APPENDIX D-21A
GENERAL PLAN AMENDMENT REPORT
OTAY RANCH RESORT VILLAGE – ALTERNATIVE H


MARCH 2020


PREPARED FOR:
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# MEMORANDUM

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| **To:** | Mark Slovick, County of San Diego Planning and Development Services |
| **From:** | Michael Huff, Dudek |
| **Subject:** | Fire-Safety – Otay Ranch Village 13 |
| **Date:** | March 19, 2020 |
| **cc:** | David Hubbard, Gatzke Dillon & Ballance |

## Introduction

Comments submitted in response to the Final EIR expressed concerns regarding the Otay Ranch Resort Village 13 – Alternate H's (Alternate H) impacts on fire ignition risk and emergency evacuation procedures. This memorandum addresses those issues and seeks to clarify certain points regarding fire ignition, subdivision-specific evacuation planning and execution, the defensibility of modern subdivisions, and temporary refuge strategies.

## 1 New Development in the WUI and Fire Ignition Risk

- <u>Data Do Not Support Assumption That New Development Increases Fire Ignition Risk</u>: Some of the comments received suggested that placing new residential projects in the County's wildland-urban interface (WUI) will increase the risk of fire ignition. The data, however, do not support that conclusion. According to the available evidence, no large fires in San Diego County since 1990 were determined to have been started within a nearby master planned, ignition-resistant subdivision or neighborhood. Syphard and Keeley[1] (2015 - *Location, timing and extent of wildfire vary by cause of ignition*) summarized all wildfire ignitions included in the CAL FIRE Fire and Resource Assessment Program[2] database, dating back over 100 years. They found that in San Diego County, equipment-caused fires were by far the most numerous, and these also accounted for most of the area burned; power-line fires were a close second. Ignitions classified as equipment-caused frequently resulted from exhaust or sparks from power saws or other equipment with gas or electrical motors, such as lawn mowers, trimmers or tractors. These ignition sources are typically associated with *lower density* housing, not *higher density* housing such as that contemplated under the proposed Project. It is noted that electrical transmission lines would be undergrounded to the Project Area consistent with the County of San Diego General Condition for undergrounding utility lines

- <u>Data Indicate That Lower-Density Housing Poses Greater Ignition Risk</u>: In San Diego County, ignitions were more likely to occur close to roads and structures, and at intermediate structure densities. This is likely

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[1]  Alexandra D. Syphard and Jon E. Keeley. 2015. Location, timing and extent of wildfire vary by cause of ignition. International Journal of Wildland Fire. 11 pp.

[2]  Cal Fire Fire and Resource Assessment Program. https://frap.fire.ca.gov/

because lower density housing creates a wildland urban *intermix* rather than an *interface*. The intermix places housing amongst unmaintained fuels, whereas higher density housing such as Alternative H converts all fuels within the footprint and provides a wide, managed fuel modification zone (FMZ) separating homes from unmaintained fuel. The majority of Alternative H will include a perimeter FMZs as well as structure specific FMZs, setting back from the nearest unmaintained fuels. Syphard and Keeley (2015 – see footnote 1) determined that "[t]he WUI, where housing density is low to intermediate, is an apparent influence in most ignition maps." This further enforces the notion that lower density housing is a larger ignition issue than higher density communities. Syphard and Keeley also state that "Development of low-density, exurban housing may also lead to more homes being destroyed by fire" (Syphard et al. 2013)[3]. However, neither of these findings considers the fire hazard and risk reduction associated with HOA managed FMZs and ignition resistant structures. In addition, the study found that frequent fires and lower density housing growth may lead to the expansion of highly flammable exotic grasses that can further increase the probability of ignitions (Keeley et al. 2012)[4]. This is not the case with Alternative H, where the landscapes are managed and maintained to remove exotic fuels that may become established over time. The Alternative H Preserve Edge Plan (PEP) and Fire Protection Plan (FPP) plant palette restrictions, combined with HOA maintenance and 3rd party review/inspections of FMZ would minimize the establishment and expansion of exotic plants, including grasses. Based on research of the relevant literature and extensive conversations with active and retired fire operations and prevention officers, there is no substantial evidence that new residential neighborhoods built to the requirements of San Diego County's Fire and Building Codes increase the risk of wildfire ignition. Rather, the data indicate that roadways, electrical distribution lines, and lower density residential projects (that do not have HOA enforced restrictions and annual inspections) are the primary causes of increased wildfire ignition. It is important to note that Alternative H will provide roadside fuel modification throughout the Project and on either side of Otay Lakes Road and that electrical lines will be subterranean. Additionally, SDG&E[5] is considered the leading electrical utility in California regarding its fire prevention and fire safety practices. SDG&E has invested heavily in developing a robust weather monitoring system with fire detection capabilities, fire hardening of its system, and fire awareness and outreach.

# 2    Evacuation Planning and Execution in San Diego County

The subdivision-specific Wildland Fire Evacuation Plan for this project was prepared based on the Unified San Diego County Emergency Services Organization and County of San Diego Operational Area (OA) Emergency Operations Plan (EOP)[6] – Evacuation Annex.

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[3]    Syphard AD, Bar Massada A, Butsic V, Keeley JE (2013) Land use planning and wildfire: development policies influence future probability of housing joss. PLoS ONE 8(8), e71708. doi:10.1371/JOURNAL. PONE.0071708

[4]    Syphard AD, Keeley JE, Bar Massada A, Brennan TJ, Radeloff VC (2012) Housing arrangement and location determine the likelihood of housing loss due to wildfire. PLoS ONE 7(3), e33954. doi:10.1371/JOURNAL. PONE.0033954

[5]    https://www.bing.com/videos/search?q=san+diego+gas+and+electric+weather+system&& view=detail&mid=40AB6A3DD81DE981EE7D40AB6A3DD81DE981EE7D&&FORM=VRDGAR&ru=%2Fvideos%2Fs earch%3Fq%3Dsan%2Bdiego%2Bgas%2Band%2Belectric%2Bweather%2Bsystem%26FORM%3DHDRSC4

[6]    https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/plans/op-area-plan/2018/2018-Annex-Q-Evacuation.pdf

- Evacuation Planning Begins with the County Office of Emergency Services (OES): To establish a framework for implementing well-coordinated evacuations, the County of San Diego OES developed an Evacuation Annex as part of the area EOP (County of San Diego 2014 – see footnote 6). Large-scale evacuations are complex, multijurisdictional 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.

  Evacuation during a wildfire is not necessarily directed by the fire agency, except in specific areas where fire personnel may enact evacuations on scene. The San Diego County Sheriff's Department, California Highway Patrol (CHP), and other cooperating law enforcement agencies have primary responsibility for evacuations. These agencies work closely within the unified Incident Commander (IC) system, with the county OES, and responding fire department personnel who assess fire behavior and spread, which should ultimately guide evacuation decisions. To that end, San Diego County Fire Authority (SDCFA), law enforcement, Public Works, Planning, Emergency Services Departments, and California Department of Transportation (Caltrans), amongst others, have worked with a county pre-fire mitigation task force to address wildland fire evacuation planning for San Diego County.

  If the emergency only impacts a local jurisdiction, the decision to evacuate will be made at the local jurisdiction level with regional collaboration considerations. 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 scenario basis. Technological advancements in emergency notification capabilities has resulted in the ability of emergency managers to evacuate targeted areas vs the mass evacuations that occurred during 2003 and 2007 wildfires. Targeted evacuations allow better management of traffic congestion and focus on evacuating populations on a threat-level priority basis.

- Evacuation Scenarios Vary and Often Change in Response to the Fire: Every evacuation scenario includes unique challenges, constraints, and fluid conditions that require interpretation, fast decision making, and alternatives. For example, given a distant wildfire driven by Santa Ana winds, emergency managers may have several hours or more to evacuate communities with less urgency and the ability to spread traffic surges out over a long timeframe. In a scenario where a fire is much closer, less time is available and a more strategic approach may be necessary. Optionality is important in case unforeseen issues arise that require short-term or long-term changes to the evacuation process. In general, risk is considered highest when evacuees are evacuating late and fire encroachment is imminent. The Proposed Project provides the option of contingency on-site temporary refuge in designated buildings to address this scenario.

- Evacuation and Early Warning Systems: As demonstrated during large and localized evacuations occurring throughout San Diego County over the last 15 years, an important component to successful evacuation is early assessment of the situation and early notification via managed evacuation declarations. San Diego County utilizes early warning and informational programs to help with these important factors. The weather system developed by SDG&E is considered to be one of the most robust systems in the country. This system enables the detection of changing weather that may favor wildfire ignition and spread and can predict these changes with 24 to 72 hours' notice, allowing time to prepare fire response resources and provide resident warnings. Similarly, there are numerous fire detection assets positioned in San Diego County's open space areas, resulting in more time availability for the evacuation process to begin while a wildfire is still in its early stages. Among the methods available to citizens for emergency information are Reverse 911/Alert

San Diego[7], radio, television, social media/internet, neighborhood patrol car, and Aerial Support to Regional Enforcement Agencies helicopter (as available) and public address notifications.

- The Alternative H subdivision-specific Evacuation Plan is Consistent with County Protocols: Alternative H's subdivision-specific Wildland Fire Evacuation Plan incorporates concepts and protocols practiced throughout San Diego County. The San Diego County Evacuation Annex follows basic protocols set forth in the County's Operation Area EOP and the California Master Mutual Aid Agreement, which dictate who is responsible for an evacuation effort and how regional resources will be requested and coordinated. In addition, Alternative H's subdivision-specific Wildland Fire Evacuation Plan is consistent with JCPP Evacuation Plan and San Diego County evacuation planning standards and can be integrated into a regional evacuation plan when and if the area officials and stakeholders (California Department of Forestry and Fire Protection (CAL FIRE), SDCFA, OES, San Diego County Sheriff's Department (SDCSD), and others) complete one. Alternative H's subdivision-specific Evacuation Plan has been reviewed by San Diego County Fire Authority and San Diego County Sheriff's Department (SDCSD).

- Law Enforcement Takes Lead on Evacuations: The SDCSD is the lead agency for evacuations of the unincorporated areas of San Diego County, including Alternative H. The SDCSD, as part of a Unified Command, assesses and evaluates the need for evacuations, and orders evacuations according to established procedures. Additionally, as part of the Unified Command, the SDCSD identifies available and appropriate evacuation routes and coordinate evacuation traffic management with the California Department of Transportation (Caltrans), the California Highway Patrol (CHP), other supporting agencies, and jurisdictions. The following process describes how emergency evacuation decisions are coordinated, allowing emergency managers and other supporting response organizations to make collaborative decisions.

# 3    Evacuation Routes

- Fire Agencies and Law Enforcement Determine Evacuation Routes: Evacuation routes are determined by 1) jointly prepared pre-wildfire plans (Rhode & Associates[8], SDCFA, Cal Fire, and others) that indicate the likely fire scenario, and how traffic can be moved from an area and 2) in real time data reflecting fire location, movement and projected path considering downstream traffic and most vulnerable populations. As indicated above, real time evacuations in San Diego County are primarily managed by the Sheriff's Department (or local law enforcement in cities). SDCSD relies on input and situational awareness provided by the Incident Command. SDCSD coordinates with CAL TRANS and CHP for road management during evacuations. The pre-prepared evacuation plans, such as the Approved Project's subdivision-specific Wildland Fire Evacuation Plan, are guidance documents only. San Diego County OES has separately prepared regional wildfire response plans that guide emergency responses and evacuation procedures. Actual field conditions supersede prepared subdivision-specific evacuation plans, but these plans may provide valuable information that helps inform the moment by moment decision making at the Incident Commander (IC) level, as well as educating local residents about what to expect in an evacuation scenario.

- Factors Affecting Evacuation Timing and Routes: The main factors affecting the timing and routing of evacuations are those related to the nature of the wildfire. For example, is the fire uncontrollable and does it have the capability of affecting a wide area? How will its movement and projected path play into evacuation

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[7]    https://www.readysandiego.org/alertsandiego/

[8]    http://www.rohdeassociates.net/wui-fire-plans

route decisions? A key component of evacuations is the weather. On non-windy days and days with higher humidity, it is far less likely for a vegetation ignition to burn out of control and therefore, evacuation notifications are not typical. Windy, low humidity days (Red Flag Warning days) are far more prone to result in vegetation ignition escape and spread, resulting in far more sensitive evacuation trigger thresholds.

Evacuation routes that are considered acceptable when a wildfire is distant may be considered unsafe when a wildfire is in closer proximity. Having alternative routes offers flexibility for decision makers and having the contingency option of being able to temporarily refuge citizens within fire hardened structures offers yet another option in an environment where optionality is extremely valuable. Changes in wildfire behavior and traffic flow do alter how evacuation orders are implemented. Evacuation orders are based on a great deal of input, contemplation, situational awareness, and pre-planning. Evacuations may be altered to focus on controlling downstream intersections so that a population that is at highest risk can be moved before other populations that are considered at lower risk are allowed passage. This occurs often during wildfires. As weather conditions change and influence wildfire movement, evacuation orders will also shift, typically including larger areas. San Diego County Fire Agencies and related partners have a robust ability to rationally predict wildfire movement. This is accomplished through pre-fire planning and fire behavior modeling, working with UCSD's WIFIRE lab advanced wildfire behavior projection technology, and SDG&E's weather system network. More than 500 million dollars has been invested to enhance the county's fire prevention, detection, response, suppression and recovery capabilities since the 2003 Cedar Fire[9]. These efforts have proven effective in successfully managing wildfire events, such as was accomplished during the successfully managed 2018 Lilac Fire.

- <u>Fire Agencies and Law Enforcement Do Not Use Subdivision-Specific Evacuation Plans</u>: Agencies involved in implementing an evacuation order would not rely on a residential subdivision evacuation plan. Individual residential subdivision evacuation plans prepared in San Diego County have been prepared as a tool to help residents be aware of wildfire evacuations, their potential evacuation routes, and the fact that they may be directed to take temporarily refuge in their homes in lieu of evacuating. Further, ICs and law enforcement are not bound by subdivision-specific evacuation plans. Instead, evacuation managers would rely on situation awareness that dictates decision making and where possible, on wildfire pre-plans, which have been or are in the process of being prepared for every portion of San Diego County by Rohde and Associates, under contract to SDCFA. The wildfire pre-plans are an operational tool provided to emergency responders that provide high-level fire environment, assets at risk, preferred evacuation approaches, and other safety information to responding personnel.

- <u>Modeling Evacuation Scenarios</u>: Modeling potential traffic impacts during an evacuation would include assumptions for the following variables (at a minimum): number of existing vehicles (various methods), number of project vehicles (various methods), roadway capacities (maximum lane capacity discounted or provided a premium if enhancements are provided – i.e., extra lanes, lane widening, signaling intersections, etc., total intersections, final destination, targeted evacuation area, total mobilization time, and others. Every fire scenario would include different assumptions. But the assumptions would change, depending on how a fire spreads, spots, and new fires start and impact routes being relied upon. Wildfire pre-plans that are going to be relied upon for evacuation in San Diego County include information without attempting to model evacuation traffic because the results would be unreliable. There are wildfire categories: Extreme

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9   https://www.sandiegocounty.gov/content/dam/sdc/sdcfa/documents/prevention/2019-Wildfire-update-5-6-2019.pdf

fire weather, fire weather, and typical (and within each of these categories, there could be a wide variety of conditions related to high wind/low humidity vs. low wind/low humidity vs. high wind/high humidity vs low wind/high humidity, etc.). Then there would be variations based on the vegetation communities and terrain. Spot fires are difficult to predict without real-time weather conditions (wind direction and intensity, relative moisture level/humidity, etc.,) and can affect fire spread rates and evacuation routes. There would also be many variations depending on where the ignition occurred. Simply put, there would be hundreds of scenarios and the results would be limited because it is a model that would not be relied upon during an evacuation event.

# 4    Fire Defensibility of Modern Residential Subdivisions

- <u>The Role Fuel Management Zones (FMZs) Play in Fire Protection</u>: FMZs provide managed and maintained separation between structures and infrastructure and the unmaintained wildland fuels. This setback is considered defensible space because it enables firefighters to safely position themselves at the development edge and begin tactical protection efforts. The FMZ's essentially starve advancing wildfire of fuel through the outer thinning zones (where native fuels are reduced so that no more than 50% of the ground is covered by plant canopy and includes removal of the highest flammability species), then an inner irrigated zone removes all native plants and replaces them with fire resistive species that are kept irrigated and with high internal moisture, which results in more difficult ignition. Fire behavior is affected as a wildfire burns into the thinned zone. Flame lengths drop, spread rates are reduced, and intensity decreases. This process continues as fire burns into the irrigated zone where flame lengths, spread rates and intensity are reduced substantially and wildfires become spotty. FMZs or "brush management" was initially made part of the Public Resources Code 4290 and 4291 to protect natural resources from fires originating in neighboring developed areas. The Proposed Project's FMZs are provided access for maintenance and for firefighting efforts at regularly spaced intervals. FMZs have since become focused on protecting communities and structures, but they continue to have the same benefit of buffering preserved open space areas from accidental ignitions within communities. Positioning the low plant density, irrigated zone directly adjacent to the structures provides a significant buffer between a house or other landscape fire and native vegetation. The same way that FMZs setback a wildland fire from structures, the FMZs setback a structure fire from the more burnable native plants. Embers can be generated by a structure fire and can be blown over the FMZs into native fuels, but the inclusion of non-combustible roof materials, ember resistant vents and automatic sprinklers in every building combined with the presence of staffed fire stations with fast response significantly reduces the potential for a structure fire to reach a size that would produce significant. The highest likelihood of vegetation ignitions would be related to roadways, which are provided roadside FMZ throughout Alternative H and along both sides of Otay Lakes Road.

- <u>Modern Subdivisions Are Easier to Defend Than Neighborhoods with Older Homes</u>: Modern subdivision are easier to defend than older subdivisions. San Diego County Fire Authority, Rancho Santa Fe Fire Protection District, and many other fire agencies (personal communications with Dudek and at Public Hearings between 2016 and 2019) have indicated that communities built to the standards required in San Diego County and maintained on an ongoing basis enable them to allocate resources where they are needed *most* — i.e., in the older communities — while defending the newer communities with significantly fewer engines. Deploying fire fighters in new communities offers safe refuge due to the wide FMZs and ignition resistant structures. The requirements for ignition resistant structures and landscapes that are maintained in ignition resistant conditions are designed to minimize impacts on fire agencies. These requirements have become

part of the fire and building codes because they were found as a result of after fire save and loss assessments to be important for protection structures from ignition. This is the same reason newer communities can be considered for contingency temporary refuge. Modern residential subdivisions in San Diego County are built to very strict requirements that have evolved over the last approximately 20 years to include a focus on ignition resistance. Following the 2003, 2007, and 2010 wildfires, assessment teams were formed to evaluate every home that was damaged or lost as well as for the first time, homes that were saved. The resulting data revealed that lost homes were almost always lost because embers penetrated the attic or other openings and ignited fires within the buildings or the homes were situated amongst heavy, unmaintained landscape fuels. Saved homes were strongly linked to newer, more resistant construction materials and methods such as ember resistant vents, boxed eaves, and other methods described in Alternative H's FPP along with maintained fuel buffers. Additionally, numerous newer master planned communities in Southern California have been subjected to wildfire and generally performed well. Examples include Cielo in Rancho Santa Fe, and 4S Ranch in San Diego[10]. Older communities throughout California continue to be the largest contributors to fire-destroyed homes, as occurred within Paradise during the Camp Fire (2018). Further evidence can be found in the Institute for Business and Home Safety *Mega Fires – The Case for Mitigation* (2007)[11] report which discusses findings from the 2007 Witch Creek Fire, and the National Institute of Standards and Technology publication NIST Technical Note 1796, *A Case Study of a Community Affected by the Witch and Guejito Fires: Report #2 – Evaluating the Effects of Hazard Mitigation Actions on Structure Ignitions[12]*. This study focused on a particular Rancho Bernardo community and findings associated with the 2007 Witch Creek Fire.

- Project Amenities Improve Fire Response and Fire Safety: Alternative H includes various improvements and amenities that improve fire response and fire safety. The accepted Fire Protection Plan details the fire protection approach and the individual requirements that provide fire safety. Amongst these are:

    o *Improved Otay Lakes Road*: Alternative H would provide for full improvements of Otay Lakes Road to both the City of Chula Vista and the County General Plan Mobility Element road classification specifications. This would provide for a paved four-lane road with bike lanes and a community pathway from Lake Crest Drive in the City of Chula Vista to the second village entry, a distance of approximately 1.6 miles. Otay Lakes Road would be improved from the second entry to the eastern property boundary to a two-lane road with bike lanes and a community pathway. Such improvements would provide immediate additional access to/from the urbanized community of Chula Vista to the west and additional capacity for the very low density rural area to the east, which also has the option to evacuate easterly (i.e., typically in the direction of an on-coming fire) towards SR-94 and Campo Road.

    o *Secondary Access Roads:* Alternative H has four access routes to Otay Lakes Road; three to the residential neighborhoods and a dedicated entry to the Resort; this is important from a fire response and fire safety perspective. Internal neighborhoods all meet access and secondary access requirements, per County acceptance of the Alternative H FPP. Access roads are crucial to communities, as they provide incoming access for emergency response and outgoing egress for evacuating citizens. Further, the concept for providing additional access is similar to providing more

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10    https://www.rsf-fire.org/shelter-in-place/
11    https://ibhs.org/wp-content/uploads/wpmembers/files/Mega-Fires-The-Case-for-Mitigation_IBHS.pdf
12    https://nvlpubs.nist.gov/nistpubs/TechnicalNotes/NIST.TN.1796.pdf

than one way out of a building. If the primary access point is not available due to fire or blockage, having another viable option is important for public safety.

o *On-Site Fire Station:* Having a fully staffed fire station within a community with the ability to respond quickly to all emergencies, including fire ignitions is a benefit that increases fire safety and reduces fire risk. It has been a common fire industry estimate that most vegetation fire ignitions (estimated 90% - Environmental Information Center 2020) occur during normal weather (non-extreme fire weather) and these fires account for approximately 10% of the total land area burned. This indicates that vegetation fires under normal weather conditions are controllable and fast response to these fires helps control them at small sizes. The 10% of fires that occur during extreme fire weather account for 90% of the burned area. These fires can quickly surpass efforts to control them and the need for a fast response to these types of vegetation fires is considerable if there is any likelihood of controlling/extinguishing them when they are small. The presence of an on-site station provides for fast response. Additional "eyes and ears" of residents in the Alternative H community heightens the likelihood of quick detection and reporting, enabling a fast response to ignitions. Structural fire ignitions are similar in that fast responses will reduce the fire's ability to spread from the room of origin and limit the overall ability of a structural fire to result in a whole home loss, which would be the primary ember producing "fuel" within a new development. However, even though fast fire station response would be provided, a built-in protection that is designed to provide for safe egress from a house fire is the automatic fire sprinkler system. These systems have been shown to contain interior fires to the room of origin and literally begin the process of fire suppression before firefighters arrive.

o *Water Service for Fire Suppression:* Water is a key component to fighting wildfire and protecting structures. Providing water where it is not currently available, especially when it is provided in a protected environment like the ignition resistant landscapes of a new master planned community, enables firefighters to protect homes and work to control a wildfire's advancement. New communities are required to provide fire hydrants meeting flow, volume and duration specifications at intervals designed to assist in fighting structural fires. These hydrants provide opportunities for wildland fire engines to stage, fill engine tanks, set up dip tanks for helicopter firefighting efforts, and sustain a fire fight. Alternative H's location offers a large area of converted landscape, a fuel break, which offers opportunities for fighting and controlling wildfires before they encroach upon more urban areas. Alternative H changes fire behavior due to the lack of fuels and, combined with aerial fire-retardant drops, extent outward to slow or stop a fire's advancement.

# 4    Temporary Refuge as Contingency Option

- *Temporary Refuge Defined*: Temporary refuge 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 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.

- *Temporary Refuge Strategies*: The decision on whether to evacuate or temporarily refuge is carefully considered with the timing and nature of the incident (County of San Diego 2014). Sheltering in place is

the preferred method of protection for people that are not in the direct path of a hazard. This reduces congestion and transportation demand on the major transportation routes for those that have been directed to evacuate by police or fire personnel. When a community is within the projected path of a wildfire, temporary refuge is a contingency option, but the preferred approach is to evacuate early. Like most new master planned communities incorporating ignition-resistant construction, wide FMZs, and providing defensibility throughout, responding fire and law enforcement personnel would be able to direct residents to temporarily refuge in their homes or within designated structures such as the school or community center if it is determined to be safer than evacuating, such as if an early evacuation is not possible.

- *Evacuation v. Temporary Refuge*: Temporarily refuging during a wildfire is not recommended or viable in all buildings or communities. Further, temporarily refuging from wildfire is not the planned approach or preferred approach by fire agencies, even in communities that are designed, constructed and maintained to withstand significant wildfire. The planned and preferred approach, given the ability to do so, is to evacuate a community and evacuate it early, long before a fire is threatening. When this is not possible, however, such as when a fire ignites nearby or otherwise does not enable enough time to fully evacuate, then temporary refuge is an important contingency plan. Evidence supporting the viability of sheltering in protected buildings requires an understanding of the previously described after action reports and post-fire save and loss assessments. This information, coupled with the extensive research that goes into determining how fire and embers affect structures and how construction materials and methods can protect structures from ignitions, provides insight into how building can be ignition resistant. Ignition resistant structures set back from wildfire by appropriate fuel modification zones/defensible space buffers result in the ability to temporarily refuge as a contingency option. In addition, there are many examples of people sheltering in open-air spaces or in buildings during wildfires, including within the town of Paradise in 2018 where nearly 150 people sheltered in an open air parking lot that included buffers from adjacent fuels, and others in a church. During the 2003 Cedar Fire, hundreds of people sheltered in the Barona Casino and hundreds of students were sheltered in the protected gymnasium in the Tea Fire on the Westmont College campus. Similarly, hundreds of students were sheltered on the Pepperdine Campus instead of evacuated during the 2018 Woolsey Fire.

The Village Core, which is approximately 1,500 feet from the FMZ and is accessed directly from the second project entry from Otay Lakes Road, includes a 10 acre open public park and 10 acre elementary school site that provides the option for incident command to use for emergency/fire services staging and/or temporary refuge.

# Conceptual Wildland Fire Evacuation Program for The Otay Ranch Resort Village Alternative H
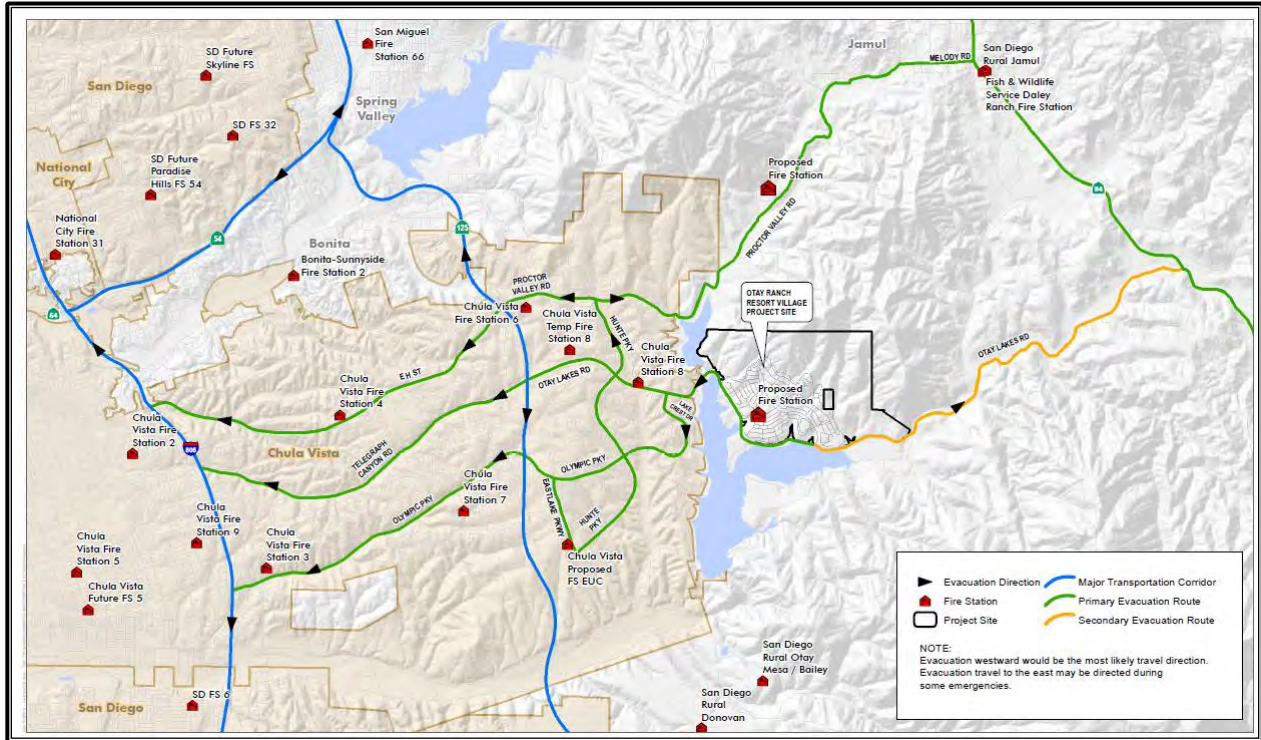


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# MARCH 2020

# Table of Contents

## APPENDICES

## FIGURES

# 1     Quick Reference – Conceptual Wildland Fire Evacuation Program

NOTE: Pages 1 through 10 are the focus of the homeowner evacuation educational outreach efforts. These pages will be available on the Otay Ranch Resort Village Alternative H community's homeowners association (HOA) Website and provided to each homeowner at change of property ownership. The remainder of this evacuation program report provides more detailed analysis and background information intended for review by emergency management agencies, including this program's consistency with standard San Diego County Office of Emergency Services and existing Jamul and Dulzura Community Protection Plans.

Figure 1 is the Otay Ranch Resort Village Alternative H (ORRV) community map and Figure 2 displays the Emergency Evacuation Routes potentially available to the ORRV community. Figure 2 highlights the community's interior roads along with primary access points and primary roads and major traffic corridors leading to off-site areas.

The available evacuation routes, potential wildfire exposure, and contingency refuge areas along evacuation routes for the residents and guests of the ORRV are detailed below and in Figure 2. *Residents should know available routes, stay informed, and follow directions provided by law enforcement or fire agencies as they will determine the best course of action. Do not rely on navigation apps that may inadvertently lead persons toward the approaching wildfire.*

1. **Egress to the east via Otay Lakes Road** – Otay Lakes Road will be improved along the ORRV frontage with widening and additional travel lanes. The road will not be improved to the east of the site, but the existing two lane Otay Lakes Road intersects SR-94 approximately 5.5 miles east of the ORRV. From this intersection, one could travel north to Jamul and developed cities of Lemon Grove, El Cajon and the greater San Diego area. Traveling south on SR-94 passes through Dulzura, Barrett Junction, Potrero and eventually Campo.

   a. **Potential Wildland Fire Exposure Rating: High.** Wildfire exposure along any of the routes to the east of the ORRV or north/south on available roads connecting with Otay Lakes Road as described above, is potentially high. The travel routes pass through wildland areas with native, unmaintained fuels. Evacuations to the east would likely not occur during a wind driven wildfire from that direction, but the route is available to fire response personnel and would be appropriate for some types of emergency situations requiring evacuation.

   **Egress to the west via Otay Lakes Road –** the widened Otay Lakes Road offers travel to the west into Chula Vista. Numerous options to the west, north, and south are available off Otay Lakes Road and its connector roads, including Lake Crest Drive/Olympic Parkway, Hunte Parkway, Eastlake Parkway, 125 Expressway, and 805 freeway, amongst others. Evacuation travel direction would be event specific and law enforcement directed.

   b. **Potential Wildland Fire Exposure Rating: Low to Moderate.** Wildfire exposure along Otay Lakes Road is considered low with the exception of an approximately one mile stretch just west of the ORRV development footprint that is adjacent to undeveloped land dominated by annual grassland, which has an exposure rating of moderate. The remainder of the evacuation routes travel through managed and maintained landscapes with low exposure rating.

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These evacuation routes may be available to ORRV residents and other area residents during an evacuation. Traffic would be managed by law enforcement and emergency response personnel. Short notice events, where a fire ignites close to the area may affect evacuation route availability. Options are available for evacuating the area and ORRV which provides for a contingency in the case that a particular route is not passable.

# 1.1 Nearest Medical Facilities

**Sharp Chula Vista Medical Center (8.75 miles)**

751 Medical Center Court
Chula Vista, California 91911

*Directions:*

- Otay Lakes Road (west) to Auto Park Way (east)
- Left on Medical Center Dr.
- Hospital on Left

**Scripps Mercy Hospital Chula Vista (12.0 miles)**

435 H Street
Chula Vista, California 91910

*Directions:*

- Otay Lakes Road (west)
- Right on Otay Lakes Road (north)
- Left on East H Street
- Hospital on Right

**See also Local Urgent Care facilities, including:**

Partners Urgent Care
2315 Otay Lakes Road
Chula Vista

AFC Urgent Care
760 Otay Lakes Road
Chula Vista

## Legend

- ☐ Project Site
- ▨ Development Footprint
- ▨ Conserved Open Space
- ▨ Allowable Use (Roads and Water Tank)
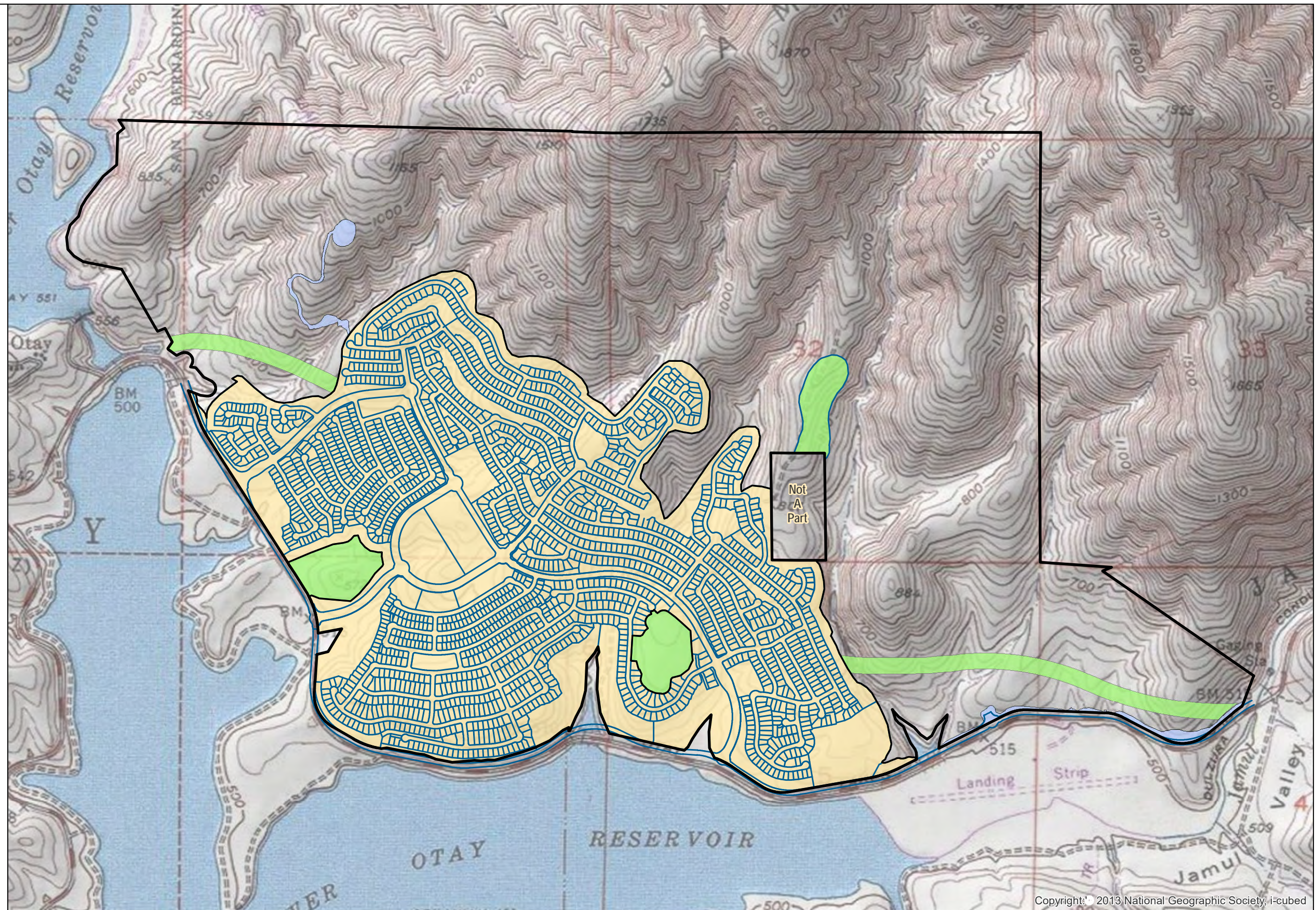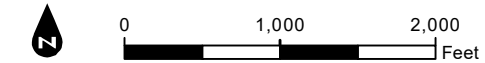
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**FIGURE 1**
**Alternative H Site Location Map**

Otay Ranch Resort Village ☐Alternative H Fire Protection Plan

0    1,000    2,000
Feet

N

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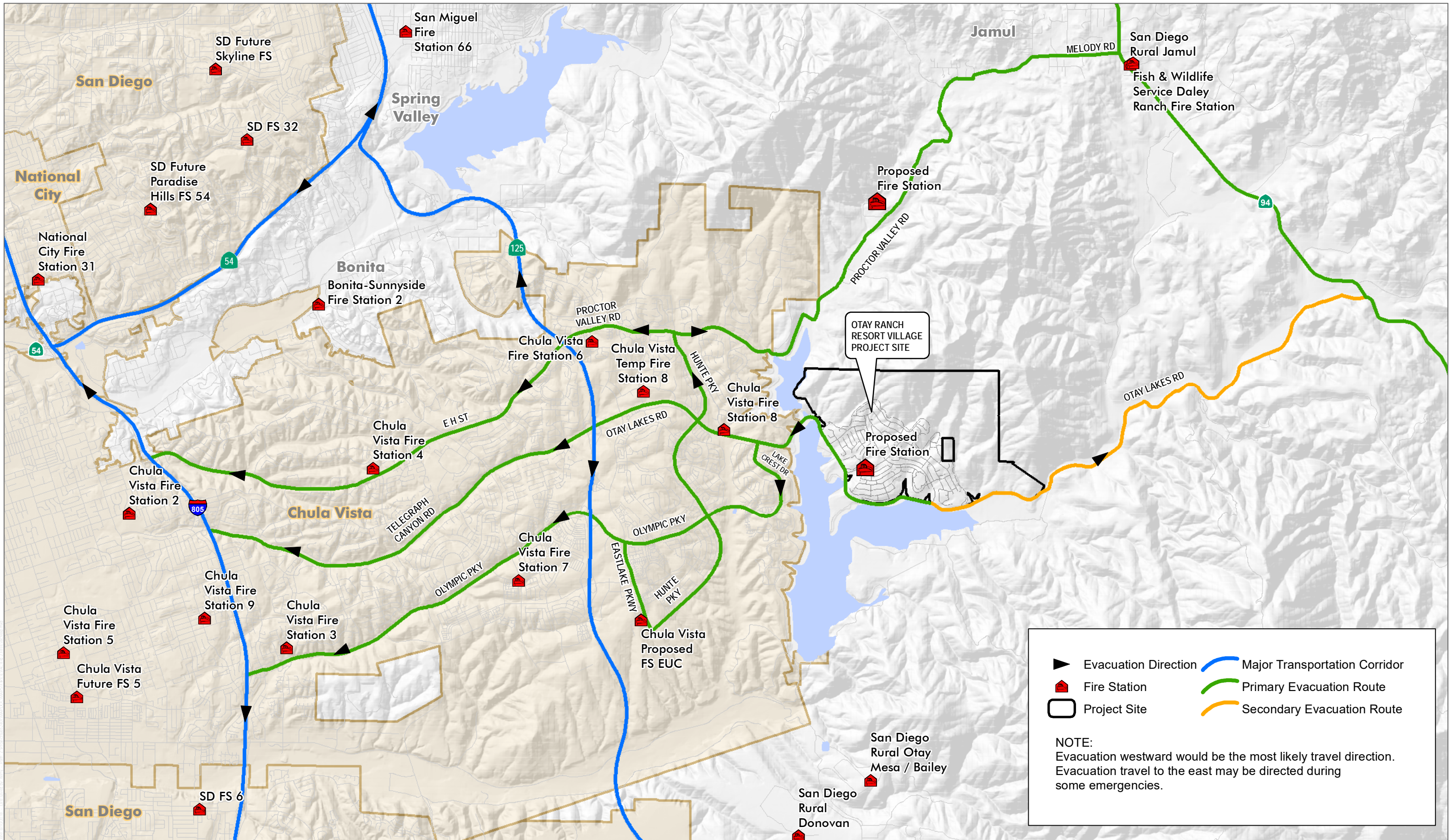
Fire Evacuation Plan

FIGURE 2

Otay Ranch Resort Village Fire Evacuation Plan

**Legend:**
- ▶ Evacuation Direction
- 🏠 Fire Station
- ▢ Project Site
- — Major Transportation Corridor
- — Primary Evacuation Route
- — Secondary Evacuation Route

NOTE:
Evacuation westward would be the most likely travel direction. Evacuation travel to the east may be directed during some emergencies.

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0   2,625   5,250
Feet

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## 1.2 Register to Receive Emergency Alerts

The County of San Diego in partnership with Blackboard Connect Inc. utilizes AlertSanDiego for its Community Emergency Notification System. AlertSanDiego is a countywide standard system that is managed as a regional asset by the County of San Diego Office of Emergency Services. In the event of a wildfire within the proximity of the ORRV community, the Incident Commander (IC) will contact the San Diego County Sheriff's Department (SDSD). The SDSD's communications center has the responsibility to request activation of the AlertSanDiego system and release an emergency notification to the affected population. Therefore, the ORRV community residents are strongly advised to register their land lines, mobile phone numbers and email addresses with Reverse 9-1-1, AlertSanDiego system (http://www.readysandiego.org/AlertSanDiego/) in order to receive emergency evacuation instructions.

The ORRV community is part of the greater San Diego media market and the media outlets will also be a good source of information, via television and radio. Emergency situations are provided coverage and information is disseminated guiding resident response. 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. The City of Chula Vista provides wildfire and evacuation information by subscribing to the City's e-alerts and Facebook and Twitter pages (https://www.chulavistaca.gov/departments/communications/social-media).

## 1.3 Get Involved in Community Readiness

ORRV residents are encouraged to form or join a volunteer Neighborhood Emergency Response Team through the Community Emergency Response Team (CERT) program (https://www.sandiegocounty.gov/oes/community/oes_jl_CERT.html). In addition, the community HOA will organize annual evacuation public outreach, engage directly with organizations such as Fire Safe Council of San Diego County, as well as maintain a fire safe page on the community Web page, including this Emergency Evacuation Program and links to important citizen preparedness information.

This evacuation program is prepared specifically for the ORRV community and focuses on wildland fire evacuations, although many of the concepts and protocols will be applicable to other emergency situations. Ultimately, this program will be used by the ORRV HOA to educate community residents as to their evacuation approach during wildfires and other similar emergencies. It is important for the ORRV residents to understand the importance of being prepared, so if/when the time comes where evacuation is necessary, they will be able to calmly implement their own evacuation plan. Some actions the community residents can do in advance include:

- Follow the "Ready, Set, Go!" model developed for wildfire evacuations.
  - o Create an escape plan from the residence, as well as familiarity with escape routes out of the area.
  - o Create a car emergency kit, including cell phone charger, flashlight, jumper cables, water, and food.
  - o Gather important paperwork, including birth and marriage certificates, account documents, passports, Social Security cards, and any other important documents.
  - o 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 ORRV residents are provided in Appendix A ("Ready, Set, Go!" Individual Action Plan) and Appendices B-1 through B-4 (Family Disaster Checklists and Communications Plans), and residents are encouraged to become familiar with the concepts detailed at the following Websites:

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

   http://www.readyforwildfire.org/docs/files/File/Ready-Set-Go-Plan-09_CALFIRE_sm.pdf or
   http://www.readyforwildfire.org/

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.fema.gov/media-library-data/1440449346150-
   1ff18127345615d8b7e1effb4752b668/Family_Comm_Plan_508_20150820.pdf

# 1.4 Evacuation Program Purpose and Limitations

Wildfire and other emergencies are often fluid 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 Emergency Evacuation program is to be considered a tool that supports existing pre-plans and provides for citizens who are familiar with the evacuation protocol, but is subservient to emergency event-specific directives provided by agencies managing the event.

# 2 Background

This ORRV Conceptual Wildland Fire Evacuation Program has been prepared based on the Unified San Diego County Emergency Services Organization and County of San Diego Operational Area Emergency Operations Plan (EOP) – Evacuation Annex.

To establish a framework for implementing well-coordinated evacuations, the County of San Diego Office of Emergency Services (OES) developed an Evacuation Annex Q as part of the Area EOP (San Diego County 2014). 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. San Diego County OES is charged with emergency management and is responsible for maintaining situational awareness of threats that may necessitate a citizen evacuation. OES coordinates with cities during emergency events.

Evacuation is a process by which people are moved from a place where there is immediate or anticipated danger, to a safer place, and offered temporary shelter facilities. When the threat passes, evacuees are able to return to their normal activities, or to make suitable alternative arrangements.

Evacuation during a wildfire is not necessarily directed by the fire agency, except in specific areas where fire personnel may enact evacuations on scene. The SDSD, California Highway Patrol (CHP), and other cooperating law enforcement agencies have primary responsibility for evacuations. These agencies work closely within the Unified Incident Command System, with the County Office of Emergency Services, and responding fire department personnel who assess fire behavior and spread, which should ultimately guide evacuation decisions. To that end, SDSD, SDCFA, Public Works, Planning, Emergency Services Departments, and California Department of Transportation (Caltrans), amongst others, have worked as a part of a County Pre-Fire Mitigation Task Force to address wildland fire evacuation planning for San Diego County.

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. Risk is considered highest when occurring during a short-notice evacuation, and fire encroachment is imminent. This hypothetical scenario highlights the importance of continuing to train responding agencies, model various scenarios, educate the public, and take a very conservative approach to evacuation decision timelines as well as providing contingency plans.

Equally as important, the evacuation procedures should be regularly updated with lessons learned from actual evacuation events, as they were following the 2003, 2007, 2014, 2016, and 2017 San Diego County fires. The authors of this Conceptual Wildland Fire Evacuation Program recommend that occasional updates are provided, especially following lessons learned from actual incidents, as new technologies become available that would aid in the evacuation process, and as changing landscapes and development patterns occur within and adjacent the ORRV community that may impact how evacuation is accomplished. At the time of this report's preparation, there is no publicly available emergency evacuation plan available for the northern San Diego region. This ORRV Conceptual Wildland Fire Evacuation Program is consistent with the County's evacuation planning standards and can be integrated into a regional evacuation plan and other pre-plans when and if the area officials and stakeholders (SDCFA, OES, SDSD, and others) complete one.

As demonstrated during large and localized evacuations occurring throughout San Diego County over the last 15 years, an important component to successful evacuation is early assessment of the situation and early notification via managed evacuation declarations. San Diego County utilizes early warning and informational programs to help meet these important factors. Among the methods available to citizens for emergency information are: radio, television, social media/internet, neighborhood patrol car public address notifications, and Reverse 9-1-1 or AlertSanDiego.

# 3 San Diego County Evacuation Planning Summary

This Conceptual Wildland Fire Evacuation Program incorporates concepts and protocols practiced throughout San Diego County. The San Diego County Evacuation Annex Q (2014) follows basic protocols set forth in the County's Operation Area Emergency Operations Plan and the California Master Mutual Aid Agreement, which dictate who is responsible for an evacuation effort and how regional resources will be requested and coordinated.

First responders are responsible for determining initial protective actions before EOCs 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 EOC under the Incident Command System.

During an evacuation effort, the designated County Evacuation Coordinator is the Sheriff, 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:

- County of San Diego Sheriff's Department
- San Diego County Fire Authority, CAL FIRE, Chula Vista, and other neighboring fire agencies
- County Health and Human Services Agency
- San Diego Humane Society
- Department of Animal Services,
- Department of Planning and Development Services
- Department of Environmental Health
- Department of General Services
- Department of Public Works
- Department of Agriculture, Weights, and Measures
- Department of Parks and Recreation

**Figure 3        Incident Command System-Local Government EOC Functional Interactions**
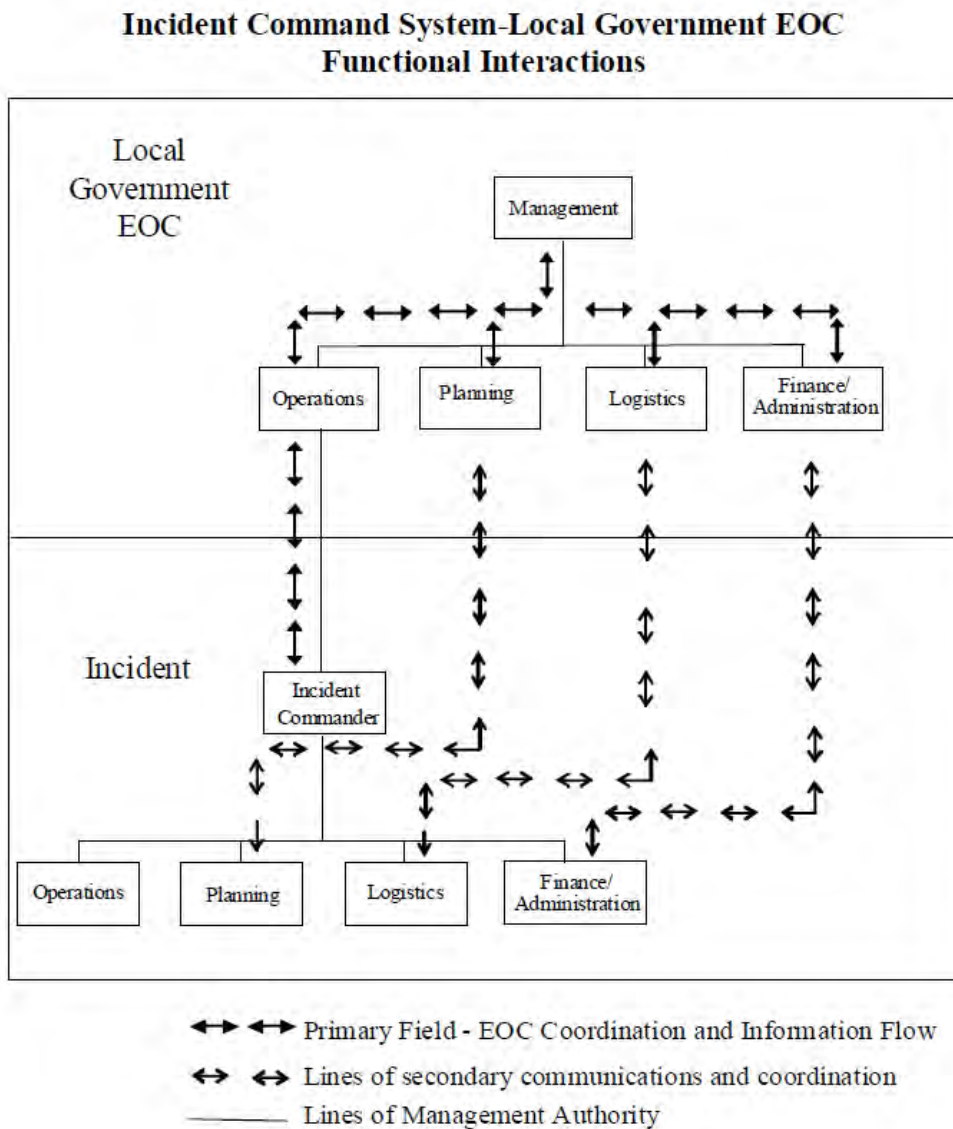


The following general information has been largely taken verbatim from the San Diego County Evacuation Annex:

# 3.1      Evacuation Objectives

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;
- Provide for evacuation to appropriate transportation points, evacuation points, and shelters;

- Provide adequate means of transportation for persons with disabilities, the elderly, other persons with access and functional needs, and persons without vehicles;

- Provide for the procurement, allocation, and use of necessary transportation and law enforcement resources by means of mutual aid or other agreements;

- Control evacuation traffic;

- 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 re-entry communications to the public through the Joint Information Center (JIC); and

- Assure the safe re-entry of the evacuated persons.

The SDSD is the lead agency for evacuations of the unincorporated areas of San Diego County, including the ORRV. The SDSD, as part of a Unified Command, assesses and evaluates the need for evacuations, and orders evacuations according to established procedures. Additionally, as part of the Unified Command, the SDSD identifies available and appropriate evacuation routes and coordinate evacuation traffic management with the (Caltrans), the CHP, 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 are coordinated, allowing emergency managers and other supporting response organizations to make collaborative decisions.

# 3.2 Evacuation Coordination Process

1. If the emergency only impacts a local jurisdiction, the decision to evacuate will be made at the local jurisdiction level with regional collaboration considerations.
   a. 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 scenario 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. The EOC may make recommendations on whether a jurisdiction should evacuate and may help coordinate the evacuation effort.
   e. The Evacuation Annex is automatically activated when an incident occurs requiring an evacuation effort that impacts two or more jurisdictions.
   f. The EOC will coordinate with fire, law enforcement, public health, and other relevant support agencies to obtain recommendations on protective actions.
   g. The EOC will coordinate with jurisdictional emergency management personnel and other public safety personnel. The Policy Group within the EOC will coordinate will other officials from jurisdictions within the OA to identify command decisions, including:
      i. Gaining regional situational awareness
      ii. Determining response status
      iii. Reviewing status of initial protective actions

    iv.   Considering additional protective actions

    v.   Evaluating public information needs

    vi.   Determining next steps

    vii.   Establishing a regular time to share updates

h.   The EOC will coordinate emergency public information to citizens in accordance with established procedures.

i.   The EOC may support coordinating the evacuation response according to the EOP, including:

    i.   Providing transportation for those who need assistance

    ii.   Provide support for people with disabilities and other access and functional needs

    iii.   Coordinate and communicate with the private sector, community groups, and faith based organizations to utilize their services and resources available to support the response

    iv.   Providing shelter for evacuees

# 3.3    Evacuation Response Operations

An evacuation of any area requires significant coordination among numerous public, private, and community/non-profit 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 make arrangements for evacuation. On the other hand, other threats, including wildfires igniting nearby, may occur with little or no notice and certain evacuation response operations will not be feasible (for example, establishing contra flow requires between 24 to 72 hours to be implemented; a no-notice event will not allow for contra flow to be established, but there are other alternatives available that can be implemented in a shorter timeframe). Evacuation assistance of specific segments of the population may also not be feasible.

## 3.3.1    Evacuation Points and Shelters

When the SDSD or IC implements an evacuation order, they coordinate with the responding fire agency (e.g., SDCFA), the EOC, and others to decide on a location to use as a Temporary Evacuation Point (TEP). The SDSD Dispatch Center will utilize the AlertSanDiego system and affected municipalities will use their social media pages and in the field direction of evacuees to the established TEPs or shelters. These evacuation points will serve as temporary safe zones for evacuees and will provide basic needs such as food, water, and restrooms. These points should be large, well known sites such as shopping centers, libraries, and schools. Possible shelters and assembly areas, subject to approvals, that can provide at least short-term refuge:

- Otay Ranch Resort Alterative H – school site, interior areas of community
- Otay Ranch High School – La Monarca Lane
- Olympian High School - Magdalena Ave
- Mater Dei Catholic High School – Mater Dei Drive
- Elite Athlete Training Center – Olympic Parkway
- Otay Ranch Town Center – Eastlake Parkway

Other refuge sites are available within urbanized areas of Chula Vista, National City, San Diego and developed communities primarily to the northwest, west, and southwest of the ORRV.

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If there are residents unable to evacuate and need transportation assistance to get to a TEP or shelter, the OES may establish transportation points to collect and transport people without transportation resources to evacuation points. Transportation should be accessible to all populations, including people with disabilities and other access and functional needs.

## 3.3.2    Animal Evacuations

The Pets Evacuation and Transportation Standards Act of 2006 amends the Stafford Act, and requires evacuation programs to take into account 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) partnering with the Human Society has plans in place to transport and shelter pets in a disaster under Annex O of the 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 should be identified and tracked in WebEOC. 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. It is imperative that horse and livestock owners who reside in wildland urban interface areas are prepared for wildfire emergencies and have the resources to transport or have their animals transported out of the area during an evacuation, or have contingency options in place. The ORRV community will not allow horses or other livestock ownership on site.

In most cases, DAS and the OA EOC will coordinate and attempt to co-locate animal shelters with people shelters. Additional ORRV specific animal evacuation information is provided in Section 6.4.2.

## 3.3.3    Shelter-in-Place

Sheltering-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 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.

The decision on whether to evacuate or shelter-in-place is carefully considered with the timing and nature of the incident (San Diego County 2014). Sheltering-in-place is the preferred method of protection for people that are not directly impacted or in the direct path of a hazard. 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. Like most new master planned communities incorporating ignition resistant construction, modified fuel zones, and providing defensibility throughout, responding fire and law enforcement personnel will be able to direct residents to temporarily refuge in their homes at the ORRV community, in the event that sheltering is determined to be safer than evacuating.

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# 4      Otay Ranch Resort Village Evacuation Road Network

Wildfire emergencies that would be most likely to include an evacuation of ORRV would be large wildfires approaching from the north, northeast, south, or southeast. These fires are often wind driven and occur during declared Red Flag Warning periods where low humidity and high winds facilitate fire ignition and spread. If a wildfire ignites within the open space areas in the vicinity of the ORRV community and is fanned by fire weather conditions, an early evacuation of the area may occur as many as several or more hours prior to actual threatening conditions at the ORRV site. Fires occurring on typical weather days have been very successfully controlled at small sizes due to the slower fire spread and fast response and would not typically trigger a need to evacuate the community.

If a wildfire ignited closer to the ORRV community during weather that facilitates fire spread, where multiple hours are not available for evacuation, law enforcement and emergency managers would prioritize evacuation based on potential exposure. It is preferred to evacuate long before a wildfire is near, and 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. For example, if a wildfire is anticipated to encroach upon the community in a timeframe that is shorter than would be required to evacuate all residents, then options available to responding fire and law enforcement personnel should include (1) partial relocation where residents in perimeter homes on the north/northeast/east edge are temporarily relocated to internal areas or to the ORRV center (public safety, school and multi-use lots), (2) Individual neighborhood relocations where residents, such as from homes on the community's perimeter, are temporarily relocated to the ORRV on-site TEPs or west to Chula Vista, (3) temporary refuge where residents are instructed to remain in their homes while firefighters perform their structure protection function.

This approach is consistent with San Diego County's (2014) Evacuation approach which states "*Due to the nature of the threats requiring an evacuation, there may be insufficient time to perform an early evacuation of the area and shelter-in-place instructions may need to be provided.*" Although not a designated shelter-in-place community, the structures in the ORRV community include the same level of ignition resistance and landscape maintenance and are defensible against the short duration wildfire exposure anticipated and they are designed to require minimal resources for protection, which enables these contingency options that may not be available to other vicinity communities.

The ORRV roads and adjacent road circulatory system will be consistent with other new communities in their ability to effectively handle average daily trips generated by the community. However, as evidenced by mass evacuations in San Diego County and elsewhere, even with roadways that are designed to the code requirements, it may not be possible, or necessary to move large numbers of persons at the same time. Road infrastructure throughout the United States, and including San Diego County is not designed to accommodate a short-notice, mass evacuation (FEMA 2008). The need for evacuation programs, 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, firefighters or other means, potential backups and slowed evacuations can be minimized. SDSD indicates that evacuations in this area would be managed consistent with previous evacuations where areas most at risk are moved first. They further indicate that they do not foresee insurmountable challenges evacuating large populations (San Diego County Planning Commission Hearings for Newland Sierra, Harmony Grove Village South, Lilac Hills and Valiano 2018).

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 report defers to Law Enforcement and OES to appropriately phase evacuations and to consider the vulnerability of communities when making decisions. For example, newer communities in Chula Vista's WUI, like ORRV, offer their residents a high level of fire safety on site along with options for firefighter safety zones and temporary on-site refuge as a contingency, as discussed further in this document.

The ORRV community interior road network and the existing regional road system that it interconnects provide multi-directional primary and secondary emergency evacuation routes consistent with, or exceeding, most communities in this area. Consistent with County of San Diego evacuation planning annex (2014), major ground transportation corridors in the area will be used as primary evacuation routes during an evacuation effort. The road systems were evaluated to determine the best routes for fire response equipment and "probable" evacuation routes for relocating people to designated safety areas. The primary roadways that would be used for evacuation from ORRV are:

- Otay Lakes Road West – this is the primary evacuation route into Chula Vista
- Otay Lakes Road East – only if directed to travel this way by law enforcement or other emergency response personnel

Otay Lakes Road provides access to urbanized areas and major traffic corridors.

During an emergency evacuation from the ORRV community, the primary and secondary roadways may be providing citizen egress while responding emergency vehicles are inbound. Because the roadways are all designed to meet or exceed County of San Diego Consolidated Fire Code requirements, provide adequate parking, turning radius, grade maximums, signals at intersections, and roadside low fuel zones, potential conflicts that could reduce the roadway efficiency are minimized, facilitating evacuations.

The ORRV community's primary evacuation routes are accessed through a looped internal neighborhood roadway, which connect with Otay Lakes Road at three locations. In addition, the Resort District accesses Otay Lakes Road directly. Based on the existing road network, the community can evacuate to the east or west and in a short distance to the west, have multiple potential routes and directions available. The specific emergency and responding emergency personnel will dictate the evacuation process and travel routes.

# 4.1     Evacuation Route Determination

Typically, fire and law enforcement officials will identify evacuation points before evacuation routes are announced to the public. Evacuation routes are determined based on the location and extent of the incident and include as many pre-designated transportation routes as possible.

# 5 Otay Ranch Resort Village Resident Fire/Evacuation Awareness

The ORRV community HOA will be active in its outreach to residents regarding fire safety and general evacuation procedures. There are aspects of fire safety and evacuation that require a significant level of awareness by the residents and emergency services in order to reduce and/or avoid problems with an effective evacuation. Mitigating potential impediments to successful evacuations requires focused and repeated information through a strong educational outreach program. The ORRV HOA will engage residents and SDCFA through a variety of methods.

This emergency evacuation program will be provided to each homeowner/HOA member as well as being accessible on the HOA Website. Annual reminder notices will be provided to each homeowner encouraging them to review the program and be familiar with community evacuation protocols. The HOA will coordinate with SDCFA to hold an annual fire safety and evacuation preparedness informational meeting. Representatives of SDCFA will be invited to attend and important fire and evacuation information reviewed. One focus of these meetings and of the HOA's annual message will be on the importance of each resident to prepare and be familiar with their own "Ready, Set, Go!" evacuation plan. The "Ready, Set, Go!" program is defined at: http://www.readysandiego.org/Resources/wildfire_preparedness_guide.pdf and information about preparing an individual Action Plan is provided in Appendix A.

The focus of the "Ready, Set, Go!" program is on public awareness and preparedness, especially for those living in the wildland-urban interface (WUI) areas. The program is designed to incorporate the local fire protection agency as part of the training and education process in order to insure 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 and your home are ready when a wildfire occurs. Assemble emergency supplies and belongings in a safe spot. Confirm you are registered for Reverse 9-1-1 and AlertSanDiego alert system. Make sure all residents residing within the home understand the plan, procedures and escape routes.

**"SET" – Situational Awareness When a Fire Starts:** If a wildfire occurs and there is potential for it to threaten the ORRV community, pack your vehicle with your emergency items. Stay aware of the latest news from local media, County of San Diego (http://www.sdcountyemergency.com/updates/), and SDCFA for updated information on the fire. If you are uncomfortable, leave the area.

**"GO!" – Leave Early!** Following your Action Plan provides you with knowledge of the situation and how you will approach evacuation. Leaving early, well before a wildfire is threatening your community, provides you with the least delay and results in a situation where, if a majority of neighbors also leave early, firefighters are now able to better maneuver, protect and defend structures, evacuate other residents who couldn't leave early, and focus on citizen 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 to your community) is dangerous and exacerbates an already confusing situation. This ORRV Conceptual Wildland Fire Evacuation Program provides key information that can be integrated into the individual Action Plans, including the best available routes for them to use in the event of an emergency evacuation.

Situation awareness requires a reliable information source. One of the most effective public notification methods is Reverse 9-1-1. The San Diego OES operates the reverse 9-1-1 notification system that provides a recorded message over land line telephone systems relating to evacuation notices. In addition, the (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 and via text messages. It is up to individual residents to register their cell phones for "AlertSanDiego". The registration of cell phones can be done on line at www.ReadySanDiego.com. The ORRV HOA will strongly encourage all residents to register telephone numbers.

As part of the ORRV community's resident fire awareness and evacuation readiness program, information will be delivered in a variety of methods. The HOA will be responsible to provide and distribute to each homeowner a complete copy of the Fire Protection Plan and this Conceptual Wildland Fire Evacuation Program, including materials from the READY! SET! GO! Program. The HOA is also responsible for insuring the distribution of copies of the aforementioned materials to those individuals that purchase properties for re-sales and to the management of non-residential properties. Management of the commercial properties will be responsible for the dissemination of the Evacuation Program information to their employees.

As part of the approval of ORRV, it shall be binding on the HOA to actively participate as a partner with the SDCFA to assist with the coordination and distribution of fire safety information they develop.

# 6 Otay Ranch Resort Village Evacuation Procedures

## 6.1 Relocation/Evacuation

Wolshon and Marchive (2007) simulated traffic flow conditions in the wildland urban interface (WUI) under a range of evacuation notice lead times and housing densities. To safely evacuate more people, they recommended that emergency managers (1) provide more lead time to evacuees and (2) control traffic levels during evacuations so that fewer vehicles are trying to exit at the same time. In some emergencies, more lead time will be possible while in others, it will not. Traffic controls may be possible with longer lead times, but may be limited to controlling some intersections during short notice events.

Wildfire emergency response procedures will vary depending on the type of wildfire and the available time in which decision makers (IC, SDCFA, SDSD, CAL FIRE, and/or County Office of Emergency Management) can assess the situation and determine the best course of action. Based on the community, its road network, and the related fire environment, the primary type of evacuation envisioned is an orderly, pre-planned evacuation process where people are evacuated from the ORRV community to urban areas further from an encroaching wildfire (likely to urban areas west) well before fire threatens. This type of evacuation must include a conservative approach to evacuating, i.e., when ignitions occur and weather is such that fires may spread rapidly, evacuations should be triggered on a conservative threshold. This threshold must include time allowances for unforeseen, but possible, events that could slow the evacuation process.

Evacuation is considered by many to offer the highest level of life protection to the public, but it can result in evacuees being placed in harm's way if the time available for evacuation is insufficient (Cova et al. 2011). An example of this type of evacuation which is highly undesirable from a public safety perspective is an evacuation that occurs when fire ignites close to vulnerable communities. This type of situation is inherently dangerous because there is generally a higher threat to persons who are in a vehicle on a road when fire is burning in the immediate area. Conditions may become so poor, that the vehicle drives off the road or crashes into another vehicle, and flames and heat overcome the occupants. This scenario occurred in San Diego County during the 2003 Cedar Fire and in the 2017 northern California wildfires. 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 (such as when there are no nearby structures, the structure(s) is/are already on fire, or when there is no other form of refuge).

A third potential type of evacuation is a hybrid of the first two. 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, including their own home if it is ignition resistant and defensible, such as those at ORRV. As with the second type of evacuation discussed above, this situation is considered highly undesirable, but the evacuation pre-planning must consider these potential scenarios and prepare decision makers at the IC level and at the field level for enacting a contingency to evacuation when conditions dictate.

Indications from past fires and related evacuations in San Diego County and throughout Southern California, which have experienced large wildfires, 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.

**DUDEK**

Evacuation orders or notifications are often triggered based on established and pre-determined buffers. These buffers are often hard or soft lines on a map and 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 buffers. Evacuations can also be very fluid. The IC, law enforcement and County OES would jointly enact evacuations based on fire behavior.

# 6.2　Otay Ranch Resort Village Community Evacuation Baseline

For purposes of this Conceptual Wildland Fire Evacuation Program, the first and most logical choice for all of the residents and guests within the boundaries of the ORRV community is to adhere to the principals and practices of the "READY! SET! GO!" Program previously mentioned in this document. As part of this program, it is imperative that each household develop a plan that is clearly understood by all family members and participates in the educational and training programs sponsored by the ORRV HOA and attended by the SDCFA. In addition, it is imperative that the "READY! SET! GO!" information be reviewed on a routine basis along with the accompanying maps illustrating evacuation routes, temporary evacuation points and pre-identified safety zones. It must be kept in mind that conditions may arise that will dictate a different evacuation route than the roads used on a daily basis.

Residents are urged to follow the directions of emergency notices and personnel and 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, ORRV residents will proceed according to known available routes away from the encroaching fire as detailed in Section 1 of this report. Residents are cautioned not to rely on navigation apps which may inadvertently lead them toward an oncoming fire. The time required to evacuate would depend on the type of emergency and the resulting evacuation process, which should include a phased approach that avoids directing large areas to evacuate simultaneously.

**Note**: This evacuation program should be updated periodically, (suggested every 5 years) to review changing conditions in the ORRV community area and to refine evacuation options, routes, and contingencies as the landscape and road system develops over time.

# 6.3　Civilian and Firefighter Evacuation Contingency

As of this document's preparation, no community in California has been directed to shelter in place during a wildland fire. Even the communities in Rancho Santa Fe, California which are designed and touted as shelter-in-place communities, were evacuated during the 2007 Witch Creek Fire. This is not to say that people have not successfully sheltered in place during wildfire, where 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 for the ORRV community will always be early evacuation following the "Ready, Set, Go!" model, but there exists the potential for unforeseen civilian evacuation issues, and having a contingency plan will provide direction in these situations that may result in saved lives.

Potential problems during wildfire evacuation from ORRV include:

- Fires that prevent safe passage along planned evacuation routes

- Inadequate time to safely evacuate

- Fire evacuations during peak traffic conditions or when large events are occurring

- Blocked traffic due to accidents or fallen tree(s) or power pole(s)

- The need to move individuals who are unable to evacuate

It is recommended that SDSD and SDCFA conduct concerted pre-planning efforts focusing on evacuation contingency planning for civilian populations when it is considered safer to temporary seek a safer refuge than evacuation.

## 6.3.1    Safety Zones

The International Fire Service Training Association (IFTSA; Fundamentals of Wildland Fire Fighting, 3rd Edition) defines Safety Zones as areas mostly devoid of fuel, which are large enough to assure that flames and/or dangerous levels of radiant heat will not reach the personnel occupying them. Areas of bare ground, burned over areas, paved areas, and bodies of water can all be used as safety zones. The size of the area needed for a safety zone is determined by fuel types, its location on slopes and its relation to topographic features (chutes and saddles) as well as observed fire behavior. Safety zones should never be located in topographic saddles, chutes or gullies. High winds, steep slopes or heavy fuel loads may increase the area needed for a Safety Zone.

The National Wildland Fire Coordinating Groups (NWFCG), Glossary of Wildland Fire Terminology provides the following definitions for Safety Zone and Escape routes:

> *Safety Zone*. An area cleared of flammable materials used for escape in the event the line is outflanked or in case a spot fire causes fuels outside the control line to render the line unsafe. In firing operations, crews progress so as to maintain a safety zone close at hand allowing the fuels inside the control line to be consumed before going ahead. Safety zones may also be constructed as integral parts of fuelbreaks; they are greatly enlarged areas which can be used with relative safety by firefighters and their equipment in the event of blowup in the vicinity.

According to NWFCG, Safety Zone(s):

- Must be survivable without a fire shelter

- Can include moving back into a clean burn

- May take advantage of natural features (rock areas, water, meadows)

- Can include Constructed sites (clear-cuts, roads, helispots)

- Are scouted for size and hazards

- Consider the topographic location (larger if upslope)

- Should be larger if downwind

- Should not include heavy fuels

- May need to be adjusted based on site specific fire behavior

The definition for a safety zone includes provisions for separation distance between the firefighter and the flames of at least four times the maximum continuous flame height. Distance separation is the radius from the center of the safety zone to the nearest fuels. For example, considering estimated 46-foot-tall flame lengths in untreated fuels adjacent this site, then a 184-foot separation would be required, and potentially more if there were site-

specific features that would result in more aggressive fire behavior. This setback would be provided on most streets within the ORRV developed areas.

If one considers the ignition resistant and maintained landscaping within the ORRV community, along with the perimeter and site-wide maintained landscaping and Chapter 7A of California Building Code compliant structures, the ORRV interior roads and neighborhoods would provide Safety Zones available to responding firefighters. The ORRV community as a Safety Zone can be part of SDCFA's pre-planning efforts, although during a fire, the identified safety zones may not be feasible due to distance, location, fire behavior, etc.

Identification of potential safety zones will require additional focused study by SDCFA and other fire and law enforcement agencies.

## 6.3.2 Temporary Firefighter Refuge Areas

Firescope California (Firefighting Resources of Southern California Organized for Potential Emergencies) was formed by legislative action to form a partnership between all facets of local, rural, and metropolitan fire departments, California Department of Forestry and Fire Protection (CAL FIRE), and federal fire agencies. Firescope defines a contingency plan when it is not possible to retreat to a safety zone. This contingency includes establishment of firefighter Temporary Refuge Areas (TRA), which are defined as:

> A preplanned area where firefighters can immediately take refuge for temporary shelter and short-term relief without using a fire shelter (fire resistant tent) in the event that emergency egress to an established Safety Zone is compromised.

Examples of a TRA may include the lee side of a structure, inside of a structure, large lawn or parking areas, or cab of fire engine, amongst others. Differences between a TRA and a Safety Zone is that TRA's are closer to the immediate firefighting area, are considered a contingency to being able to get to a Safety Zone, do not include a requirement for a large area set back four times the flame lengths of adjacent fuels, and cannot be feasibly pre-planned until firefighters arrive on scene and size up the situation.

Firescope appropriately notes that although Safety Zones and viable Escape Routes shall always be identified in the WUI environment, they may not be immediately available should the fire behavior increase unexpectedly. Often a TRA is more accessible in the WUI environment. A TRA will provide temporary shelter and short-term relief from an approaching fire without the use of a fire shelter and allow the responders to develop an alternate plan to safely survive the increase in fire behavior.

TRAs are pre-planned areas (planned shortly after firefighters arrive on scene) where firefighters may take refuge and temporary shelter for short-term thermal relief, without using a fire shelter in the event that escape routes to an established safety zone are compromised. The major difference between a TRA and a safety zone is that a TRA requires another planned tactical action, i.e., TRAs cannot be considered the final action, but must include self-defense and a move out of the area when the fire threat subsides. A TRA should be available and identified on site at a defended structure. TRAs are NOT a substitute for a Safety Zone. TRA pre-planning is difficult, at best because they are very site and fire behavior specific. For the ORRV community, TRAs would likely include navigating into primary roads where separation from fuels is provided, along with ignition resistant residences and wide roads that offer numerous opportunities for TRA.

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Large portions of the ORRVORRV-ALT H community, but especially the interior areas, are considered TRAs. This is an important concept because it offers last-resort, temporary refuge of firefighters, and in a worst-case condition, residents. This approach would be consistent with Firescope California (2013) which indicates that firefighters must determine if a safe evacuation is appropriate and if not, to identify safe refuge for those who cannot be evacuated, including civilians.

Each of the site's residences that can be considered for TRA include the following features:

- Ignition Resistant Construction
- Modified and maintained landscapes around perimeter of community and throughout community site
- Wide roadways with fire hydrants
- Maintained landscapes
- Ember resistant vents
- Interior fire sprinklers

Because there is the possibility that evacuation of the community may be less safe than temporarily refuging on site, such as during a fast-moving, wind or slope driven fire that results in a short notice event and traffic congested roads, including temporary refuge within residences or elsewhere on site is considered a contingency plan for ORRV. This concept is considered a component of the "Ready, Set, Go!" model as it provides a broader level of "readiness" should the ability to execute an early evacuation be negated by fire, road congestion, or other unforeseen issues. This approach would be considered a last-resort contingency during wildfire with the primary focus being on early evacuation. The decision for evacuation or temporarily refuging on site will be made by responding law enforcement and/or fire personnel.

# 6.4 Social Aspects of Wildfire Evacuation

Orderly movement of people is the result of planning, training, education, and awareness, all of which are promoted in San Diego County and by SDCFA. Evacuation has been the standard term used for emergency movement of people and implies imminent or threatening danger. The term in this Conceptual Wildland Fire Evacuation Program, and under the "Ready, Set, Go!" concept, 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.

Citizen reactions may vary during an evacuation event, although several studies indicate that orderly movement during wildfire and other emergencies is not typically unmanageable. 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 residents (Quarantelli and Dynes 1977; Lindell and Perry 2004) as will occur within the ORRV. Further, in all but the rarest circumstances, evacuees will be receiving information from credible sources during an evacuation. Further, it would be anticipated that law enforcement and/or fire personnel would be on site to help direct traffic and would be viewed by evacuees as knowledgeable and credible. The importance of training these personnel cannot be understated and annual education and training regarding fire safety and evacuation events will be essential for successful future evacuations.

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## 6.4.1      Evacuation of Special Populations

Vogt (1990 and 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 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 may be concentrated in facilities, but is also widespread in terms of facility locations and those who live in residences. Special needs populations in ORRV include the hearing or visually impaired, foreign speaking, visitors passing through the area, temporary visitors such as day workers, and the non-ambulatory confined to residences either temporarily or permanently.

Tourists and temporary visitors may not have knowledge of the area's fire hazard, they may not know how to react in a fire emergency, and they may not understand what they are being told. Conversely, this segment of the population would typically be easier to evacuate quickly as they have no possession or pets that they would need to prepare. They can get in their cars and be directed out of the area.

The reasons why special needs populations may fail to respond to warnings to take protective actions is that they may require special transportation while others require different types of warnings or technologies to receive a warning. Some groups must rely on care-givers to hear the warning and respond.

**Otay Ranch Resort Village Approach**

The ORRV community will provide information to residents regarding notifying SDCFA, County OES and Health and Human Services of special needs residents so that accommodations for their notification (Accessible AlertSanDiego, CERT programs, or other), transportation or other special requirements can be provided during an emergency evacuation. Visitors and guests to the ORRV community will be advised of their options during an emergency by law enforcement or fire officials, residents whom they are visiting, commercial vendor staff, or HOA representatives, as appropriate.

## 6.4.2      Animal Evacuations

Animal evacuations present a host of challenges that may affect the overall successful movement of people and their possessions out of harm's way. For example, livestock owners do not always have the means to load and trailer their livestock out of the area. Further, most wildfire evacuation relief shelters or commercial lodging facilities do not allow people to bring in pets or other animals. Sorensen and Vogt (2006) indicate that an issue receiving increasing attention is what evacuees do with pets or other animals such as livestock when they leave their homes and whether having pets or animals impacts their decision to evacuate.

The ORRV community will prohibit horses and other livestock on site. Household pets will be a common occurrence.

**The ORRV Approach**

- Develop a registration for pet owners who cannot evacuate them without assistance so that volunteer organizations or individuals, can provide resources.
- The ORRV offers a potential roadside refuge for horse owners attempting to evacuate from the east. The community streets may offer a temporary safe space during a late notice fire evacuation.

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## 6.4.3 Re-Entry Procedures

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

Re-entry will be initiated by the Incident Commander/Unified Command of the Incident Management Team, with the support of the Director of Emergency Services, the OA EOC Director, and the Operations Section Chief at the OA EOC. In most cases the OA EOC will remain activated until full re-entry 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 re-entry procedures.

The Incident Commander will designate a Re-Entry Coordinator and the Operations Section Chief of the OA EOC will coordinate with and support the re-entry coordinator. The Re-Entry Coordinator is responsible for coordinating the re-entry procedures with all involved agencies and ensuring effective communication. Priorities for re-entry include:

The impacted areas must be thoroughly investigated to ensure it is safe for residents to return and normal operations have been restored. This assessment will include verification that:

The public will be notified of the re-entry status through the notification measures previously mentioned in this document, including www.SDCountyEmergency.com, SDEmergency App for smart phones, emergency broadcast radio, television, press releases, informational phone lines such as 2-1-1, community briefings, and informational updates at shelters.

Once evacuees are permitted to return, it is important that procedures are established to properly identify residents and critical support personnel, as well as ensure the legitimacy of contractors, insurance adjustors, and other personnel. Re-entry points should be staffed by law enforcement personnel.

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# 7    Limitations

This Conceptual Wildland Fire Evacuation Program has been developed based on wildfire and evacuation standards and the San Diego County Evacuation Annex Q (San Diego County 2014) and is specifically intended as a guide for evacuations for the ORRV community residents. This document provides basic evacuation information that will familiarize ORRV residents with the evacuation route options that may be available to them during an emergency. However, because emergencies requiring evacuation have many variables and must be evaluated on a case by case basis, this program shall be subservient to real-time law enforcement and fire personnel/ agencies' decision making and direction during an emergency requiring evacuation.

This Evacuation Program promotes the "Ready, Set, Go!" model, adopted by County OES, CAL FIRE, and many fire agencies statewide. The goal is to raise agency and citizen awareness of potential evacuation issues and get a majority of the public "Ready" by taking a proactive stance on preparedness, training drills, and visitor education, and evacuation planning efforts. The ORRV populace will be "Set" by closely monitoring the situation whenever fire weather occurs and/or when wildland fire occurs, and elevating pre-planned protocol activities and situation awareness. Lastly, officials will implement the program and mandate that populations "Go" by executing pre-planned evacuation procedures, with evacuations based on conservative decision points, as proposed in this evacuation program or when directed by fire and law enforcement personnel, whichever is more conservative. The preferred alternative will always 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. For example, should a fire occur with short notice and make evacuation from the community ill advised, a contingency plan for residents is available. This contingency would include moving people to pre-designated temporary refuge areas, including possibly within ORRV residences and other structures, until it is safe to evacuate or the threat has been mitigated.

Ultimately, it is the intent of this Evacuation Program to guide the implementation of evacuation procedure recommendations such that the process of evacuating people from the ORRV community is facilitated in an efficient manner and according to a pre-defined evacuation protocol as well as providing a contingency option of temporarily refuging, if evacuation is considered less safe.

The ORRV residents will be aware of and familiar with this evacuation program as the HOA will post it on its Website and provide reminders to residents on at least an annual basis. This educational outreach will result in a populace that understands the potential for evacuations and the routes and options that may be presented to them.

During extreme fire weather conditions, there are no guarantees that a given structure will not burn or that evacuations will be successful all of the time. Wildfires may occur in the area that could damage property or harm persons. However, successful implementation of the recommendations outlined in this Evacuation Program will provide for an informed populace regarding evacuations. The ORRV community is designed specifically to be resistant to wildfire ignition and perform as a fire adapted community, offering fire and law officials with additional options for resident safety than are available from less defensible communities.

This Conceptual Wildland Fire Evacuation Program does not provide a guarantee that all persons will be safe at all times because of the recommendations proposed. There are many variables that may influence overall safety. This document provides a summary for implementation of standard evacuation protocols, suggested roadway enhancements, and public outreach, which should result in reduced wildfire related risk and hazard. Even then, fire can compromise the procedures through various, unpredictable ways. The goal is to reduce the

likelihood that the system is compromised through implementation of the elements of this Program and regular occurring program maintenance and updates.

It is recommended that the evacuation process is carried out with a conservative approach to fire safety. This approach must include maintaining the ORRV community landscape, infrastructural, and ignition resistant construction components according to the appropriate standards and embracing a "Ready, Set, Go!" stance on evacuation. Accordingly, evacuation of the wildfire areas should occur according to emergency response direction and as soon as notice to evacuate is given, or sooner if conditions dictate, which may vary depending on many environmental and other factors. Fire is a dynamic and somewhat unpredictable occurrence and it is important for anyone living at the wildland-urban interface to educate themselves on practices that will improve safety.

# 8      References

Aguirre, D.B. 1994. *Planning warning evacuation, and search and rescue: A review of the social science research literature*. College Station, Tx. Texas A&M University, Hazard Reduction Recovery Center.

Collins, S. L. 2004. *Evaluation of Evacuation Planning in Wildland-Urban Interface Environments: Executive Analysis of Fire Service Operations in Emergency Management*. Applied Research project submitted to the National Fire Academy as part of the Executive Fire Officer Program. 44 pp.

Cova, T.J., P.E. Dennison, and F.A. Drews. 2011. "Modeling evacuate versus shelter-in-place decisions in wildfires." *Sustainability*, 3(10): 1662-1687. Published, 09/30/2011. http://www.mdpi.com/2071-1050/3/10/1662/.

Drabek, T.E. 1991. "Anticipating organizational evacuations: disaster planning by managers of tourist-oriented private firms." *International Journal of Mass Emergencies and Disasters*. 9, (2), 219-245.

Fitzpatrick, C. and D.S. Mileti. 1994. "Public Risk Communication." In *Disasters, Collective Behavior, and Social Organization*. Dynes R. R. and Tierney, K.J. (Eds). 1994. Newark University of Delaware Press, 71–98.

Gordon, R. 2006. "Acute Responses to Emergencies: findings and observations of 20 years in the field." *The Australian Journal of Emergency Management*, Vol. 21, No. 1, February 2006. 23 pp.

FEMA. 2008. Mass Evacuation Incident Annex. Federal Emergency Management Agency. 20 pp.

Firescope 2013. International Fire Chiefs Association. "Ready, Set, Go!" website link: http://wildlandfirersg.org/.

Lindell, M.K. and R.W. Perry. 2004. *Communicating Environmental Risk in Multiethnic Communities*. Thousand Oaks, California: Sage Publications.

Quarantelli, E.L. and R.R. Dynnes. 1977. "Response to social crisis and disasters." *Annual Review of Sociology*. 3, 23-49.

San Diego County. 2014. Annex Q Evacuation. Unified San Diego County Emergency Services Oraganizaton and County of San Diego Operational Area Emergency Operations Plan. 84 pp. September 2014.

Sorensen, J., and B.Vogt. 2006. *Interactive Emergency Evacuation Guidebook*. Prepared for the Protective Action IPT – Chemical Stockpile Emergency Preparedness Program.

Vogt, B. 1990. *Evacuation Of Institutionalized And Specialized Populations, ORNL/SUB-7685/1 & T23*. Oak Ridge, TN: Oak Ridge National Laboratory.

Vogt, B. 1991. "Issues in nursing home evacuations." *International Journal of Mass Emergencies and Disasters*, 9, 247-265.

Wolshon B. and E. Marchive. 2007. "Planning in the Urban Wildland Interface: Moving Residential Subdivision Traffic During Wildfires." *ASCE J. Urban Plann. Dev*. – Special Emergency Transportation Issue. 133(1) 73-81.

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# Appendix A

## "Ready, Set, Go!"
## Personal Wildland Fire Action Guide

# READY, SET, GO!

YOUR PERSONAL WILDLAND FIRE ACTION GUIDE

# READY, SET, GO!

## Wildland Fire Action Guide

### Saving Lives and Property through Advance Planning

F ire is a constant threat in San Diego County, and drought, high temperatures in the summer and fall, combined with seasonal Santa Ana winds can lead to explosive fire growth.

In San Diego County, first responders are busy year-round fighting fires. When large fires threaten our community, local, state, federal, tribal, military and other agencies work together to save lives, protect property, and help those impacted by the disaster.

First responders can't do it alone though. Residents, especially those in the Wildland Urban Interface, play a critical role in being prepared for wildfires before, during, and after the next one strikes.

This guide has been modeled off of the Ready, Set, Go! program that is used locally, throughout California, and across the nation. This version is customized for San Diego County, with important local tips and information.

Use this guide to get "Ready" by making your home hardened against wildfire by using defensible space and smart fire resistant building and design choices. Create and practice a family disaster plan that includes storing essentials like food and water supplies, knowing how you'll meet up or communicate with each other, where you can safely evacuate to, and other important information.

Visit ReadySanDiego.org to register with AlertSanDiego to receive emergency alerts via email, text, cell and landline phones, and download the SD Emergency App to get the latest emergency updates delivered to your Android/iOS devices.

Be "Set" and prepared to leave when in danger by monitoring local media, viewing disaster updates on SDCountyEmergency.com, talking with 2-1-1 San Diego, and taking important steps to harden your home even further when you decide to evacuate.

Finally, be able to "Go" and go early, both to keep you and your family safe, and to make it easier for first responders to get into your community.

This guide is a great place to start as you take action to protect your family home, and community.

Tony Mecham, County Fire Chief

## INSIDE

# Living in the Wildland Urban Interface and the Ember Zone

Ready, Set, Go! begins with a house that firefighters can defend

## Defensible Space Works!

If you live next to a naturally vegetated area, often called the Wildland Urban Interface, provide firefighters with 100 feet of defensible space to protect your home. The buffer zone you create by removing weeds, brush and thinning vegetation helps keep the fire away from your home and reduces the risk from flying embers. Firewise Communities and your local fire department's brush management guidelines provide valuable guidance on property enhancements.

A home within one mile of a natural area is in the Ember Zone. Wind-driven embers can attack your home. You and your home must be prepared well before a fire occurs. Ember fires can destroy homes or neighborhoods far from the actual flame front of the wildland fire.

# What is Defensible Space?



Defensible space is the required space between a structure and the wildland area that, under normal conditions, creates a sufficient buffer to slow or halt the spread of wildland fire to a structure. It protects the home from igniting due to direct flame or radiant heat. Defensible space is essential for structure survivability during wildland fire conditions. For more information about defensible space zones and preparedness techniques within each, visit ReadySanDiego.org/wildland-fire

## ZONE ONE

Zone One extends 50 feet from your home.

- Must be permanently irrigated to maintain green and healthy plants.

- Is primarily low-growing plant material, with the exception of trees. Plants shall be low-fuel and fire-resistive.

- Trim tree canopies regularly to remove dead wood and keep branches a minimum of 10 feet from structures, chimney outlets and other trees.

- Remove leaf litter (dry leaves/pine needles) from yard, roof and rain gutters.

- Relocate woodpiles and other combustible materials into Zone Two.

- Remove combustible material and vegetation from around and under decks.

- Remove or prune vegetation near windows.

- Remove "ladder fuels" (low-level vegetation that would allow the fire to spread from the ground to the tree canopy). Create a separation between low-level vegetation and tree branches by reducing the height of the vegetation and/or trimming low branches.

## ZONE TWO

Zone Two extends 50 to 100 feet from your home.

- Minimize the chance of fire jumping from plant to plant by removing dead material and removing or thinning vegetation seasonally. The minimum spacing between vegetation is three times the dimension of the plant.

- There should be no permanent irrigation in Zone Two.

- Remove "ladder fuels."

- Cut or mow annual grass down to a maximum height of 4 inches.

- Trim tree canopies regularly to keep branches a minimum of 10 feet from other trees.

# What is a Hardened Home?

Construction materials and the quality of the defensible space surrounding a home are what gives it the best chance to survive a wildland fire. Embers from a wildland fire can find the weak link in your home's fire protection scheme and gain the upper hand because of a small, overlooked or seemingly inconsequential factor. However, there are measures you can take to safeguard your home from wildland fire. While you may not be able to accomplish all the measures listed below, each will increase your home's, and possibly your family's, safety and survival during a wildland fire.
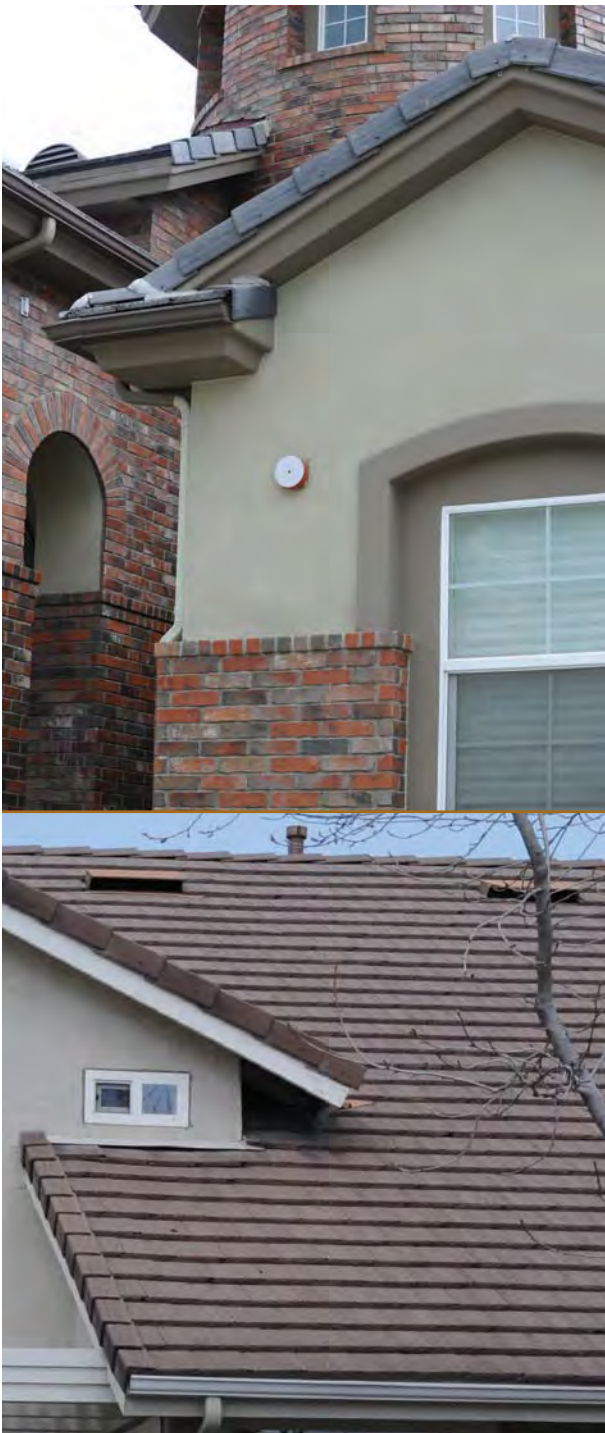
### ROOFS

Roofs are the most vulnerable surface where embers land because they can lodge and start a fire. Roof valleys, open ends of barrel tiles and rain gutters are all points of entry.

### EAVES

Embers can gather under open eaves and ignite exposed wood or other combustible material.

### VENTS

Embers can enter the attic or other concealed spaces through vents and ignite combustible materials. Vents in eaves and cornices are particularly vulnerable, as are any unscreened vents.

### WALLS

Combustible siding or other combustible or overlapping materials provide surfaces or crevices for embers to nestle and ignite.

### WINDOWS and DOORS

Embers can enter through open windows and gaps in doors, including garage doors. Plants or combustible storage near windows can ignite from embers and generate heat that can break windows and/or melt combustible frames.

### BALCONIES and DECKS

Embers can collect in or on combustible surfaces or the undersides of decks and balconies, ignite the material and enter the home through walls or windows.

To harden your home further, consider protecting your home with a residential fire sprinkler system. In addition to extinguishing a fire started by an ember that enters your home, it also protects you and your family year-round from any fire that may start in your home.

# Tour a Wildland Fire Prepared Home

**Home Site and Yard:** Ensure you have at least a 100-foot radius of defensible space (thinned vegetation) around your home. Note that even more clearance may be needed for homes in severe hazard areas. This means looking beyond what you own to determine the impact a common slope or neighbors' yard will have on your property during a wildland fire.

Cut and remove dry weeds and grass before noon when temperatures are cooler to reduce the chance of sparking a fire.

Landscape with fire-resistant plants that have a high moisture content and are low-growing.

Keep woodpiles, propane tanks and combustible materials away from your home and other structures such as garages, barns and sheds.

Ensure that trees are far away from power lines.

**Inside:** Keep working fire extinguishers on hand. Install smoke alarms and carbon monoxide detectors on each level of your home and near bedrooms. Test them monthly and change the batteries twice a year.

**Address:** Make sure your address is clearly visible from the road.

**Roof:** Your roof is the most vulnerable part of your home because it can easily catch fire from wind-blown embers. Homes with wood-shake or shingle roofs are at high risk of being destroyed during a wildland fire.

Build your roof or re-roof with fire-resistant materials such as composition, metal or tile. Block any spaces between roof decking and covering to prevent ember intrusion.

Clear pine needles, leaves and other debris from your roof and gutters.

Cut any tree branches within ten feet of your roof.

**Vents:** Vents on homes are particularly vulnerable to flying embers.

All vent openings should be covered with ⅛ inch metal mesh. Do not use fiberglass or plastic mesh because they can melt and burn.

Attic vents in eaves or cornices should be baffled or otherwise protected to prevent ember intrusion (mesh is not enough).

**Windows:** Heat from a wildland fire can cause windows to break even before the home ignites. This allows burning embers to enter and start internal fires. Single-paned and large windows are particularly vulnerable.

Install dual-paned windows with the exterior pane of tempered glass to reduce the chance of breakage in a fire.

Limit the size and number of windows in your home that face large areas of vegetation.

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

Build or remodel with fire-resistant building materials, such as brick, cement-fiber board, masonry or stucco.

Be sure to extend materials from foundation to roof.

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**Garage:** Have a fire extinguisher and tools such as a shovel, rake, bucket and hoe available for fire emergencies.

Install a solid door with self-closing hinges between living areas and the garage. Install weather stripping around and under door to prevent ember intrusion.

Store all combustibles and flammable liquids away from ignition sources.

**Driveways and Access Roads:** Driveways should be designed to allow fire and emergency vehicles and equipment to reach your house.

Access roads should have a minimum 10-foot clearance on either side of the traveled section of the roadway and should allow for two-way traffic.

Ensure that all gates open inward and are wide enough to accommodate emergency equipment.

Trim trees and shrubs overhanging the road to a minimum of 13½ feet to allow emergency vehicles to pass.

**Non-Combustible Fencing:** Make sure to use non-combustible fencing to protect your home during a wildland fire.

**Non-Combustible Boxed In Eaves:** Box in eaves with non-combustible materials to prevent accumulation of embers.

**Raingutters:** Screen or enclose rain gutters to prevent accumulation of plant debris.

**Water Supply:** Have multiple garden hoses that are long enough to reach any area of your home and other structures on your property.

If you have a pool or well, consider a pump.

**Decks and Balconies:** Decks, balconies, and other floor projections and attachments must be of one – or a combination – of the following:

- non-combustible construction (e.g., concrete, metal)
- protected by one-hour fire-resistive material (e.g., stucco, cement-fiber board, ceramic tile, deck surface listed by approved evaluation service as one-hour-rated or Class A roof covering)
- approved fire-retardant treated materials (factory-applied fire retardant, pressure-treated lumber, listed for exterior use, installed per listing)
- heavy timber construction (minimum 4x8 joists, 4x10 or 6x8 beams, 3x ledgers, and 6x6 columns/posts)
- alternative decking materials per County Building Code 92.1.709A.1.4

**Chimney:** Cover your chimney and stovepipe outlets with a non-flammable screen of ½ inch wire mesh or smaller to prevent embers from escaping and igniting a fire.

Make sure that your chimney is at least 10 feet away from any tree branches.

7

# READY, SET, GO!

## Create Your Own Action Guide

Now that you've done everything you can to protect your house, its time to prepare your family. Your **Wildland Fire Action Guide** must be prepared well in advance of a fire. Include *all* members of your household. Use these checklists to help you gain a situational awareness of the threat and to prepare your Wildland Fire Action Guide. For more information on property and home preparedness before a fire threat, review the preparedness checklist on the Firewise Communities website, www.firewise.org

# Ready – Preparing for the Fire Threat

San Diego County Office of Emergency Services

**Family Disaster Plan and Personal Survival Guide**
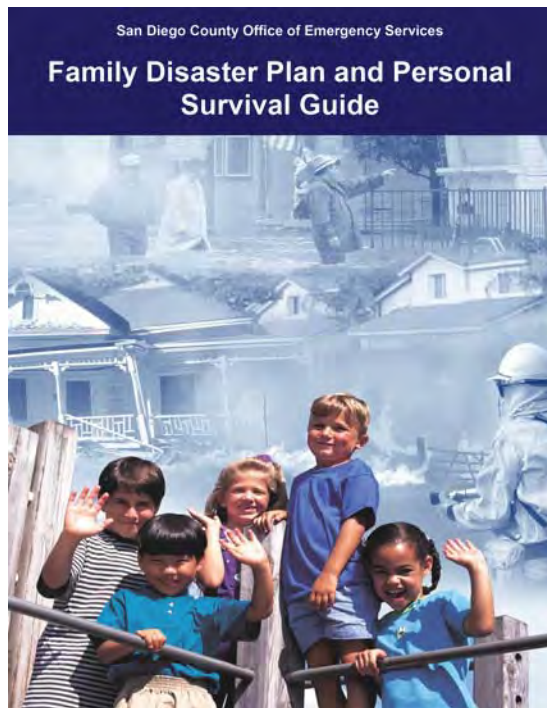
For a more extensive survival guide, please visit: ReadySanDiego.org/make-a-plan

- ☐ Create an in-depth family disaster plan at ReadySanDiego.org
- ☐ Register to receive emergency notifications on phone, cell, text, and email for your area. Sign up at AlertSanDiego.org
- ☐ Have fire extinguishers on hand
- ☐ Ensure that your family knows the location of your utility shut-off controls
- ☐ Plan and practice several different evacuation routes
- ☐ Designate an emergency meeting location
- ☐ Assemble an emergency supply kit (water, food, medicine)
- ☐ Maintain a list of emergency contact numbers
- ☐ Have a portable radio

**San Diego County**

All the information in your hands when you need it! Get the SD Emergency App for Android and iOS!

**2-1-1 SAN DIEGO DISASTER RESPONSE**

Find out how to volunteer, and get the most up-to-date disaster information! Call 2-1-1

**ReadySanDiego.org**
Prepare. Plan. Stay Informed.

Visit ReadySanDiego.org for all your preparedness needs! Get a plan, get the app, get informed!

# Set – Situational Awareness when a Fire Starts

- ☐ Alert family and neighbors

- ☐ Ensure that you have your emergency supply kit

- ☐ Stay tuned to media, visit: SDCountyEmergency.com

- ☐ Close all windows and doors, leaving them unlocked

- ☐ Remove flammable window shades and curtains

- ☐ Move furniture to the center of the room

- ☐ Turn off pilot lights and air conditioning

- ☐ Leave inside and outside lights on so firefighters can see your house through smoke

- ☐ Bring patio furniture, children's toys, etc. inside

- ☐ Turn off propane tanks and other gas at the meter

- ☐ Don't leave sprinklers on or water running

- ☐ Back your car into the driveway to facilitate a quick departure

- ☐ Cover attic and ground vents with pre-cut plywood or commercial covers

- ☐ Call 2-1-1 for all non-emergency inquiries or visit: 211SanDiego.org

**IF YOU ARE TRAPPED: SURVIVAL TIPS**

- ☐ Call 9-1-1

- ☐ Remain inside your home until the fire passes

- ☐ Shelter away from outside walls

- ☐ Bring garden hoses inside the house so embers don't destroy them

- ☐ Patrol inside your home for spot fires and extinguish any you find

- ☐ Wear long sleeves and long pants made of natural fibers such as cotton

- ☐ Stay hydrated

- ☐ Ensure you can exit the home if it catches fire (remember if it is hot inside the house, it is four to five times hotter outside)

- ☐ Fill sinks and tubs for an emergency water supply

- ☐ Place wet towels under doors to keep smoke and embers out

- ☐ After the fire has passed, check your home and roof. Extinguish any fires, sparks or embers

- ☐ Check inside the attic for hidden embers

- ☐ If there are fires that you cannot extinguish with a small amount of water or in a short period of time, call 9-1-1

# Go – Leave Early

By leaving early, you give your family the best chance of surviving a wildland fire. You also help firefighters by keeping roads clear of congestion.

## WHEN TO LEAVE

Do not wait to be advised to leave if there is a possible threat to your home or evacuation route. Leave early enough to avoid being caught in fire, smoke or road congestion. If you are advised to leave by local authorities, do not hesitate!

## MEETING LOCATION

Travel to a predetermined location. It should be a low-risk area, such as a well-prepared neighbor or relative's house, a shelter or motel, etc.

## HOW TO GET THERE

Know several travel routes out of your community in case one route is blocked by the fire or by emergency vehicles.

## WHAT TO TAKE

Take your emergency supply kit containing your prepared family and pet's necessary items.



The County of San Diego Office of Emergency Services has a free, printable, All Hazards Family Disaster Plan and Survival Guide at: ReadySanDiego.org/make-a-plan

Here is a brief checklist to get your emergency supply kit started.

- ☐ Three-day supply of water (one gallon per person per day)
- ☐ Non-perishable food for all family members and pets (three-day supply)
- ☐ First aid kit
- ☐ Flashlight, battery-powered radio, and extra batteries
- ☐ An extra set of car keys, credit cards and cash or traveler's checks
- ☐ Sanitation supplies
- ☐ Extra eyeglasses or contact lenses
- ☐ Important family documents and contact numbers
- ☐ Map marked with evacuation routes
- ☐ Prescriptions or special medications
- ☐ Family photos, valuable and other irreplace-able items that are easy to carry
- ☐ Personal computers, hard drives, disks and flash drivers
- ☐ Chargers for electronic communication de-vices

Note: Keep a pair of old shoes and a flashlight handy in case of a sudden evacuation at night.

## Why can't I immediately return home?

Although a fire has been contained or extinguished there are post-hazard concerns that must be addressed before re-entry into the impacted area(s) may be permitted. Priorities for re-entry include:
1. Safety
2. Security
3. Damage Assessment
4. Restoration of Services
5. Communication of Information

The impacted areas must be thoroughly investigated to ensure it is safe for residents to return and that services have been restored. You will be notified of the re-entry status through: *emergency broadcast radio, television, internet www.SDCountyEmergency.com, 2-1-1, community briefings, and informational updates at shelters.*

# Returning Home

After a disaster, **DO NOT attempt to return to your home or cross any barriers or caution tape without permission from law enforcement officials**. When returning home, be cautious in your neighborhood and watch out for:
- Emergency personnel still operating in the area.
- Power lines lying on the ground.
- Small fires that may flare up without warning.
- Ash pits, which are holes filled with hot ash created by burned trees.
- Damaged buildings or debris (including glass, nails, etc.)
- Charred power poles and trees that may be unstable and fall.

**Take the following precautions when attempting to enter your house:**

| POWER: | GAS: |
|---|---|
| *If a person or piece of equipment comes in contact with an electric line, or if a line is down or broken.*<br><br>☐ **Call 9-1-1**.<br>☐ If you see an electrical fire, fight it with a dry CO(2) extinguisher.<br>☐ If possible, shut off the power.<br>☐ **Don't touch the person or any equipment involved**. The line may still be energized and dangerous.<br>☐ Freeing someone from energized power lines or equipment should only be attempted by a qualified SDG&E employee or a trained rescuer such as a fire fighter.<br>☐ Always assume that power lines are energized.<br>☐ Do not smoke or attempt to light anything. Use a **flashlight instead**. | ☐ Check to see if your gas utility is working properly. If you smell gas, leave your home immediately, and call (24/7) SDG&E at 1-800-411-7343.<br>☐ **DO NOT** light a match, candle, or cigarette.<br>☐ **DO NOT** turn electrical devices on or off, including light switches.<br>☐ **DO NOT** start an engine or use any device, including a telephone, which could cause a spark.<br>☐ **DO NOT** attempt to control the leak or repair the damaged pipe or meter. Do not use or turn off any equipment that could cause a spark. |
| ☐ Check for burning embers on roofs, gutters, porches, attic, crawlspace, and throughout your property for several days after a wildfire. | ☐ Check for any structural damage before entering your home. If you are uncertain, have your home professionally inspected before returning. |
| ☐ Do not smoke or attempt to light anything as there could be flammables or leaking gases. Use a flashlight instead. | ☐ Open windows and doors to allow airflow, which will help dry out of any water damage areas. |

San Diego Gas & Electric can be reached at 1-800-411-7343 or SDGE.com/customer-service/contact-us
For more information on damage assessment visit the County's Recovery page at SDCountyRecovery.com.

# Fire Action Guide

Out of Area Contact: _____ Phone #: _____

Work: _____ School: _____ Other: _____

Evacuation Routes: _____

_____

_____

Meeting Location: _____ Location of Supply Kit: _____

Information: **SDCountyEmergency.com** **211SanDiego.org** **SD Emergency App**

**You can create a more in-depth plan for free at: ReadySanDiego.org/make-a-plan**

## READY, SET, GO!

Safety Checklist
Tips To Improve Family and Property Survival During A Wildland Fire

### Home

| | Yes | No |
|---|---|---|
| 1. Does your home have a metal, composition, tile or other non-combustible roof with capped ends and covered fascia? | ☐ | ☐ |
| 2. Are the rain gutters and roof free of leaves, needles and branches? | ☐ | ☐ |
| 3. Are all vent openings screened with $1/8$ inch non-combustible, corrosion-resistant metal mesh? | ☐ | ☐ |
| 4. Are approved spark arrestors on chimneys? | ☐ | ☐ |
| 5. Does the house have non-combustible siding material? | ☐ | ☐ |
| 6. Are the eaves "boxed in" and the decks enclosed? | ☐ | ☐ |
| 7. Are the windows dual-paned or tempered glass? | ☐ | ☐ |
| 8. Are decks, porches and similar areas made of non-combustible material and are they free of easily combustible material? | ☐ | ☐ |
| 9. Is all firewood at least 30 feet from the house? | ☐ | ☐ |

### Defensible Space

| | Yes | No |
|---|---|---|
| 1. Has dead vegetation been removed from the defensible space zones around your home? (Consider adding distance due to slope of property.) | ☐ | ☐ |
| 2. Is the required separation between shrubs maintained? | ☐ | ☐ |
| 3. Have ladder fuels been removed? | ☐ | ☐ |
| 4. Is there a clean and green area extending at least 50 feet from the house? | ☐ | ☐ |
| 5. Is there a non-combustible area within five feet of the house? | ☐ | ☐ |
| 6. Is the required separation between trees and crowns maintained? | ☐ | ☐ |

### Emergency Access

| | Yes | No |
|---|---|---|
| 1. Is the home address plainly legible and visible from the street? | ☐ | ☐ |
| 2. Are trees and shrubs overhanging the street trimmed to $15\frac{1}{2}$ feet? | ☐ | ☐ |
| 3. If your home has a long driveway, does it have a suitable turnaround area? | ☐ | ☐ |

# Appendices
# B-1 through B-4

Family Emergency Readiness Information
and Planning Aids

## ✓ Additional Items to Consider Adding to an Emergency Supply Kit:

☐ Prescription medications and glasses

☐ Infant formula and diapers

☐ Pet food and extra water for your pet

☐ Important family documents such as copies of insurance policies, identification and bank account records in a waterproof, portable container

☐ Cash or traveler's checks and change

☐ Emergency reference material such as a first aid book or information from www.ready.gov

☐ Sleeping bag or warm blanket for each person. Consider additional bedding if you live in a cold-weather climate.

☐ Complete change of clothing including a long sleeved shirt, long pants and sturdy shoes. Consider additional clothing if you live in a cold-weather climate.

☐ Household chlorine bleach and medicine dropper – When diluted nine parts water to one part bleach, bleach can be used as a disinfectant. Or in an emergency, you can use it to treat water by using 16 drops of regular household liquid bleach per gallon of water. Do not use scented, color safe or bleaches with added cleaners.

☐ Fire Extinguisher

☐ Matches in a waterproof container

☐ Feminine supplies and personal hygiene items

☐ Mess kits, paper cups, plates and plastic utensils, paper towels

☐ Paper and pencil

☐ Books, games, puzzles or other activities for children

# Ready
### Prepare. Plan. Stay Informed. ®

# Emergency Supply List

## FEMA

www.ready.gov

## Recommended Items to Include in a Basic Emergency Supply Kit:

- [ ] Water, one gallon of water per person per day for at least three days, for drinking and sanitation

- [ ] Food, at least a three-day supply of non-perishable food

- [ ] Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both

- [ ] Flashlight and extra batteries

- [ ] First aid kit

- [ ] Whistle to signal for help

- [ ] Dust mask, to help filter contaminated air and plastic sheeting and duct tape to shelter-in-place

- [ ] Moist towelettes, garbage bags and plastic ties for personal sanitation

- [ ] Wrench or pliers to turn off utilities

- [ ] Can opener for food (if kit contains canned food)

- [ ] Local maps

**Through its *Ready* Campaign,** the Federal Emergency Management Agency educates and empowers Americans to take some simple steps to prepare for and respond to potential emergencies, including natural disasters and terrorist attacks. *Ready* asks individuals to do three key things: get an emergency supply kit, make a family emergency plan, and be informed about the different types of emergencies that could occur and their appropriate responses.

All Americans should have some basic supplies on hand in order to survive for at least three days if an emergency occurs. Following is a listing of some basic items that every emergency supply kit should include. However, it is important that individuals review this list and consider where they live and the unique needs of their family in order to create an emergency supply kit that will meet these needs. Individuals should also consider having at least two emergency supply kits, one full kit at home and smaller portable kits in their workplace, vehicle or other places they spend time.

Ready.

U.S. DEPARTMENT OF HOMELAND SECURITY

FEMA

**Federal Emergency Management Agency**
Washington, DC 20472

# BE SMART. TAKE PART. CREATE YOUR FAMILY EMERGENCY COMMUNICATION PLAN

**Join with others to prepare for emergencies and participate in America's PrepareAthon! | ready.gov/prepare**

Creating your *Family Emergency Communication Plan* starts with one simple question: "What if?"

"What if something happens and I'm not with my family?" "Will I be able to reach them?" "How will I know they are safe?" "How can I let them know I'm OK?" During a disaster, you will need to send and receive information from your family.

Communication networks, such as mobile phones and computers, could be unreliable during disasters, and electricity could be disrupted. Planning in advance will help ensure that all the members of your household—including children and people with disabilities and others with access and functional needs, as well as outside caregivers—know how to reach each other and where to meet up in an emergency. Planning starts with three easy steps:

## 1. COLLECT.
Create a paper copy of the contact information for your family and other important people/offices, such as medical facilities, doctors, schools, or service providers.

## 2. SHARE.
Make sure everyone carries a copy in his or her backpack, purse, or wallet. If you complete your *Family Emergency Communication Plan* online at ready.gov/make-a-plan, you can print it onto a wallet-sized card. You should also post a copy in a central location in your home, such as your refrigerator or family bulletin board.

## 3. PRACTICE.
Have regular household meetings to review and practice your plan.

### TEXT IS BEST!
If you are using a mobile phone, a text message may get through when a phone call will not. This is because a text message requires far less bandwidth than a phone call. Text messages may also save and then send automatically as soon as capacity becomes available.

**The following sections will guide you through the process to create and practice your *Family Emergency Communication Plan*.**



## COLLECT
### INFORMATION

### HOUSEHOLD INFORMATION

Write down phone numbers and email addresses for everyone in your household. Having this important information written down will help you reconnect with others in case you don't have your mobile device or computer with you or if the battery runs down. If you have a household member(s) who is Deaf or hard of hearing, or who has a speech disability and uses traditional or video relay service (VRS), include information on how to connect through relay services on a landline phone, mobile device, or computer.

### SCHOOL, CHILDCARE, CAREGIVER, AND WORKPLACE EMERGENCY PLANS

Because a disaster can strike during school or work hours, you need to know their emergency response plans and how to stay informed. Discuss these plans with children, and let them know who could pick them up in an emergency. Make sure your household members with phones are signed up for alerts and warnings from their school, workplace, and/or local government. To find out more about how to sign up, see *Be Smart. Know Your Alerts and Warnings* at http://1.usa.gov/1BDloze. For children without mobile phones, make sure they know to follow instructions from a responsible adult, such as a teacher or principal.

### OUT-OF-TOWN CONTACT

It is also important to identify someone outside of your community or State who can act as a central point of contact to help your household reconnect. In a disaster, it may be easier to make a long-distance phone call than to call across town because local phone lines can be jammed.

### EMERGENCY MEETING PLACES

Decide on safe, familiar places where your family can go for protection or to reunite. Make sure these locations are accessible for household members with disabilities or access and functional needs. If you have pets or service animals, think about animal-friendly locations. Identify the following places:

☐ *Indoor*: If you live in an area where tornadoes, hurricanes, or other high-wind storms can happen, make sure everyone knows where to go for protection. This could be a small, interior, windowless room, such as a closet or bathroom, on the lowest level of a sturdy building, or a tornado safe room or storm shelter.

☐ *In your neighborhood*: This is a place in your neighborhood where your household members will meet if there is a fire or other emergency and you need to leave your home. The meeting place could be a big tree, a mailbox at the end of the driveway, or a neighbor's house.

☐ *Outside of your neighborhood*: This is a place where your family will meet if a disaster happens when you're not at home and you can't get back to your home. This could be a library, community center, house of worship, or family friend's home.

☐ *Outside of your town or city*: Having an out-of-town meeting place can help you reunite if a disaster happens and:

- You cannot get home or to your out-of-neighborhood meeting place; or
- Your family is not together and your community is instructed to evacuate the area.

This meeting place could be the home of a relative or family friend. Make sure everyone knows the address of the meeting place and discuss ways you would get there.

## OTHER IMPORTANT NUMBERS AND INFORMATION

You should also write down phone numbers for emergency services, utilities, service providers, medical providers, veterinarians, insurance companies, and other services.

**SHARE**

**MAKE SURE EVERYONE HAS THE INFORMATION**

☐ Make copies of your *Family Emergency Communication Plan* for each member of the household to carry in his or her wallet, backpack, or purse. Post a copy in a central place at home. Regularly check to make sure your household members are carrying their plan with them.

☐ Enter household and emergency contact information into all household members' mobile phones or devices.

☐ Store at least one emergency contact under the name "In Case of Emergency" or "ICE" for all mobile phones and devices. This will help someone identify your emergency contact if needed. Inform your emergency contact of any medical issues or other requirements you may have.

☐ Create a group list on all mobile phones and devices of the people you would need to communicate with if there was an emergency or disaster.

☐ Make sure all household members and your out-of-town contact know how to text if they have a mobile phone or device, or know alternative ways to communicate if they are unable to text.

☐ Read *Be Smart. Know Your Alerts and Warnings* at http://1.usa.gov/1BDloze and sign up to receive emergency information.

**NOW IT'S TIME TO PRACTICE!**

Once you have completed your *Family Emergency Communication Plan*, made copies for all the members of your household, and discussed it, it's time to practice!

Here are some ideas for practicing your plan:

☐ Practice texting and calling. Have each person practice sending a text message or calling your out-of-town contact and sending a group text to your mobile phone group list.

☐ Discuss what information you should send by text. You will want to let others know you are safe and where you are. Short messages like "I'm OK. At library" are good.

☐ Talk about who will be the lead person to send out information about the designated meeting place for the household.

☐ Practice gathering all household members at your indoor and neighborhood emergency meeting places. Talk about how each person would get to the identified out-of-neighborhood and out-of-town meeting places. Discuss all modes of transportation, such as public transportation, rail, and para-transit for all family members, including people with disabilities and others with access and functional needs.

☐ Regularly have conversations with household members and friends about the plan, such as whom and how to text or call, and where to go.

☐ To show why it's important to keep phone numbers written down, challenge your household members to recite important phone numbers from memory— now ask them to think about doing this in the event of an emergency.

☐ Make sure everyone, including children, knows how and when to call 911 for help. You should only call 911 when there is a life-threatening emergency.

☐ Review, update, and practice your *Family Emergency Communication Plan* at least once a year, or whenever any of your information changes.

To help start the conversation or remind your family why you are taking steps to prepare and practice, you may want to watch the 4-minute video, *It Started Like Any Other Day*, about families who have experienced disaster, at www.youtube.com/watch?v=w_omgt3MEBs. Click on the closed captioning (CC) icon on the lower right to turn on the captioning.

After you practice, talk about how it went. What worked well? What can be improved? What information, if any, needs to be updated? If you make updates, remember to print new copies of the plan for everyone.

## OTHER IMPORTANT TIPS FOR COMMUNICATING IN DISASTERS[1]

☐ Text is best when using a mobile phone, but if you make a phone call, keep it brief and convey only vital information to emergency personnel and/or family or household members. This will minimize network congestion, free up space on the network for emergency communications, and conserve battery power. Wait 10 seconds before redialing a number. If you redial too quickly, the data from the handset to the cell sites do not have enough time to clear before you've re-sent the same data. This contributes to a clogged network.

☐ Conserve your mobile phone battery by reducing the brightness of your screen, placing your phone in airplane mode, and closing apps you do not need. Limit watching videos and playing video games to help reduce network congestion.

☐ Keep charged batteries, a car phone charger, and a solar charger available for backup power for your mobile phone, teletypewriters (TTYs), amplified phones, and caption phones. If you charge your phone in your car, be sure the car is in a well-ventilated area (e.g., not in a closed garage) to avoid life-threatening carbon monoxide poisoning.

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[1] Federal Communications Commission, Public Safety and Homeland Security Bureau. (n.d.) *Tips for communicating in an emergency.* Retrieved from http://transition.fcc.gov/pshs/emergency-information/tips.html

- [ ] If driving, do not text, read texts, or make a call without a hands-free device.

- [ ] Maintain a household landline and analog phone (with battery backup if it has a cordless receiver) that can be used when mobile phone service is unavailable. Those who are Deaf or hard of hearing, or who have speech disabilities and use devices and services that depend on digital technology (e.g., VRS, Internet Protocol [IP] Relay, or captioning) should have an analog phone (e.g., TTY, amplified phone, or caption phone) with battery backup in case Internet or mobile service is down.

- [ ] If you evacuate and have a call-forwarding feature on your home phone, forward your home phone number to your mobile phone number.

- [ ] Use the Internet to communicate by email, Twitter, Facebook, and other social media networks. These communication channels allow you to share information quickly with a widespread audience or to find out if loved ones are OK. The Internet can also be used for telephone calls through Voice over Internet Protocol. For those who are Deaf or hard of hearing, or who have speech disabilities, you can make calls through your IP Relay provider.

- [ ] If you do not have a mobile phone, keep a prepaid phone card to use if needed during or after a disaster.

- [ ] Use a pay phone if available. It may have less congestion because these phones don't rely on electricity or mobile networks. In some public places, you may be able to find a TTY that can be used by those who are Deaf or hard of hearing, or who have speech disabilities.

**America's PrepareAthon! is a grassroots campaign for action to get more people prepared for emergencies. Make your actions count at ready.gov/prepare.**

*The reader recognizes that the Federal Government provides links and informational data on various disaster preparedness resources and events and does not endorse any non-Federal events, entities, organizations, services, or products.*

## 10 WAYS TO PARTICIPATE IN AMERICA'S PrepareAthon!℠

| | | | | |
|---|---|---|---|---|
| **Access Alerts and Warnings** | **Test Communication Plans** | **Assemble or Update Supplies** | **Drill or Practice Emergency Response** | **Participate in a Class, Training, or Discussion** |
| **Plan with Neighbors** | **Conduct an Exercise** | **Make Property Safer** | **Document and Insure Property** | **Safeguard Documents** |

# FAMILY EMERGENCY COMMUNICATION PLAN

**HOUSEHOLD INFORMATION**

Home #: ....................................................

Address:..................................................

Name: .................... Mobile #: ....................

Other # or social media: ..............................

Email: ....................................................

Important medical or other information: ..........

.............................................................

Name: .................... Mobile #: ....................

Other # or social media: ..............................

Email: ....................................................

Important medical or other information: ..........

.............................................................

Name: .................... Mobile #: ....................

Other # or social media: ..............................

Email: ....................................................

Important medical or other information: ..........

.............................................................

Name: .................... Mobile #: ....................

Other # or social media: ..............................

Email: ....................................................

Important medical or other information: ..........

.............................................................

**SCHOOL, CHILDCARE, CAREGIVER, AND WORKPLACE EMERGENCY PLANS**

Name: ....................................................

Address:..................................................

Emergency/Hotline #: .................................

Website: ..................................................

Emergency Plan/Pick-Up: ............................

Name: ....................................................

Address:.................................................

Emergency/Hotline #: ..............................

Website: ...............................................

Emergency Plan/Pick-Up: ........................

Name: ....................................................

Address:.................................................

Emergency/Hotline #: ..............................

Website: ...............................................

Emergency Plan/Pick-Up: ........................

Name: ....................................................

Address:.................................................

Emergency/Hotline #: ..............................

Website: ...............................................

Emergency Plan/Pick-Up: ........................

**IN CASE OF EMERGENCY (ICE) CONTACT**

Name: .................... Mobile #: ......................

Home #: .................Email: ..........................

Address: ................................................

**OUT-OF-TOWN CONTACT**

Name: .................... Mobile #: ......................

Home #: .................Email: ..........................

Address: ................................................

**EMERGENCY MEETING PLACES**

Indoor: ..................................................

Instructions: ..........................................

Neighborhood: .......................................

Instructions: ..........................................

Out-of-Neighborhood: .............................

Address:.................................................

Instructions: ..........................................

Out-of-Town: .........................................

Address:.................................................

Instructions: ..........................................

America's PrepareAthon!

Ready

Police: ................. Dial 911 or #: ...................

Fire: ................... Dial 911 or #: ...................

Poison Control: ......................#: ...................

Doctor: ..................................#: ...................

Doctor: ..................................#: ...................

Pediatrician: ...........................#: ...................

Dentist: ..................................#: ...................

Hospital/Clinic: ......................#: ...................

Pharmacy: ..............................#: ...................

Medical Insurance: .................#: ...................

Policy #: ...............................................

Medical Insurance: .................#: ...................

Policy #: ...............................................

Homeowner/Rental Insurance: .......................

#: ...............................................

Policy #: ...............................................

Flood Insurance: ....................#: ...................

Policy #: ...............................................

Veterinarian: ...........................#: ...................

Kennel: ..................................#: ...................

Electric Company: ..................#: ...................

Gas Company: ......................#: ...................

Water Company: ....................#: ...................

Alternate/Accessible Transportation: ...............

#: ...............................................

Other: ...................................#: ...................

Other: ...................................#: ...................

Other: ...................................#: ...................

## AMERICA'S PrepareAthon! Ready
BE SMART. TAKE PART. PREPARE.

............................................
*Write your family's name above*

**Family Emergency Communication Plan**

## HOUSEHOLD INFORMATION

Home #: ...................................................................

Address: ...................................................................

Name: .................................................Mobile #: .........................................

Other # or social media: ........................... Email: ....................................

Important medical or other information: ......................................................

Name: .................................................Mobile #: .........................................

Other # or social media: ........................... Email: ....................................

Important medical or other information .....................................................

Name: .................................................Mobile #: .........................................

Other # or social media: ........................... Email: ....................................

Important medical or other information: ......................................................

Name: .................................................Mobile #: .........................................

Other # or social media: ........................... Email: ....................................

Important medical or other information: ......................................................

## SCHOOL, CHILDCARE , CAREGIVER, AND WORKPLACE EMERGENCY PLANS

Name: ...................................................................

Address: ...................................................................

Emergency/Hotline #: ........................... Website: ...................................

Emergency Plan/Pick-Up: .........................................................................

Name: ...................................................................

Address: ...................................................................

Emergency/Hotline #: ........................... Website: ...................................

Emergency Plan/Pick-Up: .........................................................................

Name: ...................................................................

Address: ...................................................................

Emergency/Hotline #: ...............................Website: ...................................

Emergency Plan/Pick-Up: .........................................................................

Name: ...................................................................

Address: ...................................................................

Emergency/Hotline #: ...............................Website: ...................................

Emergency Plan/Pick-Up: .........................................................................

## IN CASE OF EMERGENCY (ICE) CONTACT

Name: ........................................... Mobile #: ......................................

Home #: ................................... Email: ...............................................

Address: ...................................................................

## OUT-OF-TOWN CONTACT

Name: ........................................... Mobile #: ......................................

Home #: ................................... Email: ...............................................

Address: ...................................................................

## EMERGENCY MEETING PLACES

Indoor: ...................................................................

Instructions: ...................................................................

...................................................................

Neighborhood: ...................................................................

Instructions: ...................................................................

...................................................................

Out-of-Neighborhood: ...................................................................

Address: ...................................................................

Instructions: ...................................................................

...................................................................

Out-of-Town: ...................................................................

Address: ...................................................................

Instructions: ...................................................................

...................................................................

## IMPORTANT NUMBERS OR INFORMATION

Police: ...........................................Dial 911 or #: ...................................

Fire: ...........................................Dial 911 or #: ...................................

Poison Control: ...............................................#: ...................................

Doctor: ...............................................#: ...................................

Doctor: ...............................................#: ...................................

Pediatrician: ...............................................#: ...................................

Dentist: ...............................................#: ...................................

Medical Insurance: ...............................................#: ...................................

Policy #: ...................................................................

Medical Insurance: ...............................................#: ...................................

Policy #: ...................................................................

Hospital/Clinic: ...............................................#: ...................................

Pharmacy: ...............................................#: ...................................

Homeowner/Rental Insurance: ......................#: ...................................

Policy #: ...................................................................

Flood Insurance: ...............................................#: ...................................

Policy #: ...................................................................

Veterinarian: ...............................................#: ...................................

Kennel: ...............................................#: ...................................

Electric Company: ...............................................#: ...................................

Gas Company: ...............................................#: ...................................

Water Company: ...............................................#: ...................................

Alternate/Accessible Transportation: ......................#: ...................................

Other: ...................................................................

Other: ...................................................................

FOLD HERE

FOLD HERE

FOLD HERE

FOLD HERE

**American Red Cross**

# Family Disaster Plan

**Family Last Name(s) or Household Address:**  **Date:**

_____  _____

**Family Member/Household Contact Info (If needed, additional space is provided in #10 below):**

Name                          Home Phone            Cell Phone            Email:

_____    _____    _____    _____

_____    _____    _____    _____

_____    _____    _____    _____

_____    _____    _____    _____

**Pet(s) Info:**

Name:                         Type:                 Color:                Registration #:

_____    _____    _____    _____

_____    _____    _____    _____

**Plan of Action**

1. The disasters most likely to affect our household are:

_____

_____

_____

2. What are the escape routes from our home?

_____

_____

3.  If separated during an emergency, what is our meeting place near our home?

_____

4.  If we cannot return home or are asked to evacuate, what is our meeting place outside of our neighborhood?

_____

What is our route to get there and an alternate route, if the first route is impassible?

_____

_____


5.  In the event our household is separated or unable to communicate with each other, our emergency contact outside of our immediate area is:

Name                              Home Phone          Cell Phone             Email:

_____        _____        _____        _____

*After a disaster, let your friends and family know you are okay by registering at "Safe and Well" at https://safeandwell.communityos.org/cms// or by calling 1-800-733-2767.  You can also give them a call, send a quick text or update your status on social networking sites.*

6. If at school/daycare, our child(ren) will be evacuated to:

Child's Name:                    Evacuation Site (address and contact info):

_____        _____

_____        _____

_____        _____

_____        _____

7.  Our plan for people in our household with a disability or special need is:

Person's Name:                  Plan:

_____        _____

_____        _____

8.  During certain emergencies local authorities may direct us to "shelter in place" in our home.  An accessible, safe room where we can go, seal windows, vents and doors and listen to emergency broadcasts for instructions, is:

_____

9.  Family Member Responsibilities in the Event of a Disaster

| Task | Description | Family Member Responsible |
|---|---|---|
| Disaster Kit* | Stock the disaster kit and take it if evacuation is necessary.   Include items you might want to take to an evacuation shelter. Remember to include medications and eye glasses. | |
| Be informed | Maintain access to NOAA or local radio, TV, email or text alerts for important and current information about disasters. | |
| Family Medical Information | Make sure the household medical information is taken with us if evacuation is necessary. | |
| Financial Information | Obtain copies of bank statements and cash in the event ATMs and credit cards do not work due to power outages.  Bring copies of utility bills as proof of residence in applying for assistance. | |
| Pet Information | Evacuate our pet(s), keep a phone list of pet-friendly motels and animal shelters, and assemble and take the pet disaster kit. | |
| Sharing and Maintaining the Plan | Share the completed plan with those who need to know.  Meet with household members every 6 months or as needs change to update household plan. | |

*What supplies and records should go in your disaster kit?  Visit www.redcross.org

10.  Other information, if not able to be included above.

*Congratulations on completing your family disaster plan!  Please tell others:  "We've made a family disaster plan and you can, too, with help from the American Red Cross."*

Get the facts about what you should do if an emergency or disaster occurs at www.redcross.org

**LAKEVIEW 1, L.L.C., LAKEVIEW 2, L.L.C., AND**

**MOLLER OTAY LAKES INVESTMENT, L.L.C.**

**FIRE PROTECTION AND MITIGATION TERM SHEET**


**TERM SHEET:** This TERM SHEET is dated _____ 2020.


**PARTIES:** This TERM SHEET is by and between Lakeview 1, L.L.C., a California limited liability company, Lakeview 2, L.L.C., a California limited liability company, and Moller Otay Lakes Investment, L.L.C. a Delaware limited liability company (collectively, "Owners") and the San Diego County Fire Authority ("SDCFA"). Collectively, Owners and SDCFA shall be referenced herein as "Parties".

**BACKGROUND:** Owners are requesting approval of entitlements, including a General Plan Amendment, Specific Plan, and a Tentative Map, for the development of a portion of Otay Ranch Village 13 ("Project") within the unincorporated area of San Diego County. The Project Area includes land uses that are subject to SDCFA 5-minute travel time standards.

A Fire Protection Plan prepared for the Project by Dudek and Associates dated January 2019 ("FPP") is attached to the Project's Environmental Impact Report ("EIR") as Appendix D-21. The FPP proposes a new fire station within the Project to allow the Project to meet SDCFA travel time standards while supporting the County regional strategies for the placement of fire facilities and services.

The FPP anticipates that construction of the permanent fire station ("Permanent Station") will be on the Project's public safety site, to commence upon an agreed upon trigger threshold prior to the commencement of construction of residential or non-residential structures provided, however, if the Permanent Station is not constructed at such time, Owners will construct a temporary fire station ("Interim Station"). The Interim Station, if necessary, shall be constructed and located at a site to the satisfaction of SDCFA, and operational prior to the issuance of the first residential Certificate of Occupancy (not including any model homes) for the Project. The FPP contemplates that the details of the Permanent Station and Interim Station will be documented and finalized in a "Fire and Emergency Services Agreement."

## AGREED UPON TERMS

1.      **Permanent Fire Station.** Owners shall fund and construct a Permanent Fire Station to be located within the Project. When completed, the Permanent Fire Station shall provide fire and emergency medical services for the Project within the 5-minute travel time standards set forth in the General Plan, Chapter 7, Policy S-6.4 ("Policy S-6.4"). The Parties agree to the following terms:

a. Site Location. The Permanent Station will be constructed at the Public Safety site as identified in the Specific Plan and Tentative Map location and attached as Exhibit A to this TERM SHEET. A Site Plan must be approved by SDCFA prior to construction, which will include ingress and egress, building location, and parking. Site requirements are identified on Exhibit B to this TERM SHEET.

b. Equipment and Facility. The Permanent Station will be designed, constructed and deeded to SDCFA at Owners' sole expense. The Permanent Station will consist of a 2-bay-two deep, approximately 6,400 square foot building structure and site improvements, and shall be designed and constructed in accordance with the specifications and requirements identified in Exhibit C. Any changes to the specifications and requirements in Exhibit C must be approved in advance by SDCFA. The Parties agree that the value of the Permanent Station shall be based upon the total cost of constructing such facility, including the land, engineering and design costs. Land costs will be per appraisal and other costs will be substantiated by construction statements provided by Owners and reasonably approved by SDCFA. Preliminary capital cost estimates and equipment are provided in Exhibit D.

c. Conveyance to SDCFA. Owners shall convey the site and improvements to SDCFA, prior to occupancy of the Permanent Station. The Parties agree that conveyance of Ownership of the Permanent Station to SDCFA is intended for the operation of a fire station and re1ated facilities and will include a County of San Diego ("County") Sheriff's storefront as contemplated by the County. Cost sharing agreements will be between SDCFA and County Sheriff.

d. Timing. The Parties agree that construction of the Permanent Station will commence prior to the 650th Certificate of Occupancy. However, the Parties agree to the timeframe outlined in the Provisions of Fire Service dated April 2020, attached hereto as Exhibit E. A construction schedule requiring the station to be completed in a timely manner shall be submitted for review and approval by SDCFA prior to commencement of construction. The facility shall be constructed in accordance with the improvement plans approved by the SDCFA and the requirements of the State Fire Code.

2. **Interim Station.** Owners shall fund and construct an Interim Station to be located within the Project. When completed, the Interim Station will provide fire and emergency medical services for the Project within the 5-minute travel time standards in Policy S-6.4. The Parties agree to the following terms:

a. Site Location. The Interim Station will be constructed at a mutually agreed upon site within the Project. SDCFA shall lease the site for $1.00/year, pursuant to the terms of a ground lease with Owners as Lessor and SDCFA as Lessee. A site plan will be approved by SDCFA prior to construction, which will include ingress and egress, building location, and parking.

b. Facility. The Interim Station will consist of a temporary building structure, a prefabricated steel building to be used as an apparatus bay, and site improvements in accordance with the specifications identified in Exhibit F and Exhibit G.

c. <u>Timing.</u> Construction of the Interim Station, including the apparatus bay, will be completed prior to issuance of the first residential Certificate of Occupancy (not including any model homes) for the Project.

3.    **Staffing.** The Parties acknowledge that the Interim and Permanent Fire Stations serve an area larger than the Project and contribute to the regional delivery of fire services, as shown on Exhibit H. Therefore, the Parties agree that the costs for Fire and Emergency Medical Services Staffing shall be shared between the County and Owners. Phased staffing levels and cost sharing are set forth in Exhibit E.

4.    **Establishment of Funding Mechanism.** Owners shall establish a Community Facilities District ("CFD") or other funding mechanism approved by County to provide long-term funding for the Project's share of the actual costs of the career firefighter staffing and operation and maintenance costs for both the Interim and Permanent fire station.

5.    **Fire Mitigation Fees.** The County has determined that Owner's performance of this Agreement satisfies and exceeds the Project's fire protection services mitigation obligation as defined by the Project's EIR and as required by Title 8, Division 10, Chapter 3, §§ 810.301- 810.315 of the San Diego County Code of Regulatory Ordinances and the Mitigation Fee Act, in connection with development of the Project. SDCFA shall waive the collection of Fire Mitigation Fees for the Project, valued at $4,073,746, in lieu of the Owner's donation of the land and new fire station as permitted under the Fire Mitigation Fee Ordinance § 810.305. SDCFA acknowledges the capital facilities set forth in this TERM SHEET are sufficient to offset the need to collect the Fire Mitigation Fees.

6.    **Assignment.** This TERM SHEET is applicable to the Project. Accordingly, Owners may transfer their rights and obligations to any entity or new owner of the Project. Owners must provide the County with a thirty (30) day written notice containing the name, address, telephone number, email address, and contact person for the assignee.

7.    **Final Agreement.** Pursuant to the Project's Conditions of Approval #48, the Parties will execute a Fire and Emergency Services Agreement, which will include the terms of this TERM SHEET, prior to approval of any plan or issuance of any permit, and prior to use of the premises in reliance on any such permit. Until such the Parties execute the Fire and Emergency Services Agreement, this TERM SHEET shall constitute the entire understanding between the Parties regarding the provision of a fire station (permanent and interim, if necessary) and supersedes and cancels all prior written and oral agreements and understandings with respect to the subject matter of this TERM SHEET. In the event of any inconsistencies between this TERM SHEET and any Exhibit to this TERM SHEET, this TERM SHEET shall prevail.

*[Signatures Follow]*

LAKEVIEW 1, L.L.C.,  SAN DIEGO COUNTY FIRE AUTHORITY
a California Limited Liability Company

LAKEVIEW 2, L.L.C.,
a California Limited Liability Company

MOLLER OTAY LAKES INVESTMENT, L.L.C.,
a Delaware Limited Liability Company


By: _____  By:_____
 Herman Reddick, Director




By: _____




By: _____