dangerous because there is generally a higher risk of entrapment or inability to move faster than the fire to persons who are in a vehicle or on foot when fire is burning in the immediate area than there is in a well-defended, ignition-resistant structure. This type of evacuation must be considered a very undesirable situation by law and fire officials in all but the rarest situations where late evacuation may be safer than seeking temporary refuge in a structure or other safe place.

In cases where evacuation is in process and changing conditions result in a situation that is considered unsafe to continue evacuation, it may be advisable to direct evacuees to pre-planned temporary refuge locations This situation is considered highly undesirable, but the evacuation pre-planning, using the P.A.C.E. model, must consider these potential scenarios. Decision makers at the Emergency Operations Center (EOC), Unified Command (UC), and/or the Incident Command (IC) must be prepared to enact an alternate, contingency, or emergency plan when conditions dictate that the primary plan may not be effective or safe.

Indications from past fires and related evacuations in Escondido, San Diego County, and throughout California, which have experienced increasingly more frequent and larger fires, are that evacuations are largely successful, even with a generally unprepared populace. It then stands to reason that an informed and prepared populace would minimize the potential evacuation issues and related risk to levels considered acceptable from a community perspective.

Evacuation orders or notifications are often initiated based on established and pre-determined model thresholds, which are based on topography, fuel, moisture content of the fuels, and wind direction. Evacuations are initiated when a wildfire reaches or crosses one of these pre-determined thresholds. Evacuations can also be very fluid. The Office of Emergency Services (OES), Unified Command, and law enforcement would jointly enact evacuations based on fire behavior.

3.1 Project Evacuation

For purposes of this Study, the first and most logical choice for the occupants within the Cleveland Avenue Residential Project is to adhere to the principles and practices of the "Ready, Set, Go!" program, which is found in Appendix A of this document. It is imperative that residents review the "Ready, Set, Go!" program information on a routine basis along with the accompanying maps illustrating evacuation routes, temporary evacuation points, and pre-identified shelters. It must be kept in mind that conditions may arise that will dictate a different evacuation route than the normal roads used on a daily basis.

Occupants are urged to evacuate as soon as they are notified to do so or earlier if they feel uncomfortable. Directions on evacuation routes will be provided in most cases, but when not provided, occupants of the Project will proceed according to known available routes away from the encroaching wildfire as detailed in Appendix C, Quick Reference Guide. Residents are cautioned not to rely on navigation aid apps which may inadvertently lead them toward an oncoming fire. Depending on the type of emergency and the resulting evacuation, it could take a considerable amount of time to complete a community-wide evacuation, based on road capacities and competing use of the roads by residents from other areas.

To ensure that initial and future residents of the Cleveland Avenue Residential Project are aware of the evacuation procedures herein and are preparing for wildfires and other emergencies in accordance with the "Ready, Set, Go!" program, the Homeowners' Association (HOA) is encouraged to designate primary and secondary Community Safety Coordinators. Potential roles and responsibilities of Community Safety Coordinators are discussed below. Residents should also be encouraged to create family disaster plans, such as those described in Appendix B.

3.1.1 Evacuation of Populations with Access and Functional Needs

Vogt (1990, 1991) defines special populations as those groups of people who, because of their special situations or needs, require different planning strategies from those of the general population. Special needs populations, more commonly referred to as access and functional needs (AFN) populations, include those in institutions or special facilities, those with disabilities in homes, those who need care, children, and others who cannot provide for their own evacuation if necessitated. The special needs population is concentrated in facilities but is also widespread in terms of facility locations and those who live in campus housing. Special needs populations in the Cleveland Avenue Residential Project include people with disabilities, the hearing or visually impaired, foreign speaking, visitors passing through the area, and temporary visitors such as day workers.

Populations with AFN refers to individuals with physical, intellectual, or developmental disabilities; chronic conditions; injuries; limited English proficiency or who are non-English speaking; older adults; children; people living in institutionalized settings; or those who are low-income, homeless, pregnant, or transportation disadvantaged, including, but not limited to, those who are dependent on public transportation (CalOES 2023).

Special populations and temporary visitors may not have knowledge of the area's wildfire hazard, they may not know how to react in a fire emergency, and they may not understand what they are being told to do. To ensure all members of the community understand the emergency alerts and resources available, emergency services personnel should use accessible messaging and communication methods. Individuals with AFN may not be able to evacuate themselves or may need assistance with evacuating. Individuals with AFN should create a personal emergency plan for themselves and, if necessary, their service animals. A Community Safety Coordinator can assist AFN residents with pre-arranging any special needs for notification of family and/or friends, transportation, sheltering, etc. AFN residents will be advised of their options during an emergency by law enforcement or fire officials.

3.1.2 Animal Evacuations

Although the Project does not propose any land uses that would add additional livestock or pets to the Project area, the City of Escondido is largely semi-rural with a number of equestrian and agricultural uses. In the event of a wildfire evacuation, residents and business that would need to evacuate livestock, and large pets would require additional time to prepare for evacuation. As demonstrated in the 2017 Lilac Hills Fire, the County and its partners were able to help evacuate approximately 800 horses to the Del Mar Fairgrounds. Residents with livestock and/or large pets will generally require more time to evacuate and will likely be among the last residents to evacuate. The addition of large vehicles and/or vehicles with trailers for transporting livestock on the road network could adversely impact the congestion of neighborhood streets.

3.1.3 Re-Entry Procedures

An important component of evacuations is the resident re-entry process. Guidance and procedures to ensure a coordinated, safe, and orderly re-entry into impacted communities following an incident are provided in the County of San Diego Re-Entry Protocol and the County of San Diego Evacuation and Repopulation Plans. (County of San Diego, 2022).

Repopulation will be initiated by the Incident Commander or Unified Command, or the Incident Management Team, with the support of the Director of Emergency Services, the Operational Area Emergency Operations Center (OA EOC) Director, or the Operations Section Chief at the OA EOC. In most cases the OA EOC will remain activated until full repopulation is complete. In the event that the OA EOC has been deactivated, the Incident Commander or the Liaison Officer of the Incident Management Team will initiate repopulation procedures.

The Incident Commander will designate staff to the Evacuation/Repopulation Branch and the Operations Section Chief of the OA EOC will coordinate with and support the Evacuation/Repopulation Branch Coordinator. The Evacuation/Repopulation Coordinator is responsible for coordinating the repopulation procedures with all involved agencies and ensuring effective communication.

The public will be notified of repopulation through various notification measures previously mentioned in this Study.

3.2 Civilian and Firefighter Evacuation Contingency

While pre-planned evacuation is the preferred type of evacuation, there are numerous examples of people sheltering in their homes, in hardened structures, in community buildings, in swimming pools, and in cleared or ignition-resistant landscape open air areas. The preference will generally be early evacuation following the "Ready, Set, Go!" model, but there exists the potential for unforeseen civilian evacuation issues. Having several options, in addition to the primary evacuation, will provide predetermined discretion in these situations that may result in saved lives.

Potential problems during wildfire evacuation from the Cleveland Avenue community include:

- Inadequate time to safely evacuate.
- Fire evacuations during peak traffic hours or when large events are occurring.
- Blocked roads due to accidents or fallen tree(s) or power pole(s).
- Diminished road capacity diminished due to the presence of trailers used to evacuate large animals.
- The need to move individuals who are unable to self-evacuate.

It is recommended that local law enforcement and fire agencies conduct concerted pre-incident planning efforts focusing on evacuation contingency planning for civilian populations when it is considered safer to temporarily seek a safer refuge than evacuation.

4 Project Evacuation

Safely undertaking large-scale evacuations is a complicated process that involves many factors that cannot necessarily be determined in advance. Evacuations are fluid and timeframes may vary widely depending on numerous factors, including, among other things, the number of vehicles evacuating, the road capacity to accommodate evacuating vehicles, occupants' awareness and preparedness, evacuation messaging and direction, and on-site law enforcement control. The sections that follow provides an analysis of the potential Project impacts related to a wildfire evacuation scenario.

As evidenced by mass evacuations during the 2003 Cedar Fire and the 2007 Witch Fire along with other San Diego County evacuations, even with roadways that are designed to the code requirements, it may not be possible, or even the best response, to move large numbers of persons at the same time as part of a mass-evacuation. Instead, informed, phased evacuations enable more streamlined evacuations where those at highest risk are moved first. Road infrastructure throughout the United States, and including San Diego County, is not designed to accommodate a short-notice, mass evacuation without some level of congestion (FEMA 2008). The need for evacuation plans, pre-planning, and tiered or targeted and staggered evacuations becomes very important for improving evacuation effectiveness. Among the most important factors for successful evacuations in urban settings is control of intersections downstream of the evacuation area. If intersections are controlled by law enforcement, barricades, signal control, and other means, potential backups and slowed evacuations can be minimized. Multiple evacuation points enable more evacuees the ability to evacuate with less impact on roadways.

Wildfire Risk

Wildfire risk for the Project site is believed to be from short-duration ember production from a wildfire burning in open spaces within the Project's vicinity. An early evacuation of Cleveland Avenue Residential Community may occur if a wildfire burns closely in the open spaces to the east of the Project. However, the surrounding terrain does not support aggressive runs at the community, which is separated from the open space by developed areas and wildfires during typical weather conditions are less aggressive and more manageable, rarely resulting in large evacuations. As conducted in past wildfires, an early evacuation of the area may occur several or more hours prior to actual threatening conditions at Cleveland Avenue Residential Community, depending on conditions and fire spread projections.

The Project is located within an area that is designated as a VHFHSZ in an LRA. However, based on the residential uses surrounding the Project site, the wildfire potential within the Project structures' direct sphere of influence is considered minimal and direct exposure to unmaintained fuels is limited. The Project would be required to provide 100 feet of fuel modification between unmaintained fuels and Project structures, as well as enhanced construction features as required by the 2022 CFC and 2022 CBC, which reduce fire risk on site. The required fuel modification zones from the Project structures include 0-5 feet of ember resistant landscaping, 5-50 feet of irrigated vegetation, and 50-100 feet of thinned and mowed vegetation. The Project specific fuel modification zone measurements and additional fire safety features are described in the Project's Fire Protection Plan, Appendix D. These same features also reduce risk of fire spreading off-site. This reduced fire behavior would be expected to facilitate evacuations as well as potential on-site sheltering for properly constructed residences, if considered safer than a short-notice evacuation, as discussed further in Section 4.2.

Among the most important factors for successful evacuations at the Project site is control of intersections downstream of the evacuation area. If intersections are controlled by law enforcement, barricades, signal control, firefighters or other means, potential backups and slowed evacuations can be minimized. Another important aspect of successful evacuation is a managed and phased evacuation declaration. Evacuating in phases, based on vulnerability, location, or other factors, enables the subsequent traffic surges on major roadway to be smoothed over a longer time frame and can be planned to result in traffic levels that flow better than when mass evacuations include large evacuation areas at the same time. This plan defers to Law Enforcement and OES to appropriately phase evacuations and to consider the vulnerability of communities when making decisions. For example, newer development in the area, including the proposed homes at Cleveland Avenue Residential Community, will offer a higher level of fire safety on site than homes in nearby communities, of which may have been built prior to 2007.

4.1 Primary Evacuation Routes and Capacity

The primary evacuation routes available to the occupants of the Cleveland Avenue Drive Residential Project that lead to the I-15 include Conway Drive, Cleveland Avenue, North Broadway, Rincon Avenue, Jesmond Dene Road, Country Club Lane, and Centre City Parkway, see Figure 4, Evacuation Routes. Based on these roadways classifications as local roads, local collectors, and collectors, the average hourly capacity is minimally 1,700 vehicles per hour[3] (Highway Capacity Manual 2022, SANDAG 2025).

The Project proposes to construct 29 single family homes, assuming each household averaged two vehicles[4], the total number of evacuating vehicles would be approximately 58. Additionally, the Project is in an area that is largely developed and would be considered infill development; therefore, the addition of approximately 58 vehicles to the area's evacuation routes would not significantly increase evacuation times for the existing land uses. Additionally, structures on the Project site would include ignition resistant construction and a large fuel break would be constructed between unmaintained fuels and Project structures to reduce fire spread on site and afford emergency managers the option to have Project occupants shelter on site, eliminating the additional traffic to the evacuation network that could result from the Project. Therefore, the Project would not be expected to significantly impact evacuation of existing land uses based on the typical road capacity like those found in and around the Project area that, as discussed above, can support approximately 1,700 vehicles per hour during an evacuation event. The addition of 58 vehicles to an evacuation could increase times by approximately 2 minutes if all traffic was utilizing the same evacuation routes. However, the Project would have multiple evacuation routes leading to the I-15, resulting in no measurable impact on existing residential area evacuation times. Further, evacuations are typically managed in a sequential or phased manner to avoid large area notices that result in congested roadways. Under this approach, traffic movement is prioritized through targeted evacuation notices and intersection control to move populations at higher risk as the priority, as discussed further in Section 4.2, below. Therefore, if the Project site and the neighboring residential areas were considered priority areas, they would likely be evacuated via all available evacuation routes with support from technological tools and in-the-field officers.

[3] Hourly roadway capacities were estimated using a 1,700 vehicles per hour per lane (vphpl) capacity per the Highway Capacity Manual [HCM] 7th Edition, Chapter 15 – Two-Lane Highways, and the SANDAG ABM2/2019 RTP 2025 data to obtain roadway classifications.

[4] https://datausa.io/profile/geo/escondido-ca/.

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4.2 Evacuation Alternatives

Fires occurring on typical (non-extreme) fire weather days, when humidity is higher and winds are not as high or gusty, have been very successfully controlled at small sizes within minutes of ignition and would not typically trigger a need to evacuate the Cleveland Avenue Residential community.

If a wildfire ignited closer to the Cleveland Avenue Residential community during weather that facilitates fire spread, where multiple hours are not available for evacuation and placing occupants on the roads could expose them to wildfire, an alternative evacuation approach would need to be explored. It is preferred to evacuate long before a wildfire is near; in fact, history indicates that most human fatalities from wildfires are due to late evacuations when they are overtaken on roads. Therefore, it is prudent to consider a contingency option of temporary on-site refuge. For example, if a wildfire is anticipated to encroach upon the community in a time frame that is shorter than would be required to evacuate all occupants, then evacuations could be significantly impacted and the ability to temporarily shelter occupants in their homes is a prudent contingency.

Targeted Evacuations

Targeted evacuation, which typically targets the scope of the evacuation to only the area in immediate danger and placing a larger area on standby for evacuation, has replaced mass evacuation as the standard protocol for conducting evacuations. This practice allows for better evacuation operations, reduces gridlock, and reserves sufficient travel methods for emergency vehicles.

Target evacuations are possible due to technological advancements and improved evacuation strategies that were learned from prior wildfire evacuation events. This improved approach is reflected in EOPs and the experience of the people tasked with coordinating emergency events and is more capable of managing evacuations. With the technology in use today (e.g., AlertSanDiego), evacuations are more strategic and surgical than in the past, evacuating smaller areas at highest risk and phasing evacuation traffic so that it flows more evenly and minimizes the surges that may slow an evacuation. Mass evacuation scenarios where large populations are all directed to leave simultaneously, resulting in traffic delays, are thereby avoided, and those populations most at risk are safely evacuated.

The Project site is within evacuation zone SDC-0662. A complete map of all evacuation zones in the County can be accessed at:

> https://protect.genasys.com/location?z=15.059885316477079&latlon=33.17197827456093%2C-117.08188133757915

Shelter In Place

Shelter-in-place is the practice of going or remaining indoors during or following an emergency event. This procedure is recommended if there is little time for the public to react to an incident and when it is safer for the public to stay indoors for a short time rather than travel outdoors. Sheltering-in-place also has many advantages because it can be implemented immediately, allowing people to remain in their familiar surroundings and providing individuals with everyday necessities such as telephone, radio, television, food, and clothing. However, the amount of time people can stay sheltered-in-place is dependent upon availability of food, water, medical care, utilities, and access to accurate and reliable information

This approach is consistent with San Diego County's evacuation approach that states (County of San Diego 2022):

> The concept of shelter-in-place is an available option in those instances where physical evacuation is impractical. This procedure may be effective for residential dwellings in the immediately impacted areas, or for large facilities that house a high percentage of non-ambulatory persons (e.g., hospitals and convalescent homes). Sheltering-in-place attempts to provide a haven within the impacted area.

Although not a designated shelter-in-place community, the proposed structures at Cleveland Avenue Residential are required to retrofit existing buildings on site to meet current CBD and CFC requirements addressing wildfire safety as a priority. All structures will be required to meet or exceed the requirements for building in a FHSZ (e.g., Chapter 7A of the CBC), which establishes minimum standards for ignition resistant construction and defensible space

4.3 Evacuation Impacts

There are currently no significant standards for evacuation travel time for the Project area or CEQA. Public safety, not time, is generally the guiding consideration for evaluating impacts related to emergency evacuation. The County considers a Project's impact on evacuation significant if the Project will significantly impair or physically interfere with implementation of an adopted emergency response or evacuation plan; or if the Project will expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Safely undertaking large-scale evacuations may take several hours or more and require moving people long distances to designated areas. Further, evacuations are fluid, and timeframes may vary widely depending on numerous factors, including, among other things, the number of vehicles evacuating, the road capacity to accommodate those vehicles, occupants' awareness and preparedness, evacuation messaging and direction, and on-site law enforcement control.

Notwithstanding evacuation challenges and variables, the success rate in the County of San Diego in safely managing both mass and targeted evacuations is very high. For example, there were no fire-caused deaths during the evacuation of the Poinsettia Fire in 2014 and losses of life in virtually every large wildfire were related to persons who ignored initial evacuation warnings, many of whom were located in rural areas with long, exposed evacuation routes. Technological advancements and improved evacuation strategies learned from prior wildfire evacuation events have resulted in a system that is many times more capable of managing evacuations. With the technology in use today in the County, evacuations are more strategic and surgical than in the past, evacuating smaller areas at highest risk and phasing evacuation traffic so that it flows more evenly and minimizes the surges that may slow an evacuation. Mass evacuation scenarios where large populations are all directed to leave simultaneously, resulting in traffic delays, are thereby avoided, and those populations most at risk safely evacuate.

As discussed above, the Project would provide emergency managers the alternative option of recommending occupants to temporarily seek refuge on site in fire-resistant buildings or within the wide, converted landscapes and hardscapes that would not readily facilitate wildfire spread. This would provide emergency managers with a safer alternative to risking a late evacuation. By contrast, the examples of Southern California evacuations that have included loss of life have been the result of occupants who did not evacuate when directed, and then attempted a late evacuation with travel through long distances of exposed travel ways as wildfire were overtaking the area. These examples occurred in fire environments that were more aggressive and included less maintenance than would occur at the Project area. Additionally, the Project would not cut off or otherwise modify existing evacuation routes.

This information will be provided to emergency managers for use in pre-planning scenarios to better inform in-the field-decisions made pursuant to adopted Emergency Operations Plans. Emergency personnel who issue an evacuation order may take into account these time estimates in determining when and where to issue evacuation orders. In a real evacuation scenario, emergency managers may use alternative actions/options to further expedite evacuation. Such actions may include providing additional lead time in issuing evacuation orders, providing alternative signal control at downstream intersections, utilizing additional off-site routes or directing traffic to roadways with additional capacity, implementing contra-flow lanes, issuing shelter-in-place orders when determined to be safer than evacuation, or considering the possibility of a delayed evacuation where parts of the population could be directed to remain on site until the fire burns out in the sparse fuels around the evacuation route. These options require in-the-field determinations of when evacuations are needed and how they are phased to maximize efficiency.

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5 Wildfire/Evacuation Awareness

Although not required by regulation or code, nor relied upon for purposes of reaching the significance conclusions set forth in this Study, the Cleveland Avenue Residential Project team can be proactive in its awareness outreach to its future buyers and residents regarding wildfire safety and general evacuation procedures. There are aspects of wildfire safety and evacuation that require occupants to be aware of the potential for wildfire and evacuation and how to respond during an emergency, which will reduce and/or avoid challenges with an effective evacuation. Mitigating potential impediments to successful evacuations requires focused and repeated information through a strong informational outreach program.

Preparedness and awareness information provided herein could be made accessible to buyers and residents on the Escondido Fire Department's website. Community organizations such as a Neighborhood Watch or a formally organized Firewise Community could coordinate with local fire agencies to hold an annual fire safety and evacuation preparedness informational meeting. One focus of these meetings could be the importance of each resident to prepare and be familiar with their own "Ready, Set, Go!" Action Plan. The "Ready, Set, Go!" program is defined at https://www.readyforwildfire.org/, and information about preparing a personalized Action Plan is provided in Appendix A of this document.

The focus of the "Ready, Set, Go!" program is on community awareness and preparedness, especially for those living and working in or near wildfire hazard areas. The program is designed to incorporate the local fire agency as part of the training and education process in order to ensure that evacuation preparedness information is disseminated to those subject to the potential impact from a wildfire. There are three components to the program:

- **"READY" – Preparing for the Fire Threat:** Take personal responsibility and prepare long before the threat of a wildfire so you are ready when a wildfire occurs. Create an emergency kit for your vehicle(s). Assemble emergency supplies and essential belongings in a safe spot in your home. Confirm you are registered for AlertSanDiego.
- **"SET" – Situational Awareness When a Fire Starts:** If a wildfire occurs and there is potential for it to threaten your home and/or surrounding communities, pack your vehicle with your emergency supplies essential belongings. Stay aware of the latest news from local media and monitor your local fire department for updated information on the fire. If you are uncomfortable, leave the area.
- **"GO!" – Leave Early!** Following your individual Action Plan provides you with knowledge of the situation and how you will approach evacuation. Leaving when an evacuation order is issued provides you with the least delay and results in a situation where firefighters are now able to better maneuver, protect, and defend structures; evacuate other residents who couldn't leave early; and focus on community safety.

"READY SET GO!" is predicated on the fact that being unprepared and attempting to flee an impending fire late, such as when the fire is physically close, is dangerous and complicates an already confusing situation. This Study provides key information that can be integrated into the individual evacuation plans, including the best available routes to use in the event of an emergency evacuation.

Situational awareness requires a reliable information source. One of the most effective public notification methods is Reverse 911. The San Diego Office of Emergency Services (OES) operates the Reverse 911 notification system that provides a recorded message relating to evacuation notices over land line telephone systems. In addition, OES operates a program known as AlertSanDiego that has the capability to send emergency notifications over both land

lines as well as to cell phones via voice and text messages. It is up to individual residents to register their cell phones for AlertSanDiego. The registration of cell phones can be done online at www.ReadySanDiego.com. In addition, the San Diego Emergency Alert System (EAS) is county-wide and broadcasts emergency information via two radio stations: KOGO AM 600 and KLSD AM 1360.

While the practices above support an informed populace and would further improve safety and reduce and/or avoid challenges during an evacuation, the analysis herein is not predicated on implementation of those practices. Therefore, as previously discussed, the Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires or substantially impair implementation of or physically interfere with an adopted emergency evacuation plan or emergency response plan.

6 Wildfire Evacuation Study Limitations

This Study has evaluated the proposed Project with regard to its impact on the existing evacuation capability and capacity of the road network that serves the existing dwellings, businesses, and recreational uses in the vicinity of the Project and the City of Escondido as a whole. This study specifically evaluated evacuations associated with a wildfire event but also acknowledge that evacuations could be needed for other hazard related events. The evaluations that form the basis for this Study assume the completion of the proposed Cleveland Avenue Residential Project.

As noted, the amount of time needed to evacuate the Project site and adjacent neighborhoods is dependent on the type of emergency, the extent of the evacuation, the rate of forward progress of a wildfire, current weather conditions, the time of day, and other factors that can have a compounding effect. A collective, community–wide evacuation is anticipated to result in some traffic congestion on the existing road network given the extent of the current development surrounding the Project site.

Congested roads are normal in any urban setting when a large evacuation is ordered. However, evacuations conducted in accordance with the recommendations of this Study will result in an orderly and continuous outflow of residents from the Project area despite the anticipated traffic congestion that results from having more vehicles than normal using the road network. As previously determined, the Project does not create a significant impact on the existing evacuation ability and/or capacity of the road network that serves the Project, however, there is the potential for congestion and delays during an evacuation. This reality underscores the importance of early, phased, and orderly evacuations managed by public safety officials.

This Study promotes the "Ready, Set, Go!" model, adopted by County of San Diego, CAL FIRE, and many fire agencies statewide. The goal is to raise agency and community awareness of potential evacuation issues and get a majority of the public "Ready" by taking a proactive stance on preparedness, training drills, resident education, and evacuation planning efforts.

The Project residents will be "Set" by closely monitoring local conditions whenever fire weather occurs and/or when there is an actual wildfire event. During these times, it is important to maintain situational awareness and begin the process of preparing to evacuate.

Lastly, fire or law enforcement officials will mandate that people in a high-risk situation "Go" by executing pre-planned evacuation procedures. The preferred alternative, initially, may well be early evacuation. However, there may be instances when evacuation is not possible, is not considered safe, or is not an option based on changing conditions, or other factors.

The construction associated with this Project is designed specifically to maintain an enhanced resistance to wildfire ignition, offering fire and law officials with additional options for safety to the residents compared to other neighborhoods with older construction that was not required to meet newer fire-resistant standards and neighborhoods that are not required to provide defensible space and sustained vegetation management.

As noted, this Study does not and cannot provide a guarantee that all persons and property will be unaffected by a wildfire event, other emergency, or a disaster. The considerations presented herein for further development, refinement, and implementation including sheltering in place versus evacuating, suggested roadway

enhancements, increased effectiveness of traffic measures, ignition resistance measures, public outreach, program maintenance, and updates by local authorities are strongly recommended. Buyers and residents are encouraged to work cooperatively and regularly engage with public safety officials to review the implementation of the recommendations of this Study with an overall goal of instilling a heightened sense of awareness and preparedness in the event of a wildfire incident. Fire is a dynamic and unpredictable occurrence, and it is important for those in wildfire hazard areas to inform themselves on practices that will improve safety and are be able to be implemented at the individual and household level rapidly and effectively, albeit in combination with protocols and "in-the-field" decision making of emergency responders.

While this Study has determined that the Project will not have a significant impact on the existing evacuation ability and capacity of the current development adjacent to the Project, this Study has provided some recommendations for evacuation routing under various scenarios. Given the circumstances during an actual wildfire event, public safety officials will determine which evacuation options and routes provide the highest degree of public safety and the best opportunities for a successful and timely evacuation.

Many factors can affect the amount of time required for a complete evacuation. These factors include:

- Establishing an evacuation route that utilizes less traveled roads that may not be familiar to residents.
- Increasing or decreasing the number of households and businesses evacuated during each phase depending on the present and anticipated conditions of the wildfire event. Reserving certain road lanes for emergency vehicle ingress, which could impact egress road capacity and affect evacuation travel time.
- Evacuees utilizing fewer or more vehicles to evacuate from the Project or surrounding communities than they would use for their normal daily routines. A reduced road capacity at the time of the wildfire event as a result of repair work or the presence of roadway obstructions such as downed trees or utility poles.
- The number of people at home or at work at nearby businesses during the wildfire event who will need to evacuate.
- The number of people, from both households and businesses, who proactively self-evacuated prior to the evacuation order being given.

Limitation On Reliance Or Dependence Upon Report

Any person or entity furnished with or who reviews this report agrees that the advance written consent of Dudek will be sought and furnished to such person or entity prior to the review, reliance, or authorization as to any matters that are the subject of the reports by any person or entity (whether through act or omission as set forth in the report), other than Dudek's direct client. In such case, obtaining Dudek's consent shall not be subject to any fee or charge (other than reasonable copy costs, where applicable).

Dudek expressly disavows, does not assume any responsibility for, nor will be liable for any claims, losses, or damages associated with any matters that are the subject of this or other reports it prepares or contributes to respecting this project, however characterized (including without limitation as sounding in tort, breach of contract, misrepresentation by act or omission, failure to adhere to applicable standards of professionalism, statutory liability, etc.), whether in law or equity, whether known or unknown, and whether actual or contingent, excepting only Dudek's direct client, as to which the limitation of liability provisions in the contract between Dudek and its client shall govern.

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Appendix A1–A2

San Diego County Emergency Preparedness Resources and “Ready, Set, Go!” Wildland Fire Action Guide

CALIFORNIA WILDFIRE HOME SAFETY CHECKLIST

• HOW COMMON ARE CALIFORNIA WILDFIRES? •

At least 6,284 wildfires occurred in California in 2018, according to the California Department of Forestry and Fire Protection (CAL FIRE). These fires burned approximately 876,147 acres of land.

• WHAT TO DO BEFORE A CALIFORNIA WILDFIRE •



Separate your home from flammable materials

Create at least 30 feet of space between your home and flammable vegetation and materials.



Trim trees and shrubs

Ensure trees and shrubs do not come into contact with electrical wires or hang over your home's chimney.



Clean your home's roof

Remove pine needles, leaves and other debris from your home's roof.



Store combustible materials properly

Store combustible or flammable materials in approved containers.



Pick up battery-operated flashlights and radios

Keep battery-operated flashlights and radios with additional fresh batteries in a safe, easy-to-access location in your home.

• WHAT TO DO DURING A CALIFORNIA WILDFIRE •



Stay up to date

Use a TV or radio to receive wildfire emergency updates.



Set up hoses and water

If possible, fill buckets with water and set up hoses outside your home.



Turn on the house lights

Activate the lights in each room of your home.



Remove flammable drapes or curtains

Take down flammable drapes or curtains in your home.



Get ready to evacuate

Prepare all family members and pets to evacuate your home.

• WHAT TO DO AFTER A CALIFORNIA WILDFIRE •



Contact local fire officials

Check in with local fire officials to find out if it is safe to return home.



Look for hot spots

Check the ground for smoldering stumps and other hot spots and use buckets of water on these spots as needed.



Examine your home's exterior

Look for sparks and embers across your home's roof and exterior areas.



Evaluate your home's interior

Keep an eye out for hidden burning in each room of your home.

9-1-1

Call 911

Contact 911 if you identify any potential dangers.

How much do you know about wildfires?

True or False:

1. An average of 7 million acres of US woodland burn every year.
2. 1 in 5 wildfires are caused by humans.
3. Wildfires move faster downhill.
4. Some species of trees and shrubs require fire to reproduce.
5. The 'fuel' (trees, plants, etc.) you see burning isn't really on fire.
6. There are three broad types of fire spread: Subterranean, Surface and Crown fires.
7. Only YOU can prevent wildfires.

1. True: Across the US, including Alaska, approximately 7 million acres of federal, tribal, state and private land burns annually.
2. False: More than 4 out of 5 wildfires are caused by humans.
3. False: Fire moves faster uphill. The steeper the slope, the faster the fire travels.
4. True: Species such as Ceanothus and many types of closed-cone coniferous trees require heat to germinate.
5. True: The fuel itself is not on fire, but rather, is being converted into a gas. It's the gas produced by the fuel that is actually burning.
6. False: The three types of fire spread are: Ground - organic material in the soil is burning; Surface - leaf litter, fallen braches, etc. on the ground are burning; Crown - the top layer of foliage from trees is burning.
7. True:!

WILDFIRE IS COMING.
ARE YOU READY?

WILDFIRE ACTION PLAN



BE PREPARED

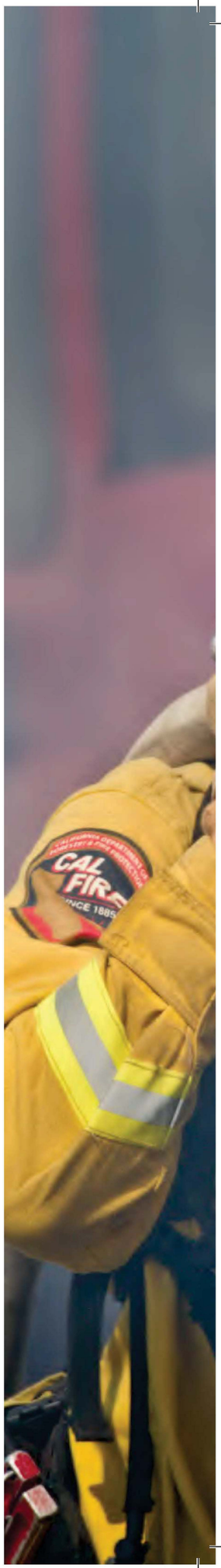
Wildfires are a fact of life in California. It's not a question of if they will occur, but when. Catastrophic wildfires are increasing in our state, encroaching further into populated areas. It is extremely important that Californians be prepared when wildfire strikes.

By preparing your home and property for wildfire, and knowing what to do if evacuation is necessary, you can dramatically increase your safety and the survivability of your home. It is your responsibility to prepare yourself, your family, and your home for when wildfire strikes.

This guide illustrates the importance of creating and maintaining Defensible Space and hardening your home by retrofitting it with ignition-resistant or noncombustible materials to protect against the threat of flying embers, direct flame contact, and radiant heat exposure. It also provides information about the preparations and precautions to make in order to evacuate early and safely.

If you need more information about preparing for wildfire or any other disaster, contact your nearest fire station or visit us at ReadyforWildfire.org.

These counties receive funding from the state to provide fire protection and prevention services to State Responsibility Area lands within their boundaries.





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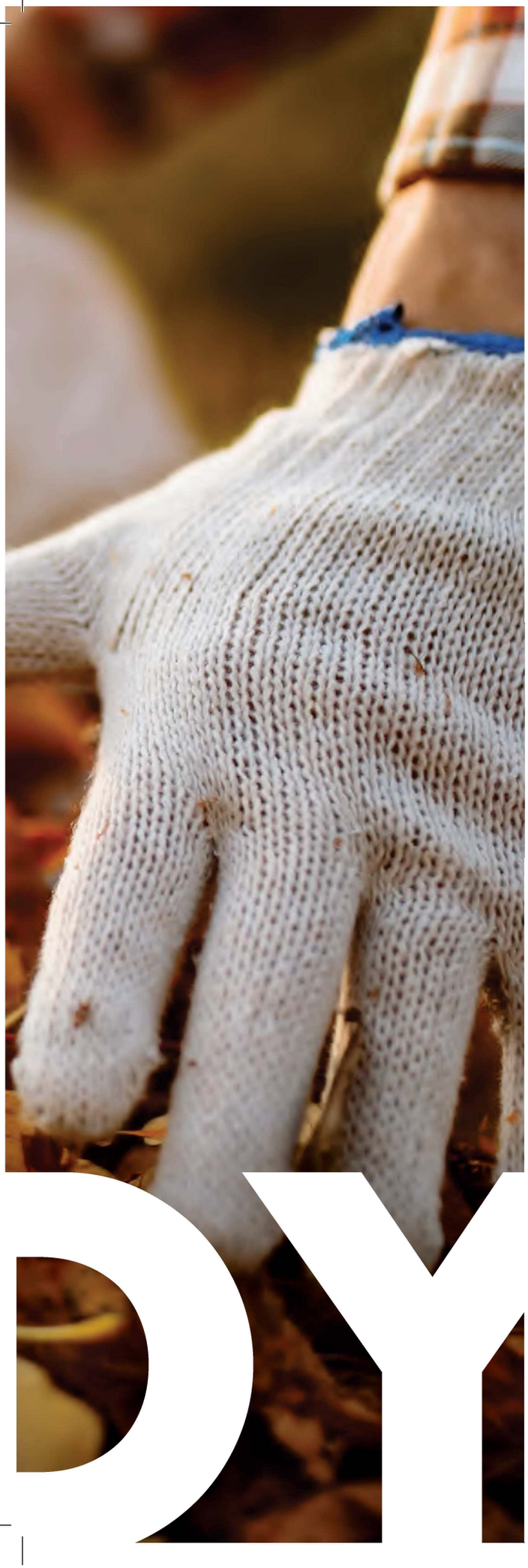
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GO!

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GET
REAL



There are three ways your home can be exposed to wildfire: through flying embers, direct flame contact, and radiant heat exposure.

Embers are the main cause of homes igniting during a wildfire. Wind can blow embers up to a mile ahead of a wildfire. These flying embers can directly ignite materials on, or attached to, a home. They can also ignite vegetation or combustible materials near the home, resulting in a subsequent fire that spreads to the home through direct flame contact or radiant heat.

Direct flame contact to the home can be the result of nearby vegetation or combustible materials catching on fire due to embers, or from the wildfire burning unchecked directly to the building.

Radiant heat exposure occurs when there are materials, vegetation, or other combustibles, that are burning close to the home—for a long enough period of time—and generate enough heat to directly ignite a combustible component of the home.

Getting ready for wildfire begins with two very important efforts: **Home Hardening** and **Defensible Space.** Hardening your home is retrofitting it with fire-resistant materials. Defensible Space is creating and maintaining a buffer between buildings and vegetation to slow wildfire. While not a guarantee that your home will survive a wildfire, these efforts give it the best chance.

HARDENING YOUR HOME

Now is the time to retrofit your home—before a wildfire strikes. California Building Code Chapter 7A requires specific construction materials and methods for the building of new homes in wildfire-prone areas. These same materials and methods are also the minimum standards recommended when retrofitting a home. Retrofitting prepares your home for the exposure it will experience during a wildfire. Here's what you can do to harden your home:

ROOF

Your roof is the most vulnerable part of your home. Homes with wood shake or shingle roofs are at high risk of being destroyed in a wildfire.

- Replace wood shake or shingle roofs with a Class A fire-rated roof, using materials such as composition, metal, or tile.
- Inspect your roof and maintain it by removing debris and plugging gaps.

VENTS

Vents on homes create openings for flying embers.

- Avoid storing combustible items near attic or crawl space vents.
- Inspect vents to ensure they are in good condition with no tears or large openings.
- Cover all vent openings with 1/16 inch to 1/8 inch corrosion-resistant metal mesh screen.
- Consider replacing screened vents with ember and flame-resistant vents.

EAVES AND SOFFITS

Eaves and soffits are a point of entry for flying embers from fires up to a mile away or flames from nearby vegetation or other material burning.

- Plug or caulk gaps greater than 1/8 inch in size with durable caulk.
- Enclose eaves with ignition-resistant or noncombustible materials if possible.

WINDOWS

Heat from a wildfire can cause windows to break before the home ignites, allowing embers to enter and start fires inside. Single-paned and large windows are particularly at risk.

- Install dual or multi-paned windows with at least one pane being tempered glass.
- Consider limiting the size and number of windows that face large areas of vegetation.
- Install metal mesh screens on openable windows to increase ember resistance and reduce radiant heat exposure.

DECKS

Surfaces within 10 feet of the building should be built with ignition-resistant, noncombustible, or other approved materials.

- Remove all combustible items from underneath deck.
- Limit combustible items on top of deck. Bring these items inside the home or move them away from the home when wildfire threatens.

EXTERIOR WALLS

Wood products such as boards, panels, or shingles are common siding materials. However, they are combustible and not good choices for wildfire prone areas.

- Use noncombustible materials such as stucco, metal, or fiber cement, or use ignition-resistant siding.
- Be sure to extend materials from the foundation to the roof.
- Plug or caulk gaps and joints with openings greater than 1/8 inch.

RAIN GUTTERS

Screen or enclose rain gutters with noncombustible corrosion-resistant materials to prevent accumulation of plant debris.

PATIO COVERS

Consider using noncombustible material within eight feet of buildings.

CHIMNEYS

Cover chimney or stovepipe outlet with a noncombustible corrosion-resistant metal mesh screen with openings between 3/8 inch and 1/2 inch in size. Close the fireplace flue during fire season when the fireplace is not in use.

FENCES

Construct fences using noncombustible materials within eight feet of your home.

GARAGES

Install weather stripping to eliminate gaps around garage doors. Add a battery back-up to automatic garage door openers so the garage can easily be opened if the power is out.

DRIVEWAYS

Ensure that access to your home complies with local fire codes.

WATER SUPPLY

Have multiple garden hoses long enough to reach all areas of your house.

ADDITIONAL HOME FIRE SAFETY RESOURCES



HOME HARDENING INFORMATION GUIDE

ReadyforWildfire.org



CALIFORNIA BUILDING CODE CHAPTER 7A

codes.iccsafe.org



WILDFIRE HOME RETROFIT GUIDE

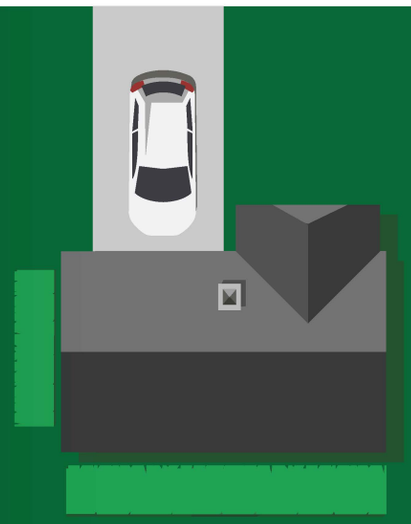
ReadyforWildfire.org



BUILDING MATERIALS LISTING

osfm.fire.ca.gov

DEFENSIBLE SPACE



Creating and maintaining Defensible Space is essential to reducing the impact of wildfire on your home and property. Defensible Space is the buffer created between a building on your property and the plants, brush, trees, or other combustible items in the near vicinity. This buffer helps to keep wildfire away from your home by reducing the fire's intensity and slowing or halting the spread of wildfire. The less there is to burn near your home, the less exposure your home will have to wildfire. Creating this space also provides protection for the firefighters defending your home.

CREATING AND MAINTAINING YOUR DEFENSIBLE SPACE

Within the 100-foot perimeter of a home, there is a need for more intense reduction of wildfire fuels. Start at the home and work your way out 100 feet or to your property line, whichever is closer.

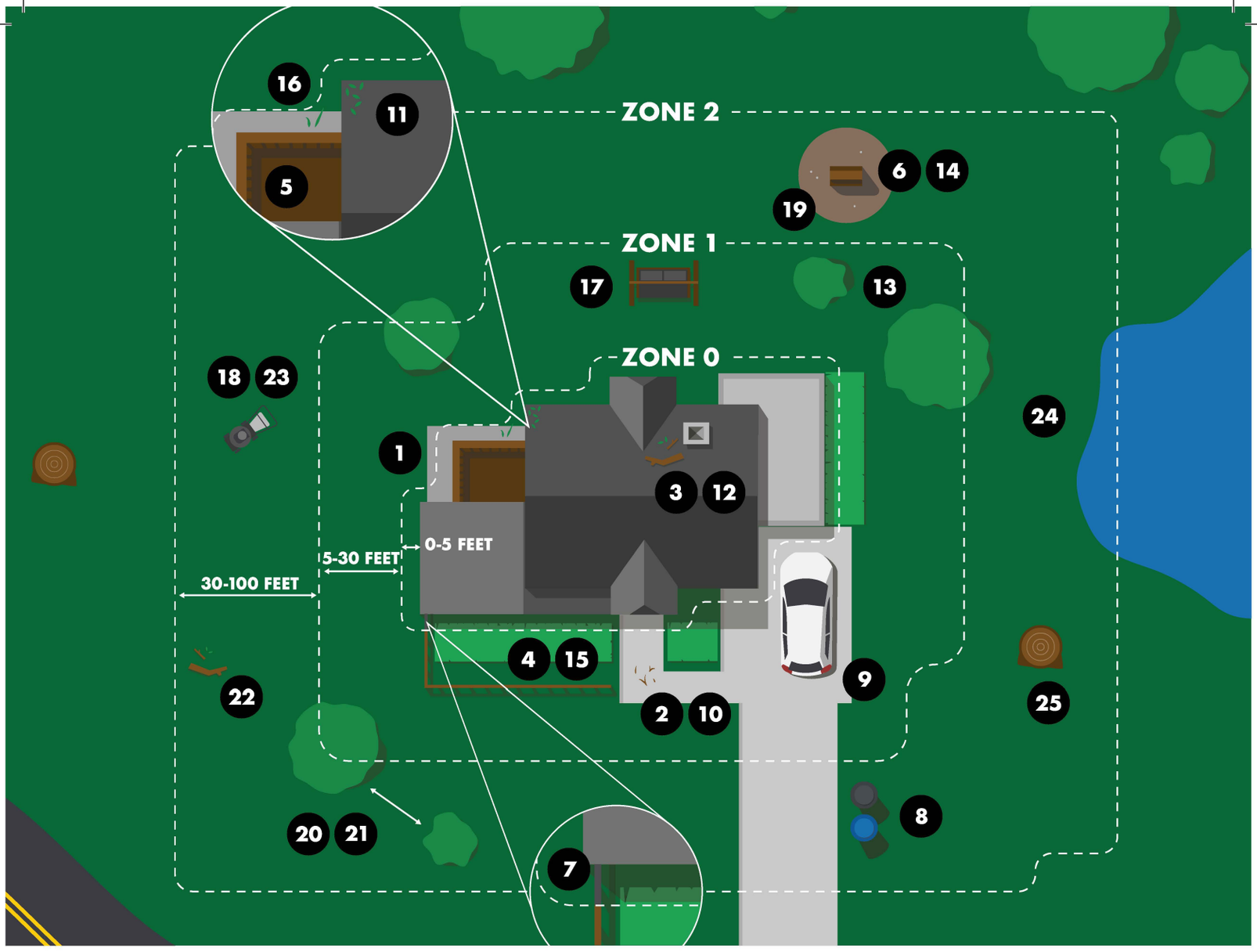
KNOW THE LAW - BE FIRE SMART

One hundred feet of Defensible Space is required under the Public Resources Code (PRC) 4291. Zones 1 and 2 currently make up the 100 feet of Defensible Space required by law. Assembly Bill 3074, passed into law in 2020, requires an ignition-resistant Zone 0 for Defensible Space.

Many local government agencies have ordinances for Defensible Space. These local ordinances will often be more stringent than the state of California's minimum requirement in PRC 4291. Check with your local fire department or fire protection district for any additional Defensible Space requirements. **fire.ca.gov/dspace**

Zone 0 extends from zero to five feet from buildings, structures, decks, etc.

1. Use hardscape like gravel, pavers, concrete, and other noncombustible mulch materials. No combustible bark or mulch.
2. Remove all dead and dying weeds, grass, branches, and vegetative debris. Check your roofs, gutters, decks, porches, stairways, etc.
3. Remove all branches within 10 feet of any chimney or stovepipe outlet.
4. Limit plants in this area to low growing, nonwoody, properly watered, and maintained plants.
5. Limit combustible items (outdoor furniture, planters, etc.) on top of decks.
6. Relocate firewood and lumber to Zone 2.
7. Replace within Zone 0 combustible fencing, gates, and arbors attached to the home with noncombustible alternatives.



8. Relocate garbage and recycling containers outside this zone.
9. Relocate boats, RVs, vehicles, and other combustible items outside this zone.

Zone 1 extends five to 30 feet from buildings, decks, and other structures.

10. Remove all dead plants, grass, and weeds (vegetation).
11. Remove dead or dry leaves and pine needles from your yard, roof, and rain gutters.
12. Remove branches that hang over your roof and keep dead branches 10 feet away from your chimney or stovepipe outlet.
13. Trim trees regularly to keep branches a minimum of 10 feet from other trees.
14. Relocate exposed wood piles outside of Zone 1.
15. Remove or prune flammable plants and shrubs near windows.
16. Remove vegetation and items that could catch fire from around and under decks.
17. Create a separation between trees, shrubs, and items that could catch fire, such as patio furniture, wood piles, swing sets, etc.

Zone 2 extends from 30 feet to 100 feet from buildings, structures, decks, etc.

18. Cut or mow annual grasses to a maximum height of four inches.
19. All exposed wood piles must have a minimum of 10 feet clearance around them, down to bare mineral soil, in all directions.
20. Create horizontal space between shrubs and trees. (See diagram on page 11)
21. Create vertical space between grass, shrubs, and trees. (See diagram on page 11)
22. Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of three inches.

All zones

23. Mow before 10 a.m., but never when it's windy or excessively dry.
24. Protect water quality. Do not clear vegetation near waterways to bare soil. Vegetation removal can cause soil erosion—especially on steep slopes.
25. Logs or stumps embedded in the soil must be removed in Zone 0. In Zones 1 and 2 they need to be removed or isolated from other vegetation.

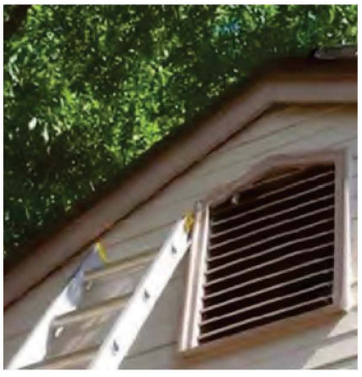
It takes the combination of both Defensible Space and Home Hardening to give your home and property the best chance of surviving a wildfire. Below are examples of low-risk and high-risk scenarios:

HIGH RISK

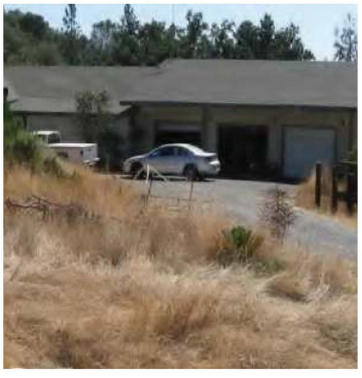
UNENCLOSED EAVES



UNSCREENED VENTS



DEFENSIBLE SPACE NONCOMPLIANT



LOW RISK

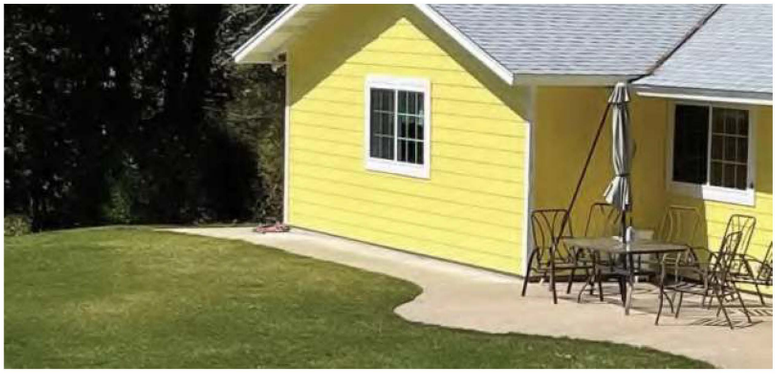
ENCLOSED EAVES



SCREENED VENTS



DEFENSIBLE SPACE COMPLIANT



FIRE SMART LANDSCAPING

While some plants are characterized as "fire-safe" or "fire-resistant," all plants will burn under the right conditions, regardless of how they are classified. The environment the plant grows in, how it is maintained, and its placement and spacing near other vegetation and combustibles will generally have more influence on the flammability of the plant than how it is characterized. Taking these items into consideration is crucial to reduce the spread of wildfire to your home. Scan the QR code below for more information.

FIRE SMART LANDSCAPING
ReadyforWildfire.org/fire-smart-landscaping

MINIMUM VERTICAL SPACING BETWEEN TREES AND SHRUBS

Eliminate opportunities for a vertical "fire ladder":

- Remove branches beneath large trees for a six-foot minimum clearance.
- Create proper vertical spacing between shrubs and the lowest branches of trees. See adjacent diagrams.

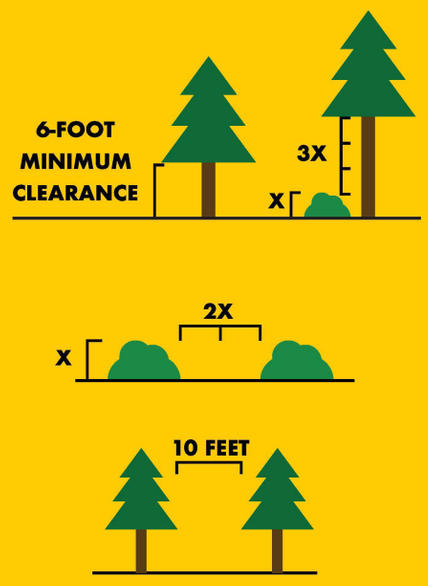
MINIMUM HORIZONTAL SPACING BETWEEN TREES AND SHRUBS

Horizontal spacing depends on the slope of the land and the height of the shrubs or trees. See adjacent diagrams.

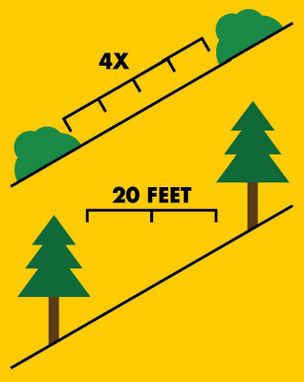
DEAD TREE REMOVAL

If you have dead or dying trees on your property, the entire tree needs to be removed to reduce wildfire risk. Scan the QR code below to learn about permit requirements.

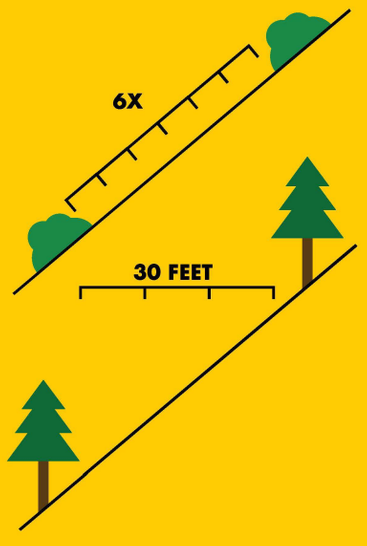
PERMIT REQUIREMENTS
ReadyforWildfire.org/dead-tree-removal



Flat to mild slope (<20%)



Mild to moderate slope (20%–40%)



Moderate to steep slope (>40%)


GET
SET



It is important that you are prepared **before** wildfire strikes. In an emergency it is easy to become confused or panicked.

Getting Set requires three main preparation actions:

- Creating a Wildfire Action Plan
- Creating an Emergency Supply Kit
- Creating a Family Communication Plan

Preparing these items in advance will help keep you focused and able to act quickly when evacuation is anticipated or needed.

Use this guide to complete these actions to prepare in advance of wildfire.

READY FOR WILDFIRE INCIDENT APP

Scan the QR code below to access accurate updates about active wildfires near you with our web-based Ready for Wildfire Incident App.

ACTION PLAN CHECKLIST

CREATE A WILDFIRE ACTION PLAN

Your Wildfire Action Plan must be prepared and familiar to all members of your household well in advance of a wildfire. Use the checklist below to help create your plan. Each family's plan will be different, depending on a variety of issues, needs, and situations.

Create an evacuation plan that includes:

- ○ A designated emergency meeting location outside the fire or hazard area. This is critical to determine who has safely evacuated from the affected area.
- ○ Identification of several different escape routes from your home and community. Practice these routes often so everyone in your family is familiar with them in case of emergency. Go to page 18 to write down your evacuation routes.
- ○ An evacuation plan for pets and large animals such as horses and other livestock.
- ○ A Family Communication Plan that designates an out-of-area friend or relative as a point of contact to act as a single source of communication among family members in case of separation. It is easier to call or message one person and let them contact others than to try and call everyone when phone, cell, and internet systems can be overloaded or limited during a disaster and under a stressful situation. See page 18 for a Family Communication Plan form.



Be prepared:

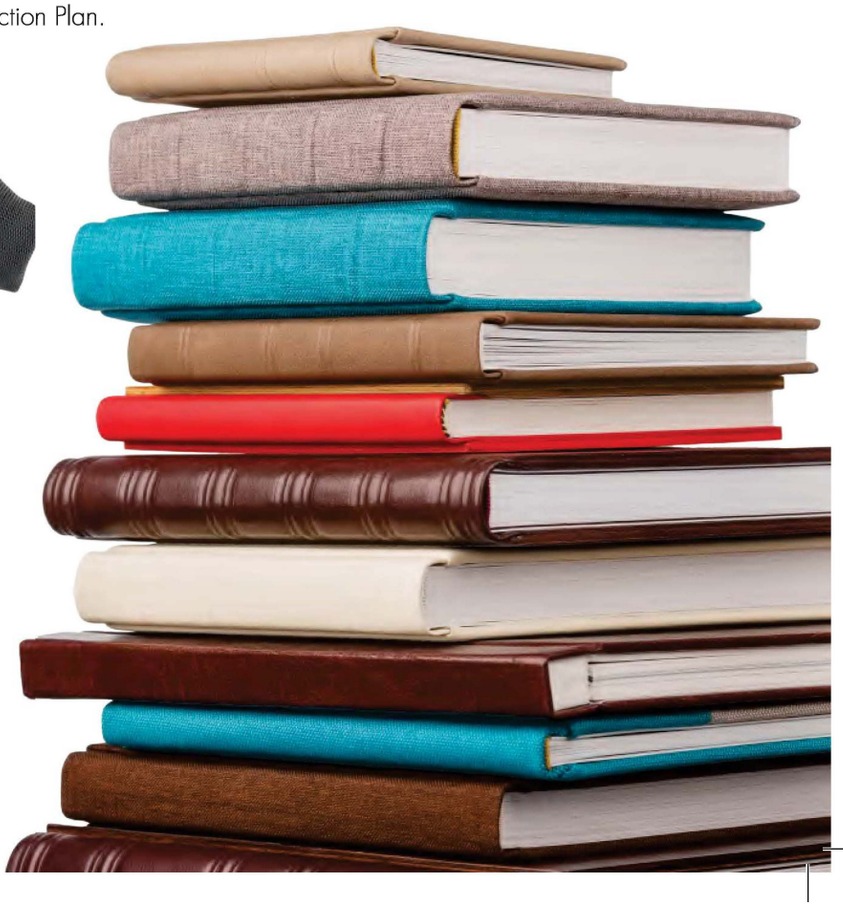
- ○ Have fire extinguishers on hand and make sure everyone in the family knows how to use them. Many fire extinguishers have expiration dates, so make sure to check yours.
- ○ Ensure you and your family know where the home's gas, electric, and water main shut-off controls are located and how to safely shut them down in an emergency.
- ○ Assemble an Emergency Supply Kit for each person, as recommended by the American Red Cross. See Emergency Supply Kit on page 16 for details.
- ○ Maintain a list of emergency contact numbers in your cell phone, posted near your home phone, and in your Emergency Supply Kit.
- ○ Keep an extra Emergency Supply Kit in your car in case you cannot get to your home because of fire or other emergency.
- ○ Have a portable radio or scanner, or follow the Ready for Wildfire App so you can stay updated on wildfires. Follow local law enforcement notifications for any evacuation information. Visit incidents.ReadyforWildfire.org or scan QR code on page 13 to view the incident app.
- ○ Tell your neighbors about Ready, Set, Go! and your Wildfire Action Plan.

THE SIX Ps

Remember the "Six Ps" and keep them ready in case immediate evacuation is required:

- ○ People and pets
- ○ Papers, phone numbers, and important documents
- ○ Prescriptions, vitamins, and eyeglasses
- ○ Pictures and irreplaceable memorabilia
- ○ Personal computer, hard drive, and disks
- ○ "Plastic" (credit cards, ATM cards) and cash





EMERGENCY SUPPLY KIT

Put together your Emergency Supply Kit—also called a "go bag"—before a wildfire or other disaster occurs and keep it easily accessible so you can take it with you when you evacuate. Backpacks work great for storing these items (except food and water) and are quick to grab. Storing food and water in a tub or chest on wheels will make it easier to transport. Keep it light enough to be able to lift it into your car.

Emergency Supply Kit Contents:

- ○ Face masks or coverings
- ○ Three-day supply of non-perishable food and three gallons of water per person
- ○ Map marked with at least two evacuation routes
- ○ Prescriptions or special medications
- ○ Change of clothing, including a cotton long-sleeved shirt and pants
- ○ Extra eyeglasses or contact lenses
- ○ An extra set of car keys, phone charger, credit cards, cash, or traveler's checks
- ○ First aid kit
- ○ Flashlight
- ○ Battery-powered radio and extra batteries
- ○ Sanitation supplies
- ○ Copies of important documents (birth certificates, passports, insurance, etc.)
- ○ Food, water, and medications for pets
- ○ Can opener

Items to take if time allows:

- ○ Easily carried valuables
- ○ Family photos and other irreplaceable items
- ○ Personal computer information on hard drives and disks
- ○ Extra cell phone chargers, laptops, etc.

Always keep a sturdy pair of shoes and a flashlight near your bed handy in case of a sudden evacuation at night.

OUR FAMILY'S ADDITIONAL SUPPLY KIT MUST HAVES ARE:

BE PREPARED FOR POWER OUTAGES

Power outages may occur before and during the threat of a wildfire. It's important to be prepared and know what actions to take when leaving your home during a power outage.

- Learn how to manually open your automatic garage doors or gates—this is extremely important!
- Be familiar with your home's utility shutoffs (electricity, water, and gas).
- Keep a flashlight and shoes near your bed in case you need to evacuate during the night.
- Keep your Emergency Supply Kit easily accessible so you can find it in the dark if you have to evacuate.
- Always keep at least a half tank of gas in your vehicles.
- If you have a power generator, be sure you know the safety guidelines of your model, including where to connect it, which electrical cords to use, and the electrical load rating. An improperly installed generator can electrocute you or an electric utility worker and can also be a fire hazard.
- Keep your cell phone charged.
- Keep a supply of bottled water.

DURING A POWER OUTAGE

If the power goes out, follow these steps:

- Keep your refrigerator and freezer doors closed.
- Shut off the gas and other combustibles such as propane tanks.
- If wildfire is within your area, keep informed with a battery-powered radio or your cell phone.
- Stay at least 10 feet away from both overhead power lines and electrical facilities, and never approach or touch overhead power lines or any person or object in contact with the lines.



SAVE THIS
FAMILY COMMUNICATION PLAN

Fill out this form and place it in a location where it can easily be found by everyone in your household. Copy the form and keep it in your Emergency Supply Kit. This will allow all family members to have access to this key information in case you get separated.

WHEN WE HAVE TO EVACUATE, WE WILL MEET AT:

_____

OUR OUT-OF-AREA EMERGENCY CONTACT PERSON IS:

Name: _____

Home Phone #: _____

Relationship: _____

E-mail: _____

Cell Phone #: _____

OTHER IMPORTANT NUMBERS ARE:

Emergency 911: _____

Local Police: _____

Local Fire Department: _____

Other: _____

Other: _____

Other: _____

OUR TWO EVACUATION ROUTES ARE (DESCRIBE BELOW):

_____ _____

_____ _____

_____ _____

_____ _____

INSURANCE PREPAREDNESS

A home is generally your largest asset. Protect it.

Insurance is the critical back-up plan enabling you to rebuild your home after a wildfire. Follow these tips as part of your Ready, Set, Go! Wildfire Action Plan:

Conduct an annual insurance checkup

- Call your agent or insurance company annually to discuss your policy limits and coverage. Make sure your policy reflects the correct square footage and features in your home. Consider purchasing building code upgrade coverage.

Know what your policy covers

- Know if you have a replacement-cost policy that pays to replace all of your items at current market price, or if you have an actual cash value policy that takes depreciation into account and pays less for aged items.

Update your policy to cover home improvements

- If you make home improvements, be sure to call your agent or company to update your coverage. Make sure your insurer knows about the changes, so that new countertops, floors, rooms, etc., are covered if you must rebuild.

Maintain insurance

- If your home is paid off, be sure to maintain homeowner insurance. Without insurance, costs to repair or replace a home or structure is the responsibility of a homeowner.

Get renters insurance

- Renters can lose everything in a fire and be left to start over. Many insurers bundle renters insurance coverage with an auto insurance policy at affordable prices.

Make a home inventory

- Document the contents of your home before a wildfire occurs. Use your cell phone to video your belongings or a camera to take photos. Store the inventory list and photos at a location away from the property and/or in a cloud internet server. Include the cost of items and note important or expensive items. If possible, keep receipts for major purchases.
- Don't forget to include items inside the home, inside the garage, and outside of the home.


GO



Give your household the best chance of surviving a wildfire by being ready to go and evacuating early.

Being ready to go means following pre-evacuation steps, knowing when to evacuate, preparing possible evacuation routes, and knowing what to do if you become trapped.

Be safe and don't wait until it's too late! Use these checklists to help prepare you and your family to be ready to evacuate if wildfire strikes.

It is also important to learn what to expect after a wildfire and what you should do before returning home. The danger is not over after the flames are put out.

KNOW THE LAW—BE READY TO EVACUATE

California law authorizes officers to restrict access to any area where a menace to public health or safety exists due to a calamity such as flood, storm, fire, earthquake, explosion, accident, or other disaster. Refusal to comply is a misdemeanor. (Penal Code 409.5)

PRE-EVACUATION STEPS

When evacuation is anticipated, follow these checklists (if time allows):

Outside

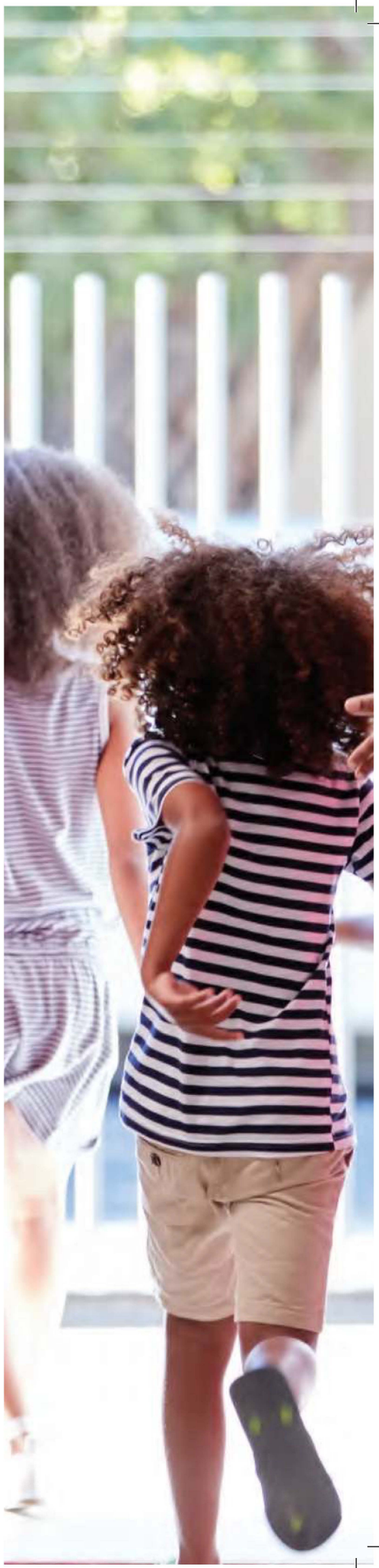
- ○ Gather flammable items from the exterior of the house and bring them inside (patio furniture, children's toys, door mats, trash cans, etc.) or place them in your pool.
- ○ Turn off propane tanks.
- ○ Move propane BBQ appliances away from structures.
- ○ Connect garden hoses to outside water valves or spigots for use by firefighters. Fill water buckets and place them around the house.
- ○ Turn off sprinklers and running water; leaving them on can affect critical water pressure.
- ○ Leave exterior lights on so your home is visible to firefighters in the smoke or darkness of night.
- ○ Put your Emergency Supply Kit in your vehicle.
- ○ Back your car into the driveway with vehicle loaded and all doors and windows closed. Carry your car keys with you.
- ○ Have a ladder available and place it at the corner of the house for firefighters to quickly access your roof.
- ○ Seal attic and ground vents with pre-cut fire-resistant boards or commercial seals.
- ○ Monitor your property and the fire situation. Don't wait for an evacuation order if you feel threatened and need to leave.
- ○ Check on neighbors and make sure they are preparing to leave.

Inside the House

- ○ Shut all windows and doors, leaving them unlocked.
- ○ Remove flammable window shades and curtains. Close metal shutters.
- ○ Move flammable furniture to the center of the room, away from windows and doors.
- ○ Shut off gas at the meter or tank. Turn off pilot lights.
- ○ Leave your lights on so firefighters can see your house under smoky conditions.
- ○ Shut off the air conditioning or heater.

Animals

- ○ Locate your pets and keep them nearby.
- ○ Prepare livestock for transport and consider moving them to a safe location early.





EVACUATION STEPS

- ○ Review your Evacuation Checklist.
- ○ Ensure your Emergency Supply Kit is in your vehicle.
- ○ Cover up to protect against heat and flying embers. Wear long pants, a long-sleeved shirt, heavy shoes/boots, cap/hat, a dry bandana for face cover, goggles, or glasses. Clothing made of 100% cotton is preferable.
- ○ Locate your pets and take them with you.

WHEN TO EVACUATE

Leave when evacuation is recommended by fire officials to avoid being caught in fire, smoke, or road congestion. You don't need to wait to be ordered by authorities to evacuate. In an intense wildfire, emergency personnel may not have time to knock on every door. If you feel you are in danger, the best course of action is to evacuate. If you are advised to leave, don't hesitate!

Officials will determine the areas to be evacuated and escape routes to use depending upon the fire's location, behavior, winds, terrain, etc.

Law enforcement agencies are typically responsible for enforcing an evacuation order. Follow their directions promptly.

You will be advised of potential evacuations as early as possible. You must take the initiative to stay informed and aware. Listen to your radio/TV for announcements from law enforcement and emergency personnel.

You may be directed to temporary assembly areas to await transfer to a safe location.

The terms "Warning" and "Order" are used to describe evacuation orders. However, local jurisdictions may use other terminology such as "Precautionary" and "Immediate Threat." These terms are used to alert you to the significance of the danger. All evacuation instructions provided by officials should be followed immediately for your safety.

ANIMAL EVACUATION

You've taken steps to help keep your family and home fire safe. Don't forget your pets and livestock. With some advanced planning, you can increase their chances of surviving a wildfire.

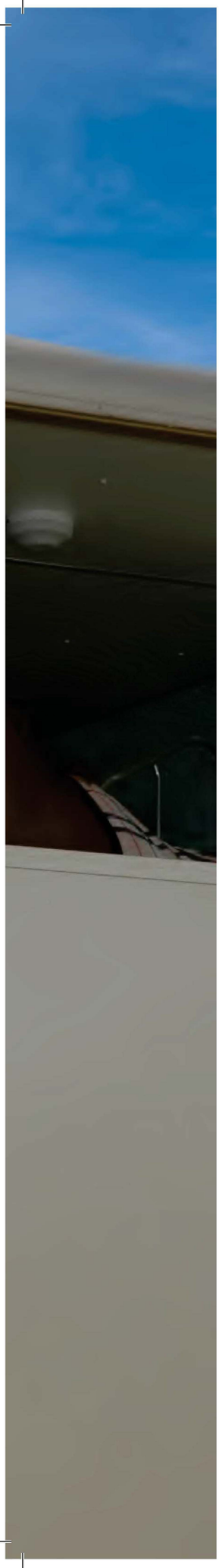
1. Clear Defensible Space around your barns, pastures, and property just as you do your home.
2. Contact your local fairgrounds, stockyards, equestrian centers, friends, etc. about their policies and ability to temporarily take livestock in an emergency.
3. Have vaccination/medical records, registration papers, and photographs of your animals (proof of ownership).
4. If you must leave your animals, leave them in a pre-selected, cleared area. If appropriate, leave enough hay for 48 to 72 hours.
   - Leave water for your animals. Do not rely on automatic watering systems, as a power outage could occur or the water system become compromised.
5. Arrange in advance for a neighbor to check on or transport your pets in case you are not home when disaster strikes.
   - Make sure your neighbors have your contact numbers (cell phone, work, home, etc.).
6. Make sure that each animal has its own pet carrier, as appropriate.
   - Birds, rodents, and reptiles should be transported in cages covered with a light sheet or cloth to minimize their fear.
7. Make sure your pets are always wearing properly fitted collars with personal identification, rabies and license tags.
8. Plan where you will take your pets and select an alternate prearranged location as well.
   - In the event of evacuation, pets may not be allowed inside human emergency shelters.
9. Prepare your livestock disaster preparedness kit.
10. Prepare your pet disaster preparedness kit.

Scan the QR code below to find what items to include in your livestock and pet disaster preparedness kit.

LIVESTOCK AND PET DISASTER PREPAREDNESS KIT INSTRUCTIONS

ReadyforWildfire.org/animal-evacuation





WHAT TO DO IF TRAPPED

WHILE IN YOUR VEHICLE:

- Stay calm.
- Park your vehicle in an area clear of vegetation.
- Close all vehicle windows and vents. If possible, cover inside of windows with a wool or cotton blanket to minimize radiant heat.
- Cover yourself with a wool or cotton blanket or jacket.
- Lie on vehicle floor.
- Use your cell phone to contact officials—**Call 911**

WHILE ON FOOT:

- Stay calm.
- Go to an area clear of vegetation, a ditch, or depression on level ground, if possible.
- Lie face down and cover up your body.
- If near a body of water—pool, creek, pond, lake, etc.—seek safety in the water or use it to keep distance away from the fire. Be careful not to be swept away by moving water or get too deep.
- Use your cell phone to contact officials—**Call 911**

WHILE IN YOUR HOME:

- Stay calm and keep your family together.
- **Call 911** and inform authorities of your location.
- Fill sinks and tubs with cold water.
- Keep doors and windows closed but unlocked.
- Stay inside your house.
- Stay away from outside walls and windows.
- Turn on lights so emergency officials know you are inside.

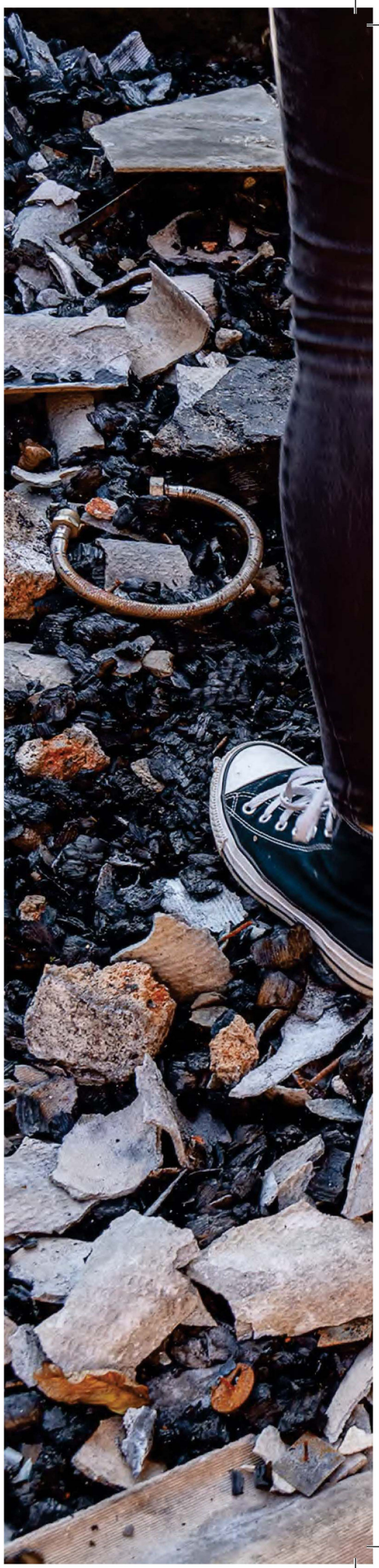
RETURNING HOME AFTER A WILDFIRE

ALWAYS check with officials before attempting to return to your home after a wildfire. Once home, check for the following:

- ○ **Call 911** if any danger is perceived.
- ○ Before inspecting your home, first check for the smell of gas. Turn off power until you've completed your inspection. Use a battery-powered flashlight to inspect a damaged home.
- ○ Check grounds for hot spots, smoldering stumps, and vegetation.
- ○ Check the roof and exterior areas for sparks or embers.
- ○ Check the attic and throughout your house for any hidden burning sparks or embers.
- ○ Check for fire damage to your home, turn off all appliances, and make sure the meter is not damaged before turning on the main circuit breaker.
- ○ Check the well or pump house to ensure it is in working order.
- ○ Do not drink or use water from the faucet until emergency officials say it is okay.
- ○ Discard any food that has been exposed to heat, smoke, or soot.
- ○ Consult local experts on the best way to restore and plant your land with fire smart landscaping.

Be aware of the following dangers that exist after a wildfire:

- Flash floods are a very real and potentially deadly hazard when rain occurs in heavily burned areas after a wildfire. Stay away from burned forests, storm channels, and natural drainages.
- Use extreme caution around trees, power poles, and other tall objects or structures that may have lost stability during the fire.

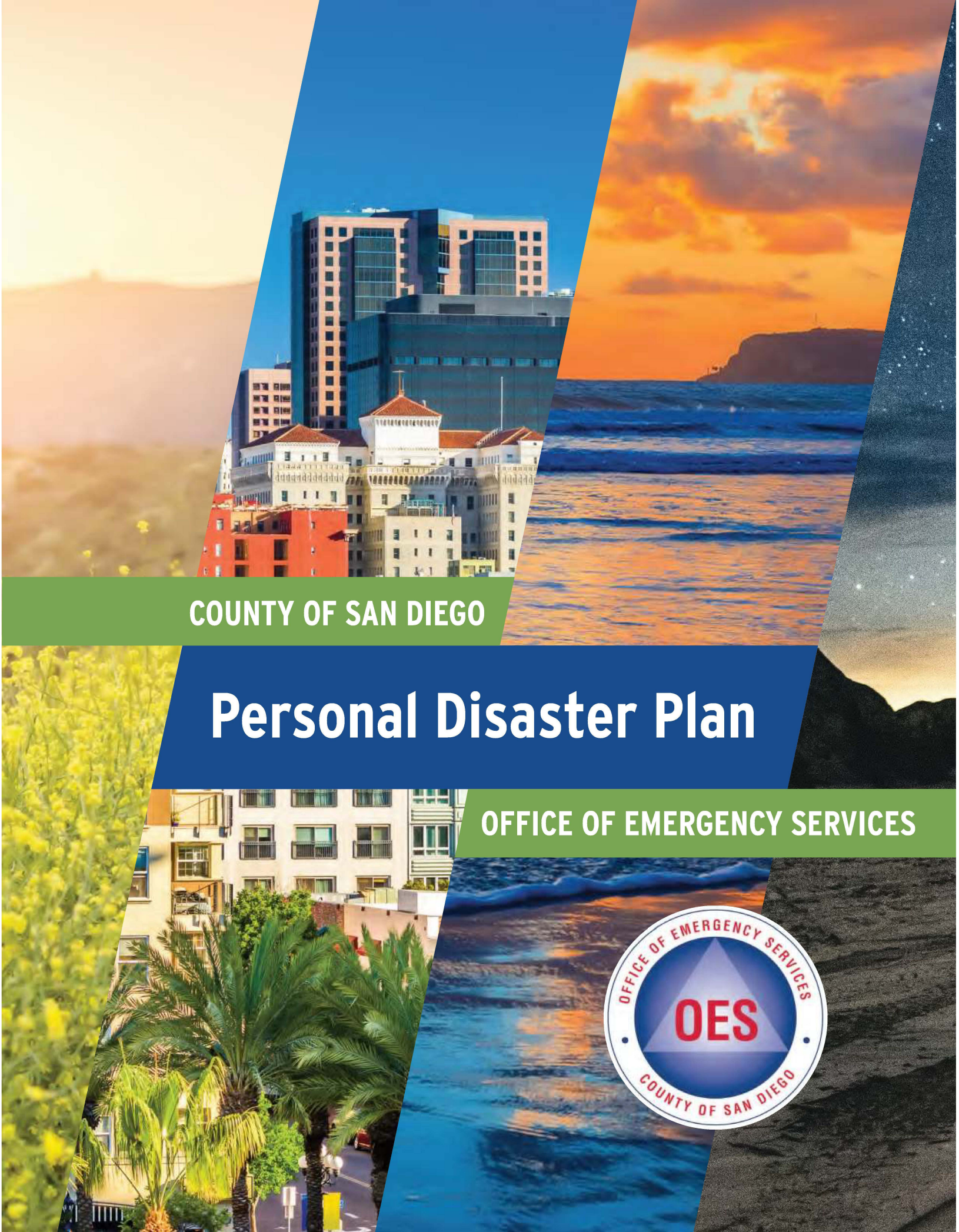





ReadyforWildfire.org
CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
CAL FIRE
SINCE 1885

Appendix B1–B4

Disaster Plan and Personal Survival Guide



COUNTY OF SAN DIEGO

Personal Disaster Plan

OFFICE OF EMERGENCY SERVICES

OFFICE OF EMERGENCY SERVICES
OES
COUNTY OF SAN DIEGO

This Disaster Plan Belongs To:

Name: _____

Address: _____

_____

Home Phone: _____

Cell Phone(s): _____

Email: _____

Medical Condition(s): _____

Medical Equipment: _____

Medication(s): _____

Allergies: _____

Blood Type: _____

Local Fire Department: _____

Local Law Enforcement Station: _____

Primary Doctor: _____

Power Company: _____

Water Agency: _____

Poison Control: **(800) 222-1222**

Main Emergency Alert System radio stations for San Diego County:
KOGO AM 600 and KLSD AM 1360.

San Diego County is home to diverse landscapes, beautiful beaches, and great weather. Regardless, our region is no stranger to a variety of natural disasters, like wildfires, earthquakes, flooding, tsunamis and others. Human-caused disasters, like hazardous materials spills, civil unrest and acts of terrorism also pose a significant threat to our region. The truth is, it is not a matter of *if* a disaster will occur, it's a matter of *when*.

While we cannot predict when disasters will happen, there are steps you can take today to be prepared. Find out which hazards you may face at your home, school or work. Visit **ReadySanDiego.org** and click on **"Know Your Hazards"**. Enter your address to learn the risks you may face.

As someone who lives or works in San Diego County, you play a significant role in emergency preparedness and building resilience within your home and community. We hope this guide will equip you with the tools you'll need to keep you, your loved ones, pets, and neighbors safe during a disaster, and remain self-sufficient afterwards. This guide will help you to better prepare for, respond to, and recover from an emergency or disaster.

Practice this plan yourself or with your loved ones at least twice a year. Doing so will help you react quickly during the next emergency.



Did you know that all local fire, law enforcement and emergency medical first responders in San Diego County only make up less than 1% of our total population? That's why it's important for all of us to be prepared with a disaster plan – so that our first responders can focus on critical life safety issues during disaster response.

ReadySanDiego.org
Prepare. Plan. Stay Informed.

Emergency Contacts

Identify emergency contacts, including one that lives out of the area, who you can contact during and after a disaster. *Memorize these phone numbers, make photocopies of them and take them with you.*

During an emergency, local phone services may be overwhelmed. You may be able to reach out-of-area contacts more easily by phone. Text instead of calling when possible.

Emergency Contact

Name: _____

Home Phone: _____ Cell Phone: _____

Email: _____ Location: _____

Emergency Contact

Name: _____

Home Phone: _____ Cell Phone: _____

Email: _____ Location: _____

Emergency Contact

Name: _____

Home Phone: _____ Cell Phone: _____

Email: _____ Location: _____

Emergency Contact (Out-of-Area)

Name: _____

Home Phone: _____ Cell Phone: _____

Email: _____ Location: _____

Make a Plan

☐ Prepare an Evacuation Plan

Draw a floorplan of your home below. Clearly indicate the location of all main exits, including doors and windows in each room. Mark the location of your home's utility shutoffs, your fire extinguisher, emergency supply kit(s), and first aid kit. Have everyone in your home study this plan and become familiar with it.

- Make a step-by-step plan to escape your house during an emergency, such as a house fire. Practice this plan two times per year.
- Make sure everyone can unlock all locks and open doors and windows. If you have safety bars on your windows, make sure they unlock easily during an emergency.
- If you live in a multiple story house or apartment building, determine a safe way to reach the ground in advance. Make special arrangements for small children, or anyone in your household with limited mobility, disabilities, or other access and functional needs.

Everyone should know where your utilities are located and how and when to shut them off.



▶ **Note where these are located in your home:**

Gas Valve*: _____

Water Valve: _____

Circuit Breaker: _____

Garage Door Manual Override: _____

Tools required to turn off utilities: _____

*If you smell gas, hear a hissing sound or suspect a leak, turn off the main gas valve immediately with a wrench, open windows, and leave the area immediately. **Do not turn on lights or appliances, light candles or strike matches. Do not shut off the gas unless you suspect a leak. Only the gas company can restore service.**

☐ **Install smoke and carbon monoxide detectors** on every level of your home and make sure they are functioning properly. Test them monthly and replace batteries if needed. Replace units every 10 years. If you are deaf, install vibrating alarms and visual smoke detectors.

☐ **Determine two meeting places** where you and the members of your household can meet if you are separated during a disaster: One directly outside your home (like a neighbor's mailbox) and one location outside of your neighborhood (like a community park or familiar parking lot). *Consider drawing this with your floorplan on the previous page, too.*

- Meeting location outside of your home:

  _____

- Meeting location outside of your neighborhood:

  _____

☐ **Identify two ways out of your neighborhood** and write them below. During an emergency, roads could be blocked or damaged. *You might even attach a local map to this plan with highlighted routes.*

1. _____
2. _____

Helpful Tip: *Make sure your vehicle is parked facing your evacuation route (i.e. facing the street in the driveway or facing the main exit road on the street).*

☐ **If you have school-age children or you attend college,** know the school's emergency plan. Learn the school's emergency policy and determine who will pick up your children if you cannot – and how – during a disaster. Make sure that the school knows your current contact information and the people you have authorized to pick up your child. *Staple a copy of your school's emergency plan to this booklet.*

☐ **Get training.** Learn life-saving skills such as first aid and CPR (cardiopulmonary resuscitation).

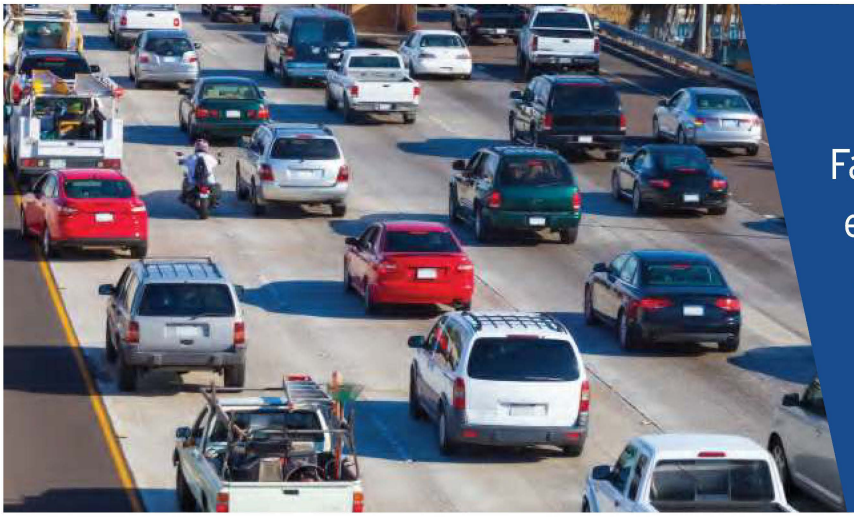
Evacuations: What You Need to Know

There are two phases of evacuations that are issued by law enforcement during an emergency: **Evacuation Warnings** and **Evacuation Orders**. If you feel unsafe, evacuate early. You do not need to wait for an evacuation warning or order to leave!

If you get an Evacuation Warning, prepare yourself and all the members of your household, including pets and/or service animals, to evacuate. An evacuation warning is voluntary, but should be taken seriously, as it could quickly turn into an evacuation order. If you have medical needs or limited mobility, you should prepare to leave when an evacuation warning is issued. People with large animals, like horses and livestock, should also begin to evacuate.

If you get an Evacuation Order, leave your home or business immediately. An evacuation order is mandatory – it moves you away from danger and should be taken seriously. Failure to follow an evacuation order can endanger your life and the lives of others. Once you have left the area, you will not be able to return until the evacuation order is lifted by law enforcement.

Whether you are at home, at work, or in a public place, it's also important to consider how you could leave quickly and safely in an emergency. Locate stairways and emergency exits. Pay attention to evacuation signs posted in buildings, transportation services and other crowded public areas. If anyone in your house or your neighbor needs assistance evacuating, consider working together in advance to make an evacuation plan.



Failure to follow an evacuation order can endanger your life and the lives of others.

Shelter-in-Place

In certain situations involving chemical releases and incidents involving gasoline, oil or other hazardous materials with potentially poisonous fumes or smoke, emergency officials may ask you to stay indoors. If you are told to shelter-in-place, consider the following:

- Bring your family and pets inside immediately.
- Lock doors and close windows, air vents and fireplace dampers. Turn off air conditioning, forced-air heating systems, exhaust fans, ceiling fans and clothes dryers.
- If you are instructed to seal the room, use duct tape and plastic to seal off doorways, vents, outlets and windows. Cover the space under the door with a wet towel.
- If your children are at school, do not pick them up unless instructed to do so.

Alert & Warning

Fire agencies, law enforcement and emergency managers use a variety of tools to provide you with critical, lifesaving information during a disaster.

Wireless Emergency Alert

The Wireless Emergency Alert (WEA) system is a federal system that allows local, state and federal officials to send text-like emergency notifications to cell phones. Most people within the notification area will get the message whether they are a resident or just visiting. Common examples of WEA messages include AMBER alerts or severe weather alerts. You do not need to register your phone or take any action to receive alerts through this system.

AlertSanDiego

AlertSanDiego is the emergency mass notification system used by first responders in San Diego County to send evacuation instructions and other disaster information through calls, text and email.



Listed and unlisted landline phone numbers are already in the AlertSanDiego database, however, cell phone numbers, Voice over Internet Protocol (VoIP) phone numbers and email addresses are not and must be registered. Residents can also request to get information in American Sign Language (Accessible AlertSanDiego).

To register for AlertSanDiego or Accessible AlertSanDiego, visit **ReadySanDiego.org**.

KNOW YOUR HAZARDS

Here are some of the top hazards we face in our region and what you can do before, during and after to prepare and stay safe. Go through each hazard and assess your risk.

To learn more about hazards you may face in San Diego County and how to prepare, visit **ReadySanDiego.org** and click on **"Know Your Hazards".**



Through preparation and planning, you can reduce the effects of fire in your home and community.

Fire

Fire is a constant threat in San Diego County, especially to homes near canyons or rural areas. Dry brush, high temperatures in the summer and fall combined with seasonal high Santa Ana winds, create the perfect environment for severe wildfire conditions. Through preparation and planning, you can reduce the effects of fire in your home and community.

BEFORE: Be Ready

- ☐ **Know at least two ways out** of each room in your house and your neighborhood.
- ☐ **Keep important documents in a fireproof container** and copies in your emergency supplies kit.
- ☐ **Get to know your neighbors.** If anyone in your house or your neighborhood needs assistance during an evacuation, consider working together in advance to make an evacuation plan.
- ☐ **Practice evacuating** at least two times a year.
- ☐ **Clear 100 feet of Defensible Space around your house.** Remove dead trees, shrubs, trash and other debris from around your house that could catch fire and make it difficult for first responders to access your house during a fire or emergency.

For more information on how to prepare for wildfires, visit and download the **Ready, Set, Go!** Guide at **ReadySanDiego.org**.

DURING A WILDFIRE: Take Action! Stay Safe

You do not have to wait for an official evacuation warning or order from public safety officials to leave. If you feel unsafe, evacuate early.

- **Leave immediately if you are told to evacuate** by local emergency officials. Bring your emergency supplies kit with you and make sure your address number is visible from the street.
- **Shut all doors and windows** when evacuating.
- **If you are trapped, call 911**. Leave the lights on to help first responders see your home.
- **Listen to the radio and monitor your television and phone** for official information and alerts.
- **Use a certified N95 mask** to protect your lungs from harmful smoke particles in the air.

DURING A HOUSE FIRE: Leave Immediately

- **Do not wait, get out as soon as possible.** Get low to avoid heat and smoke inhalation and exit the building immediately. If your primary exit is blocked, use an alternate escape route.
- **Call 911** once you are safely outside at your meeting place.
- **NEVER go back inside a burning building.** If someone is still trapped inside, tell first responders.
- **If you are trapped,** close doors, call 911, and try to block vents and cracks around doors with a towel or tape to keep smoke out. Signal for help out of the window with a cloth or a flashlight.
- **If your clothes catch fire,** stop, drop and roll.
- **Teach children** to not hide from firefighters.

Earthquakes

San Diego County is home to several major active faults: The Rose Canyon Fault (which runs along the coast, through downtown, Old Town and La Jolla), and the San Jacinto and Elsinore Faults which run through the northern and eastern areas of the county. Most of us live less than 15 miles from a fault. These faults could produce damaging earthquakes that may disrupt roadways, transportation, and services like water, gas and phone communication for weeks or months.

Some faults, also known as blind faults, are hidden beneath undisturbed sediments and would only be discovered after an earthquake occurs.

BEFORE: Be Ready

Earthquakes happen with little to no warning. Take time to inspect your house now to identify potential hazards and minimize risks that could endanger your life and the life of your loved ones during an earthquake.

- ☐ **Move heavy objects and large decorative items** to the floor and lower shelves.
- ☐ **Secure large furniture, refrigerator, and electronics** to walls studs with flexible straps.
- ☐ **Install latches and other locking devices** on cupboards and cabinet doors.
- ☐ **Ensure gas lines are flexible** on furnace and all major appliances.

DURING AN EARTHQUAKE: Take Action! Stay Safe

- **Drop** down on your hands and knees, take shelter under a sturdy desk or table, **Cover** your head and neck with your arms, and **Hold on** until the shaking stops. If there is no table, brace yourself against an interior wall away from windows and protect your head and neck with your arms.
- **If you are outside**, try to move to an area away from buildings, walls, glass, trees, power lines, signs, cars or any other potential hazards. Drop, cover, and hold on to protect yourself from debris.
- **If you are driving**, safely pull over to the side of the road, stop, put on the parking brake and stay inside until the shaking stops. Do not stop under overpasses, near power lines, trees or any other large structures that could fall on you.
- **If you are in bed**, stay there, face down to protect vital organs. Hold on and cover your head and neck with your arms or a pillow as close to your head as possible and wait until the shaking stops.
- **If you are in a wheelchair,** lock the wheels, cover your head and neck with your arms, a book, or a pillow and hold on until the shaking stops.
- **If you are at the beach**, wait until the shaking stops and calmly go inland and to higher ground as soon as possible. Earthquakes can produce local *tsunamis* that can arrive in just minutes. Be aware of tsunami evacuation routes in advance and follow tsunami evacuation signs. Go on foot to avoid traffic. Do not go sightseeing and stay away from the coast.
- **Be prepared for aftershocks.** These can happen minutes to months after the first earthquake and cause further damage to buildings, roads and services.
- **Check on your neighbors.**



Take shelter under a sturdy desk or table and cover your head and neck with your arms, and hold on until the shaking stops.

Did you know?
It only takes six inches of moving water to knock a person down, and one foot of moving water to sweep a vehicle away!



Flooding

Flooding is one of the most common and costly disasters in the United States. Floods can lead to other disasters like power outages, landslides, and dangerous flash flooding. Debris flow occurs when heavy rain saturates the soil, causing mud to form, break away, and pick up debris as it rapidly flows downhill. Areas burned by wildfires, or "burn scars", are especially at-risk for flash flooding and debris flow because lack of vegetation and burnt soil is unable to absorb rainwater properly.

BEFORE: Be Ready

- **Know your flood risk.** If you are in an area at risk for flooding, or a floodplain, consider purchasing or renewing flood insurance.
- **Monitor your TV, radio, and cell phone** for flood watches or warnings during severe weather.
- If instructed, **turn off water and electricity and unplug appliances**.

DURING A FLOOD: Stay Safe

- **Evacuate immediately** if public safety officials tell you to do so.
- **Never walk, swim or drive** through flood waters.
- **Never drive around barricades.**
- **Stay off bridges over fast-moving water.**
- **Avoid downed power lines.** Do not touch electrical equipment if it is wet or if you are standing in water. If it is safe to do so, turn off the electricity to prevent electric shock.
- **If you become trapped in a building,** go to the highest floor. Do not climb into a closed attic. You may become trapped by rising floodwater. Go onto the roof only if necessary, and signal for help.

Build an Emergency Supply Kit

Everyone in your household should have a basic supplies kit that you can easily take with you in an emergency or disaster. Your emergency kit should have enough supplies to sustain you, your family members, pets and/or service animals **for at least 3-5 days following a disaster**. It should be in a sturdy container, like a plastic bin, backpack or small suitcase on wheels.

The good news: you may already have some of these supplies in your house! When building your kit, think about where you live and consider any specific needs you may have. You should also make at least three (3) separate kits: one to store in your home, one at work, and one in your car.

Check off items as you go. Review your kit every six (6) months to replace spoiled or expired items.

- ☐ Water – one gallon per person, per day
- ☐ Non-perishable foods
- ☐ Manual can opener
- ☐ First aid kit & manual
- ☐ Flashlight (solar or battery-operated)
- ☐ Radio (hand-crank or battery-operated)
- ☐ Extra batteries
- ☐ Cash (small bills), ATM cards, traveler's checks
- ☐ Copies of important documents in a waterproof container or sealable bag (i.e. Social Security card, driver's license, passport, insurance information, medical records, rental agreement, marriage & birth certificates, copies of credit & ATM cards, utility bills)
- ☐ Prescription medications (at least a week-long supply) with dosage instructions
- ☐ Extra set of house and car keys
- ☐ Portable cell phone charger (solar or battery-operated)
- ☐ Sleeping bags & warm blankets
- ☐ Extra clothing (warm & cold weather) for you and each member of your household
- ☐ Sturdy shoes
- ☐ Paper/notebook & pencil
- ☐ Paper plates, plastic cups & utensils
- ☐ Dust mask, plastic sheeting & duct tape (to help filter contaminated air)
- ☐ Wrench or pliers (to turn off utilities)
- ☐ Fire extinguisher
- ☐ Matches in a waterproof container
- ☐ Books, games, puzzles, a deck of cards or other entertainment items
- ☐ Whistle (to signal for help)
- ☐ Local maps
- ☐ Photos

Personal Hygiene Items

- ☐ Pre-moistened wipes or towelettes
- ☐ Paper towels or napkins
- ☐ Trash bags of various sizes
- ☐ Toilet paper & tissues
- ☐ Feminine hygiene supplies
- ☐ Toothbrush & toothpaste
- ☐ Hand soap & detergent
- ☐ Shampoo
- ☐ Deodorant



Baby Items

- ☐ Diapers & wipes
- ☐ Formula and/or baby food
- ☐ Change of clothing & blankets

Don't forget your pets and/or service animals!

- ☐ Identification & immunization records
- ☐ Carrier or cage
- ☐ Food & water
- ☐ Leash
- ☐ Favorite toy
- ☐ Newspaper, litter box & sand, etc.
- ☐ Photos of your pet and/or service animal

Other considerations

- ☐ Wheelchair, canes, braces and/or walker
- ☐ Assistive eating tools
- ☐ Special equipment vendor information & user guide(s)
- ☐ Any additional items you feel are necessary (e.g. photos, heirlooms, jewelry, etc.)

Glossary

Access and Functional Needs: People who may have additional needs before, during and after an emergency in functional areas, including: maintaining independence, communication, transportation, supervision, and medical care. Individuals in need of additional response assistance may include people with disabilities (i.e. blind or low vision, deaf or hard of hearing, limited mobility), older adults, children, people with limited English proficiency (or non-English speakers), people who are transportation disadvantaged, or live in institutionalized settings.

Excessive Heat Watch: This is issued by the National Weather Service when there is an increased risk for a heat wave, but its timing is still uncertain.

Excessive Heat Warning: This is issued by the National Weather Service when extremely dangerous heat conditions are expected in a specific area. A warning is typically issued when the maximum heat index temperature is expected to be 105° Fahrenheit or higher for at least 2 days, and nighttime air temperatures will not drop below 75° Fahrenheit. Find County Cool Zone locations and heat safety tips at **CoolZones.org**.

Flood Watch: Flooding is possible in the area. Check forecast updates and prepare to move to higher ground.

Flood Warning: Flooding is expected, and action is required to stay safe. Move to higher ground immediately, use extra caution if driving and check for forecast updates.

Hard Road Closure: The road(s) are closed to all traffic, except fire and law enforcement personnel.

Soft Road Closure: The road(s) are closed to all traffic, except fire and law enforcement personnel, and Critical Incident Resources (i.e. utility companies, Damage Assessment Teams, Caltrans, County Public Works, etc.)

Residents Only Closure: Soft road closure with exceptions for residents and local government agencies assisting with disaster response and recovery.

Shelter: A short-term place to house evacuees when a disaster or large-scale incident requires people to be out of their homes for one or more nights. Shelters provide services and meals and are typically run by the American Red Cross.

Temporary Evacuation Point: A location identified by Law Enforcement or Fire as a temporary place to evacuate to when a disaster or large-scale incident happens. It does not include over-night stays or provision of services for evacuees.

Tsunami Watch: A distant earthquake has occurred, and a tsunami is possible. Stay tuned for further information and be prepared to take action if necessary.

Tsunami Advisory: A tsunami is expected or occurring, with the potential for strong currents and waves in or very near to the shore. Stay out of the water, away from beaches and waterways. Follow all instructions from local officials.

Tsunami Warning: A tsunami that may cause widespread flooding is expected or occurring. Dangerous coastal flooding and powerful currents are possible. Evacuation is recommended. Move inland and to higher ground immediately. Follow tsunami evacuation signage and instructions from local officials.

Other Resources & Quick Reminders

- County's preparedness website: **ReadySanDiego.org**.
- Register your cell phone number, VoIP phone number and email at **ReadySanDiego.org/AlertSanDiego**.
- Download the free SD Emergency app, available in English and Spanish for iOS and Android mobile devices. Visit **ReadySanDiego.org/SDEmergencyApp**.
- During an emergency, visit **SDCountyEmergency.com** or the SD Emergency App for incident updates, shelter locations, evacuation areas, hazard perimeters, official social media feeds, and more.
- The main Emergency Alert System radio stations for San Diego County are KOGO AM 600 and KLSD AM 1360.
- For recovery information, visit **SDCountyRecovery.com**.
- For non-emergency questions and updated disaster information, call 211.
- If you are experiencing a life-threatening emergency, call 911.
- Join a Community Emergency Response Team (CERT): **ReadySanDiego.org/get_involved**.
- Follow us on Twitter: **Twitter.com/ReadySanDiego** (English) or **Twitter.com/ListoSanDiego** (Spanish).
- Visit our Facebook page: **Facebook.com/ReadySanDiego**.

ReadySanDiego.org
Prepare. Plan. Stay Informed.

The information presented in this plan is believed to be accurate and of practical value in preparing for a disaster, however, no guarantee can be given that the guidance presented will provide protection. The County of San Diego, the County of San Diego Office of Emergency Services, the Unified San Diego County Emergency Services Organization, the Unified Disaster Council and each organization's officers, employees, and agents, assume no legal liability for the accuracy, completeness, or usefulness of any information, product, or process disclosed herein, or for any injuries or damages arising from any disaster or occurrence giving rise to the use or application of the information, products or processes described or disclosed herein.

Water Safety Tips:

In an emergency, you can treat water by mixing 16 drops of regular household liquid bleach per gallon of water. Do not use scented, color safe or bleaches with added cleaners.

Boiling is the safest method of treating water. In a large pot or kettle, bring water to a rolling boil for one full minute. Let the water cool before drinking.





County of San Diego Office of Emergency Services
5580 Overland Ave., Suite 100, San Diego, CA 92123-1294
Phone: (858) 565-3490 | Fax: (858) 565-3499

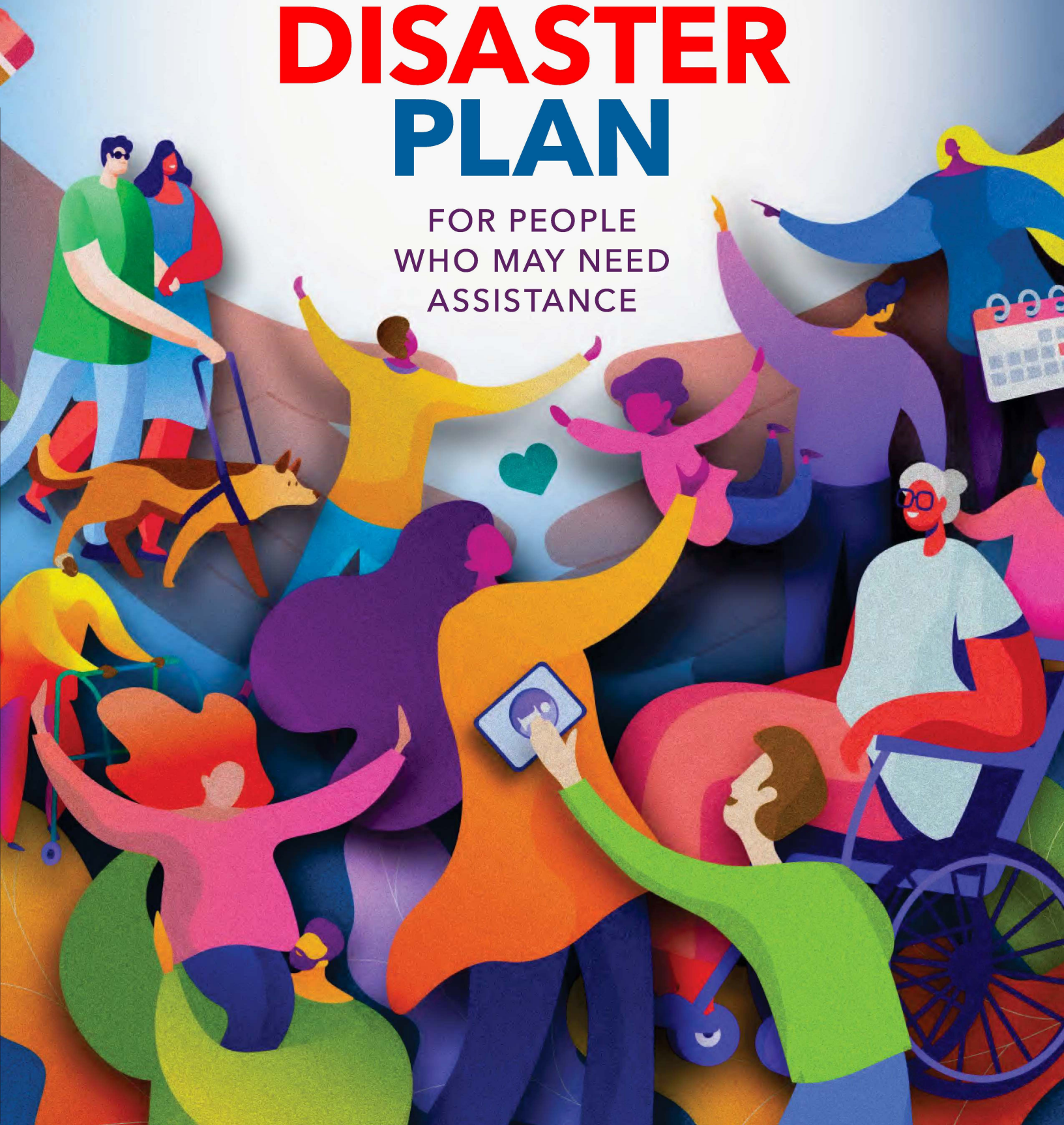
This document was prepared under a grant from FEMA's Grant Programs Directorate, U.S. Department of Homeland Security. Points of view or opinions expressed in this document are those of the authors and do not necessarily represent the official position or policies of FEMA's Grant Programs Directorate or the U.S. Department of Homeland Security.



COUNTY OF SAN DIEGO OFFICE OF EMERGENCY SERVICES

PERSONAL DISASTER PLAN

FOR PEOPLE WHO MAY NEED ASSISTANCE



Introduction



This guide supports older adults, people with disabilities, caregivers, and others who may benefit from help when planning for disasters.



Emergencies can range from falls in the home to fires and earthquakes. Each person has unique abilities and needs during a disaster, and everyone can take steps to prepare.



This guide will help you evaluate your needs and make a personalized emergency plan so that you and your loved ones can be better prepared.





Steps to Prepare for any Emergency

GET CONNECTED

Preparedness is all about people.

Build your support network.



05

MAKE A PLAN

Know where to go, what to do, and who can help.

Share your plan with your support network.



13

GATHER SUPPLIES

Create a Go Kit with supplies you can easily take with you.

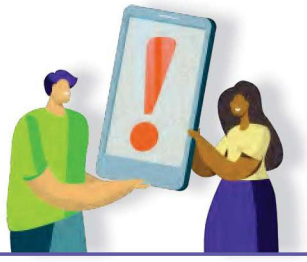
Assemble a Home Kit with supplies for sheltering in place.



37

STAY INFORMED

Get alerts and know your local resources.



45


Get Connected
The first step in disaster preparedness is building a support network of people who can help











Preparedness is all about People

Our social connections help us respond better to challenges during emergencies.

Social connections also provide physical and mental health benefits to improve your ability to react to disasters.

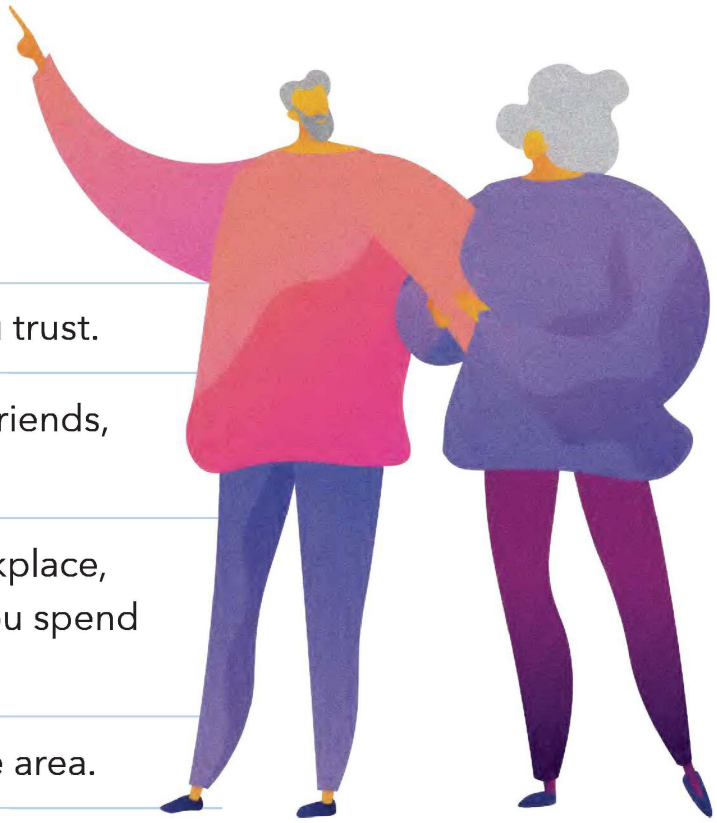
Think about the groups that you already belong to or could join:

- Volunteer groups
- Faith-based groups
- Co-workers
- School-based groups
- Neighborhood groups
- Exercise groups
- Support groups

During an emergency or disaster, you and members of your community can come together to help each other.

Build your Support Network

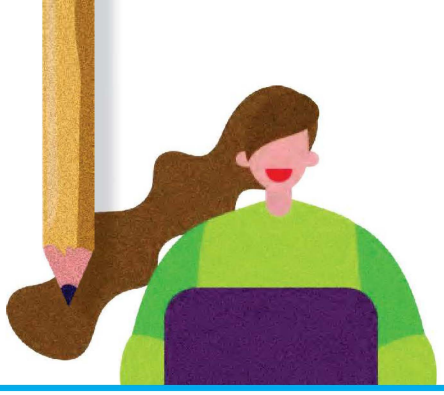
Your support network can include anyone who can provide help during an emergency.



- Include a minimum of three people you trust.
- Consider family members, neighbors, friends, coworkers, and personal attendants.
- Organize networks for your home, workplace, volunteer sites, and any other places you spend a lot of time.
- Include one contact that lives out of the area.
- Network members should know your capabilities and limitations.
- Disasters can be stressful and overwhelming. Include people that are supportive when you are under stress.







CONTACTS

Name/Relationship

Home Phone | Cell Phone

Other Phone | Email

Name/Relationship

Home Phone | Cell Phone

Other Phone | Email

Name/Relationship

Home Phone | Cell Phone

Other Phone | Email

OUT-OF-AREA CONTACTS

Name/Relationship

Home Phone | Cell Phone

Other Phone | Email

Name/Relationship

Home Phone | Cell Phone

Other Phone | Email

Planning with your Support Network

Communicating with Your Network Members

- Share your disaster plan with your support network.
- Ask your network to notify you when an emergency arises.
- Agree on how you will contact each other during an emergency.
- When possible, text instead of calling during an emergency.
- Consider giving a trusted member of your network keys to your home and car.
- Choose an emergency meeting place where you can reunite.
- Show members of your network how to operate your medical equipment and assistive devices.
- If you have a service animal, make sure it knows and trusts the people in your network.









To learn more about the **NET** program or to connect with a **NET** member in your area.

readysd@sdcounty.ca.gov

858-565-3490

- Join a **Community Emergency Response Team (CERT)**: ReadySanDiego.org/get_involved

Connect with your Neighborhood Evacuation Team

The **Neighborhood Evacuation Team (NET)** pairs trained **Community Emergency Response Team** members with individuals who may have difficulty evacuating during an emergency.

Neighborhood Evacuation Team members can help you:

- Prepare and review your evacuation plan
- Identify emergency contacts
- Register for **AlertSanDiego** and learn about other emergency communication tools
- Connect you with other resources to help you better prepare for disasters



Call 2-1-1 to connect to resources

Free, 24 hour, confidential phone service in 200+ languages and a searchable online database. Trusted local, nonprofit organization providing access to 6000+ community, health, and disaster services such as:

- Food Assistance
- Housing & Utilities
- Disaster Relief & Prevention
- Financial & Legal Assistance
- Transportation
- Health, Nutrition & Primary Care
- Military & Veteran Services
- Enrollment Services



TALK



LIVE CHAT



SEARCH



ENROLL

If you have limitations hearing or speaking, a specially-trained **California Relay Service Communications Assistant** can relay telephone conversations for all of your calls. Dial **7-1-1** and ask to be connected with **2-1-1** at **(858) 300-1211**.



Facebook
211sandiego

Twitter
@211sd

Instagram
211sd





Food Assistance



Housing & Utilities



Disaster Relief
& Prevention



Financial &
Legal Assistance



Transportation



Health, Nutrition
& Primary Care



Military & Veteran
Services



Enrollment Services


Make
a Plan
NEWS
PASSPORT



Your Home

Emergency planning starts in your home

- Install smoke and carbon monoxide detectors on every level of your home and test regularly. If you are deaf or have hearing loss, install a system with flashing lights or vibrations. Call **2-1-1** if you need help installing smoke alarms.
- Know the location of utility valves and learn how to disconnect them during an emergency.

Write down the locations of utilities

Gas Valve: *

Water Valve:

Circuit Breaker:

Garage Door Manual Override:

Insurance Coverage

- Talk with your insurance agent to be sure that you have adequate insurance coverage. Typical homeowner's or renter's insurance may not provide full coverage for all hazards such as flooding, wildfires, or earthquakes.
- Inventory your possessions so you may claim reimbursement in case of loss or damage.

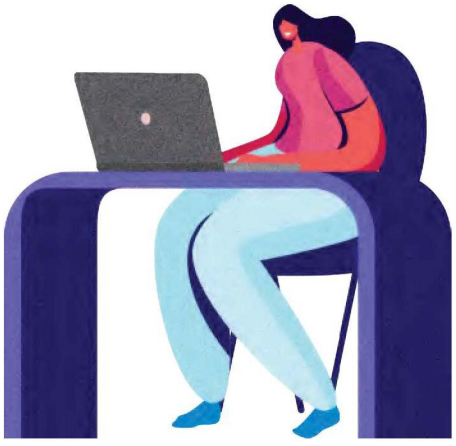


* *If you smell gas, hear a hissing sound, or suspect a leak, turn off the main gas valve, open windows, and leave the area immediately. Do not light candles or strike matches. Only shut off the gas if you suspect a leak, because only the gas company can restore service.*

Evacuation Plan

- **Know your evacuation routes.** Find the location of all exits, including doors and windows in each room.
- **Evacuate early.** If you have medical or mobility concerns, or pets or service animals, prepare to leave when an Evacuation Warning is issued instead of waiting for a mandatory Evacuation Order.
- **Plan for unique needs.** Consider the ability of you and your loved ones to evacuate, use stairs, and access transportation. Arrange help from your support network or call **2-1-1** for assistance before an emergency.
- **Meeting places.** Know where you will meet your friends and family after an emergency. Pick two places to meet, one right outside your home and meeting place outside of your neighborhood.





Meeting place close to home:

Meeting place outside of your neighborhood:



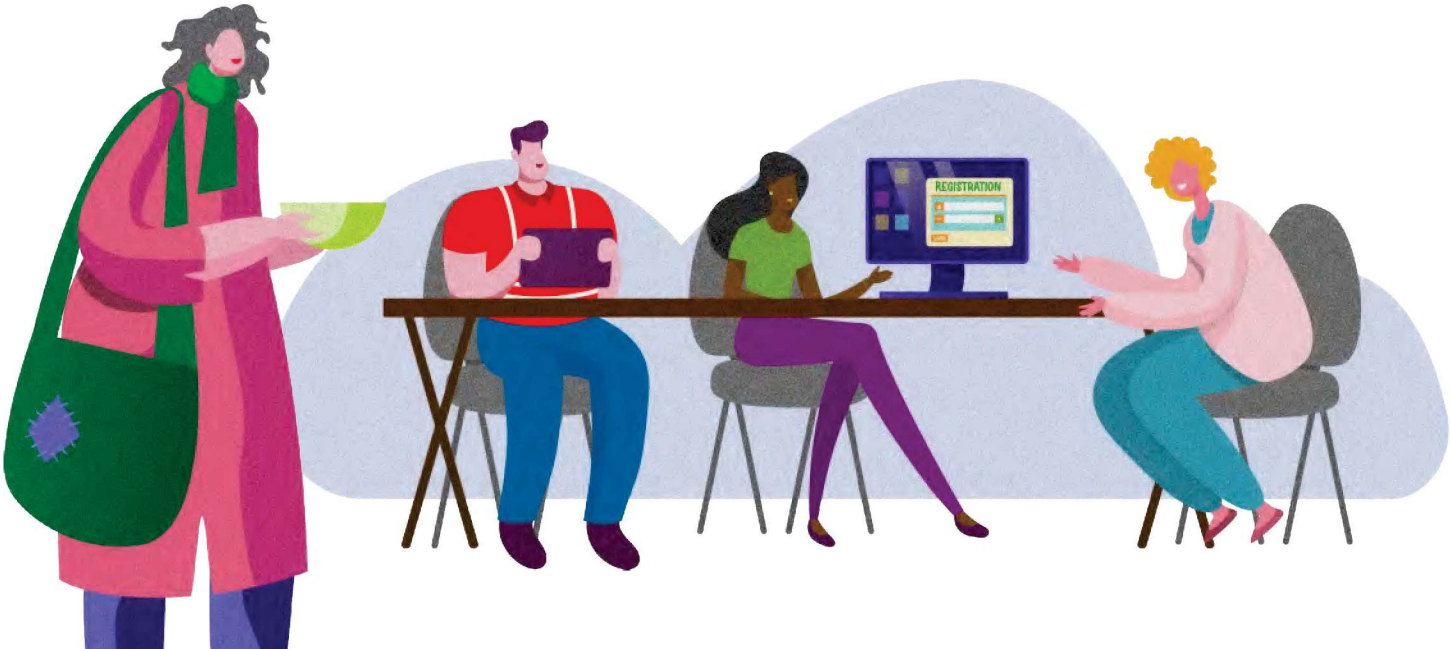
Emergency Shelters



If an emergency requires you to evacuate, consider going to a hotel, a friend or relative's home, or a shelter. Emergency shelters may be set up in schools, community buildings, and places of worship.

- Shelters provide food, water, and basic supplies.
- Bring items you need, including medical equipment.
- Shelters will be accessible and can meet needs of people with different abilities. Service animals are allowed.
- Shelters follow public health safety recommendations, such as social distancing during the COVID-19 pandemic.
- Call **2-1-1** or visit **AlertSD.org** to find a shelter near you.





Planning for Your Medical Equipment



- Attach instruction cards on how to use and move each item in case of evacuation.
- Identify critical supplies (such as catheters, colostomy supplies, etc.) that must be taken.
- If you rely on electric medical equipment, ask your medical supply company about a back-up power source, and ask your utility company about programs you may be eligible for.
- If you depend on dialysis or other life-sustaining treatment, know the location of more than one treatment facility.





- To request a free **Vial of LIFE** kit, please call: **1-800-339-4661**
- Fill out the medical information form included on the following pages or for a version with large print and different languages visit **readysandiego.org/make-a-plan/**
- Make copies and store in your wallet or purse. Share a copy with members of your support network.



Vial of LIFE

The **Vial of LIFE** program has saved countless lives by providing emergency responders with life-saving medical information. Store the **Vial of LIFE** envelope on your refrigerator.

Each Vial of LIFE kit includes:

- **A medical information form.** List your medical conditions, medications, emergency contacts, insurance, and hospital preference.
- **A vinyl envelope and magnet.** Place the completed medical form in the envelope and store it on the outside of your refrigerator. Add a copy of your power of attorney for health care and health care directive.
- **A Vial of LIFE sticker.** Place on the door jamb of your front door or a front window. This informs emergency responders that you completed a **Vial of LIFE**.

VIAL OF LIFE

LIVE WELL SAN DIEGO
LIVEWELLSD.ORG

Information & Assistance
1-800-339-4661
Updated On
____/____/____

Name _____

☐ Blind ☐ Deaf ☐ Alzheimer's Disease or Related Dementia

Address _____ City _____ Zip _____

Phone # _____ Male ☐ Female ☐ Date of Birth _____

Social Security Number (last four digits) _____

Medicare Number (last four digits) _____

Other Insurance _____ Policy Number _____

Do you have an Advance Health Care Directive? Yes ☐ No ☐

If yes, location _____ Agent _____ Phone # _____

Do you have a "Do Not Resuscitate Order" Yes ☐ No ☐

Registered with Sheriff's "Take Me Home"? Yes ☐ No ☐

Emergency Contacts

Name _____ Relationship _____ Phone # and E-mail _____

Name _____ Relationship _____ Phone # and E-mail _____

Caregiver _____ Phone # and E-mail _____

Clergy _____ Phone # and E-mail _____

Pet's Information Name & Type _____

Veterinarian _____ Phone # _____

Medical Information

Primary Doctor _____ Phone # _____

Secondary Doctor _____ Phone # _____

Hospital _____ Phone # _____

Height _____ Weight _____ Blood Type _____

Normal Bood Pressure _____

Allergies to drugs or foods _____

Please list any medical conditions that apply (for example: cardiac, diabetes, hypertension, stroke) _____

Surgeries (type and date)

Do you?

Wear dentures?	Yes ☐	No ☐	Wear glasses?	Yes ☐	No ☐
Wear contacts?	Yes ☐	No ☐	Use Oxygen?	Yes ☐	No ☐
Wear hearing aids?	Yes ☐	No ☐	Wheelchair?	Yes ☐	No ☐

Other Important Emergency Information

Immunizations

Where do you keep your medications?

Medications
(Prescription, Over-the-counter Drugs, Vitamins, Herbal Supplelments)

Name	Dose-Frequency	Purpose
Name	Dose-Frequency	Purpose
Name	Dose-Frequency	Purpose
Name	Dose-Frequency	Purpose
Name	Dose-Frequency	Purpose
Name	Dose-Frequency	Purpose
Name	Dose-Frequency	Purpose
Name	Dose-Frequency	Purpose
Name	Dose-Frequency	Purpose

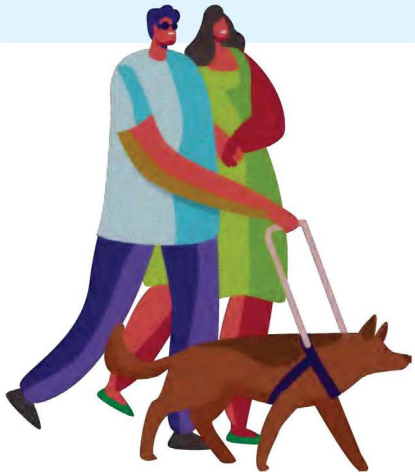
Please record all information in a manner easy to read by emergency medical personnel.

Planning for Different Circumstances



Disasters are challenging for everyone. We benefit from understanding our own needs and the unique needs of our friends, neighbors, and family members. Disaster preparedness is an individual and a community effort. Review the tips below to help prepare for a variety of circumstances.





People with Pets or Service Animals

- Get your pet an ID tag. Ask for a free or discounted microchip.
- Pack food, water, medicine, and proof of immunization.
- Dial **2-1-1** for local animal service resources.



Older Adults

- Clear your home of clutter to prevent falls.
- If you receive home care, ask about their plans for emergencies.
- If you live in a retirement community, learn about their emergency plan.
- Consider getting a medical alert system so you can call for help.



Rural Communities

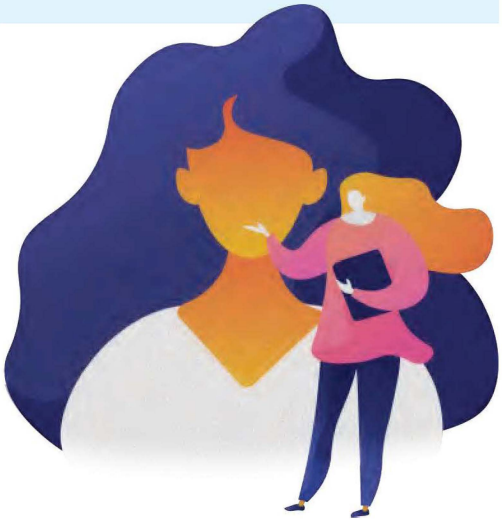
- Share alerts through phone trees and ham radio networks.
- Meet with neighbors to discuss collaboration.
- Plan for evacuating large animals.

People with Developmental Disabilities



- Practice your disaster plan with your support network to help you feel safe.
- Ask emergency responders to repeat directions if you don't understand.
- Practice how you might quickly describe your disability to a rescuer.

People with Speech/Communication Disabilities



- Carry an instruction card on how to communicate with you.
- Carry communication devices, phrase cards, or picture boards, like on page 43 and 44.
- Know how to replace your assistive device if damaged.

People with Mobility or Other Physical Disabilities



- Identify paratransit or accessible transportation options.
- Plan for damaged ramps, rails, or elevators.
- Bring an extra wheelchair battery, tire repair kit, and seat cushion.

People who are Blind or who have Low Vision



- Mark emergency supplies with Braille or large print.
- Keep a Braille or deaf-blind communication device in your emergency supply kit.
- Keep Braille/text communication cards for two-way communication.

People with Dementia



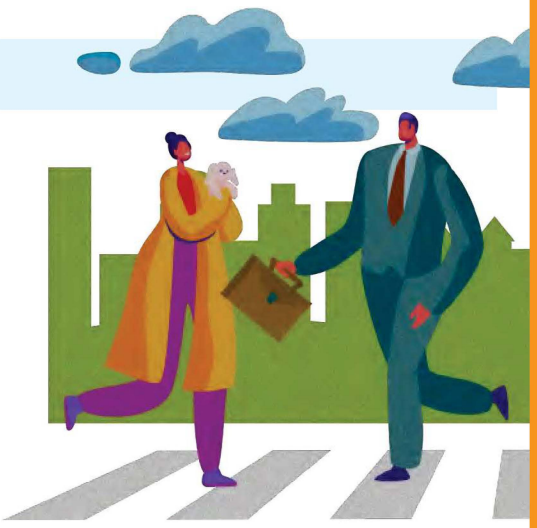
- Move to a quieter place to avoid agitation. Limit stimulation.
- Redirect the person's attention if he or she becomes upset.
- Find outlets such as taking a walk or engaging in simple tasks.
- Avoid elaborate explanations. Use concrete terms.

Pregnant women and families with infants



- Find out where to get prenatal or well-baby checkups if your doctor's office closes.
- Include baby care supplies in your **Go Kit**.
- Tell shelter staff if you have a baby or have issues with your pregnancy.

Transportation Challenged



- Arrange for rides with neighbors if you must evacuate.
- Call **2-1-1** to identify transportation service providers in your area.
- Ask if public transit or ride share services may be free after a disaster.

People who speak Limited English



- Find trusted community sources to talk to about safety options.
- Call **2-1-1** for information in over 200 languages.
- Ask a bilingual person to share safety steps with you.
- Know which of your media sources provide emergency alerts.

New Californians



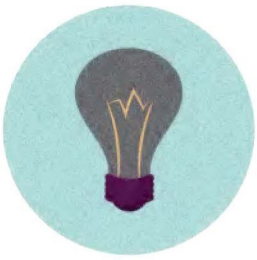
- Learn emergency system basics, like dialing **2-1-1** for non-emergencies and **9-1-1** for emergencies.
- Ask your community how disasters here are different.
- Find trusted sources in emergencies beyond the government.

Planning for Different Emergencies

In this section you will find tips on what to do in different disaster situations.



Fires



Power Outages



Tsunamis



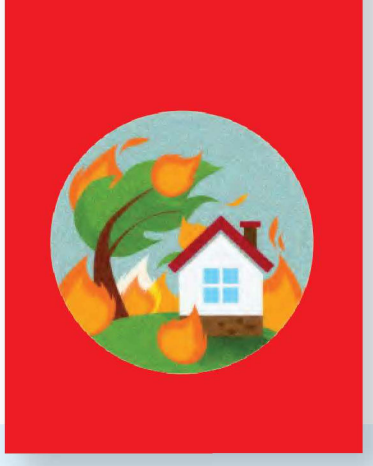
Floods



Heat Waves

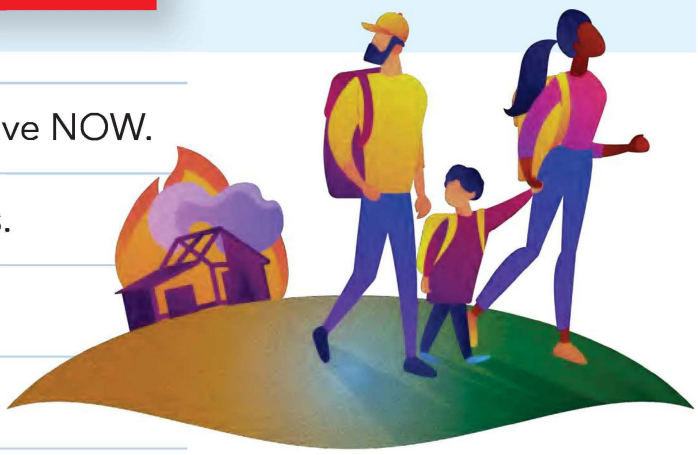


Earthquakes



Fires

Before:

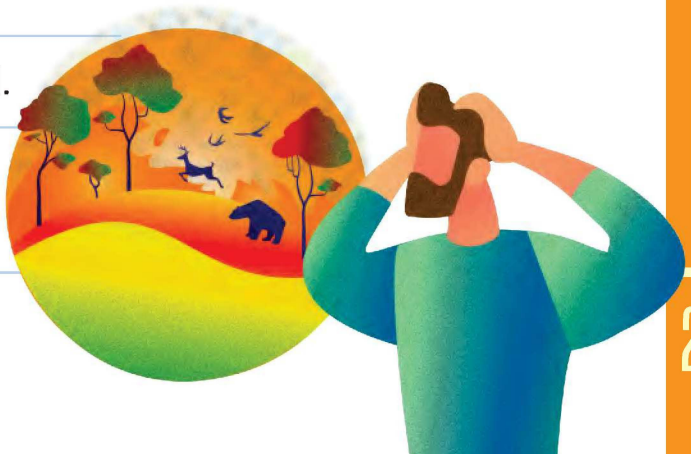


- Evacuation warning means prepare to leave NOW.
- Plan for no electricity. Do not use candles.
- Get a bandana or mask to protect lungs.
- Plan escape routes from each room.
- Clean gutters. Remove brush near home. Call **2-1-1** to see if local Fire Safe Councils can assist.

During:



- Evacuation order means you must leave NOW.
- Don't "wait and see." Leave immediately when ordered to evacuate.
- When a door feels hot, do not open it.
- If trapped, close doors and windows to keep smoke out.
- If your clothes are on fire, Stop, Drop and Roll.
- Leave smoky areas quickly. Stay low to the ground as smoke rises.





Earthquakes





Before:

- Secure furniture to walls.
- Identify safe spots in each room, like sturdy tables and desks.
- Identify dangerous spots near windows, mirrors, and hanging objects.
- Learn how to shut off gas, water, and electricity.

During:



- Don't rush outside. Get under a desk or table.
- If outside, move away from buildings, trees, streetlights, or powerlines.
- If driving, pull over and stop away from buildings and trees.
- Using a wheelchair: Go into a doorway, lock wheels, cover head and neck.
- Be ready for aftershocks.
- Watch for tsunamis on the coast.





Flooding

Before:

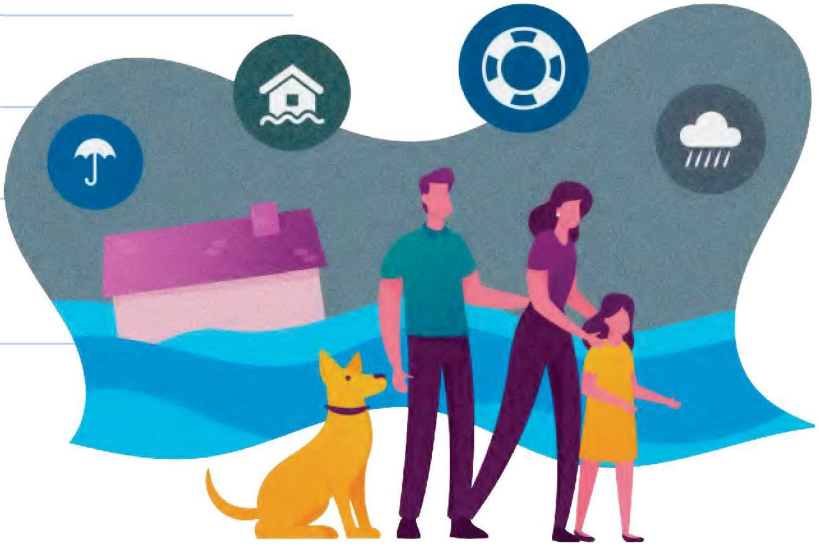
- Keep storm pipes and drains clear.
- Move valuables to higher floors.
- Monitor TV and radio for flood watches or warnings.
- Learn best escape routes to higher ground.
- Use sandbags to divert water.



During:

- Don't "wait and see." Leave immediately when ordered to evacuate.
- Never walk, swim, or drive through moving water. Remember, Turn Around, Don't Drown.
- Watch for mudslides.
- Avoid downed powerlines.
- If instructed, turn off water and electricity and unplug appliances.







Power Outages



Before:

- Prepare flashlights – no candles.
- Keep an emergency backup phone charger.
- Buy food that won't spoil and doesn't need cooking.
- Keep car gas tank at least half full.



During:

- Unplug appliances/electronics to prevent damage.
- Leave one light plugged in.
- Keep your refrigerator and freezer door closed.
- Do not use your gas stove for heat.
- Use generators, camp stoves, and grills outdoors.





Be prepared for public safety power shutoff

San Diego Gas & Electric® (SDG&E®) sometimes turns power off in fire-prone areas during adverse weather conditions as a safety precaution. This is known as a **Public Safety Power Shutoff (PSPS).** While these events are more likely to occur in high fire-risk areas, all San Diegans could be affected and should be prepared. **SDG&E** aims to send early notifications via phone calls, text alerts, emails and other means before turning off power.

Stay informed during PSPS

Update Your Contact Information and/or Sign Up for Outage Notifications

Visit **sdge.com/notifications** or call **1-800-411-7343** to update your contact information and/or sign up to receive voice, text and/or email notifications, even if you don't have an **SDG&E** account.

Community Resource Centers

SDG&E may open **Community Resource Centers** near affected communities during a PSPS event. Visitors can receive preparedness materials, ice, water, snacks,

SDGE®

Follow SDG&E on social media and the NewsCenter for updates during a PSPS

Facebook: facebook.com/SanDiegoGasandElectric

Twitter: twitter.com/SDGE

Instagram: instagram.com/sdge

Nextdoor: San Diego Gas & Electric

NewsCenter: sdgenews.com



charging for mobile devices, small solar powered batteries, radios and up-to-date information about the shutoff event. Public health protocols may also be in place including social distancing measures, routine deep cleaning and drive through service. Learn more at **sdge.com/resource-centers**.

Event Duration/Backup Generation

A PSPS event will require power to remain out for as long as a threat to public safety and to the electric system continues. Before power can be restored, crews must inspect power lines and equipment and make any needed repairs.



You are encouraged to explore safe, alternative power sources to operate your critical equipment during PSPS events. For additional information on choosing a generator or an alternative back-up system, please consult a licensed electrician and **SDG&E**. Learn more at **sdge.com/generator**.

Medical Baseline Allowance program

If you or someone in your household has a qualifying medical condition or needs certain in-home medical equipment, you may be eligible for more electricity or natural gas at a lower rate. The person with the qualifying medical condition must live at the address on the application, and the medical equipment must be for home-use only. This program can also help by providing extra notifications in advance of a PSPS event. Learn more at **sdge.com/medicalbaseline**.

CARE and FERA programs

CARE and **FERA** are two **SDG&E** programs that can provide you with a monthly discount on your bill.



- **California Alternate Rates for Energy (CARE)**
  30% or more monthly bill discount.
- **Family Electric Rate Assistance (FERA)**
  18% monthly bill discount. **FERA** is only open to households with three or more people.

Learn more about qualifications, income guidelines, and apply to these programs at **sdge.com/CARE**.



Energy Savings Assistance program

Energy-efficient home improvements can make your home more comfortable, save you money now, and for years to come. You may be eligible to receive low- or no-cost products and installation. Learn more and apply at **sdge.com/ESA**.

Access & Functional Needs (AFN) Resources

SDG&E and **2-1-1** San Diego partner to support individuals with Access and Functional Needs. Information and services are provided to increase preparedness and self-resilience during PSPS events and emergencies. Services may include assisted transportation, backup power, preparedness items, food security, temporary shelter and welfare checks. Learn more at **211SanDiego.org** or dial **2-1-1**.

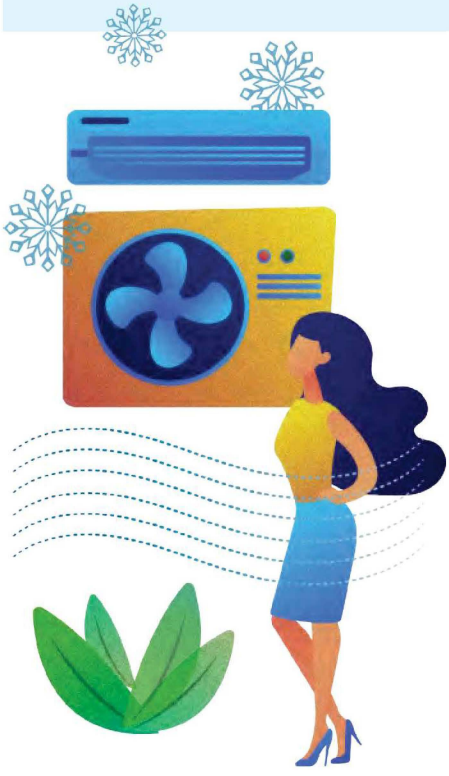


Tips for other Emergencies



Pandemics and Public Health Emergencies

- Store a two-week supply of water and food.
- Keep prescription drugs on hand.
- Wash hands frequently.
- Cover coughs or sneezes.
- Stay home if you are sick.



Extreme Heat

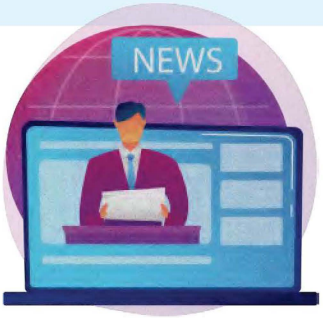
- Seek air conditioning or a fan.
- Go to libraries, shopping malls, or call **2-1-1** to find a designated cool zone or visit **coolzones.org**.
- Take a cool bath.
- Drink cool, non-alcoholic, non-caffeinated beverages.
- If you feel ill, call a doctor or **9-1-1** immediately.

Extreme Cold



- Stay indoors.
- Wear warm, comfortable, dry clothing.
- Watch for frostbite, hypothermia, or overexertion.
- Do not use a charcoal or gas grill for heat inside your home.

Tsunami



- Move to higher ground, inland and/or to a higher floor.
- Listen to your radio or TV for emergency instructions.
- Leave immediately if ordered to do so.
- Do not go sightseeing – stay away from the coast.
- Do not return to the hazard zone until local safety officials give the "all clear."



Terrorism



- Report suspicious activities to authorities.
- Do not accept packages from strangers.
- Follow instructions from emergency officials.
- Be ready for instructions to shelter in place or evacuate.
- Remain calm, patient, and contact someone in your personal support network.

For more information on responding to specific emergencies, visit the County's preparedness website: **ReadySanDiego.org**

Evacuation Warning: The alerting of people in an affected area of potential threat to life and property. An Evacuation Warning considers the probability that an area will be affected in the near future and prepares people for a potential Evacuation Order. Vulnerable populations such as people with disabilities, with access or functional needs, and/or large animals should leave now.

Evacuation Order: Requires immediate movement out of an affected area due to an imminent threat to life.



Shelter in Place: Go inside. Shut and lock doors and windows. Prepare to self-sustain until further notice and/or contacted by emergency officials.


Gather Supplies
MEDICATION LIST
ID CARD
PASSPORT



Go Kit

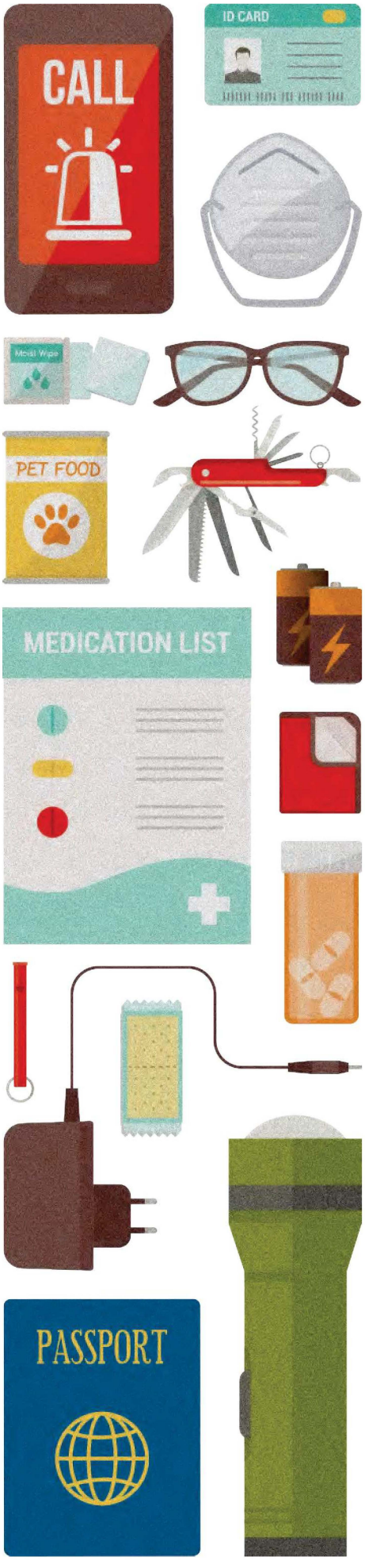
Most disasters are unexpected and happen fast. You might not have time to shop or pack. Pack a "Go Kit" for when you must leave in a hurry.

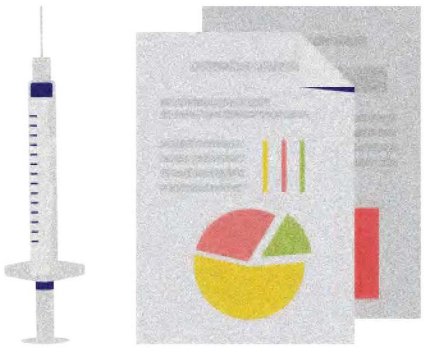
Check off items you have and add those you will need:

- ☐ Bottled water and nonperishable food, such as granola bars
- ☐ Copies and/or a USB flash drive of your important documents in a waterproof container (identification, insurance, photos of family and pets for identification)
- ☐ List of the medications you take, why you take them, and their dosages
- ☐ If any medication needs to be refrigerated, keep an extra ice pack in the freezer
- ☐ Contact information for your household and members of your support network
- ☐ Flashlight, hand-crank or battery-operated AM/FM radio, and extra batteries
- ☐ Cash, in small bills
- ☐ Notepad and pen
- ☐ Antibacterial wipes and hand sanitizer

- [ ] Face mask or bandana
- [ ] Back-up medical equipment (e.g., glasses, batteries) and chargers
- [ ] Aerosol tire repair kits and/or tire inflator to repair flat wheelchair or scooter tires
- [ ] Supplies for your service animal or pet (food, extra water, bowl, leash, cleaning items, vaccination records, and medications)
- [ ] Portable cell phone chargers
- [ ] This guide

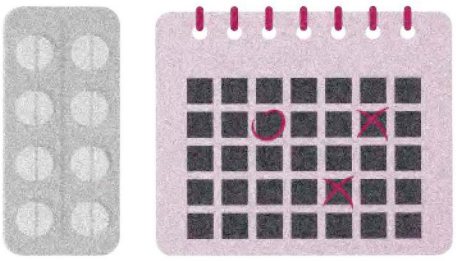
Other items you will need:













Home Kit

In some emergencies, you may be safer staying at home. You may not have water to drink or be able to flush the toilet. You may not have electricity to keep your food cold, turn on the light, or charge your phone. Prepare a "Home Kit" to survive for at least three days without water or electricity.

Check off items you have and add those you will need:

- ☐ One gallon of drinking water, per person, per day
- ☐ Food that won't spoil, like ready-to-eat canned foods, and a manual can opener
- ☐ First-aid kit
- ☐ Medications, including a list of the medications you take, why you take them, and their dosages
- ☐ Flashlight or battery-powered lantern, battery-operated AM/FM radio, and extra batteries, or wind-up radios that do not require batteries
- ☐ Whistle or bell
- ☐ Back-up medical equipment, if possible (e.g., oxygen, medication, scooter battery, hearing aids, mobility aids, glasses, facemasks, gloves)
- ☐ Style and serial numbers of medical devices (such as pacemakers) and usage instructions

Other personal items:



TIP: Your hot water heater is a source of water. Turn off the power and let the water cool. To get water, place a container underneath and open the drain valve on the bottom of the tank.

Communication Tools

During an emergency, your normal way of communicating may be impacted by changes in environment, noise, service disruptions, or confusion.

If you are blind or have low vision, practice explaining to others how to guide you.

If you are Deaf or hard of hearing, find alternate ways to communicate your needs, such as through gestures, note cards, or text messages. Keep communication cards in your emergency supply kits.

I need a translator

Necesito un traductor

Tôi cần một người phiên dịch

انا بحاجة الى الترجمة

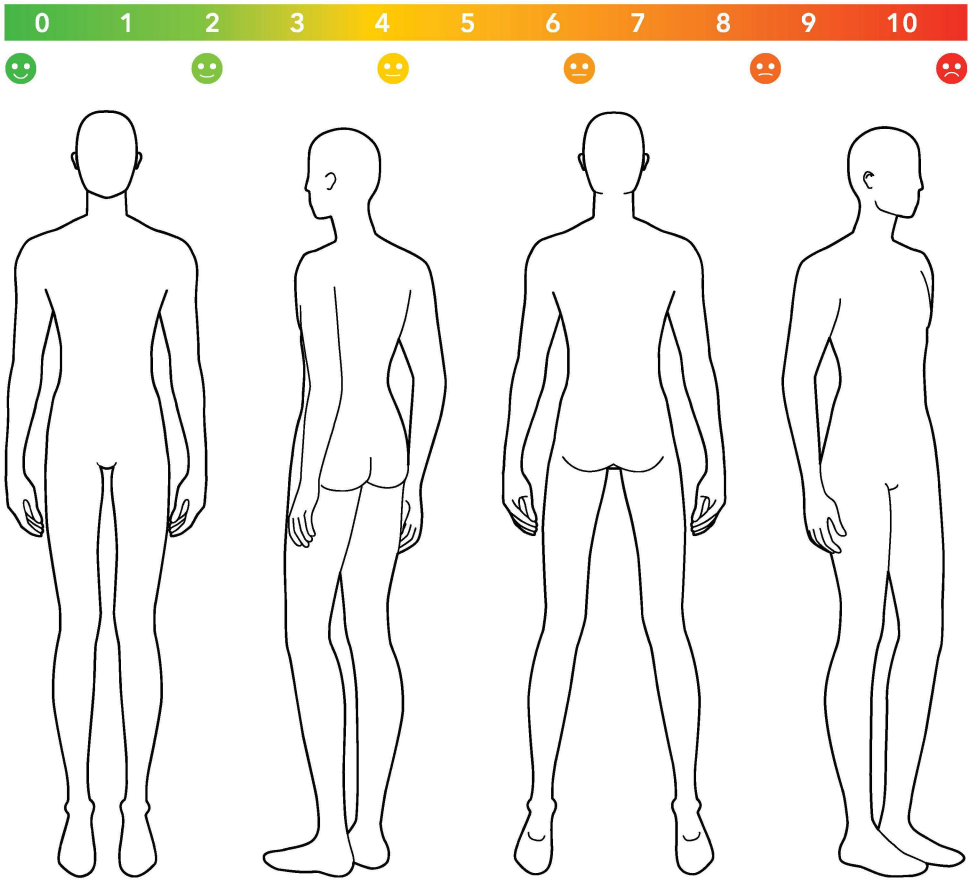
Kailangan ko ng tagasalin

我需要翻

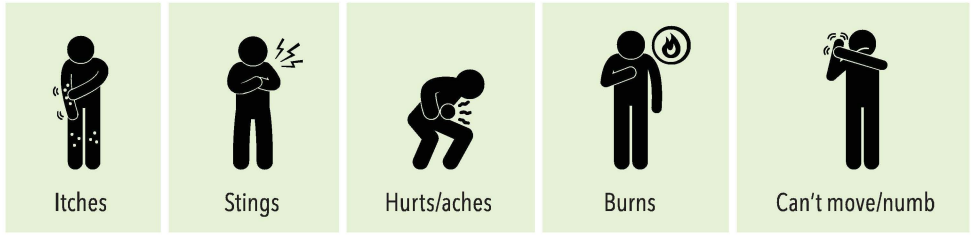


A	B	C	D	E	F	G	H	I	J
K	L	M	N	Ñ	O	P	Q	R	S
T	U	Ü	V	W	X	Y	Z		
1	2	3	4	5	6	7	8	9	0
.	'	,	?	!	+	-	SPACE		

PAIN CHART | LEVEL OF PAIN









I AM

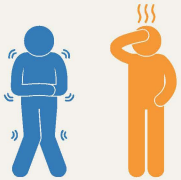

Short of breath


In pain


Choking

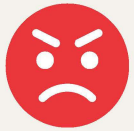

Feeling sick


Hungry/Thirsty

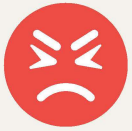

Cold/Hot


Tired


Dizzy


Angry


Afraid

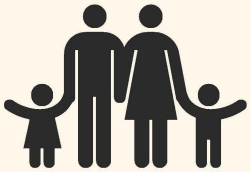

Frustrated


Sad

I WANT TO SEE


Doctor

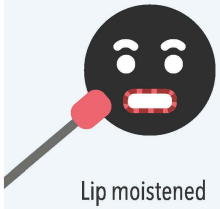

Nurse


Family


Chaplain

I WANT


To be suctioned


Lip moistened


Water/Ice


To be comforted


To sleep


TV/Video/DVD


Call light/Remote


It quiet


Lights Off/On

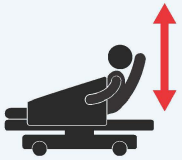

To go home


To sit up


To lie down


To turn left


To turn right


Head of bed up/down


Get out of bed








Pen/Paper

Thank you

I Love you

For infection control purposes, please do not reuse this board between patients.


SD County Emergency
ReadySanDiego
Plan, Prepare
Emergency
Disaster Info, Maps, Shelters
Recovery
Resources, Assi
Disaster Info | Refreshed:
PT
Excessive Heat Warning Is
8/14/20,12:00 p.m. throug
Fri Aug 14, 2020 12:00 PM
Excessive Heat Warning ued Today,
7/30/20,11:00 a.m. through 8/02/20, 9:00 p.m.
Thu Jul 30, 2020 1 M PDT ASL/Audio
Stay Informed
SanDiegoCounty.gov
2 1 1

Stay Informed

ReadySanDiego.org
Prepare. Plan. Stay Informed.

- County's preparedness website: **ReadySanDiego.org**

AlertSanDiego
Get signed up. Get notified.

ACCESSIBLE AlertSanDiego
Get signed up. Get notified.

- Register your cell phone number, VoIP phone number and email at **ReadySanDiego.org/AlertSanDiego.** This is the County's emergency mass notification system used by first responders to send evacuation instructions and other disaster information through calls, text, and email.

San Diego County

- Download the free **SD Emergency App**, available in English and Spanish for iOS and Android mobile devices. Visit **ReadySanDiego.org/SDEmergencyApp**.

Twitter.com/ReadySanDiego

- During an emergency, visit **AlertSD.org** or the **SD Emergency App** for incident updates, shelter locations, evacuation areas, hazard perimeters, official social media feeds, and more.
- The main **Emergency Alert System** radio stations for San Diego County are ***KOGO AM 600*** and ***KLSD AM 1360***.

Facebook.com/ReadySanDiego

- For recovery information, visit **RecoverSD.org**.
- For non-emergency questions and updated disaster information, call **2-1-1**.
- If you are experiencing a life-threatening emergency, call **9-1-1**.

Getting Support

Disasters can be stressful and overwhelming. You may feel irritable, sad, or angry. You may experience headaches or not be able to sleep.

Talk to someone about your feelings, even though it might be difficult.

Look to your support network or seek help from a professional.

San Diego Access and Crisis Line

If you need support, experienced counselors are available 7 days a week/24 hours a day to provide you with a referral to meet your needs and help determine eligibility for mental health or substance use services.

- Call **(888) 724-7240** or visit our web site: **www.sandiegocounty.gov/hhsa/programs/bhs**

National Alliance on Mental Health (NAMI) San Diego

You can connect with a trained crisis counselor to receive free crisis support 24 hours a day.

- Text **NAMI** to **741-741** or call **(888) 523-5933**

National Suicide Prevention Lifeline and Veterans Crisis Line

We can all help prevent suicide. The Lifeline provides 24/7, free and confidential support for people in distress, prevention and crisis resources for you or your loved ones, and best practices for professionals.

- Call **(800) 273-8255** or call **9-8-8**



County of San Diego
www.sandiegocounty.gov
(800) 694-3900

Office of Emergency Services
www.sandiegocounty.gov/oes
(858) 565-3490

Listos California
www.listoscalifornia.org
(916) 845-8510

Thank you to the **County of San Diego Health and Human Services Agency**, Aging & Independence Services for their contributions to this guide. For aging resources, visit www.aging.sandiegocounty.gov

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This document was prepared under a grant from Listos California, a program anchored at the Governor's Office of Emergency Services. Points of view or opinions expressed in this document are those of the authors and do not necessarily represent the official position or policies of Listos California or the Governor's Office of Emergency Services.



Prepare Your Pets for Disasters

Your pets are important member of your family! This is why they should be included in your family's emergency plan.

To prepare for the unexpected, keep your pets in mind as you follow these tips:

1. Make a plan.
2. Build an emergency kit.
3. Stay informed.

Make a Plan

If you have a plan in place for you and your pets, you will likely encounter less difficulty, stress and worry when you need to make a decision during an emergency.

THINGS TO INCLUDE IN YOUR PLAN:

- **Know what to do with your pet during an evacuation .** Many public shelters and hotels do not allow pets inside. Know a safe place where you can take your pets before disasters and emergencies happen.
- **Develop a buddy system.** Plan with neighbors, friends or relatives to make sure that someone is available to care for or evacuate your pets if you are unable to do so.
- **Have copies of your pet's vaccination record, and make sure your pet is microchipped.** Keep your address and phone number up-to-date and include an emergency contact outside of your immediate area.
- **Keep contact information for your local emergency management office or animal control office and shelters** on hand in case you become separated from your pet.

Build a Kit for your Pet

Just as you do with your family's emergency supply kit, think first about the basics for survival.

Review your kit regularly to ensure that their contents are fresh.

HERE ARE SOME ITEMS TO INCLUDE IN AN EMERGENCY KIT FOR YOUR PET:

- **Food and Water.** Keep several days' supply of both.
- Keep food in an airtight, waterproof container, and have a water bowl to use.





Ready®



- **Medicine.** Keep an extra supply of the medicine your pet takes on a regular basis in a waterproof container.
- **First aid kit.** Include items appropriate for your pet's emergency medical needs.
- **Backup collar with ID tag and a harness or leash.** Have copies of your pet's registration information in a waterproof container and available electronically.
- **Traveling bag, crate or sturdy carrier** for each pet.
- **Grooming items.** Pet shampoo and other items, in case your pet needs some cleaning up.
- **A picture of you and your pet together.** If you become separated from your pet, a picture will help you document ownership and allow others to assist you in identifying your pet.
- **Sanitation needs.** Include pet litter and litter box, trash bags and other items to provide for your pet's sanitation needs.
- **Familiar items.** Put favorite toys, treats or bedding in your kit to reduce stress for your pets.

Stay Informed

Stay informed of current conditions and know how you will receive emergency alerts and warnings.

Download the FEMA app to get weather alerts for up to five different locations anywhere in the United States.

Always bring your pets indoors at the first sign or waring of a storm. For more information about how to prepare your pets, visit Ready.gov/pets.

Ready®







Appendix C
Quick Reference Guide

Quick Reference - Wildfire Preparedness

The Quick Reference Guide provides helpful tips and educational resources, so occupants are prepared in the event of a wildland fire evacuation.

Evacuation routes for Cleveland Avenue Residential Project occupants are detailed in Section 4 and illustrated in Figure 1. Figure 2 displays the Project's vicinity location, and Figure 3 is the Project's site plan. Occupants should know available routes, stay informed, and follow directions provided by law enforcement or fire agencies, news media, and other credible sources, and should not rely on navigation apps that may inadvertently lead people toward the approaching wildfire.

Nearest Medical Facilities

Hospitals:

Palomar Medical Center Escondido
2185 Citracado Parkway Olive View Drive,
Escondido, CA 92029

Travel south on Conway Drive
Turn right onto Rincon Ave
Turn left onto N Iris Lane
Turn left onto Centre City Parkway
Turn right onto W Mission Ave
Turn left onto Enterprise Street
Turn right onto Auto Park Way
Hospital is ahead on the left

Kaiser Permanente San Marcos Medical Center Emergency Room
360 Rush Drive, San Marcos, CA 92078

Start south on Conway Drive to Rincon Ave
Take 1-15BL/ Centre City Parkway/ N Centre City Pkwy
Head west on CA-78
Take the exit onto Twin Oaks Valley Road
Turn right onto Discovery Street
Turn left onto Rush Drive
Hospital is on the right

Urgent Care Facilities:

Concentra Urgent Care
740 Nordahl Road, Ste 131
San Marcos, CA2069

Centro Medico Escondido – Urgent Care
1121 E Washington Ave,
Escondido CA 92025

Carbon Health Urgent Care Escondido – Felicita Town Center
1855 South Centre Parkway,
Escondido, CA 92025

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Register to Receive Emergency Alerts

The City of Escondido utilizes the County's for its Community Emergency Notifications. The County instituted AlertSanDiego, which is a regional notification system that sends telephone notifications to occupants and businesses within areas in San Diego_County impacted by, or in danger of being impacted by, an emergency or disaster. AlertSanDiego is used by emergency response personnel to notify at-risk occupants and businesses with information about the event and/or any advisable or ordered actions, such as evacuation, shelter-in-place, gas leak, missing person, etc. The TTY/TDD capable system utilizes the region's 911 database, provided by the local telephone company(ies) to contact landline telephones whether listed or unlisted. Because the system uses the 911 database, only landline numbers are in the system. Residents who have a Voice over Internet Protocol (VoIP) or cellular telephone and would like to be notified via those means, or who would like an email notification, must register those telephone numbers and/or email address for use by the system to receive voice, text, and email messages

Occupants of the Cleveland Avenue Residential Project should sign up to receive emergency alerts at the link below.

- AlertSanDiego: http://www.readysandiego.org/AlertSanDiego/

The occupants of Cleveland Avenue Residential Project will also be able to receive information through the media outlets radio stations, providing occupants information on overall emergency situations and how occupants should respond. In addition, the San Diego County Emergency Alert System (EAS) broadcasts emergency information via multiple radio stations; KOGO AM 600 and KLSD AM 1360. Television channels include CityTV, Channel 24 and Channel 99.

Social media provides another outlet for news:

Escondido Police

- Facebook: https://www.facebook.com/EscondidoPolice
- X: https://x.com/EscondidoPolice

City of Escondido

- Facebook: https://www.facebook.com/CityofEscondido
- X: https://x.com/CityofEscondido

Alert San Diego

- Facebook: https://www.facebook.com/AlertSanDiego/
- X: https://x.com/AlertSanDiegoCo

Get Involved in Community Readiness

Occupants of the Project are encouraged to participate in the City of Escondido Community Emergency Response Team (CERT) training through the EFD (https://www.escondido.gov/494/Community-Emergency-Response-Team-CERT). The Cleveland Avenue Residential Project will organize annual evacuation education for occupants of the Project, as well as maintaining a fire safe page on the Project's website or social media page, as possible, including this Wildfire Evacuation Study (WES) and links to important citizen preparedness information.

This WES is prepared specifically for the Cleveland Avenue Residential Project and focuses on wildland fire evacuations, although many of the concepts and protocols will be applicable to other emergency situations. Ultimately, this WES should be used by occupants for awareness of evacuation approaches during wildfires and other similar emergencies. It is important for the occupants to understand the importance of being prepared, so that they will be able to calmly implement their personal evacuation plan if/when the time comes where evacuation is necessary. Some actions the community occupants can do in advance include:

- Follow the "Ready, Set, Go!" model developed for wildfire evacuations.
- Create an escape plan from the residence (i.e., "Know Two Ways Out"), as well as an escape route once outside of the home.
- Know your available routes, stay informed and follow directions provided by credible sources.
- Do not rely on navigation apps that may inadvertently lead you toward an approaching fire.
- Create a car emergency kit, including cell phone charger, flashlight, jumper cables, water, and food.
- Gather important paperwork, including birth and marriage certificates, account documents, passports, Social Security cards, and any other important family photos or irreplaceable items and documents.
- As time allows, make sure to secure your home by locking all doors and windows, and unplugging electrical equipment, such as appliances and electronics.

Sample emergency preparedness resources available to the Project occupants are provided in Appendices A (City of Escondido Fire Department Evacuation Information, San Diego County Emergency Preparedness Resources, and "Ready, Set, Go!" Wildland Fire Action Guide) and Appendices B (Family Disaster Plan and Personal Survival Guide), and occupants are encouraged to become familiar with the concepts detailed at the following websites:

1. "Ready, Set, Go!" Personal Action plan:

   https://www.readysandiego.org/content/dam/oesready/en/Resources/wildfire_preparedness_guide.pdf
2. Red Cross Emergency Planning:

   http://www.redcross.org/get-help/how-to-prepare-for-emergencies/make-a-plan
3. Hazardous Materials Emergency Preparedness:

   https://www.ready.gov/hazardous-materials-incidents
4. Building a disaster kit:

   http://www.redcross.org/get-help/prepare-for-emergencies/be-red-cross-ready/get-a-kit
5. Making a Plan Checklist:

   https://www.ready.gov/make-a-plan
6. Family Communication Plan:

   https://www.ready.gov/collection/family-communication-plan

Evacuation Study Purpose and Limitations

Wildfire and other emergencies are often dynamic events, and the need for evacuations are typically determined by on-scene first responders or by a collaboration between first responders and designated emergency response teams, including Office of Emergency Services and the IC established for larger emergency events. As such, and consistent with all emergency evacuation plans, this WES is to be considered a tool that supports existing pre-plans and provides for occupants who are familiar with the evacuation protocol but is subservient to emergency event-specific directives provided by agencies managing the event.

Appendix D
Cleveland Fire Protection Plan

DRAFT

Fire Protection Plan – Letter Report

Cleveland Avenue Residential Project

Escondido, California

SEPTEMBER 2025

Prepared For:

ESCONDIDO FIRE DEPARTMENT
1163 North Centre City Parkway,
Escondido, California, 92026

Applicant:

THE TRUE LIFE COMPANIES
4350 Von Karman Ave., Suite 200,
Newport Beach, California 92660
Contact: David Stearn

Prepared by:

DUDEK

687 S. Coast Highway 101, Suite 110
Encinitas, California 92024

Austin Ott
Fire Protection Planner, Urban Forestry + Fire Protection

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1 Representative Photographs
2 Fire History Map
3 Suggested Plant List

DUDEK
MAIN OFFICE
687 S. COAST HIGHWAY 101, SUITE 110
ENCINITAS, CALIFORNIA 92024
T 760.942.5147 F 760.632.0164

September 10, 2025 17591

LaVona Koretke, Deputy Fire Marshal
City of Escondido, Fire Department
1163 Centre City Parkway
Escondido, California, 92026

Subject: Fire Protection Plan – Letter Report for the Cleveland Avenue Residential Project, Escondido, California

Dear Deputy Fire Marshal Koretke:

This Fire Protection Plan (FPP) – Letter Report demonstrates that the Cleveland Avenue Residential Project will be in compliance with applicable portions of the City of Escondido Fire Code which has adopted and amended the 2022 California Fire Code (CFC), including Chapter 49 (Municipal Code Chapter 11 – Fire Prevention and Protection, Article 2, Division 1, Ordinance 2022-04), and Section 4903 of the 2023 San Diego County Consolidated Fire Code (SDCCFC). The Escondido Fire Code and SDCCFC are more restrictive because of modifications that were reasonable and necessary because of local climatic, geographical and topographical conditions (Escondido Fire Department, 2023).[1] The Project will also be consistent with applicable sections of the 2022 California Building Code (CBC), including Chapter 7A (Municipal Code Chapter 6 – Building and Building Regulations, Article 3); and 2022 California Residential Code (CRC), including Section 337, as adopted by the City of Escondido and Escondido Fire Department (EFD). In addition to the above referenced codes, this FPP Letter Report shall be consistent with the EFD's Fire Prevention Division's Vegetation Management and Defensible Space requirements. The Project would be required to meet the most currently adopted codes at the time of Project building plan submittal. This FPP-Letter Report has been prepared as prescribed in the County's "Guidelines for Determining Significance and Report Format and Content Requirements for Wildland Fire and Fire Protection (County of San Diego 2010)" document. For purposes of this FPP- Letter Report, the Cleveland Avenue Residential Project will be referred to as the "Project".

The Project site is located within the City of Escondido, San Diego County, California. This FPP Letter Report evaluates and identifies requirements for water supply, fuel modification and defensible space, emergency access, building ignition and fire resistance, fire protection systems, and wildfire emergency pre-planning, among other pertinent fire protection criteria. The purpose of this plan is to generate and memorialize the fire safety requirements of the City of Escondido along with project-specific measures based on the site, its intended use, and its fire environment. The Project site is within the Escondido Fire Department's (EFD's) jurisdictional area. The EFD operates at least three fire stations that could respond to an incident on the site in under approximately seven minutes travel time, one of which could reach the site in under 5 minutes total response time (EFD Station 7). In addition, automatic/mutual aid agreements are in place with neighboring fire agencies to augment response, especially at the fringe area of EFD's jurisdiction. The closest existing fire station to the Project site is the EFD Station 7, located at 1220 North Ash Street, Escondido, California, approximately 2 miles from the development. EFD Station 7 includes one (1) Type 1 Fire Engine

[1] Escondido Fire Code: https://www.escondido.gov/518/Fire-Code

that is staffed daily by five (5) personnel including a Fire Captain, an Engineer, and a Firefighter Paramedic; and one (1) Rescue Ambulance, that is staffed daily with two (2) Paramedics.

Following extensive review of available digital site information, including topography, vegetation types, fire history, and the Project's site plan, Dudek fire protection planners conducted a field assessment of the Project in SEPTEMBER 2025. As determined during the analysis of this site and its fire environment, the proposed 29 lot residential development Project, in its current undeveloped condition, is considered to include characteristics that, under favorable conditions, have the potential to facilitate fire spread. Under extreme conditions, wildfires on the hillside to the east of the site could burn erratically and aggressively and result in significant ember production. Once the Project is constructed, the on-site fire potential will be lower than its current condition due to conversion of areas of wildland fuels to managed landscapes, extensive fuel modification areas, improved accessibility to firefighting personnel and equipment, and new structures built to the latest ignition resistant codes. However, it is anticipated that fire has the potential to encroach upon the Project site and subject the structures to wildfire. This FPP contemplates wildfire encroachment and provides specific requirements that will minimize the potential for structural damage.

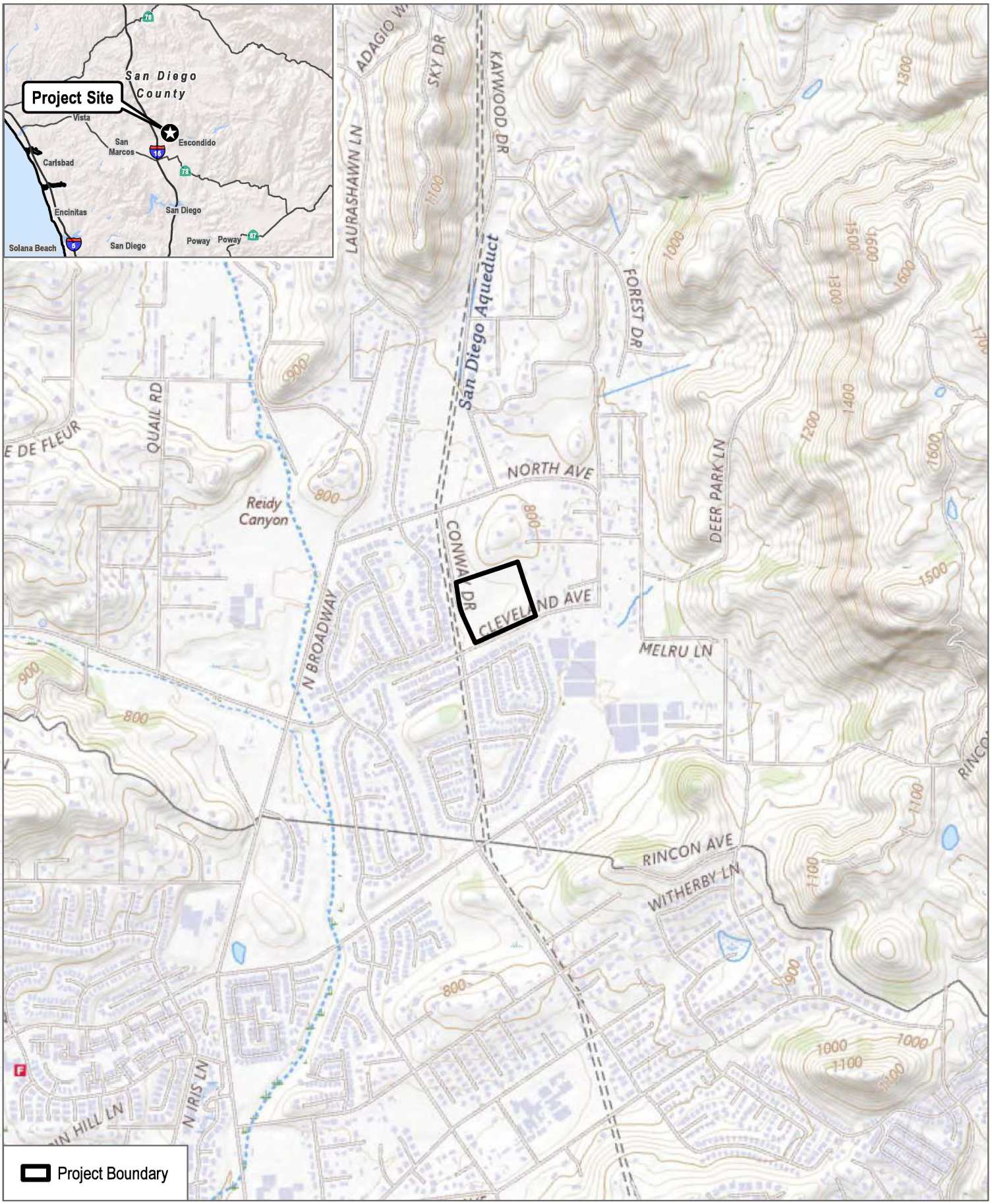
Early evacuation for any type of wildfire emergency near the Project Site is the preferred method of providing for resident safety, consistent with the City's current approach. As such, each property owner will be individually responsible to adopt, practice, and implement a "Ready, Set, Go!" (Escondido Fire Department 2024)[2] approach to site evacuation. The "Ready, Set, Go!" concept is widely known and encouraged by the state of California and most fire agencies. Pre-planning for emergencies, including wildfire emergencies, focuses on being prepared, having a well-defined plan, minimizing potential for errors, maintaining the site's fire protection systems, and implementing a conservative (evacuate as early as possible) approach to evacuation and site uses during periods of fire weather extremes.

1 Project Description

The Cleveland Avenue Residential Project is an urban infill project in the City of Escondido (see Figure 1, Vicinity Map and Figure 2, Project Site Plan). The Project encompasses 10.378 acres in northern City of Escondido at APN 224-151-51-00. The Project proposes to develop 29 residential lots, two water quality basins, a utility lot, and a street lot. The site is located north of Cleveland Avenue and east of Conway Drive. The Project site is surrounded by single-family residential development, similar to the proposed Project. Currently, the Project site consists of undeveloped open space, primarily grassland vegetation types (see Figure 3, Vegetation Community Map), that is frequently mowed for fire prevention purposes.

Access to the Project would be from points on Cleveland Avenue and Conway Drive, both of which would connect to the internal "Street A". The existing Cleveland Avenue and Conway Drive are in compliance with the existing code for street width and allows for increased capacity, safety, and evacuation efficiency. Internal circulation includes Street "A", a 36 foot wide roadway. Street "B" is a 36-foot wide, approximately 325 foot long, dead-end roadway terminating in a cul-de-sac. All on-site fire access roads will be designed and maintained to support the imposed loads of fire apparatus (not less than 75,000 pounds) and will be consistent with code requirements for all weather paving surfaces (County of San Diego 2023).

[2] Escondido Fire Department Wildfire Safety & Evacuation – "Get Ready To Pack, Get Set To Leave, and Go!": https://www.escondido.gov/716/Wildfire-Safety-Evacuation



SOURCE: USGS National Map 2025

DUDEK

0 500 1,000 Feet

FIGURE 1

Project Vicinity Map

Cleveland Residential Project

2 Environmental Setting

2.1 Location

As depicted in Figure 1, Project Location, the Project site is located within the City of Escondido (City), generally east of Interstate 15 (I-15), and bound by Cleveland Avenue to the south and Conway Drive to the north. The Project site is within APN(s) 224-151-51-00, within Section 33 and 34, Township 11 South, Range 2 West of the San Bernardino Meridian U.S. Geographical Survey 7.5-minute quadrangle map. The Project is surrounded by single family residential development, with some nearby agricultural land uses.

In its existing state, the Project site consists of open space, maintained grassland vegetation, with four single family dwelling units to the north of the site. This Project site is primarily grasslands, including California Ruderal Grassland and Meadow, and Western Warm Temperate Urban and Developed Herbaceous (see Figure 3, Vegetation Community Map) (refer to Attachment 1, Representative Site Photographs).

The Project site is designated as a Very High Fire Hazard Severity Zone (FHSZ) within a Local Responsibility Area (LRA) by the California Department of Forestry and Fire Protection (CAL FIRE) (see Figure 4, CAL FIRE Fire Hazard Severity Zone Map). CAL FIRE Fire and Resource Assessment Program (CAL FIRE 2024) fire history data indicates wildfires have occurred within a 5-mile vicinity of the Project site; however, there have been no recorded wildfires on-site. The most recent wildfire in the Project vicinity was the 2014 Cocos Fire, which burned approximately 1,995 acres. The largest wildfire in the Project vicinity was the 1969 Moosa Fire, which burned approximately 6,944 acres.

2.2 Topography

Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread up-slope and slower fire spread down-slope, unless downslope winds are influencing the fire. Flat terrain tends to have little effect on fire spread, resulting in fires that are driven by wind.

The Project site has an elevation of approximately 758 feet above mean sea level (amsl) on the southwestern corner of the property, near the Conway Drive and Cleveland Avenue intersection, to approximately 790 feet amsl in the northeastern corner of the site. Project site is comprised of relatively flat terrain.

2.3 Climate

Inland, northern San Diego County and the Project area's weather are influenced by the Pacific Ocean and are frequently under the influence of a seasonal, migratory subtropical high-pressure cell known as the "Pacific High" (WRCC 2022a). Wet winters and dry summers with mild seasonal changes characterize the Southern California climate. This climate pattern is occasionally interrupted by extreme periods of hot weather, winter storms, or dry, easterly Santa Ana winds. The average high temperature for the Project area is approximately 84°F, with average highs in the summer and early fall months (June–September) reaching 90°F. Precipitation typically occurs from December through March with annual rainfall averaging 12 inches (WeatherSpark 2025). The prevailing wind pattern is from the west (on-shore), but the presence of the Pacific Ocean causes a diurnal wind pattern known as the land/sea breeze system. During the day, winds are from the west–southwest (sea) and at night, winds are from

the northeast (land), averaging two miles per hour (mph). During the summer season, the diurnal winds may average slightly higher (approximately 14 mph) than the winds during the winter season due to greater pressure gradient forces. Surface winds can also be influenced locally by topography and slope variations. The highest wind velocities are associated with downslope, canyon, and Santa Ana winds.

The Project area's climate has a large influence on the fire risk, as drying vegetation during the summer months becomes fuel available to advancing flames should an ignition be realized. Typically, the highest fire danger is produced by the high-pressure systems that occur in the Great Basin, which result in the Santa Ana winds of Southern California. Sustained wind speeds recorded during recent major fires in San Diego County exceeded 30 mph and may exceed 65 mph during extreme conditions. The Santa Ana wind conditions are a reversal of the prevailing southwesterly winds that usually occur on a region-wide basis during late summer and early fall. Santa Ana winds are warm and dry winds that flow from the higher desert elevations in the north through the mountain passes and canyons. As they converge through the canyons, their velocities increase. Santa Ana winds generally coincide with the regional drought period and the period of highest fire danger. The Project site is affected by Santa Ana winds from the north and east. The slopes are generally in alignment with the extreme Santa Ana wind events, which can influence fire spread by creating downslope and down canyon wind-driven fires.

2.4 Vegetation

Extensive vegetation type mapping is useful for fire planning, because it enables each vegetation community to be assigned a fuel model, which is used in a software program to predict fire behavior characteristics, as discussed in Section 3.12, Fire Behavior Modeling. Vegetation types on the Project site primarily include non-native grassland, non-native grassland: broadleaf-dominated, and urban/developed landscapes (RECON 2025). (Figure 3, Vegetation Communities).

2.4.1 Vegetation Dynamics

The vegetation described above translates to fuel models used for fire behavior modeling, discussed in Section 3.12 of this FPP Letter Report. Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (bark thickness, leaf size, branching patterns), and overall fuel loading. For example, the native shrub species that compose the coastal sage scrub and mixed chaparral plant communities on site are considered to exhibit higher potential hazard (higher intensity heat and flame length) than grass dominated plant communities (fast moving, but lower intensity) if ignition occurred. The corresponding fuel models for each of these vegetation types are designed to capture these differences. Additionally, vegetative cover influences fire suppression efforts through its effect on fire behavior. For example, while fires burning in grasslands may exhibit lower flame lengths and heat outputs than those burning in native shrub habitats, fire spread rates in grasslands are often more rapid.

As described, vegetation plays a significant role in fire behavior and is an important component to the fire behavior models discussed in this report. A critical factor to consider is the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes disrupts plant succession, setting plant communities to an earlier state where less fuel is present for a period of time as the plant community begins its succession again. In summary, high-frequency fires tend to convert shrublands to grasslands or maintain grasslands, and fire exclusion

tends to convert grasslands to shrublands over time as shrubs sprout back or establish and are not disturbed by repeated fires. In general, biomass and associated fuel loading will increase over time, assuming that disturbance (e.g., fire, grazing, or farming) or fuel reduction efforts are not diligently implemented, which would not occur on this site due to the funded maintenance entity. It is possible to alter successional pathways for varying plant communities through manual alteration. This concept is a key component in the overall establishment and maintenance of the proposed FMZs for the Project Site. The FMZs will consist of irrigated and maintained landscapes that will be subject to regular "disturbance" in the form of maintenance and will not be allowed to accumulate excessive biomass over time, which results in reduced fire ignition, spread rates, and intensity. In contrast, conditions outside the fuel modification zones, where the wildfire threat will exist post-development (north of the project site), are classified as light fuel loads due to the classification as annually maintained grasslands.



SOURCE: Recon 2025

DUDEK

0 500 1,000 Feet

FIGURE 3

Vegetation Map

Cleveland Avenue Project

Project Exposure to Wildland Fires

The Project is urban infill without a wildland interface, and therefore has minimal exposure to wildland fires, primarily through potential ember cast. The Project would address this potential threat through application of Chapter 7A of the 2022 California Building Code, or most currently adopted code year at the time of Project building plan submittal.

2.5 Water Supply

Water for the Project would be provided by the City of Escondido Water Division. On-site firefighting water needs will be met by various fire hydrants along Conway Drive. Additional fire hydrants may be proposed on site along Street "A" and Street "B" to the code specifications of the Escondido Fire Department, as discussed in Section 3.7.

2.6 Fire Access Roads

Site access, including fire lane, driveway, and entrance road widths, primary and secondary access, turnarounds, dead end lengths, signage, surface, and other requirements will comply with the City's roadway standards as identified in the most currently adopted Escondido Fire Code and California Building Code. The current codes that apply to the Project include the Escondido Fire Code which has adopted and amended the 2022 California Fire Code, California Code of Regulations, Title 24, Part 9 (Municipal Code Chapter 11, Article 2, Division 1; Ordinance No. 2022-04), and the 2022 California Building Code, including Chapter 7A (Municipal Code Chapter 6, Article 3). Fire access will be reviewed and approved by EFD prior to construction.

A lighted directory map, meeting current fire department standards, shall be installed at the driveway entrance to a residential project or a mobile home park, with more than fifteen (1) units (EFD Amendments, Section 505.3 – Directory Map). Furthermore, any new development which necessitates updated emergency response maps due to new structures, hydrants, roadways, or similar features shall be required to provide map updates in a format compatible with current department mapping services to the EFD (EFD Amendments, Section 505.4 – Response Map updates).

The Project will be accessible by new roadways/driveways and would involve the construction of new residential structures, roadways, and would generate new trips to and from the Project site. Primary access to the Project site would be from a point on Conway Drive that connects to the proposed Street "A" and a point on Cleveland Avenue that connects to the proposed Street "A". The existing roadways leading to the Project site, Conway Drive and Cleveland Avenue are in compliance with the existing code for street width and allows for increased capacity, safety, and evacuation efficiency. Internal circulation includes a Street "A" that connects to both Conway Drive and Cleveland Avenue and is 36-feet wide. Street "B" is a dead end cul-de-sac that is 36 feet wide, and approximately 400 feet long, that terminates in a cul-de-sac with a 48-foot turning radius bulb. All on-site fire access roads will be designed and maintained to support the imposed loads of fire apparatus (not less than 75,000 pounds) and will be consistent with code requirements for asphaltic paving surfaces.

All on-site roads shall be constructed to the current City of Escondido and EFD road standards, including minimum 24-foot wide, unobstructed road widths. Turning radius for fire apparatus access roads will be 28 feet as measured on the inside edge of the improved width. No buildings will exceed 30 feet heights, so no additional widths for ladder

truck access would be required. Road grades will comply with the County of San Diego's Standards for Private Roads and Public Roads, per Section 503.2.7 of the Escondido Fire Code. Minimum vertical clearance of 13 feet 6 inches will be maintained for the entire required width of fire access roads.

All access and internal road surfaces will consist of asphalt pavement and would be capable of supporting the imposed loads of fire apparatus (not less than 75,000 lbs.). All proposed roads would be improved with asphalt pavement to facilitate on-site circulation for emergency vehicles. Additionally, the HOA and/or private property owners adjacent to the site's roads would maintain all roadside landscape in a fire safe condition.

2.7 Dead End Roads

The Project includes a dead-end Street "B" that terminates in a cul-de-sac. Street "B" is 36-feet wide, approximately 400 feet long, and has a code approved cul-de-sac, with a 48-foot turning radius. The code allowable dead end road length is 800 feet for this Project's lot sizes, thus the project meets the dead-end road length requirement and does not necessitate mitigating measures.

2.8 Gates

Any gates that will be proposed as part of the Project must comply with the Escondido Fire Code (Section 503.5.1) and EFD standards for electric gates. Setbacks from driveways and other code requirements will be required. Additional proposed gates for the project or on private driveways will comply with EFD standards for electric gates and the SDCCFC Section 503.6 including:

- Shall be equipped with an approved emergency key-operated switch overriding all command functions and opening the gate.
- Be equipped with an approved emergency traffic control-activating strobe light sensor or other device approved by the fire code official, which will activate the gate on the approach of emergency apparatus.
- Be provided with a battery backup or manual mechanical disconnect in case of power failure.

2.9 Driveways

All proposed structures are along project roadways. Driveways shall have a paved driveway meeting EFD requirements as follows:

1. Grades 15% or less with surfacing and sub-base consistent with EFD.
2. Driveways serving no more than two residential parcels will be 16 feet wide unobstructed with a fire apparatus turnaround.

2.10 Premises Identification

Identification of roads and structures will comply with the EFD Fire Code, Section 505.1, as follows:

1. New and existing buildings shall be provided with approved address identification that shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters.
2. Numbers shall not be spelled out and each character shall be not less than 4 inches high with a minimum 1/2-inch stroke width for single-family residential structures.
3. Address identification shall be maintained.
4. Streets and roads within the development shall be identified with approved signs and shall be installed at street intersections to the satisfaction of the EFD and the Department of Public Works.
5. Streets and roads will have street signs posted on non-combustible, weather resistant street signposts and shall be of an approved size. There will be street signs at the entrance to the development, all intersections, and elsewhere as needed subject to approval of the EFD Fire Chief.
6. Access roads to private lots to be completed and paved prior to issuance of building permits and prior to the occurrence of combustible construction.

As noted above, a lighted directory map, meeting current fire department standards, shall be installed at the driveway entrance to a residential project or a mobile home park, with more than fifteen (15) units (EFD Amendments, Section 505.3 – Directory Map). Furthermore, any new development which necessitates updated emergency response maps due to new structures, hydrants, roadways, or similar features shall be required to provide map updates in a format compatible with current department mapping services to the EFD (EFD Amendments, Section 505.4 – Response Map updates).

2.11 Fire Hydrants

New fire hydrants shall be located along fire access roadways as determined by the EFD Fire Marshal to meet operational needs. Fire hydrants shall be located off of the largest main at intersection of mains, behind the sidewalk, every 250 feet on alternating side of the street, and within 50 feet of the fire department connection. Fire hydrants will be installed in accordance with the most currently adopted Escondido Standard Drawings and EFD Design Standards. A minimum of 3 feet of unobstructed clearance around all fire hydrants is required. Any fire hydrant installed within 3 feet of a vehicle accessible surface shall have guard posts installed, per San Diego Regional Standard WF-04. If a cul-de-sac or dead-end street is over 250 feet long, a fire hydrant is required at the beginning or end of the curb return of the bulb of the cul-de-sac, or within 100 feet of the end of the dead-end street (City of Escondido 2014). Hydrants will be consistent with EFD Design Standards (507.5.1). The fire hydrants provide enhanced firefighting capabilities in the vicinity of the Project by providing significant additional access to water connections. The fire hydrant fire valves shall be between 14 to 24 inches above grade, no closer than 4 feet nor further than 12 feet from the roadway, and 8 feet from combustible vegetation.

2.12 Fire Response

The Project site is located within the EFD's jurisdictional response area. Emergency response for the Project would be provided by Escondido Fire Department's (EFD) Escondido Fire Station 7, located at 1220 North Ash Street. Escondido is staffed by one (1) Fire Captain, one (1) Engineer, and one (1) Firefighter Paramedics and two (2) Paramedics[3]. Station 7's apparatus includes one (1) Type 1 Fire Engine and one (1) Rescue Ambulance. Station 7 is approximately 2.3 miles from the entrance into the development with a calculated travel time of approximately 4 minutes and 34 seconds[4]. Therefore, EFD can respond to the Project site within the City's adopted performance goal of responding to emergency calls with a first-due unit within 7 minutes and 30 minutes (5:00 minutes travel time), 90% of the time (Citygate 2017).

There are additional firefighting resources within the vicinity of the Project site, including EFD Station 3, located at 1808 North Nutmeg Street, Escondido and EFD Station 2, located at 421 North Midway Drive, Escondido. EFD Station 3 is approximately 2.7 miles from the Project site with a calculated travel time of 5 minutes and 14 seconds, and EFD Station 2 is approximately 3.6 miles from the Project site with a calculated travel time of 6 minutes and 46 seconds.

Table 1. Closest Responding Fire Stations Summary

Station No.	Location	Maximum Travel Distance	Est. Travel Time*
EFD Station 7	1220 N Ash St, Escondido, California 92027	2.3 miles	4 minutes and 34 seconds
EFD Station 3	1808 N Nutmeg St, Escondido, California 92026	2.7 miles	5 minutes and 14 seconds
EFD Station 2	421 N Midway Dr, Escondido, California 92027	3.6 miles	6 minutes and 46 seconds
EFD Station 1	310 N Quince St # 1, Escondido, California 92025	4.0 miles	7 minutes and 27 seconds

Note:
* Assumes travel at 35 mph travel speed and does not include donning turnout gear and fire dispatch time. Actual travel speeds are likely to be closer to 45 mph speed limits.

The Project proposes the development of 29 residential lots, which would generate a population of approximately 89 residents based on the average of 3.05 persons per household (SANDAG, 2023). In 2023, the EFD responded to a total of 18,979 calls[5]. The total population within the EFD service area is approximately 150,571 (SANDAG, 2023); therefore, the estimated number of annual calls per 1,000 population is 150 (generation rate of 0.150), the Project would potentially generate up to 13.35 calls per year (roughly 1.11 calls per month or 0.2567 call per week), most of which would be expected to be medical-related calls, consistent with typical emergency call statistics (Refer to Table 2 for call volume calculations).

3 https://www.escondido.gov/Facilities/Facility/Details/Fire-Station-7-31
4 Calculated using the nationally recognized RAND Corporation formula used by the Insurance Services Office (ISO) Public Protection Classification Program's Response Time Standard: (T=0.65 + 1.7D), where T=time and D=distance).
5 https://cityofescondidoca.nextrequest.com/documents/29859715

Table 2 Calculated Call Volume Associated with the Cleveland Avenue Residential Project

Emergency Calls per 1,000	Number of Residents	Avg. No. Calls per Year (89/1,000)x150	Avg. No. Calls per Day (13.35/365)
150	89 (estimate)	13.35	0.036

Service level requirements are not expected to be significantly impacted by the increase of approximately one call per month for the local fire response system. For example, EFD currently responds to roughly 52 call per day (18,979 calls per year, approximately 1,582 calls per month or 365 calls per week) in its primary service area split amongst 7 stations, so approximately 7 calls per day per station. For reference, a Fire Station that responds to 5 calls per day in an urban setting is considered average and 10 calls per day is considered busy. Therefore, the Project is not expected to cause a decline in the emergency response times. The requirements described in this FPP Letter Report are intended to aid firefighting personnel and minimize the demand placed on the existing emergency service system.

2.13 Ignition Resistant Building Construction

All new structures will be constructed to EFD and City of Escondido Fire Code standards. Due to its location within a Very High Fire Hazard Severity Zone, each of the proposed residential buildings will comply with the enhanced ignition-resistant construction standards of CBC Chapter 7A and Chapter 5 of the Urban-Wildland Interface code, or the most currently adopted code year at the time of project building plan submittal. These requirements address roofs, eaves, exterior walls, vents, appendages, windows, and doors and result in hardened structures that have been proven to perform at high levels (resist ignition) during the typically short duration of exposure to burning vegetation from wildfires. While these standards will provide a high level of protection to structures in this development and should reduce the potential for ordering evacuations in a wildfire, there is no guarantee that compliance with these standards will prevent damage or destruction of structures by fire in all cases.

There are two primary concerns for structure ignition: 1) radiant and/or convective heat and 2) burning embers (NFPA 1144 2008, Ventura County Fire Protection District 2011, IBHS 2008, and others). Burning embers have been a focus of building code updates for at least the last decade, and new structures in the WUI built to these codes have proven to be very ignition resistant. Likewise, radiant and convective heat impacts on structures have been minimized through the Chapter 7A exterior fire ratings for walls, windows and doors. Additionally, provisions for modified fuel areas separating wildland fuels from structures have reduced the number of fuel-related structure losses. As such, most of the primary components of the layered fire protection system provided the project are required by the EFD (City of Escondido Municipal Code, Chapter 6, Article 2) and state codes, but are worth listing because they have been proven effective for minimizing structural vulnerability to wildfire and, with the inclusion of required interior sprinklers (required in the 2010 Building/Fire Code update), of extinguishing interior fires, should embers succeed in entering a structure. Even though these measures are now required by the latest Building and Fire Codes, at one time, they were used as mitigation measures for buildings in WUI areas, because they were known to reduce structure vulnerability to wildfire. These measures performed so well, they were adopted into the code. While the Project would not be considered a shelter-in-place development, these structures would be intended

to provide temporary refuge as a contingency to evacuation should evacuation be considered less safe. Hardening each building against wildfire would require building features as follows:

- Application of Chapter 7A, ignition resistant building requirements
- New Class-A fire-rated roof and associated assembly. With the proposed Class-A fire-rated roof, there will be attic or void spaces above living spaces requiring ventilation to the outside environment. The attic spaces will require either ember-resistant roof vents or a minimum 1/16-inch mesh and shall not exceed 1/8-inch mesh for side ventilation (recommend BrandGuard, O'Hagin, or similar vents).
- Minimum 1-hour rated exterior walls and doors; one layer of 5/8-inch type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing, from the foundation to the roof, for all exterior walls of each building.
- Multi-pane glazing with a minimum of one tempered pane, fire-resistance rating of not less than 20 minutes when tested according to NFPA 257 (such as SaftiFirst, SuperLite 20-minute rated glass product), or be tested to meet the performance requirements of State Fire Marshal Standard 12-7A-2
- National Fire Protection Association (NFPA) 13D Automatic, Interior Fire Sprinkler System to installed for all buildings on the Project site.
- Modern infrastructure, access roads, and water delivery system.

2.14 Fire Protection Systems – Automatic Interior Fire Sprinkler Systems

All structures within the Project site will include the installation of an automatic, residential interior fire sprinkler system. Automatic internal sprinkler systems shall be in accordance with the National Fire Protection Association (NFPA) 13-D[6] and EFD requirements that are consistent with Section R313.3 of the 2022 California Residential Code, Chapter 9, Section 903 of the 2022 California Fire Code, and Section 602 of the Urban-Wildland Interface Code, or the most currently adopted code year at the time of project building plan submittal. The requirements for NFPA 13-D systems are two-fold. First, a one-hour vertical separation is required between individual living units from floor level to underside of roof. Secondly, each unit must have its own dedicated and properly sized water meter for the NFPA 13-D system.

All exterior overhangs four feet or more will require sprinkler coverage.

2.15 Defensible Space

An important component of a fire protection system for this Project is the provision for fire resistant landscapes and modified vegetation buffers. Fuel Modification Zones (FMZs) are designed to provide vegetation buffers that gradually reduce fire intensity and flame lengths from advancing fire by strategically placing thinning zones, restricted vegetation zones, and irrigated zones adjacent to each other. FMZs are arguably more important when situated adjacent to older structures that were built prior to the latest ignition resistant codes and interior sprinkler

6 NFPA 13D. Standard for the Installation of Sprinkler Systems in Detached Single Family Residential Occupancies. 2019 Edition.

requirements. All dwelling units on the Project site will be highly ignition resistant based on required construction design, materials, and methods. FMZs would be located on the perimeter of all structures.

The defensible space/fuel modification zones surrounding the structures will be consistent with EFD's Defensible Space Property Review Checklist and consist of up to 50 feet of irrigated, well-maintained landscape with fire-resistant plants (refer to Attachment 3, Suggested Plant List), Fuel Modification Zone 1 and up to 50 feet of 50% thinning of dead and diseased vegetation within Fuel Modification Zone 2. The following are requirements of Fuel Modification Zone 1 and 2:

- Zone 0 Immediate Zone (0 feet to 5 feet) - This is the area located from the exterior wall surface of the building extending 5 feet on a horizontal plane to Zone 1. This zone shall be constructed of continuous hardscape or limited fire-resistant plantings acceptable to the FAHJ. Vegetation in this zone shall not exceed 6-inches in height and irrigation is required. Removal of combustible materials surrounding the exterior wall area and maintaining area free of combustible materials. The use of mulch and other combustible materials shall be prohibited.
- Zone 1 Intermediate Zone (5 feet to 50 feet) – This zone is located from the immediate edge of Zone 0 extending out in a horizontal plane up to 50 feet. The zone shall consist of planting low growth, drought tolerant and fire resistive plant species. The height of the plants in this zone starts as 6-inches adjacent to Zone 0 and extending in a linear fashion up to a maximum of 18-inches at intersection with Zone 2. Vegetation in this zone shall be irrigated and not exceed 10 feet in height and shall be moderate in nature. Trees shall not exceed 30 feet in height and be limited or as approved by the FAHJ. Firewood inside this zone shall be piled a minimum of 30 feet away from all buildings and structures. Cords of firewood shall also be maintained at least 10 feet from property lines and not stacked under tree canopies drip lines. This Zone is a fully irrigated zone with a maintained landscape with trees, shrubs and other plantings that shall be fire resistive, and shall be spaced according to Figure 5, Fuel Modification Measurement Distance. Any dead or dying material shall be removed from this zone.
- Zone 2 Extended zone (50 feet to 100 feet) – This zone is located from the immediate edge of Zone 1 extending out in a horizontal plane for 50 feet for a total of 100 feet of fuel modification. This zone consists of planting of drought tolerant and fire resistive plant species of moderate height. Brush and plants shall be limbed up off the ground, so the lowest branches are 1/3 height of bush/tree/plant or up to 6 feet off the ground on mature trees. This area would be considered selective clearing of natural vegetation and dense chaparral by removing a minimum 50% of the square footage of this area. Weeds and annual grasses are to be mowed to a height of 4–6 inches. Any chipping that is done on site should be spread not to exceed 6 inches in depth. Trees may remain in the Zone 3 area provided that the horizontal distance between crowns of adjacent trees or tree groupings and crowns of trees and structures is not less than 10 feet.

The Project site will not be able to meet the 100 foot of defensible space requirement on the periphery of all proposed Project structures. All structures will be able to meet the Ember Resistant Zone, 0-5 feet from the structure. Zone 1, 5-50 feet, is impaired on all boundaries, though the Project is minimally able to achieve 25 feet of Zone 1 throughout the Project site. Zone 2 is impaired throughout the entire Project site (see Figure 5, Fuel Modification Plan). The FMZ measurements are discussed further in Section 3.11.2.

Further, as required in the Escondido Fire Code, from the exterior wall surface of the building extending 5 feet on a horizontal plane shall be constructed of continuous hardscape or limited fire-resistant plantings acceptable to the

FAJH. Vegetation in this space shall not exceed 6" to 18" in height and irrigation is required. Additionally, this space shall be free of combustible materials, and the use of mulch is prohibited.

The Cleveland Avenue Residential Project's Homeowners Association shall be responsible for ensuring long-term funding and ongoing compliance with fuel modification and maintenance requirements throughout the Project site's common areas. Private property owners will be responsible for maintenance within individual lots. All fuel modification area vegetation management shall be completed annually no later than June 1st of each year and more often as needed for fire safety, as determined by the EFD.

2.15.1 Landscaping Requirements

The following requirements are provided for FMZs. These zones are presented graphically in Figure 5. Plants used in the fuel modification areas or landscapes will include drought-tolerant, fire resistive trees, shrubs, and groundcovers. Suggested landscape plants are provided on the City of Escondido website. The intent of the plant list is to provide examples of plants that are less prone to ignite or spread flames to other vegetation and combustible structures during a wildfire. The addition of plant material to the approved list will be at the discretion of EFD. Landscape plans shall be in accordance with the following criteria:

1. Throughout the entire project site, all fire resistive trees (i.e., trees on the approved-City plant list) shall be planted and maintained at a minimum of 10 feet from the tree's drip line to any combustible structure. All non-fire resistive tree species, including conifers, pepper trees, eucalyptus, and acacia species shall be planted and maintained so that the tree's drip line at maturity is a minimum 30 feet from any combustible structure. Additionally, palm trees (*Phoenix* spp. and *Washingtonia* spp.) that have fibrous tissue or leaf stem bases along the trunk shall be planted and maintained no closer than 30 feet from the tree's drip line to any combustible structure. Front yard trees may be planted if they are from the approved City plant list.
2. For streetscape plantings, all non-fire resistive trees shall be planted so that the center of the tree trunk is 20 feet from the edge of curb. Fire resistive trees can be planted 10 feet from edge of curb to center of tree trunk as long as there is sufficient setback (a minimum of 15 feet to allow for canopy growth) to adjacent structures or closer if a narrow canopy tree species is selected. Care should be given to the type of tree selected, so that it will not encroach into the roadway, or produce a closed canopy effect.
3. Limit planting of large unbroken masses of trees and large shrubs. Groupings should be two to three trees maximum, with mature foliage of any group separated horizontally by at least 10 feet, if planted on less than 20% slope, and 20 feet, if planted on greater than 20% slope.
4. If shrubs are located underneath a tree's drip line, the lowest branch should be at least three times as high as the understory shrubs or 10 feet, whichever is greater.
5. Existing trees can be pruned 10 feet away from roof, eave, or exterior siding, depending on the tree's physical or flammable characteristics and the building construction features.
6. All tree branches and palm fronds shall be removed within 10 feet of a fireplace chimney or outdoor barbecue.

2.15.2 FMZ Measurements

Zone 1, 5-50 feet, and Zone 2, 50-100 feet, are impaired throughout the entire Project site (see Figure 5, Fuel Modification Plan).

As evaluated in Figure 5, Fuel Modification Plan, Zone 0 is fully obtainable around all structures. Zone 1 and Zone 2 are impaired surrounding the majority of the Project site, although off-site FMZ equivalency absolves some of the fuel modification zone impairments as described herein. The following zone impairments are observed:

2.15.2.1 Zone 1 Impairments

- Zone 1 is impaired at 25 feet from the structure along the southern boundary of the Project site. Cleveland Avenue borders the southern boundary of the Project site and provides an approximately 38-foot noncombustible fuel break adjacent to the Project site. The vegetation adjacent to the roadway is properly maintained and irrigated year-round, to EFD Vegetation Management standards, therefore, those areas are off-site FMZ equivalent. The adjacent land use beyond Cleveland Avenue is residential and also satisfies the intent of off-site FMZ equivalencies.
- Zone 1 is impaired at 36 feet from the structure on the eastern boundary of the Project site. The adjacent land use is residential and is bound to comply with the same defensible space requirements for the adjacent structure, therefore, this area is off-site FMZ equivalent. The Project will also construct 6-foot-tall CMU block wall at the property line, to further protect the Project site from a fire spreading on site from the east.
- Zone 1 is impaired at 34 feet from the structure on the western boundary of the Project site. The adjacent roadway, Conway Drive, is a 40-foot wide, code compliant roadway, which will serve as a fuel break adjacent to the Project site. Additionally, the ornamental grass to the west of Conway Drive is maintained and irrigated year-round, to EFD Vegetation Management standards. Therefore, the adjacent roadway, and maintained vegetation to the west of the Project site provides off-site FMZ equivalency. The adjacent land use beyond Conway Drive is residential and also satisfies the intent of off-site FMZ equivalencies.
- Zone 1 is impaired at 32 feet from the structure along the northern boundary of the Project site. At buildout, there will be an off site FMZ easement to the northwest of the Project site. The Project will maintain vegetation in this area. To the northeast of the Project site is a residential property, which is bound to comply with the same defensible space requirements for the adjacent structure, therefore, the area surrounding the adjacent structure is off-site FMZ equivalent. The Project will also construct 6-foot-tall CMU block wall 10 feet inwards from the property line, to further protect the Project site from a fire spreading on site. As noted in the fire behavior modeling section, a fire in the abated grass to the north would only be expected to produce 2.9 foot flames; the 6-foot-tall CMU block wall and on site Zone 1 will sufficiently interrupt fire progression from the north.

2.15.2.2 Zone 2 Impairments

- Zone 2 is impaired in all areas listed above.
  - The adjacent land uses surrounding the Project to the south and west include paved roadways providing 40 and 38 feet of non-combustible roadway fuel breaks adjacent to the Project site, respectively. The vegetation adjacent to the roadways are properly maintained and irrigated year round, to EFD Vegetation Management standards, therefore, those areas are off-site FMZ equivalent.
  - The adjacent land uses surrounding the Project to the east, south, and west are residential and bound to comply with the same defensible space requirements for the adjacent structures, therefore, those areas are off-site FMZ equivalent. Further, the Project will also construct 6-foot-tall CMU block wall along the eastern property line, to further protect the Project site from a fire spreading on site from the east.

- At buildout, there will be an off site FMZ easement to the northwest of the Project site. The Project will maintain vegetation in this area. To the northeast of the Project site is a residential property, which is bound to comply with the same defensible space requirements for the adjacent structure, therefore, the area surrounding the adjacent structure is off-site FMZ equivalent. The Project will also construct a 6 foot tall CMU block wall 10 feet inwards from the property line, to further protect the Project site from a fire spreading on site.

While Zone 1 and 2 are impaired on all sides of the Project, the Project benefits from off-site FMZ equivalencies on the east, south, and west sides, and will achieve 100 feet of abatement to the north through FMZ maintenance agreement/easement. The property owner for the northern parcel is the same as the Project. It is important to note that the Project does not have a wildland interface; the nearest wildland is approximately 1,200 feet to the east. The parcel to the north of the Project could experience a vegetation fire, but the 100 foot FMZ achieved through easement/maintenance agreement and 6-foot-tall CMU block wall will provide sufficient fuels reduction and heat deflection to prevent the vegetation fire from contacting the Project.

3 Fire Behavior Modeling

Following field data collection efforts and available data analysis, fire behavior modeling was conducted to document the type and intensity of fire that would be expected on and adjacent to the Project Site given characteristic site features such as topography, vegetation, and weather. BehavePlus software package version 6.0 (Andres, Bevins, and Seli 2008), which is the industry standard, was utilized to analyze potential fire behavior within the moderate-load shrubs on the hillside south of the project site with assumptions made for pre- and post-project slope and fuels conditions. Results are provided below.

3.1 Fire Behavior Modeling Analysis

An analysis utilizing the BehavePlus software package was conducted to evaluate fire behavior variables and to objectively predict flame lengths (feet), fireline intensities (BTU/feet/second), rate of spread (feet/minute), and spotting distance (miles) for four modeling scenarios. Modeling scenario locations were selected to better understand different fire behavior that may be experienced on or adjacent the site. These fire scenarios incorporated observed fuel types representing the dominant on-site and off-site vegetation to the north, west, and northeast, in addition to measured slope gradients, and wind and fuel moisture values derived from Remote Automated Weather Stations (RAWS) weather data sets for both the 50th percentile weather (summer, on-shore winds) and the 97th percentile weather (fall, off-shore winds). Weather and wind data for this Project were derived from the Valley Center RAWS Station (Station 045734). Weather and wind inputs for fire behavior modeling conducted in support of this FPP utilized the guidelines and standards presented by the County of San Diego, Department of Planning and Land Use (County of San Diego 2022a). These guidelines identify acceptable fire weather inputs for fire conditions during summer months and Santa Ana fire weather patterns. The County analyzed and processed 44 years of fire weather data from fire stations and Remote Automated Weather Stations (RAWS) between April 15 to December 31 in order to represent the general limits of the fire season. Data provided by the County's analysis included temperature, relative humidity, and sustained wind speed and is categorized by weather zone, including Maritime, Coastal, Transitional, Interior, and Desert.

As identified in the County's guidelines, Dudek utilized the Fine Dead Fuel Moisture (FDFM) tool within BehavePlus fire behavior modeling software package to determine fuel moisture. The temperature, relative humidity, and wind speed data for the Transitional weather zone were utilized based on the project's location. Reference fuel moistures were calculated in the FDFM tool and were based on site-specific topographic data inputs. Table 3 summarizes the FDFM inputs and the resulting fine dead fuel moisture values. Table 4 presents the fuel moisture and wind speed inputs for the fire behavior modeling efforts conducted for this analysis.

Table 3. BehavePlus Fine Dead Fuel Moisture Calculation.

Variable	50th Percentile Summer Weather	97th Percentile Peak Weather (Santa Ana)
Dry Bulb Temperature	90–109 deg. F	90–109 deg. F
Relative Humidity	10–14 %	0–4 %
Reference Fuel Moisture	2 %	1 %
Month	May June July	May June July
Time of Day	12:00–13:59	12:00–13:59

Table 3. BehavePlus Fine Dead Fuel Moisture Calculation.

Variable	50th Percentile Summer Weather	97th Percentile Peak Weather (Santa Ana)
Elevation Difference	Level (within 1,000 ft.)	Level (within 1,000 ft.)
Slope	0–30%	0–30%
Aspect	South/East	South/East
Fuel Shading	Exposed (< 50% shading)	Exposed (< 50% shading)
Fuel Moisture Correction	0%	0%
Fine Dead Fuel Moisture	2%	1%

Table 4. Fuel Moisture and Wind Speed Inputs

Variable	50th Percentile Summer Weather	97th Percentile Peak Weather (Santa Ana)
Fuel Models	GR1	SH5
1 h fuel moisture	2%	1%
10 h fuel moisture	7%	2%
100 h fuel moisture	14%	5%
Live herbaceous moisture	52%	30%
Live woody moisture	104%	60%
20 ft. wind speed	19 mph (sustained winds)	28 mph (sustained winds); wind gusts of 41 mph
Wind Directions from north (degrees)	202	68
Wind adjustment factor	0.4	0.4

Note: Wind speeds are taken from the San Diego County Fire Behavior Modeling Guidelines

Vegetation types, which were derived from the field assessment for the Project site, were classified into a fuel model. Fuel Models are simply tools to help fire experts realistically estimate fire behavior for a vegetation type. Fuel models are selected by their vegetation type; fuel stratum most likely to carry the fire; and depth and compactness of the fuels. Fire behavior modeling was conducted for vegetative types that surround the proposed development sites. Fuel models were selected from *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model* (Scott and Burgan 2005). Fuel models were also assigned to the perimeter fuel management areas to illustrate post-project fire behavior changes. Based on the anticipated pre- and post-project vegetation conditions, two different fuel models were used in the fire behavior modeling effort presented herein. Fuel model attributes are summarized in Table 5.

Table 5. Fuel Model Characteristics

Fuel Model	Description	Location	Fuel Bed Depth (Feet)
Pre-Project Conditions			
GR1	Short, sparse dry climate grass	Represents the annual grasslands on and off the proposed Project site	0.4

Table 5. Fuel Model Characteristics

Fuel Model	Description	Location	Fuel Bed Depth (Feet)
SH5	High load, dry climate shrub	Represents the off-site scrub and chapparal fuels in the open space to the east of the Project site	4-5 ft
Post-Project Conditions			
FM8	Compact Litter	On-site Zone 1 and 2 fuel modification	0.2 ft.
GR1	Low load dry climate grass	Off-site grassland adjacent to Project site	0.4
SH5	High load, dry climate shrub	Off-site scrub and chapparal fuels in the open space to the east of the Project site	4-5 ft
NB	Non-burnable	Paved areas throughout the proposed Project site.	0 ft

The results of fire behavior modeling analysis for pre- and post-project conditions are presented in Tables 6 and 7, respectively. Identification of modeling run (fire scenarios) locations is presented graphically in Figure 6, BehavePlus Fire Behavior Analysis exhibit.

Table 6. RAWS BehavePlus Fire Behavior Model Results – Existing Conditions

Fire Scenarios	Flame Length[1] (feet)	Fireline Intensity[1] (BTU/feet/ second)	Spread Rate[1] (mph)	Spotting Distance[1] (miles)
Scenario 1 (Pre-Project): 4% slope; Average summer winds (50th percentile onshore), sustained 19 mph wind, north of the site				
Short, sparse grass (GR1) (Off site)	2.9	57	0.4	0.2
Scenario 2 (Pre-Project): 4.5% slope; Average summer winds (50th percentile onshore), sustained 19 mph wind, on site				
Short, sparse grass (GR1) (On site)	2.9	57	0.4	0.2
Scenario 3 (Pre-Project): 26% slope; Santa Ana winds (50th percentile onshore), sustained 28 mph wind (41 mph gusts) east of the site				
High load dry climate shrub (SH5) (Off site)	32.9 (40.3)	11,273 (17,558)	3.5 (5.4)	1.3 (2.0)

Notes:
1 Wind-driven surface fire.
2 Values in parentheses represent the respective output in the presence of 41 mph gusts.

Table 7. RAWS BehavePlus Fire Behavior Model Results – Post Proposed Project Conditions

Fire Scenarios	Flame Length[1] (feet)	Fireline Intensity[1] (BTU/feet/ second)	Spread Rate[1] (mph)	Spotting Distance[1] (miles)
Scenario 1 (Post-Project): 4% slope; Average summer winds (50th percentile onshore), sustained 19 mph wind north of the site				
(Off site FMZ Equivalency) FM 8	1.9	22	0.1	0.1
(Off site Fuels) GR1	2.9	57	0.4	0.2
(Paved Areas On site) NB	N/A	N/A	N/A	N/A
Scenario 2 (Post-Project): 4.5% slope; Average summer winds (50th percentile onshore), sustained 19 mph wind, on site				
(Zone 1 & 2 On site) FM8	1.9	22	0.1	0.1
(Paved Areas On site) NB	N/A	N/A	N/A	N/A
Scenario 3 (Post-Project): 26% slope; Santa Ana winds (97th percentile onshore), sustained 28 mph wind (41 mph gusts) east of the site				
(Off site Fuels in Open Space to the East) SH5	32.9 (40.3)	11,273 (17,558)	3.5 (5.4)	1.3 (2.0)

Note:
1 Wind-driven surface fire.
2 Values in parentheses represent the respective output in the presence of 41 mph gusts.

The results presented in Tables 6 and 7 depict values based on inputs to the BehavePlus software and are not intended to capture changing fire behavior as it moves across a landscape. Changes in slope, weather, or pockets of different fuel types are not accounted for in this analysis, but the models provide a worst-case wildfire behavior condition as part of a conservative approach. For planning purposes, the averaged worst-case fire behavior is the most useful information for conservative fuel modification design. Model results should be used as a basis for planning only, as actual fire behavior for a given location would be affected by many factors, including unique weather patterns, small-scale topographic variations, or changing vegetation patterns.

3.2 Fire Modeling Summary

The results presented in Tables 6 and 7 depict values based on inputs to the BehavePlus software and are not intended to capture changing fire behavior as it moves across a landscape. Changes in slope, weather, or pockets of different fuel types are not accounted for in this analysis. For planning purposes, the averaged worst-case fire behavior is the most useful information for conservative fuel modification design. Model results should be used as a basis for planning only, as actual fire behavior for a given location will be affected by many factors, including unique weather patterns, small-scale topographic variations, or changing vegetation patterns.

The proposed Project site maintains similar slope and vegetation types on and off site. The fire behavior models have been run considering pre-Project and post-Project conditions. Under the summer weather conditions modeled in pre-Project Scenario 1, a fire burning through the grasslands to the north of the Project site would move at a low rate of speed (0.4 mph during sustained winds), produce low flame lengths (2.9 feet during sustained winds), and produce embers that could travel 0.2 miles during sustained winds.

While the proposed Project would be within range of the embers being produced during this scenario, the Cleveland Avenue Residential development would include structures with ignition resistant construction methods and materials as well as an ember-resistant Zone 0 around all structures. The fire modeled in this area within Scenario 1 would produce similar results to Scenario 2, a fire burning on site the proposed Project site, with the same average summer weather conditions. Such a fire would burn through the grasslands at a low rate of speed (0.4 mph during sustained winds), produce low flame lengths (2.9 feet during sustained winds), and produce embers that would travel 0.3 miles.

Under the extreme Santa Ana weather conditions modeled in pre-Project Scenario 3, a fire burning downhill through the shrublands and chaparral vegetation in the unmaintained open space to the east of the Project site, would move at a moderate to high rate of speed (3.5 mph during sustained winds, 5.4 mph during gusts), produce very high flame lengths (32.9 feet during sustained winds, 40.3 mph during gusts), and produce embers that could travel up to 2 miles during gusting winds. While the proposed Project would be within range of the embers being produced during this scenario, the Cleveland Avenue Residential development would include structures with ignition resistant, and non-combustible construction methods and materials as well as an ember-resistant Zone 0 around all structures. Any vegetation on site would be managed and irrigated and therefore has a much lower ignition risk potential than pre-project conditions.

If any of the fires modeled in pre-Project Scenarios 1 or 2 were to spread onto the proposed Project site following development of the Project, the resulting fire would be described by post-proposed Project Scenarios 1 and 2. Post-proposed Project Scenario 1 describes a fire igniting to the north of the Project during Project conditions and burning through the adjacent off-site fuels, and off-site fuel modification zones during average summer weather conditions. During such an event, fire behavior would vary according to the different vegetation present on site. In the off-site fuel modification zone areas that have been irrigated, mowed and maintained, there would be low flame lengths (1.9 feet during sustained winds), a low rate of spread (0.1 mph during sustained winds) and embers could travel 0.1 miles during sustained winds. Off site areas adjacent to the Project site that have not been further maintained would continue to produce low to moderate flame lengths (2.9 feet during sustained winds) and move at a low rate of speed (0.4 mph during sustained winds) and produce embers that could travel 0.2 miles under sustained winds.

Post-proposed Project Scenario 2 describes a fire burning on site during Project buildout conditions during average summer weather conditions. During such an event, fire behavior would vary according to the different vegetation present on site. In fuel modification zones and areas that have been irrigated, mowed and maintained, the fire behavior would remain the same as in Scenario 1 (1.9-foot flame lengths, 0.1 mph spread rate, and 0.1-mile spotting distance).

If the fire modeled in pre-Project Scenario 3 were to spread onto the proposed Project site following development of the Project, the resulting fire would be described by post-proposed Project Scenario 3. Post-proposed Project Scenario 3 describes a fire igniting in the unmaintained open space to the east of the Project during extreme Santa Ana weather conditions. During such an event, fire behavior would vary according to the different vegetation present. The off-site, unmaintained open space areas would continue to produce high flame lengths (32.9 feet during sustained winds, 40.3 feet during gusts) and move at a moderate rate of speed (3.5 mph during sustained winds 5.4 mph during gusts) and produce embers that could travel 2.0 miles under sustained winds.

Post-Project conditions in the on-site Project areas would result in a reduction of up to 1 foot in flame lengths and up to 0.3 mph in spread rates. As a result of the proposed fuel modification, the fire hazard presented by the site would be reduced compared to its current state. This means reduced fire risk for nearby residents. Further, the

anticipated surface fire would not be anticipated to transition to any proposed structures due to their planned ignition resistance and the proposed integration of the ember-resistant Zone 0. Flame lengths in off-site fuels will remain similar in pre and post Project conditions, producing maximum flame lengths of approximately 40 feet during extreme weather events with high wind gusts. The proposed Project structures will be at a minimum of 100 feet away from the nearest off-site fuels. Unmaintained fuels to the east of the Project site could pose a threat of fire ignition risk due to ember spread, but during post-Project conditions, the majority of wildfire risk would be reduced as vegetation is converted to paved and ignition resistant landscapes, and vegetation is regularly irrigated and maintained.

The following describes the fire behavior variables (Heisch and Andrews 2010) as presented in Tables 5 and 6:

Surface Fire:

Flame Length (feet): The flame length of a spreading surface fire within the flaming front is measured from midway in the active flaming combustion zone to the average tip of the flames.

Fireline Intensity (Btu/ft/s): Fireline intensity is the heat energy release per unit time from a one-foot wide section of the fuel bed extending from the front to the rear of the flaming zone. Fireline intensity is a function of rate of spread and heat per unit area and is directly related to flame length. Fireline intensity and the flame length are related to the heat felt by a person standing next to the flames.

Surface Rate of Spread (mph): Surface rate of spread is the "speed" the fire travels through the surface fuels. Surface fuels include litter, grass, brush and other dead and live vegetation within about 6 feet of the ground.

The information in Table 8 presents an interpretation of the outputs for five fire behavior variables as related to fire suppression efforts. The results of fire behavior modeling efforts are presented in Tables 6 and 7. Identification of modeling run locations is presented graphically in Figure 6 of the FPP.

Table 8. Fire Suppression Interpretation

Flame Length (ft)	Fireline Intensity (Btu/ft/s)	Interpretations
Under 4 feet	Under 100 BTU/ft/s	Fires can generally be attacked at the head or flanks by persons using hand tools. Hand line should hold the fire.
4 to 8 feet	100-500 BTU/ft/s	Fires are too intense for direct attack on the head by persons using hand tools. Hand line cannot be relied on to hold the fire. Equipment such as dozers, pumpers, and retardant aircraft can be effective.
8 to 11 feet	500-1000 BTU/ft/s	Fires may present serious control problems -- torching out, crowning, and spotting. Control efforts at the fire head will probably be ineffective.
Over 11 feet	Over 1000 BTU/ft/s	Crowning, spotting, and major fire runs are probable. Control efforts at head of fire are ineffective.

3.3 On-site Wildland Fire Risk Assessment

Given the climatic, vegetative, topographic characteristics, and local fire history of the area, the Project site, once developed, may be subject to the occasional instance of wildfires in the Project vicinity. Potential for wildfire encroaching onto the Project is unlikely due to the lack of wildland interface, however showering embers on the site is possible, but the risk of ignition from such encroachments or ember showers is also considered low based on the type of construction, fuel modification zones, and fire protection features that will be provided for the structures.

Therefore, it will be critical that the latest fire protection technologies, developed through intensive research and real-world wildfire observations and findings by fire professionals, for both ignition resistant construction and for creating defensible space in the ever-expanding WUI areas, are implemented and enforced. The Cleveland Avenue Residential Project, once developed, would provide each structure with defensible space that would reduce projected flame lengths to levels that would be manageable by firefighting resources for protecting the site's structures, especially given the ignition resistance of the structures and the planned ongoing maintenance of the entire sites' landscapes.

Wildland fires are a common natural hazard in most of southern California with a long and extensive history. Southern California landscapes include a diverse range of plant communities, including vast tracts of shrublands, like those found adjacent to the Project site. Wildfire in this Mediterranean-type ecosystem ultimately affects the structure and functions of vegetation communities (Keeley 1984) and will continue to have a substantial and recurring role (Keeley and Fotheringham 2003). Supporting this are the facts that 1) native landscapes, from chaparral to grasslands, become highly flammable each fall; 2) the climate of southern California has been characterized by fire climatologists as the worst fire climate in the United States (Keeley 2004) with high winds (Santa Ana) occurring during autumn after a six-month drought period each year; and 3) homes embedded in natural and managed landscape vegetation in what may be accurately described as a wildland urban intermix. Based on this research, it can be anticipated that periodic vegetation fires or wildfires will occur in the designated open space areas adjacent to portions of the property site.

Table 5. RAWS BehavePlus Fire Behavior Model Results - Existing Conditions

Fire Scenarios	Flame Length[1] (feet)	Fireline Intensity[1] (BTU/feet/second)	Spread Rate[1] (mph)	Spotting Distance[1] (miles)
Scenario 1 (Pre-Project): 4% slope; Average summer winds (50th percentile onshore), sustained 19 mph wind, north of the site				
Short, sparse grass (GR1) (Offsite)	2.9	57	0.4	0.2
Scenario 2 (Pre-Project): 4.5% slope; Average summer winds (50th percentile onshore), sustained 19 mph wind, onsite				
Short, sparse grass (GR1) (Onsite)	2.9	57	0.4	0.2
Scenario 3 (Pre-Project): 26% slope; Santa Ana winds (50th percentile onshore), sustained 28 mph wind (41 mph gusts) east of the site				
High load dry climate shrub (SH5) (Offsite)	32.9 (40.3)	11,273 (17,558)	3.5 (5.4)	1.3 (2.0)

Note:
1 Wind-driven surface fire.
2 Values in parentheses represent the respective output in the presence of 41 mph gusts.

Table 6. RAWS BehavePlus Fire Behavior Model Results - Post Proposed Project Conditions

Fire Scenarios	Flame Length[1] (feet)	Fireline Intensity[1] (BTU/feet/second)	Spread Rate[1] (mph)	Spotting Distance[1] (miles)
Scenario 1 (Post-Project): 4% slope; Average summer winds (50th percentile onshore), sustained 19 mph wind north of the site				
(Offsite FMZ Equivalency) FM 8	1.9	22	0.1	0.1
(Offsite Fuels) GR1	2.9	57	0.4	0.2
(Paved Areas Onsite) NB	N/A	N/A	N/A	N/A
Scenario 2 (Post-Project): 4.5% slope; Average summer winds (50th percentile onshore), sustained 19 mph wind, onsite				
(Zone 1 & 2 Onsite) FM8	1.9	22	0.1	0.1
(Paved Areas Onsite) NB	N/A	N/A	N/A	N/A
Scenario 3 (Post-Project): 26% slope; Santa Ana winds (97th percentile onshore), sustained 28 mph wind (41 mph gusts) east of the site				
(Offsite Fuels in Open Space to the East) SH5	32.9 (40.3)	11,273 (17,558)	3.5 (5.4)	1.3 (2.0)

Note:
1 Wind-driven surface fire.
2 Values in parentheses represent the respective output in the presence of 41 mph gusts.



Table 4. Wind and Weather Input Variables

Model Variable	Summer Weather (50th Percentile) On and Offshore Wind	Peak Weather (97th Percentile) Offshore Wind
Fuel Models	GR1	SH5
1 h fuel moisture	2%	1%
10 h fuel moisture	7%	2%
100 h fuel moisture	14%	5%
Live herbaceous moisture	52%	30%
Live woody moisture	104%	60%
20 ft. wind speed	19 mph (sustained winds)	28 mph (sustained winds); wind gusts of 41 mph
Wind Directions from north (degrees)	202	68
Wind adjustment factor	0.4	0.4
Slope	4%	26%

SOURCE: Bing Imagery 2024; Open Street Map 2019

FIGURE 6
BehavePlus Fire Behavior Analysis Map
Cleveland Residential Project

DUDEK

4 Emergency Pre-Planning – Evacuation

Early evacuation for any type of wildfire emergency at the Project site is the preferred method of providing for resident safety, consistent with the EFD's current approach within San Diego County. As such, the Project would formally adopt, practice, and implement a "Get Ready to Pack, Get Set to Leave, Go!" approach to evacuation[7]. The "Ready, Set, Go!" concept is widely known and encouraged by the State of California and most fire agencies. Pre-planning for emergencies, including wildfire emergencies, focuses on being prepared, having a well-defined plan, minimizing the potential for errors, maintaining the Project site's fire protection systems, and implementing a conservative (evacuate as early as possible) approach to evacuation and Project area activities during periods of fire weather extremes.

[7] https://www.escondido.gov/716/Wildfire-Safety-Evacuation

5 Conclusion

Based on the developed landscapes throughout the area and lack of wildlands, provisions for wide internal circulation roadways and 86-foot-wide cul-de-sacs at the end of 'Street B', along with the an under 5-minute total response time from EFD Station 7 (closest responding fire station), a code-compliant 40-foot wide Conway Drive and 30-foot wide Cleveland Avenue primary access roadways, lack of wildfire exposed roadways during an evacuation event, and minimal overall Project size and limited number of new residents and vehicles to the area, the Project is considered to meet the intent of the code.

Please feel free to contact me regarding this letter FPP and its conclusions.

Respectfully,

Prepared By (Signature)	June 26, 2025 Date	Austin Ott, Fire Protection Planner, Urban Forestry + Fire Protection Printed Name, Title
Project Applicant (Signature)	Date	Printed Name, Title

Att: *1 – Representative Photographs*
2 – Fire History Map
3 – Suggested Plant List

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Attachment 1

Representative Photographs



Photo Location Map



Photo 1. Photo Location 1, looking north.



Photo 2. Photo Location 1, looking northeast



Photo 3. Photo Location 1, looking east.



Photo 4. Photo Location 1, looking southeast.



Photo 5. Photo Location 1, looking south.



Photo 6. Photo Location 1, looking southwest.



Photo 7. Photo Location 1, looking west.



Photo 8. Photo Location 1, looking northwest.



Photo 9. Photo Location 2, looking north



Photo 10. Photo Location 2, looking northeast.



Photo 11. Photo Location 2, looking east



Photo 12. Photo Location 2, looking southeast.



Photo 13. Photo Location 2, looking south.



Photo 14. Photo Location 2, looking southwest.



Photo 15. Photo Location 2, looking west



Photo 16. Photo Location 2, looking northwest.



Photo 17. Photo Location 3, looking north.



Photo 18. Photo Location 3, looking northeast.



Photo 19. Photo Location 3, looking east



Photo 20. Photo Location 3, looking southeast.



Photo 21. Photo Location 3, looking south



Photo 22. Photo Location 3, looking southwest.



Photo 23. Photo Location 3, looking west



Photo 24. Photo Location 3, looking northwest.

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Attachment 2

Fire History Map

Attachment 3

Suggested Plant List

California Native Plant list



Sustaining Native Plant Communities



Contributors

California Native Plant Society

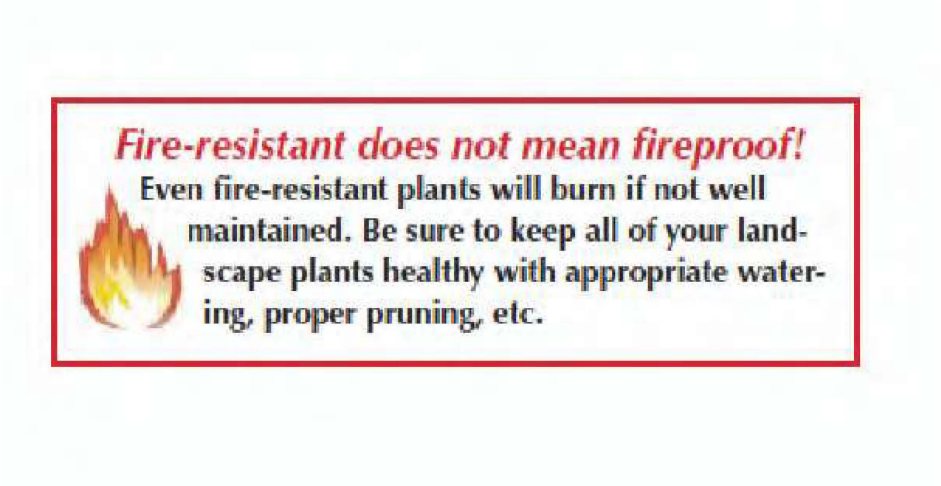
bewaterwise.com

Armstrong Garden Centers

Theodore Payne

County of San Diego

What are fire-resistant plants? Fire-resistant plants are those that do not readily ignite from a flame or other ignition sources. These plants can be damaged or even killed by fire; however, their foliage and stems do not significantly contribute to the fuel and, therefore, the fire's intensity. There are several other significant factors that influence the fire characteristics of plants, including plant moisture content, age, total volume, dead material, and chemical content.



VINES		
Antigonon leptopus	San Miguel Coral Vine	C/I
Distictis buccinatoria	Blood-Red Trumpet Vine	C/I/D
Keckiella cordifolia**	Heart-Leaved Penstemon	C/I
Lonicera		
japonica 'Halliana'	Hall's Honeysuckle	All Zones
subspicata**	Chaparral Honeysuckle	C/I
Solanum		
jasminoides	Potato Vine	C/I/D

PERENNIALS		
Coreopsis		
gigantean	Giant Coreopsis	C
grandiflora	Coreopsis	All Zones
maritime	Sea Dahlia	C
verticillata	Coreopsis	C/I
Heuchera maxima	Island Coral Bells	C/I
Iris douglasiana**	Douglas Iris	C/M
Iva hayesiana**	Poverty Weed	C/I
Kniphofia uvaria	Red-Hot Poker	C/M
Lavandula spp.	Lavender	All Zones
Limonium californicum		
var. mexicanum	Coastal Statice	C
perezii	Sea Lavender	C/I
Oenothera spp.	Primrose	C/I/M
Penstemon spp.**	Penstemon	C/I/D
Satureja douglasii	Yerba Buena	C/I
Sisyrinchium		
bellum	Blue-Eyed Grass	C/I
californicum	Golden-Eyed Grass	C
Solanum		
xantii	Purple Nightshade	C/I
Zauschneria**		
californica	California Fuschia	C/I
cana	Hoary California Fuschia	C/I
'Catalina'	Catalina Fuschia	C/I

ANNUALS		
Lupinus spp.**	Lupine	C/I/M

Fire Resistant Native Plants with High Wildlife Value

Compiled by The Theodore Payne Foundation *for Wildflowers and Native Plants, Inc.*
10459 Tuxford Street, Sun Valley, CA 91352 Phone: (818) 768-1802 http://www.theodorepayne.org

Important Note: All plants will eventually burn. There is no such thing as a fireproof plant. There are some plants that can retain moisture, even in dry areas, and are called fire resistant. This list is designed to identify some Californian native plants that are fire resistant and have wildlife value. These plants with few exceptions are listed as acceptable to plant in Fuel Modification Zones by Los Angeles County Fire. The purpose of this list is to help place fire resistant and wildlife important plants in areas where brush clearance can leave an area barren.

LA Country approved plant list for Fuel Modification: http://www.lacofd.org/forestry_folder/pdf/fmpg.pdf

GROUNDCOVERS

- *Atriplex barclayana.* **Beach Carpet Saltbush.** A low growing form of saltbush (6" high, spreading). This saltbush provides good ground cover for soil erosion and provides seeds, salt and cover for wildlife.
- *Atriplex canescens.* **Four-wing Saltbush.** A low growing form of saltbush (1-2' high, 3' wide) that happily grows in the desert. It provides seeds, salt and cover for wildlife.
- *Baccharis piluaris "Pigeon Point".* **Dwarf Coyote Bush.** While not a "showy" plant, it does produce some flowers and has a deep root system, that provides good erosion control. It grows 12" to 18" in height. It adds cover and seeds for a variety of birds. *(LA County Fire approved)*
- *Monardella linoides viminea.* **Willowy Coyote Mint.** This federally protected coyote mint grows up to 18" tall and prefers North facing (somewhat shaded) or riparian areas. It has a long blooming cycle, flowering through the summer and fall and is an attractant to hummingbirds and butterflies. Songbirds also eat the seeds.

SHRUBS

- *Atriplex lentiformis breweri.* **Quail Bush.** A larger saltbush (4' high, 6-8' wide) that provides critical habitat for the California quail and other birds.
- *Galvezia speciosa.* **Island Bush Snapdragon.** This CNPS "rare" plant is from the Channel Islands and stays evergreen year round producing trumpet shape red flowers favored by hummingbirds. It grows in 18" to 24" in height and 3' to 5' in width. It also adds excellent cover for wildlife.
- *Isomeris arborea.* **Bladderpod.** A very drought tolerant shrub that forms yellow flowers and seedpods. *(LA County Fire approved)*
- *Mahonia nevinii (aka Berberis nevinii).* **Nevin's Barberry.** A federally endangered species, once common in the Verdugo Mountains, grows berries that are favored by many songbirds. The spiny leaves also add a protective cover. The shrub can grow up to 4' in height and 6' in width and is evergreen. *(LA County Fire approved)*
- *Mahonia, Aquifolium and all subspecies.* **Mahonia/ Barberry.** It's purple berries and yellow flowers are favored by many songbirds. The spiny leaves also add a protective cover. *(LA County Fire approved)*
- *Rhus laurina (aka Malosma laurina).* **Laurel Sumac.** While laurel sumac does have a high oil content, it has found to have a much higher incineration point than most other plants. It has been found to be one of the last plants to burn in fires. It provides important cover, food and nesting resource for many types of wildlife. A laurel sumac that has the lower third of it's branches pruned is considered fire-safe. It is a favorite shrub amongst warbler.
- *Mimulus sp. "Big Tujunga" or "La Tuna".* **Monkeyflower (local varieties).** These two local varieties of Monkeyflower do well in the summer heat and provide pale to deep orange flowers. It grows 18" to 36" in height and 3' to 5' in width. The flowers and seeds provide wildlife value
- *Ribes aureum.* **Golden Currant.** This currant grows upright to 6' and is lacy in structure. In summers, it can go semi-drought deciduous, though with some water in will remain evergreen. It's berries offer a high wildlife value. *(LA County Fire approved)*
- *Rhus integrifolia.* **Lemonade Berry.** A very drought-resistant shrub that provides cover and food to wildlife. California Thrasher uses it's fruit and leaf material for nesting. It also is an excellent erosion control plant.
- *Symphoricarpos albus.* **Common Snowberry.** While not the favorite berry choice of most wildlife, it still gets eaten. Its root system is vigorous and deep enough to hold most banks. Snowberry has been seen on North-facing slopes in the full sun, though shaded areas such as under oaks is best.

TREES

- *Heteromeles arbutifolia.* **Toyon.** This small tree is found readily in La Tuna Canyon. It is very drought tolerant and provides red berry for months that are a favorite amongst many birds found in the area.
- *Quercus agrifolia.* **Coastal Live Oak.** Oak trees are important wildlife resources and have actually been found to suppress fire.

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Fire-Resistant Plant Guide

One of the first steps to firescaping is identifying plants with fire retardant abilities. Below is a sample of trees, shrubs, ground cover and perennials that are ideal plants for firescaping.

Fire-Resistant Trees
Tree selection should be done with care as this is a plant that will be with you and your home for years to come.
African Sumac (Rhus lancea)
Ash (Fraxinus sp.)
Carob (Ceratonia seliqua)
California Sycamore (Platanus racemosa)
Carrotwood Tree (Cupaniopsisanarcardiodes)
California Bay Laurel (umbellularia californica)
Catalina Ironwood (Lyonothamnus sp.)
Chinese Pistache (Pistacia chinensis)
Coast Live Oak (Quercus agrifolia)
Coral Tree (Erythrina caffra)
Cork Oak (Quercus suber)
Crape Myrtle (Lagerstroemia indica)
Elm (Ulmus sp.)
Flowering Cherry (Prunus sp.)
Guadelupe Fan Palm (Brahia edulis)
Honey Locust (Gleditisa triacanthos)
King Palm (Archontophoenix cunninghamiana)
Loquat (Eriobotrya japonica)
Macadamia (Macadamia sp.)
Maidenhair Tree (Ginkgo biloba)
Manzanita (Arctostaphylos sp.)
New Zealand Christmas Tree (Metrosideros sp.)
Palo Verde Tree (Parkinsonia sp.)
Paperbark Tree (Melaleuca sp.)
Purple Leaf Plum (Prunus cerasifera)
Silver Maple (Acer saccharinum)
Strawberry Tree (Arbutus unedo)
Sweet Gum (Liquidambar stryaiflua)
Toyon (Heteromeles arbutifolia)
Tulip Tree (Liriodendron tulipifera)
Victorian Box (Pittosporum undulatum)
Western Redbud (Cercis occidentalis)
White Alder (Alnus rhombifoli)

Fire-Resistant Shrubs
California Lilac (Ceanothus sp.)
Bronze Loquat (Eriobotrya deflexa)
Bush Morninglory (Convolvulus cneorum)
Flannel Bush (Fremontodendron sp.)
India Hawthorn (Raphiolepis indica)
Lantana (Lantana sp.)
Lilac (Syringa vulgaris)
Matilija Poppy (Romneya coulteri)
Mock Orange (Pittosporum sp.)
Monkey Flower (Mimulus sp.)
Natal Plum (Carissa grandiflora)
Ocotillo (Fouquieria splendens)
Pineapple Guava (Feijoa sellowiana)
Pink Escallonia (Escallonia sp.)
Rockrose (Cistus sp.)
Rose (Rosa hydrida)
Sage (Salvia sp.)
Shiny Xylosma (Xylosma congestum)
Silverberry (Elaeagnus punge)

Fire-Resistant Ground Cover
Creeping Coprosma (Coprosma kirkii)

Dwarf Myrtle (Vinca minor)
Gazania (Gazania sp.)
Lantana (Lantana sp.)
Manzanita (Arctostaphylos sp.)
Myoporum (Myoporum parvifolium)
Periwinkle (Vinca major)
Red Apple Ice Plant (Aptenia cordfolia)
Rosea Ice Plant (Drosanthemum hispidu)

Fire-Resistant Perennials
Blue-Eyed Grass (Sisrinchium bellum)
Coral Bells (Heuchera sp.)
Douglas Iris (Iris douglasiana)
Golden-Eyed Grass (Sisyrinchium californicum)
Lavender (Lavandula sp.)
Red-Hot Poker (Kniphofia uvaria)
Seafoam Statice (Limonium perezi)

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Fire-Resistant California Friendly Plants

Shrubs | Trees | Perennials and Annuals | Groundcover

Shrubs



California Redbud
An interesting plant all year long, with magenta flowers on leafless stems in summer, followed by crimson seedpods and heart-shaped blue-green leaves. Deciduous, with yellow or red fall foliage falling away in winter to reveal smooth reddish brown trunks. Long lived, very drought tolerant, and flowers more profusely as it matures.



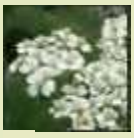
Monkeyflower (Mimulus)
This entire species is endorsed for use by San Diego County planners and the Los Angeles and Orange County fire departments. Be sure to check out the drought-tolerant varieties.



Ceanothus 'Concha'
This California lilac is a large shrub with a dense mass of dark green, 1-inch leaves, with dark blue clusters of flowers appearing in spring. Requires good drainage; can tolerate summer water. Grows to six feet.



Sage (Salvia)
Nothing evokes California quite like a sage-scented hillside. Beloved by hummingbirds and firefighters alike, the autumn sage pictured here is endorsed for use by the Orange County Fire Authority, while the entire sage species is endorsed by the Los Angeles County Fire Department.



Common Yarrow (Achillea millefolium)
It appears on fire-resistant lists for California Native Plant Society, Western MWD (zone 3), San Diego County, and Orange County fire. However it is not on the approved list for Los Angeles County fire. Yarrow also can be used as a groundcover if mowed.



French Lavender (Lavandula dentata)
Although not a true California native, this attractive drought-tolerant plant is endorsed for Zone B use in Los Angeles County, and also makes fire-resistant lists for the Inland Empire and Orange and San Diego counties.

Trees



Coast Live Oak
Handsome shade tree. Round-headed with dense foliage, grows 20-70 feet tall. Smooth, dark grey bark, with leathery dark green leaves. Native to coastal central and Southern California.



California Sycamore
Sycamores have delighted generations of Californians, and this particular variety is endorsed for use by the Los Angeles and Orange County fire departments, plus San Diego County.



Toyon (Hetereomeles arbutifolia)
A classic California native, it has white flowers in the summer and berries in the winter, it gets good marks from Los Angeles, Orange, San Diego and the Inland Empire.

Perennials and Annals



California Fuchsia (Epilobium canum/californica)
This sprawling plant is one of the few perennials listed by Los Angeles, Orange and San Diego counties.



Beard Tongue (Penstemon palmeri)
This particular variety is native to the Southland, but the entire species has been embraced by native plant enthusiasts and firefighters alike, and is approved for use in L.A., Orange and San Diego counties.

Groundcover



Wild Strawberry (Fragaria chilolensis)
Looking for a low-growing plant that you can plant next to your home? This species has the rare distinction of being approved by Los Angeles County fire department for any zone in your yard.

Firewise Brochure.qxd 6/4/08 10:29 AM Page 1

Pyrophytic Characteristics

HIGH PYROPHYTIC plants, shrubs and trees ignite and burn intensely and typically share certain characteristics:

1) They are usually blade-leaf or needle-leaf evergreens
2) They have stiff, woody, small or fine, lacey leaves
3) Their leaves and wood usually contain volatile waxes, fats, terpenes or oils (crushed leaves have strong odors)
4) Their sap is usually gummy, resinous and has a strong odor
5) They usually contain plentiful fine, twiggy, dry or dead materials
6) They may have hair covered leaves
7) They may have loose or papery bark
8) These plants flame (not smolder) when preheated and ignited with a match

Defensible Space

Every home requires defensible space. Defensible space is the area around the home free from dangerous accumulations of flammable pyrophytic vegetation. This allows firefighters a safe working area from which to defend against an oncoming wildfire.

A firewise landscape includes LOW pyrophytic plants, shrubs and trees (those less likely to burn and slower to ignite), strategically placed and maintained to resist the spread of fire. It also, is a landscape maintained free of dead and dry plant materials, with living plants, shrubs and trees properly spaced and managed so they will not serve as ladder fuels during a wildfire.

Understanding Pyrophytic

A plant, shrub or tree with HIGH PYROPHYTIC properties means they will ignite easily and burn intensely.

Understanding the characteristics of Xeriscape plants, native plants, shrubs and trees, will help determine the correct placement and proper selection of your plants. This will help to make your landscape more fire resistant and help your local firefighters protect your home during the threat of a wildfire.

HIGH PYROPHYTIC plants, shrubs and trees should be planted in areas further than 15 feet from a structure, including decks and patios. Maintenance of high pyrophytic plants, shrubs and trees should include removing all dead plant material. The crowns (lower branches) of shrubs should be raised at least 2 to 3 feet off the ground and limited to a single specimen with spacing between plants of 2 times the height of the tallest shrub, unless the shrub is isolated or heavily modified.

For more information on how to make your home more fire resistant, log on to *www.thinisin.org*

Working Together
We Can Make the Big Bear Valley
A More Fire Safe, Firewise Community.

Get In The Race For Defensible Space

City of Big Bear Lake
Fire Department

This brochure was created in cooperation with the Big Bear Group of the Sierra Club







Can You Say...
"PYROPHYTIC"

BIG BEAR
Firewise
Planting Guide

Get In The Race For Defensible Space

City of Big Bear Lake
Fire Department

Firewise Brochure.qxd 6/4/08 10:29 AM Page 2

Many Xeriscape and native plants, shrubs and trees found in the Big Bear Valley are listed here, and are low in Pyrophytic properties (they **WILL NOT** easily ignite or burn intensely).

The Xeriscape and native plants, shrubs and trees listed that are in a ***RED BOLD ITALIC TYPEFACE*** & identified with the icon are HIGH in PYROPHYTIC PROPERTIES (they **WILL** easily ignite or burn intensely).

HIGH PYROPHYTIC plants, shrubs and trees should be planted in areas further than 15 feet from a structure, including decks and patios. Maintenance of HIGH pyrophytic plants should include removing all dead plant material. The crowns (lower branches) of shrubs should be raised at least 2 to 3 feet off the ground and limited to a single specimen with spacing between plants of 2 times the height of the tallest shrub, unless the shrub is isolated or heavily modified.

Flowering Perennials

Alum Root
Beardtongue
Bergenia
Blue Catmint
Buckwheat - Sulphur-flowered
Buckwheat - Wright's
Coral Bells
Daylily
Dianthus
Fuchsia - California
Goldenrod - California
Hollyhock
Honeysuckle
Iris - Bearded
Jupiter's Beard
Lamb's Ears
Lavender
Mallow - Apricot
Mint - Coyote
Mint - Hummingbird
Mojave Mound
Penstemon - Beakflowered
Penstemon - Bumblebee
Penstemon - Firecracker
Penstemon - Scarlet
Phlox - Creeping
Poppy - California
Poppy - Oriental
Poppy - Prickly
Primrose - California Evening
Primrose - Fragrant Evening
Rydberg's Horkelia
Sage - Desert Purple
Sage - Garden
Sage - Meadow
Sage - Rose
Sage - Russian
Sage - Silver
Wallflower - Western
Western Blue Flag
Whirling Butterflies
Yarrow - Moonshine
Yarrow - Paprika
Yarrow - Wooly

Shrubs

Bitter Brush –
Blue Mist
Butterfly Bush
Currant
Flannel Bush –
Gray Santolina (Lavender)
Juniper Shrubs (any type) –
Lilac
Manzanita - Greenleaf –
Mountain Mahogany (Ironwood) –
Mountain Whitethorn –
Oregon Grape
Sagebrush –
Serviceberry –
Snowberry
Wild Rose

Trees

Black Oak
Incense Cedar –
Jeffrey Pine –
Juniper – (all types, including Western Juniper)
Leyland Cypress –
Pinyon Pine –
White Fir –

CNPS San Diego Chapter California Native Plant Society

Sources for Native Plants in Southern California

Annual Plant Sales
Sources for California Native Seeds and Bulbs
CNPS San Diego Chapter Monthly Meetings: We usually carry a small selection of native plants at our monthly meetings. New members who sign up at the meeting will receive a free gift. For more info contact us info@cnpssd.org

Nurseries in the San Diego Area that Specialize in California Native Species

In addition to the following specialty nurseries, many other nurseries do grow and stock a limited choice of species.
Be aware that many lists of California Native Plants provided by non-speciality nurseries are not accurate.
If in doubt check on species on the Cal Flora www.calflora.org website or the San Diego Plant Atlas Project website www.sdplantatlas.org
If any readers learn of other nurseries in the Southern California region, please contact me - Kay Stewart

Cal-Native Plants Nursery, (Formerly Plants for Dry Places) 25735 Garbani Road, Menifee, CA (near Temecula) 92584, ph 909-301-8075/fax 909-301-8314. Specializing in natives under new ownership.

****new****City Farmers Nursery**, San Diego. 40 different native plant species available with ability to special order 200 additional species and have them delivered within one week. 4832 Home Ave. San Diego CA 92105. 619-284-6358. Ask for Farmer Bill.

****new**** **Cedros Gardens**, Solana Beach. 40 different native plant species available with ability to special order 200 additional species and have them delivered within one week. 330 South Cedros Ave., Solana Beach CA 92075. 858-792-8640. Ask for Mia or Matt.

Coastal Sage Gardening, 3685 Voltaire Street, (Ocean Beach), San Diego, CA 92106-1253, ph 619-223-5229. A garden shop with a selection of native plants and wildflower seeds. Owner John Noble will deliver plants from Tree-of-Life Nursery. Open weekends or by appointment, email coastalsagegardening@cox.net

El Nativo Growers, 200 S. Peckham Rd., Azusa, CA 91702-3238, ph 626-969-8449/fax 626-969-7299. Well-established wholesale grower, 500 species in sizes from 4" to 24" box for some trees; will contract grow.

****new**** **El Plantio Nursery**, Escondido. 40 different native plant species available with ability to special order 200 additional species and have them delivered within one week. 1322 san Pasqual Valley Road, Escondido CA 92027. 760-745-8736.

new **Green Thumb Nursery**, San Marcos. 40 different native plant species available with ability to special order 200 additional species and have them delivered within one week. 1019 San Marcos Blvd. San Marcos CA 92069. Contact Jeff Funk. 760-744-3822.

Las Pilitas Nursery, Nelson Way at Old Highway 395, Escondido, CA 92026, ph 760-749-5930. The satellite of a 30-year old natives nursery near Morro Bay. Increasing variety, 1 to 5 gallon sizes. Retail, wholesale, contract grow, consulting, growing guide.

Manzanita Native Plant Nursery, 39397 Highway 94, Boulevard, CA 91905, ph 619-733-9843, manzanitanursery@aol.com. Most Saturdays or by appointment. Local California native conifers, penstemons and other interior natives and carries more familiar species and cultivars as well. Will contract grow.

Matilija Nursery, 8225 Waters Road, Moorpark, CA 93021, ph 805-523-8604, matilijanursery@gtemail.net. Entertaining web site includes contests and details on the plants available. Wholesale and retail available.

Mission Hills Nursery , 1525 Fort Stockton Dr. San Diego, ph. 619-295-2808. Now has California Native Plants. Currently there are 40 species in stock but an additional 150 species are available for special order. For special orders, you can download the availability list at www.moosacreeknursery.com/availability-list.pdf. The prices are very reasonable so stop by this weekend and check it out!
Fausto, the owner, or Tiger the Manager will be happy to help with your native plant requirements.

Moosa Creek Nursery, 28435 Wilkes Road, Valley Center, CA 92082, Hank and Su Kraus, ph 760-749-3216, Grow plants from San Diego County chaparral and woodlands. Availability list on website and monthly plants.

Native Plant Connection, in the Descanso area, juljanssen@yahoo.com , (619) 445-8771

Rancho Jojoba Nursery, 11935 Hwy 67, Lakeside, CA 92040, ph 619-561-0751/fax 619-504-2017, allenj.k@sbcglobal.net. Stocks and grows a wide variety of native plants, wholesale and retail.

Rancho Santa Ana Botanical Garden,100 N. College Ave, Claremont, CA 91711-3157, ph 909-625-8767/fax 909-626-7670. Rancho Santa Ana Botanic Garden is devoted to the collection, cultivation, study, and display of native California plants and to graduate training and research in plant systematics and evolution. Native plants are sold during the Fall Sale on the first weekend of November, the Spring Sale on the first Saturday in April, and in the Garden Shop year-round except during the summer.

Recon Native Plant Nursery, Wholesale to the industry, 1755 Saturn Blvd. San Diego, CA 92154 Ph: 619-423-2284 Fax: 619-423-0632. Large grower of native plants to the Southwestern US. Current plant inventory available online, contract grow, and consulting. Plants grown at Recon now available at these retail locations: Simpsons Garden Town in Jamul, Miramar Wholesale Nursery (over 70 varieties in stock, ask for Wayne), Walter Andersen Nursery in Pt. Loma.

new **San Carlos Hardware**, San Carlos. 40 different native plant species available with ability to special order 200 additional species and have them delivered within one week. 7375 Jackson Drive, San Diego CA 92119

Santa Barbara Botanic Garden, 1212 Mission Canyon Road, Santa Barbara, CA 93105, ph 805-682-4726 x127. Sells plants and seeds in the gift shop.

Simpsons Garden Town in Jamul

Theodore Payne Foundation for Wildflowers and Native Plants, 10459 Tuxford Street, Sun Valley, CA 91352-2126, ph 818-768-1802. 80-year old nonprofit retail nursery sells California native plants, seeds and books. Over 300 native species for sale.

Tree of Life Nursery, Mailing: PO Box 635, San Juan Capistrano, CA 92693; Physical: 33201 Ortega Highway, San Juan Capistrano, CA 92675, ph 949-728-0685, fax 949-728-0509. Wholesale, restoration, contract grow; retail Monday through Friday and most Saturdays. Over 600 types of native plants for landscaping and revegetation.

****new**** **Walter Anderson**, Poway. 40 different native plant species available with ability to special order 200 additional species and have them delivered within one week. 12755 Danielson Court, San Diego CA 92064. Contact David. 858-513-4900.

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