



CITY OF SAN MARCOS
SENATE BILL 99 WHITE PAPER
Emergency Evacuation Route Planning

Prepared by De Novo Planning Group

Background

The City prepared an analysis consistent with Senate Bill 99 to identify residential developments in hazard areas that do not have at least two emergency evacuation routes. The analysis identified four residential areas of concern in high hazard zones that warranted further study. The analysis determined that all four areas have two or more evacuation routes. The following is an explanation of the methodology used to map the evacuation routes.

Definitions & Data Sources

Residential Developments

Parcel data obtained from the SANDAG/SanGIS Regional GIS Data Warehouse Open Portal were used to determine the location of residential developments. This parcel set includes legally recorded data provided by the San Diego County Assessor's Master Property Record (MPR) or Parcel Assessment Record (PAR.) Parcels with assessed uses of RESIDENTIAL, MULTIPLE, CONDOMINIUM, or MANUFACTURED HOME were considered as Residential Developments for the purposes of this study.

Hazard Areas

High Hazard Zones were defined as areas that are in one or more of the following pre-defined hazard zones:

1. FEMA's 100-year flood zone
2. California OES dam inundation area
3. California Geological Survey's Map Sheet 58 Landslide Susceptibility classes 8, 9, or 10
4. San Diego County's Areas of Potential Liquefaction
5. CalFire's High and Very High Fire Threat zones

These hazard zones were combined into one single "High Hazard Zone" using ArcGIS merge and dissolve geoprocessing tools.

Evacuation Routes

Road data obtained from the SANDAG/SanGIS Regional Data Warehouse Open Portal were utilized to identify evacuation routes. Road centerlines were divided into three main classes:

1. **Evacuation Routes** – According to the San Diego County Emergency Map, State Route 78 is the only major evacuation route through the San Marcos Planning Area
2. **Minor Roads** – Roads classified by SanGIS as local, alley, or unpaved road were classified as "Minor Roads." Minor Roads are generally the first roads a resident will encounter when departing their residence
3. **Major Roads** – Roads classified as Arterial, Collector, Minor Highway, or Major Road were incorporated into a single "Major Roads" category. Roads in this category effectively connect Minor Roads to the SR 78 Evacuation Route. The Major Roads category includes the following roads identified by the City of San Marcos as "open and passable": Twin Oaks Valley Rd, Las Posas Road, Rancho Santa Fe Road, Woodland Parkway, Nordhal Road, Mission Road, South Sante Fe Road, Barham Drive, Craven Road, West San Marcos Boulevard, Borden Road, Buena Creek Road, Knob Hill Road, and Montiel Road

Assumptions & Methodology

Identification of Residential Developments in Hazard Areas

Using ArcGIS, Residential Developments in Hazard Areas were identified by a running a location query to find the parcels with assessed residential uses that intersect the single High Hazard Zone area. The following assumptions apply:

1. If smaller parcels in larger neighborhoods/subdivisions were identified through this process, the entire neighborhood/subdivision was in a Hazard Area

2. If larger, rural parcels were identified, they were considered independently of the other surrounding residential parcels

Identification of Evacuation Route Ingress Points

The goal of this analysis was to find two separate points of entry, or Ingress Points, into a rudimentary evacuation network in which vehicles move from Minor Road to Major Road to Evacuation Route. The following assumptions apply:

1. Residential Developments have immediate access to Minor Roads but are distant from the SR 78 Evacuation Route
2. Major Roads connect Minor Roads to the SR 78 Evacuation Route
3. Ingress Points are the points where Minor Roads intersect Major Roads, thereby providing eventual access to the SR 78 Evacuation Route

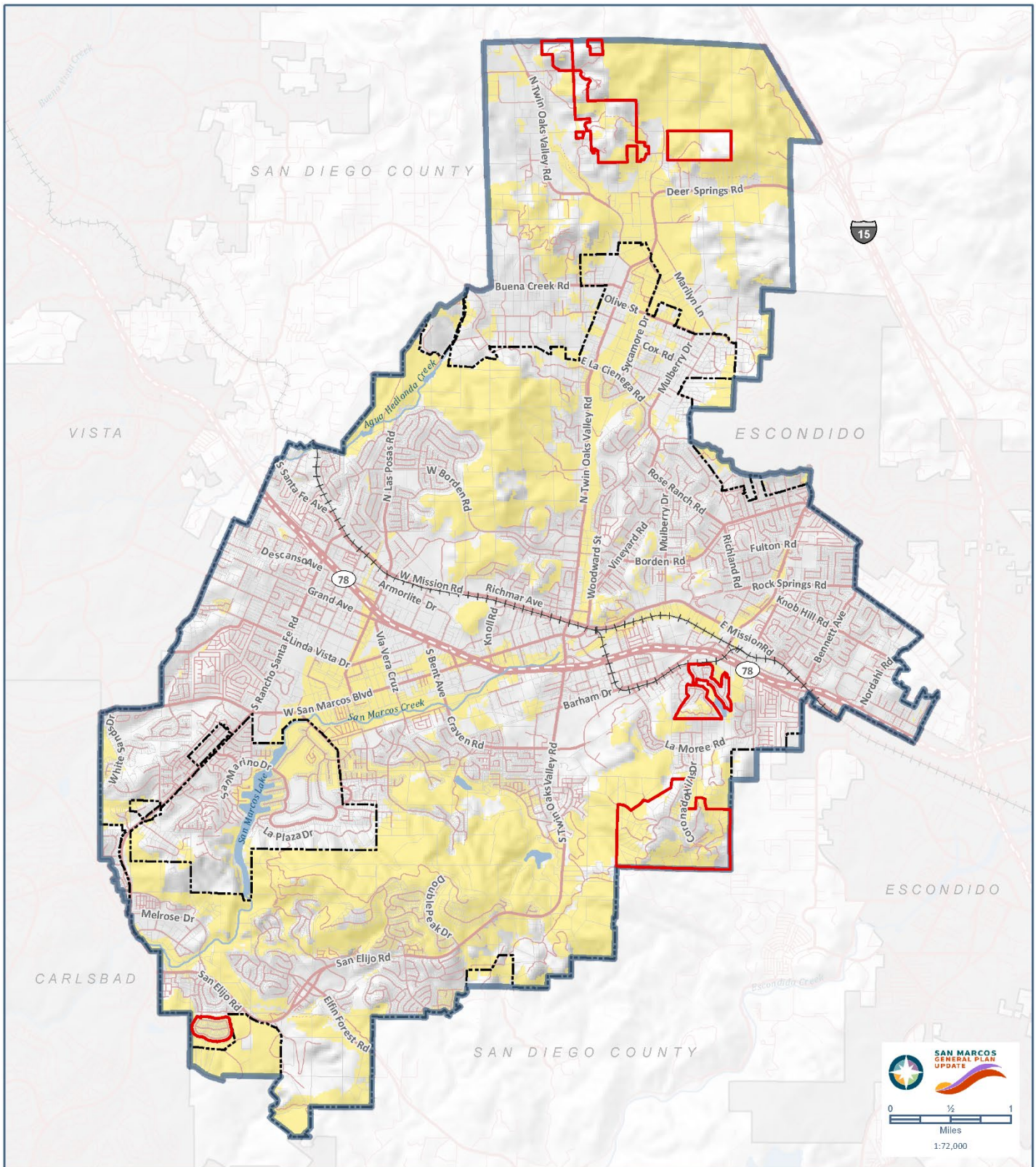
Using ArcGIS, a point file representing the intersections of Minor and Major roads was created.

Analysis

Upon visual analysis, four residential areas in high hazard zones were designated as areas requiring further study (Fig. 1)

1. *North Twin Oaks*: Residences in these areas, although few, only have a single ingress which require traveling longer distances on private or unpaved roads
2. *Jack's Lake Neighborhood*: All parcels within the subdivision must ingress at the E. Barham Lane/La Moree Rd intersection
3. *Coronado Hills Residential Area*: All parcels within this area must Ingress at the northern end of Coronado Hills Rd at the intersection with La Moree Road. Although there is a southerly exit from Coronado Hills, it is a windy ridge route through additional through High Fire Hazard areas.
4. *San Elijo Tract*: The southernmost subdivision of University Commons – Although this neighborhood actually has two possible Ingress points (Dove Tail Drive at San Elijo Road, and Fallsview Road at San Elijo Road), the only way to approach those points is via Dove Tail Drive and Fallsview Road intersection which may create a bottle neck scenario.

In some cases, residential areas in high hazards zones with only one ingress point were not considered to be areas requiring further study because a) the residential area consisted of a low number of parcels, or b) the residential area immediately connected to a Major Road.



LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Unincorporated San Diego County
- Lake or Pond
- Creek
- High Hazard Zone
- Residential Areas Requiring Further Study
- Evacuation Route (State Route 78)
- Arterial/Collector/Minor Highway/Major Road
- Local Road
- Alley or Unpaved Road

FIGURE 1

**Residential Areas
Requiring
Further Study**

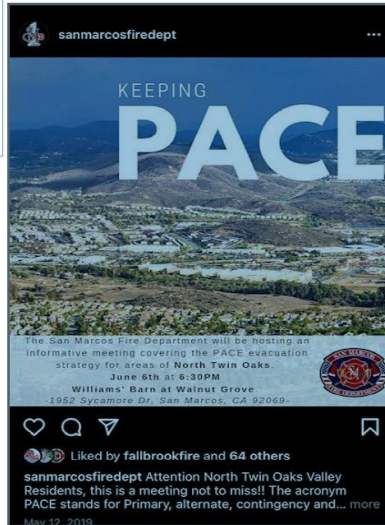
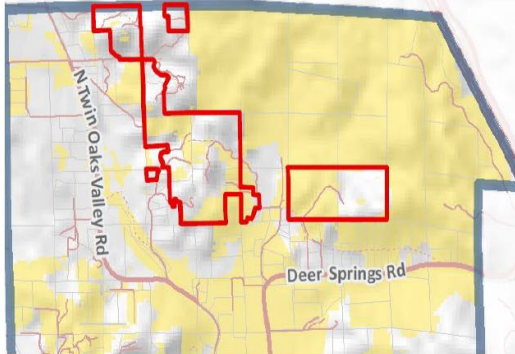
Data sources: City of San Marcos; SANGIS; CalAtlas. Map date: March 15, 2021.



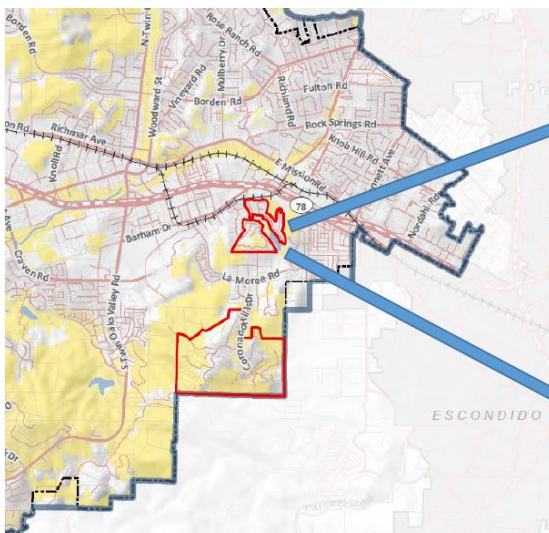
The San Marcos Fire Department has provided more detailed evacuation route information below for the four residential areas in high hazard zones identified in Fig. 1.

1. North Twin Oaks

We have held community PACE meetings in Twin Oaks Valley to discuss Wildfire Evacuation in May 2018. None of this highlighted area has any high density housing tracts consistent with SB99 , mostly agricultural farms.



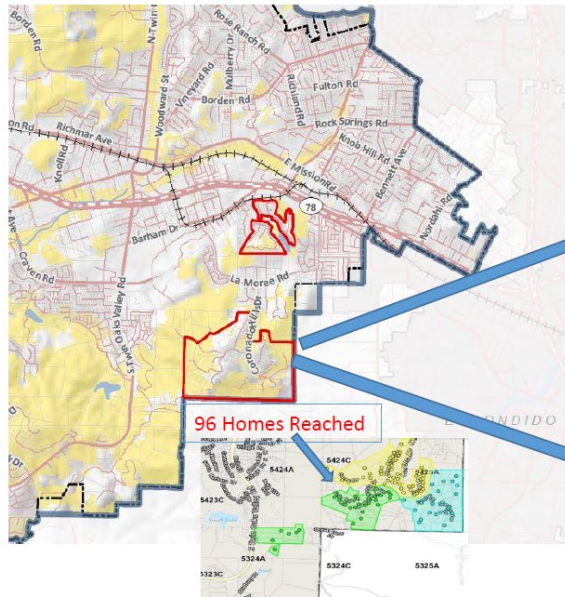
2. Jack's Lake Neighborhood



Secondary Emergency Access provided



3. Coronado Hills Residential Area



5 WAYS TO PROTECT YOU FROM WILDFIRE

1. CREATE SPACE

Create 100 feet of DEFENSIBLE SPACE ZONE surrounding your structures. Remove dry grass, brush, and other flammable materials around your home. Replace with well-maintained and watered, drought-tolerant, fire-resistant plants within the first 30 feet of the structure. The next 70 feet of vegetation should be thinned so that no more than 50% of this open space is covered by plants taller than 18 inches in height.

2. HAVE A PLAN

- Be Notified
 - Register your mobile phone to receive "Reverse 911" at readysandiego.org
- Know your Access Road
- Prepare an Evacuation Kit

3. PROTECT YOUR CRITICAL ZONES

- Remove any easily ignitable "fuels" within the first 5 feet to structures such as leaf litter in gutters. Most homes burn due to fuel catching on fire in the critical zone or ember intrusion.
- When the weather gets dry and winds picks up; remove ignitable materials surrounding structures such as placing patio furniture indoor.

4. PROTECT ANY EXPOSURES

- Cover any exposed openings such as vent holes before evacuating, or upgrade to ember resistance vents.
- Close windows, garage, doors, etc.

5. WHEN TOLD EVACUATE



4. San Elijo Tract

