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7. Risk Assessment: Identifying and Evaluating Assets at Risk¹

7.1. Assets at Risk in the Santa Monica Mountains

In addition to everything in the built environment, assets (or values) at risk include many non-quantifiable facets of what we call “quality of life”—natural beauty and clean air, for example—that can be threatened with degradation, destruction, or loss from wildfire. Assets at risk include homes, infrastructure, cultural sites, wildlife habitat, threatened and endangered flora and fauna, natural resources, air quality, recreational facilities and areas, historical structures, and every other important attribute that individual communities rely on for their well-being or appreciate in their surroundings.

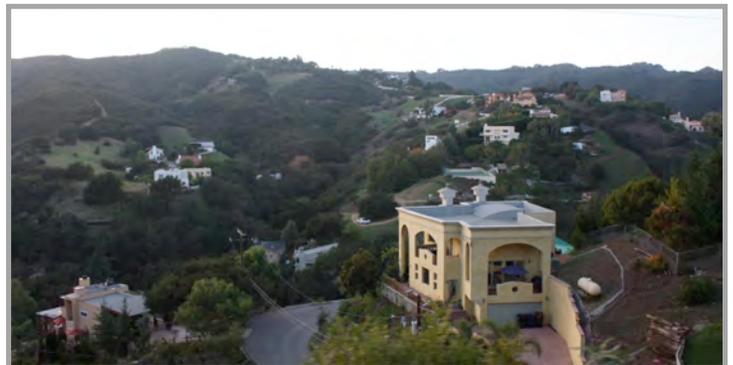


Neither the term “assets” nor a dollar figure fully conveys the community value found in many of these attributes of the Santa Monica Mountains area. They are the precious elements that make up the quilted fabric of community life and our place in the natural world. Communities can suffer greatly if highly valued or essential infrastructure is damaged or destroyed during a wildfire or other disaster. Some communities contain infrastructure that is critical to the entire region (e.g. hospitals or utilities). When an area with a concentration of high-value assets comes into contact with hazardous fuels and a high fire threat, its risk of loss due to wildfire increases.

As part of the scoping and outreach effort of the Santa Monica Mountains Community Wildfire Protection Plan, community meetings were held throughout the Planning Area in October–November 2009 and January 2010 to identify community assets and discuss wildfire protection efforts. These meetings provided an opportunity for residents to identify areas and structures of value to their community. Attendees identified local assets such as essential infrastructure and/or areas that serve as important community centers. Some of the key community assets and values identified at these meetings included schools, churches, fire stations, hospitals, senior centers, commercial districts, golf courses, campgrounds, and neighborhoods. Detailed information for assets at risk in each of the twenty planning units can be found in Part II of this CWPP, the Community Fire Safety Action Plans.

7.1.1. Homes and Structures

The eastern section of the CWPP Planning Area, located in Los Angeles County, is more heavily populated than the western portion in Ventura County. Overall, the Planning Area is relatively unpopulated, especially compared to the rest of Los Angeles County, one of the most



¹ Stephen Umbertis contributed to this document, with ForEverGreen Forestry.

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heavily populated counties in the United States.² In the two cities within the Planning Area, Malibu and Calabasas, homes tend to be more concentrated, although the Planning Area's major thoroughfares all contain a relatively dense concentration of homes. Due to the varying densities of neighborhoods and the character of different communities, home values span a wide range, with some of the highest real estate values in the nation found here.

In the 90265 Malibu zip code, condominiums start at around \$300,000, and the price of mansions reaches up to \$65 million. Fifty percent of the homes in Malibu are worth over \$1 million, while 12% cost less than \$500,000.³ In Topanga Canyon house prices range from \$200,000 to \$9 million. In Las Virgenes Canyon and Calabasas, house prices range from approximately \$200,000 to upwards of \$20 million. The 91301 zip code area, which includes Cornell, Liberty Canyon, and the Lost Hills area, has property values ranging from \$150,000 to \$6 million. Finally, the area around Hidden Valley and Lake Sherwood in Ventura County contains homes that range from approximately \$200,000 to \$5.2 million in value.⁴

7.1.2. General Infrastructure Assets

Infrastructure includes the roads, utilities, water, and all other services provided to the residents of the Santa Monica Mountains. Two highways border the Planning Area—Highway 101 to the north and the Pacific Coast Highway 1 along the south. Kanan Dume Road, Malibu Canyon/Las Virgenes Road, and Topanga Canyon Boulevard (Highway 27) are the major north-south roads in the area that connect these two highways. The major



road systems within the Planning Area are considered essential assets. Fire-suppression efforts utilize roads to strategically place equipment and personnel during wildfires, and to provide evacuation routes for residents. Local fire agencies have stressed the need to connect county roads and other paved roads with the many fire access roads in the Planning Area; this would improve speed of access for firefighters and add to the number of safe evacuation routes for residents. Fire itself, as well as erosion and landslides following a wildfire event, can pose significant threats to this transportation infrastructure.

Airstrips are important infrastructure in any community. They provide emergency landing sites, potential evacuation sites, recreational opportunities, and an arrival point for visitors. King Gillette Ranch, managed by the Mountains Recreation and Conservation Authority (MRCA), used to have a private airstrip.⁵ Adjacent to the southwestern border of the Planning Area the Naval Station Ventura County, Point Mugu, has airstrips, but they are not open to public use. However, the facility may be used in the event of a major firestorm.

² http://en.wikipedia.org/wiki/Los_Angeles_County,_California

³ US Census, http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=86000US90265&-qr_name=DEC_2000_SF3_U_DP4&-ds_name=DEC_2000_SF3_U&-lang=en&-sse=on. (This data is from 2000; housing values have since changed).

⁴ <http://losangeles.blockshopper.com>, www.lakesherwood-hiddenvalley-realestate.com

⁵ <http://smmc.ca.gov/KGRP/guide.html>

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A number of potential helicopter landing sites have been identified throughout the Planning Area. These sites are identified based on the ability of rotary-winged aircraft to land on the site, engage in basic maintenance and refueling operations, and take on or offload personnel and supplies. While potential sites have been identified, they are not designated until needed for an operation.⁶

Los Angeles County Fire Department maintains Camp 8, which is located at the top of Las Flores Canyon Road and Rambla Pacifico. It contains a primary paramedic helicopter standby location. This landing site can be used during daylight hours only. It has a helicopter with water-dropping capabilities and a crew of seven to eight firefighters.⁷

The Santa Monica Airport, about 25 miles east of Malibu, is the closest airstrip to the southeastern sector of the Planning Area. Camarillo and Oxnard airports are approximately 10 miles to the north and northwest, respectively. Van Nuys Airport is located 34 road miles east from Malibu. It is sometimes used for logistical aircraft during wildfire incidents in the Santa Monica Mountains.

The public and private water purveyors within the Santa Monica Mountains are also important assets, providing water and wastewater services to residents as well as fire-fighting capacity to the communities at large. Local water supply is scarce in the Santa Monica Mountains. The Las Virgenes Municipal Water District (LVMWD) owns and operates a potable water system that serves Calabasas as well as unincorporated areas in the western portions of Los Angeles County, near Ventura County (as well as other cities not in the Planning Area). There are 22 potable water and four recycled water pressure zones within LVMWD that utilize 24 tanks and 24 pumping stations capable of providing 34 million gallons of water storage.

The LVMWD system is composed of more than 400 miles of pipeline and serves approximately 36,000 residents in the Planning Area.⁸ Primary water storage is at the 9,500-acre-foot Las Virgenes Reservoir in Westlake Village. That reservoir, in conjunction with the adjacent Westlake Filtration Plant, allows LVMWD to produce up to 15 million gallons of water per day. LVMWD owns 360 acres of land immediately around the reservoir to protect water quality.

Los Angeles County Waterworks District No. 29 (District No. 29) provides water services to an estimated 20,000 people in Malibu, Topanga Canyon, and the area between Tuna Canyon and Upper Rambla Pacifico.⁹ District No. 29 purchases its water from the West Basin Municipal Water District (West Basin), which gets its water from the Metropolitan Water District of Southern California. District No. 29 also has emergency connections with the City of Los Angeles Department of Water and Power and LVMWD. The water from West Basin is treated at the



⁶ Dale Carnathan, Ventura County Office of Emergency Services, personal communication, April 7, 2010.

⁷ www.fire.lacounty.gov/AirWildland/AirWildlandFireCamps.asp

⁸ Las Virgenes Municipal Water District (2007), Integrated Water System Master Plan Update 2007, pp. 32, 39–41.

⁹ <http://dpw.lacounty.gov>

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Joseph Jensen Filtration Plant, which is outside the Planning Area.¹⁰

District No. 29's major system facilities include approximately 200 miles of water mains, 32 pump stations, and 52 tanks with a storage capacity of approximately 20 million gallons. A portion of the wastewater generated in the area is collected and treated by small private and publicly owned package wastewater treatment plants serving individual developments. The Los Angeles County Dept. of Public Works (Public Works) operates and maintains the collection and treatment systems of three publicly owned treatment plants (Malibu Mesa Water Reclamation Plant, Malibu Water Pollution Control Plant, and Trancas Water Pollution Control Plant).¹¹ Paradise View Estates on Ramirez Mesa Drive uses the Valencia Heights Water Company.

Residents in the Ventura County portion of the Planning Area receive water service from several sources. Navy Base Ventura County, Point Mugu, receives its supply from Port Hueneme Water Agency, which contracts with both Calleguas Municipal Water District and the California American Water Company. The latter also delivers water for Point Mugu State Park.¹² Yerba Buena Water Company supplies coastal residents in the Planning Area in Ventura County. Properties located in the inland areas of Deer Creek, Yerba Buena, and associated neighborhoods are dependent on individual wells.¹³ Water for Lake Sherwood and Hidden Valley comes from the Lake Sherwood Community Services District, the Hidden Valley Municipal Water District, and private sources.



Southern California Edison provides power to the Planning Area through a number of transformers and transmission lines. There are no substations here. Transformers are at risk from fire, potentially knocking out power to areas when they burn or shut down as a result of overheating.¹⁴

Southern California Gas provides natural gas service through lines that surround the Planning Area. Natural gas lines follow the major roads on the perimeter of the Planning Area, connecting the cities of Calabasas and Thousand Oaks before returning to the coastal areas northwest of the Planning Area.¹⁵

There are numerous cell phone towers and antennas located throughout the Planning Area. In a four-mile radius of the City of Calabasas, for example, there are approximately 28 cell phone towers and 87 cell antennas.¹⁶ These sites provide important communication infrastructure for the surrounding communities and for fire management. Cellular communication is becoming the primary communication form for many people, making it more important than ever to sustain functionality during an emergency. Keeping residents up to date with fire conditions or possible evacuations via their cell phones can be essential to protecting life and property.

¹⁰ Los Angeles County Waterworks Districts (2008), District No. 29, Malibu & Marina del Rey Water System Annual Water Quality Report, <http://dpw.lacounty.gov/wwd/web/waterquality/2008/malibu.pdf>.

¹¹ County of Los Angeles Department of Public Works (2005), Waterworks District No. 29, Malibu and The Marina del Rey Water System 2005 Urban Water Management Plan, pp. 7–8.

¹² Calleguas Municipal Water District, www.calleguas.com/district_history_description.htm

¹³ Thomas White, resident, personal communication, May 2010.

¹⁴ www.energy.ca.gov/maps/transmission_lines_lower.html

¹⁵ www.energy.ca.gov/maps/natural_gas.html

¹⁶ www.antennasearch.com

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Key parts of the Planning Area without cell service include parts of Ventura County along the Yerba Buena Canyon corridor and areas within Corral Canyon. Residents who attended community outreach meetings identified Upper Rambla, Corral Canyon and Pepperdine, and areas of Calabasas as needing improvements in cellular service coverage. Additional towers in these areas would improve emergency preparedness and contribute to risk reduction for the affected communities.

7.1.3. Commercial Assets

The primary commercial assets in the Planning Area are located in the incorporated cities of Malibu and Calabasas. Malibu is known for its beaches and coastline, and there is a large amount of tourist-oriented development in the city. Calabasas is the most developed region in the Planning Area, with shopping centers and other typical commercial development.

The City of Malibu is home to HRL Laboratories LLC, formerly Hughes Research Laboratories. The 72-acre HRL facility on Malibu Canyon Road has been in Malibu since 1948, and it presently employs 450 people to do research and development for Boeing and General Motors, now members of the LLC.¹⁷ Pepperdine University is located in the unincorporated area adjacent to the City of Malibu. The University's 830-acre campus was built in 1972 in Malibu Canyon and houses more than 7,000 students.¹⁸



Pepperdine University

The Santa Monica Mountains National Recreation Area, which encompasses the Planning Area, provides residents and tourists with multiple recreational opportunities. An iconic part of the southern California landscape, the SMMNRA is known for its large area of undeveloped wilderness in close proximity to the urban metropolis of Los Angeles. Recreational sites offer campgrounds and facilities, as well as passive recreational areas (wildlands). Fire and fire-management activities can impact scenic resources, camping facilities, and other infrastructure that contributes to the recreational experience.

The loss of vegetation from a fire, or bare earth as a result of fire-fighting activities, reduces the visual appeal and ambiance of the affected area, reducing its value for these purposes.¹⁹

The natural beauty of the SMMNRA makes it a popular filming location. Paramount Ranch and its "Western Town," located within the Planning Area, provides people the opportunity to see movie-making in action. The National Park Service provides a fire safety advisor and water truck during filming, which is included in the cost to use the facilities.



Paramount Ranch Western Town

¹⁷ HRL Laboratories, LLC. www.hrl.com/pages/abt_main.html

¹⁸ "Pepperdine At A Glance," www.pepperdine.edu/about/pepperdine

¹⁹ www.nps.gov/samo/faqs.htm

7.1.4. Schools and Seasonal-Use Facilities

There are 29 schools and educational facilities in the CWPP Planning Area. These are in the Conejo Unified School District in Ventura County, the Las Virgenes Unified School District in Los Angeles County, the Los Angeles Unified School District, and the Santa Monica–Malibu Unified School District.²⁰ Schools are often used for emergency shelters when necessary. Various private schools, including Pepperdine University, are also located within the Planning Area.

A number of organized camp facilities, retreat centers, equine centers, and educational facilities are located in the Planning Area. They range from religious communities and retreat centers, such as the Serra Institute, to facilities serving as children’s summer camps, business retreats, and ranches used for horseback-riding instruction. These camps present a potential evacuation challenge due to large numbers of occupants. Visitors to these facilities may not be as familiar with the area as are residents. Quite often, these persons do not have individual transportation. Vans and buses may be required to evacuate during a wildfire, necessitating some degree of coordination between the facilities and emergency services. In some cases, these facilities are not coordinated with existing emergency services. Emergency plans should be put in place for these facilities, outlining a coordinated response for fire and other natural disasters.

7.1.5. Medical Facilities

Three senior care centers, four urgent-care facilities, and a health center are in the Planning Area. In addition, a number of assisted-living centers for seniors are located in the unincorporated areas near Camarillo, Thousand Oaks, and Calabasas, and several drug and alcohol rehabilitation centers are found in the Malibu area.

FIGURE 7-1. SANTA MONICA MOUNTAINS MEDICAL FACILITIES AND SENIOR CENTERS

NAME	ADDRESS	EMERGENCY POWER SUPPLY
Urgent Care Medical Center	22241 Craft Court, Calabasas	No emergency power supply
Jack H. Skirball Health Center	23388 Mulholland Drive, Woodland Hills	Generator(s)
ResCare Home Care	23901 Calabasas Road, Calabasas	Business provides in-home care to clients and does not house people on site at this address.
Canyon Medical Center & Urgent Care	4937 Las Virgenes Rd #104, Calabasas	Generator(s)
Malibu Country Manor	6810 Wildlife Road, Malibu	No emergency power supply
Silverado at Home	25100 Calabasas Road, Calabasas	Generator(s)
Malibu Urgent Care	23656 Pacific Coast Highway, Malibu	Generator(s)

7.1.6. Correctional Facilities

In addition to the seasonal and educational facilities described above, there are a number of juvenile detention centers and fire camps used to house inmate fire crews. These facilities are mostly integrated into, or part of, the

²⁰ These districts were identified using the school locator from the California Dept. of Education and the zip code map of the state: www.cde.ca.gov/re/sd/index.asp, <http://zipcodes.com/California>.

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emergency services system. Inmate crews provide fuel-reduction services and fight fire. There are three juvenile camps located in the Planning Area, one in Calabasas and two in Malibu.

FIGURE 7-2. CORRECTIONAL FACILITIES

NAME	ADDRESS	PHONE NUMBER
Camp David Gonzales	1301 N. Las Virgenes Rd., Calabasas 91302	818-222-1192
Camp Fred Miller	433 S. Encinal Canyon Rd., Malibu 90265	818-889-0260
Camp Vernon Kilpatrick	427 S. Encinal Canyon Rd., Malibu 90265	818-889-1353
Los Angeles County Department of Corrections, Camp 13	1250 S. Encinal Canyon Rd., Malibu 90265	

7.1.7. Cultural Assets

Cultural assets include pre-historic or archeological resources, historic buildings, and locations of current community importance such as parks, churches, and community centers. They can be a vital part of creating and strengthening a community. Attendees at each planning-unit meeting identified cultural assets for their communities; these included the Calabasas Agoura Hills Community Center, the Gillette Ranch, and some state parks, to name a few.²¹

Cultural assets also include archeological sites. In the Santa Monica Mountains, these sites are attributed to two Native American groups, the Chumash and the Gabrieliño/Tongva. There are more than 1,500 sites where artifacts have been found in the Santa Monica Mountains, including nine historic village sites, dating from as far back as 5000 BC.²² Artifacts include hunting and camping tools, mortars and pestles, and post holes and depressions from house sites.

There are also hundreds of historic sites in the Santa Monica Mountains that have local importance. These include barns, ranches, homestead sites (nearly 1,300 recorded), and local works of renowned architects. There are two structures on the National Register of Historic Places (the Adamson House and Loeff’s Hippodrome), and fifteen structures on National Park Service land that are recorded in the SMMNRA’s List of Classified Structures.



7.1.8. Natural Assets

A number of natural assets within the Planning Area are susceptible to wildfire, including 450 different species of vertebrates and five distinct vegetation communities. Wildfire not only damages or destroys habitat and threatens wildlife directly during an event, but vegetation succession after a burn changes habitat and species composition, sometimes for many years.¹⁵ Burned areas are also susceptible to colonization by invasive plant species, which can crowd out native vegetation and prevent those species from growing back.

²¹ “Assets identified by community.xls,” Community meeting records, SMMCWPP planning process.

²² National Park Service (2005), *Final Environmental Impact Statement for a Fire Management Plan*, Santa Monica Mountains National Recreation Area, Chapter 3.

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In addition to damaging or destroying local habitats, wildfires can fragment habitat at a landscape level by destroying the linkages and corridors between different areas. This creates islands of habitat that are not able to support the same level of biodiversity on their own as a connected network of habitat can. Avoiding this “island effect” is increasingly important for wildlife as urban development and land conversions continue to occur throughout the Planning Area.

The SMM is an important stopover for migratory species using the Pacific Flyway, including many bird species and the monarch butterfly. Loss of diverse food sources or safe resting and nesting sites can overstress and result in



death of tired, hungry fauna. They depend on the high level of biodiversity here to supply their needs.

Fire also damages air and water quality. Smoke from wildfires is known to be detrimental to those with respiratory ailments as well as the general public, and it can transport particulate matter for extremely long distances. Wildfire smoke is a major source of particulate matter, which damages lung tissue, irritates eyes and sinuses, and can have both long- and short-term health impacts.

Post-burn erosion severely impacts water quality in both the streams and the near-shore coastal waters. For example, many landslides occurred in and around the Angeles National Forest in the winter of 2009–2010 as a result of vegetation loss from fires in the same year. Many near-shore coastal resources, such as the kelp beds and their dependent fish and mammal species, are made vulnerable by degraded water quality as a result of fire-induced erosion.

Malibu Creek drains 109 square miles of the Santa Monica Mountains into Santa Monica Bay and is home to a number of threatened and endangered species. These include a native run of steelhead trout and lamprey eel, which are sensitive to increases in water temperature and stream sedimentation.²³ The latter affects steelhead trout by filling in pools and covering gravel with silt, which destroys feeding and breeding habitat. Fire contributes to increased erosion and degrades stream habitat by removing streamside (or riparian) vegetation; erosion then results from this loss of vegetation, destabilizing slopes and allowing rain to fall unimpeded to the ground, increasing run-off rates. Without riparian vegetation, streams receive more sunlight, which directly increases water temperature.

7.1.9. Conflicts Between Natural Assets and Human Occupation

Nearly all areas of the Santa Monica Mountains are aesthetically pleasing and provide an atmosphere in which many seek to live and recreate. Human encroachment into wildland areas creates a conflict that can threaten life and property, as well as the natural environment. Although wildfire can affect anyone and anything in the SMM, the



greatest threat generally occurs where the wildland meets the human community, also known as the wildland-urban interface—which is found throughout the Planning Area.

Habitat loss as a result of human encroachment can seem inevitable in the face of continued population

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[g/2ndLevel/aboutws.html](http://www.santa-monica-mountains.com/2ndLevel/aboutws.html)

growth and development activities. Fire, especially human-induced fire, is very dangerous to the remaining natural areas in the SMM. The ability of certain species and natural communities to survive is already compromised by habitat fragmentation and competition for resources. Preventing *leap-frog development*,²⁴ minimizing the risk that urban fires will spread to wild areas, and effective fire-fighting efforts will all help reduce future fire impacts to the SMM.

Many of the policies and regulations in existing planning documents, such as those discussed in Chapter 6, are helping to reduce the negative impact of humans on the natural environment. The proposed actions in this CWPP aim to advance those efforts, helping to preserve the natural beauty, ecological function, and overall health of the communities in the Santa Monica Mountains.

7.2. Assessing Risks in the Santa Monica Mountains

Throughout the Santa Monica Mountains the risk of wildfire is high. All residents who live here share this risk, and the responsibility to minimize it. The following factors were analyzed for this risk assessment. They are based on a qualitative scale from low to very high, with very high meaning the most risk. In the case of fire-protection support, a lower rating signifies higher risk.

Assets at Risk

Given the combination of very high land values and the high-quality, rare Mediterranean ecosystem, the entire Santa Monica Mountains area is given a **high** asset rating. All neighborhoods and population centers are assumed to be equally important local assets and values. *For more information on assets at risk, see section 7.1.*

Fire Hazard Severity

Fire hazard is a measure of the likelihood of an area burning and how it burns (e.g. intensity, speed, and embers produced). The entire Planning Area is classified as “Very High Fire Hazard Severity Zone” by CAL FIRE, a designation adopted by both Los Angeles and Ventura counties. The fire hazard zoning ratings are based only on fire hazard, without considering the value at risk.²⁵ Given this designation, the entire Planning Area was given a **very high** rating throughout. *For more information on Fire Hazard Severity ratings, see Chapter 3, section 3.4, “Fire Hazard.”*

Risk of Wildfire Occurrence

“Risk of wildfire occurrence” refers to the possibility of a wildfire occurring. Based on the frequency and variety of human-caused ignitions, and the resultant extensive fire history of the Santa Monica Mountains, the risk of wildfire occurrence in the entire Planning Area is rated **very high**. *For more information on wildfire risk, see Chapter 3, section 3.1, “Fire History.”*

Structural Ignitability

Structural ignitability means the ability of structures, especially homes, to burn. It is generally tied to the age of a given development (or structure), with newer developments built to the current or recent WUI building codes receiving a “low” designation. Older wooden homes generally have higher structural ignitability than newer homes, unless they have been retrofitted to current WUI building standards. The complete range from **low to very high** structural ignitability is found throughout the Santa Monica Mountains, although most homes tend toward higher

²⁴ Where development skips over available land and instead focuses on larger or more desirable places. Development leaps to outlying and isolated areas because better land may be at a distance.

²⁵ www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_development.php

structural ignitability. *For information on reducing structural ignitability, see Chapter 4, section 4.1.1, “Hardened Homes.”*



Urban Fuels

“Urban fuels” in this risk assessment generally refers to anything that can burn—including ornamental vegetation—that is surrounding a structure, and often directly adjacent to and including homes. The presence of urban fuels in the home ignition zone within the Santa Monica Mountains is one of the most relevant factors determining whether or not a structure will burn, distinct from the structural ignitability of the house itself. There are individual

homes where urban fuels are low; however, **very high** levels of urban fuels are generally found throughout the Santa Monica Mountains, and this threatens everyone. *For more information on urban fuels, please see Chapter 4, section 4.1.3, “Urban Fuels.”*

Evacuation Vulnerability

A critical factor in the Santa Monica Mountains is the ability for residents and their animals to safely evacuate. Given the steep topography and high local population densities, the existing road infrastructure is marginally adequate under normal conditions. There are very few primary and secondary access routes; they are mostly narrow, winding roads. Hence, early evacuation significantly increases residents’ ability to leave safely, while also reducing road congestion. Later evacuations limit travel routes and safe destinations. Therefore, evacuation vulnerability in the SMM is **very high**. *For more information on evacuation, please see Chapter 4, section 4.2.3, “Go: What to Do During Wildfire—Evacuating Safely.”*

Fire Protection Support

Fire protection support is based on the ease of fire engine access to homes, and adequate water supply and pressure. It is dependent upon sufficient defensible space around structures and timely evacuations by local residents. Access is related to the fire codes at the time of development, the steep and windy terrain, and the high potential for road blockage. Water limitations are always present throughout the Santa Monica Mountains.

Adequate defensible space allows firefighters the ability to protect a home safely. Timely evacuation allows firefighters to focus solely on structure protection. Local fire agencies have a high capability of providing fire protection if access, water, defensible space, and timely evacuation are present. However, these four factors are highly challenging in the Santa Monica Mountains, making support for fire protection often **low**. *For more information on access, water supply,*



defensible space, and evacuation, see Chapter 4.

7.3. Furthering the Risk Assessment of the Santa Monica Mountains

The risk assessment undertaken for this CWPP was done at a very coarse scale. A more detailed assessment (home by home) of risks is needed at the local level. Residents can assess their own risk based on a qualitative analysis of the issues below and the assessment form in Appendix L. Fire Safe Councils, homeowner's associations, and other neighborhood organizations can do this at the neighborhood or community scale. Two methodologies are provided in the appendices. Appendix B describes the methodology used for the mapping exercise during the CWPP community meetings. Appendix L, Home Ignition Zone Structure Assessment Guide, is a risk assessment for analyzing a specific property. A localized risk assessment in the Santa Monica Mountains would include a parcel-level analysis of the following components:

- Hardened homes: local building materials, construction, and age of structures
- Community values at risk
- Urban fuels: home landscaping and defensible space
- Hazardous trees
- Topography and location in the landscape
- Santa Ana winds and Red Flag conditions
- Community education and awareness
- Community emergency preparedness
- Community preparedness plans provided to public safety agencies
- Sources of local ignitions
- Ingress and egress routes
- Water sources
- Existing fuel reduction
- Impact of surrounding wildlands/vegetation
- Post-fire effects (e.g. erosion, invasive species, etc.)





2003 Cedar Fire, Rancho Santa Fe. Source: Jon Keeley

Every home in the Santa Monica Mountains contributes to the resiliency of an entire neighborhood or community and the collective ability to withstand the damaging effects of wildfire. Residents can lower their own wildfire risk and that of their neighbors by implementing the best management practices for hardening homes, improving defensible space within the home ignition zone, and following the “Ready, Set, Go” guidelines, all described in Chapter 4.

In summary, this means residents should:

- Build homes in a safe location,
- of nonflammable materials consistent with the current WUI building standards,
- with fire-safe design features that strongly resist ignition by embers,
- surrounded by defensible space with fire-safe landscaping in the home ignition zone,
- in a whole community that was laid out with fire safety in mind,
- that includes adequate evacuation (ingress and egress) routes, and
- has good communication within and beyond the neighborhood.

All Santa Monica Mountains residents are in this together; and together it’s possible to reduce wildfire occurrence and consequences with awareness and advance preparation.

