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13. Corral Canyon – Pepperdine University Community Fire Safety Action Plan

13.1. Corral Canyon – Pepperdine University Description

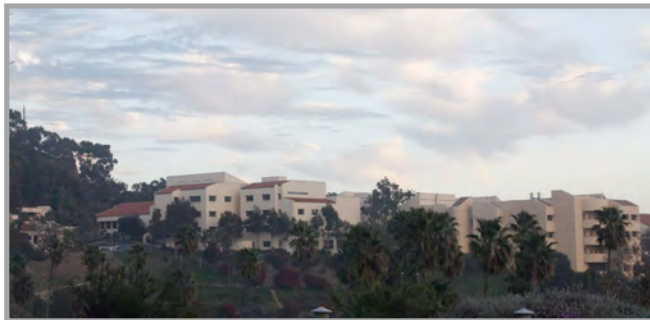
This planning unit includes the unincorporated neighborhoods of Los Angeles County in Corral Canyon (El Nido, Barrymore Drive, Malibu Bowl) and Pepperdine University. The Corral Canyon–Pepperdine University unit extends from Solstice Canyon east to Puerco Canyon inclusive. Its northern boundary includes National Park Service inholdings near Castro Crest ridgeline and Malibu Creek State Park. The southern boundary includes the northern part of the City of Malibu boundary starting inside Solstice Canyon Park, near El Nido and moving eastward to Pepperdine University property along Pacific Coast Highway. The eastern boundary is Los Angeles County Highway N1 (Malibu Canyon Road). The Corral Canyon–Pepperdine University unit is 9.1 square miles in area.



Assets at risk in the built environment include more than 600 single-family homes, 119 faculty residences related to Pepperdine University, student housing for 4,000, and at least 25 administrative and educational facilities buildings of the university. Additional assets include open-space areas of the City of Malibu, national parks (Solstice Canyon, Castro Crest), state conservancy (Corral Canyon Park), a state park (Malibu Creek), two artificial lakes, a remote automated weather station, commercial agriculture operation, and remnants of a few historic structures. Properties and homes vary in size. Parcels range from a fraction of an acre to more than 800 acres.^{1,2} Single-family home prices in Corral Canyon currently start at \$470,000 and go up to \$2 million. Undeveloped parcels in this unit range from \$30,000 to \$140,000 per acre.³

13.1.1. Corral Canyon – Pepperdine University Wildfire Environment

Development in the Corral Canyon–Pepperdine University Planning Unit is surrounded by open space and high habitat values. The Coastal Zone extends inland from the beach into this area.⁴ The environment includes several



Significant Ecological Areas and cultural resource sites. Attributes include Solstice, Corral, and Upper Puerco canyon watersheds, oak woodlands, white alder/sycamore/walnut woodlands, upland prairies/meadows, riparian corridors, pristine coastal sage scrub, rock outcrop, and chaparral habitat, as well as other significant habitat areas. At least thirteen sensitive, threatened, or endangered plant and animal species are

¹ Corral Canyon (2010), Corral Canyon, www.corralcanyon.org

² Pepperdine University (2010), Pepperdine University, www.pepperdine.edu

³ All Malibu Land, www.malibulandandhomes.com (accessed July 7, 2010).

⁴ The California Coastal Zone extends 1,000 yards inland from the mean high tide line. In significant coastal estuarine habitat and recreational areas it extends inland to the first major ridgeline or 5 miles from the mean high tide line, whichever is less. In developed urban areas, the boundary is generally less than 1,000 yards.

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identified in this unit. Pepperdine University cultivates local vegetation from surrounding hillside native plant communities to use in ornamental landscaping. Sixty percent (500 acres) of the 830-acre campus is undeveloped and saved as open space.⁵ Areas with high historic disturbance in this planning unit have dense populations of non-native grasses and at least 28 types of noxious weed species.⁶ The increasing presence of these non-native “wildland” species is a strong indicator that type conversion poses a threat to the native environment.⁷

Passive recreational opportunities include walking, jogging, bicycling, mountain biking, bird watching, wildflower and wildlife viewing, and horseback riding. Developed and private types include dirt biking, motor biking, pool swimming, and court sports.

Ingress and egress is from Pacific Coast Highway to the south for all the areas of the planning unit. Pepperdine University is also accessible on the east side from Malibu Canyon Road. There are no other paved roads that lead outside the unit. Connectivity and condition of roads in the area vary. Corral Canyon experiences a great deal of geologic instability including at least two active landslides. Subdivisions in El Nido and Malibu Bowl were created prior to modern building and grading standards. These lots and accompanying streets often are located on steep unstable hillsides. Barrymore Drive has active landslides.⁸ Twenty-five percent of parcels in Corral Canyon are undevelopable. Lateral streets in Corral Canyon are narrow with some hairpin turns and generally have marginal

shoulder space and very little parking.^{9,10} The streets in El Nido and Malibu Bowl are a combination of cul-de-sacs and circuitous drives. Barrymore Drive is one-way in and out. Access to all three subdivisions in the canyon is restricted to Corral Canyon Road, which is five miles long, travels along the ridgetop, and terminates in a dead-end. Corral Canyon Road crosses over a bridge at Solstice Creek in the lower reach of the canyon. Access historically has been a problem when the bridge suffers damage from wildfire or storm events.^{11,12} Pepperdine University has wide curved streets that afford good access. The institution is gated and guarded.



CAL FIRE designated the entire Santa Monica Mountains region as a Very High Fire Hazard Severity Zone, including this area. This determination by the state is based on factors such as fire weather, slope, and fuel loading, among others.

The Corral Canyon–Pepperdine University Planning Unit has a history of many wildfires: Rindge (1903); Topanga-Escondido (1913); 30,000-acre Latigo complex (1935); 15,000-acre Woodland Hills #65 (November 6,

⁵ Center for Sustainability (2010), Pepperdine University, www.pepperdine.edu/sustainability/current-practices/water.htm.

⁶ Interagency Burned Area Emergency Response (BAER) (December 10, 2007), Corral fire report – CA-LAC-259483 – Santa Monica Mountains – Los Angeles County, California.

⁷ California Invasive Plant Council (2010), California inventory, www.cal-ipc.org

⁸ Interagency Burned Area Emergency Response (December 10, 2007), Corral fire report.

⁹ Chuck Chriss (2010), Getting around Malibu – El Nido. In *Malibu Complete*, www.malibucomplete.com.

¹⁰ Chriss (2010), Getting around Malibu – Malibu Bowl. In *Malibu Complete*.

¹¹ Interagency Burned Area Emergency Response, (December 10, 2007), Corral fire report.

¹² Hans Laetz (November 28, 2007), “Malibu’s worst fear: wildfire repeats and takes devastating toll,” *Malibu Surfside News*.

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1943) with 150 homes destroyed in the burn area; 18,000-acre Liberty (November 28, 1958) with 17 homes destroyed in Corral Canyon; 28,201-acre Wright (September 25, 1970) with 403 homes destroyed in the burn area and ten fatalities; 43,090-acre Dayton Canyon (October 9, 1982) with 74 homes destroyed in the burn area; Decker (August 7, 1983); 5,197-acre Piuma (October 14, 1985); Malibu (September 18, 1993); Calabasas (October 21, 1996); Corral (August 23, 1998); Latigo (January 5, 2003); Corral (October 25, 2003); Latigo Canyon (April 26, 2007); Latigo (May 23, 2007); and 4,709-acre Corral (November 24, 2007) with 32 homes lost in Malibu Bowl and three in El Nido.^{13,14,15}

Structures in the Corral Canyon–Pepperdine University unit have a variable age-class. Older structures tend to be wooden. Newer structures generally are constructed of stucco, plaster, or masonry. Many homes, regardless of age, have wooden decks and/or fences. Mature, lush, and tall ornamental vegetation is found around structures in Corral Canyon. Utilities are aboveground. Many structures in the Corral Canyon–Pepperdine University unit are not retrofitted to current California WUI Fire and Building Standards.¹⁶



Municipal water supply for the Corral Canyon–Pepperdine University unit is from Las Virgenes Municipal Water District (LVMWD).¹⁷ Mandatory water conservation and enforcement measures were established in 2009. The district has one emergency 9,500-acre-foot back-up reservoir.¹⁸ Pepperdine employs a water conservation program for its 7,000+ campus population. It treats its sewage to tertiary standards in addition to use of water-saving devices.¹⁹ Reclaimed water is stored in two on-site lakes. The treated water is used to irrigate 99% of the campus non-native landscaping. Pepperdine estimates that this system saves the university 92 million gallons of water per year.²⁰

Corral Canyon residents organized and formalized the Corral Canyon Fire Safety Alliance²¹ (CCFSA) and its several subcommittees following the destructive 4,709-acre Corral Canyon fire of 2007. The group has nonprofit status, 300 members, and an elected board of directors. Its working committees address public safety, policy, road conditions, parking, evacuation planning, communications, and Red Flag code violations. The group started an Arson Watch program with twelve members and is part of the larger Los Angeles County volunteer Arson Watch program. A volunteer call-firefighter program is underway to elicit participation and train local residents. Los Angeles County Fire Department Engine #271 will eventually be assigned to Corral Canyon when the call-firefighter program has

¹³ Hans Laetz (November 28, 2007), “Malibu’s worst fear.” *Malibu Surfside News*.

¹⁴ Robert S. Taylor, Biogeographer/Fire GIS Specialist, National Park Service, personal communication, February 12, 2010.

¹⁵ Mike Davis (1998), “The Case for Letting Malibu Burn.” In *Ecology of Fear* (New York: Henry Holt), pp. 93–147.

¹⁶ State of California, Building Standards Commission, www.bsc.ca.gov (accessed February 8, 2010).

¹⁷ Las Virgenes Municipal Water District (2010), District Map [Data], www.lvmwd.com/Modules/ShowDocument.aspx?documentid=838.

¹⁸ Las Virgenes Municipal Water District (2010), www.lvmwd.com.

¹⁹ H. Stone and A. Bouchard (1991), “Wastewater reclamation and reuse for Malibu, CA.” In *Water Resource Planning Management: Urban Water Resources* (Reston, VA: American Society of Civil Engineers), pp. 249–253.

²⁰ Center for Sustainability (2010), Pepperdine University, www.pepperdine.edu/sustainability/current-practices/water.htm.

²¹ www.corralcanyon.org/ccfsa.html

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enough trained participants. Operation Recovery is aligned with the CCFSA. It assists residents with post-emergency permitting, rebuilding, and other logistics related to loss.²² CCFSA was awarded a California Fire Safe Council grant for hazardous fuel reduction and community education in 2011.

Los Angeles County Fire Station #88 is located on Malibu Road near the Civic Center. Station #71 is located on Pacific Coast Highway at Point Dume.

13.2. Corral Canyon – Pepperdine University Evacuations

Possible impediments to emergency ingress and egress include downed power lines, trees, landslides, poor road conditions, problems with the Solstice/Corral bridge, traffic, and locked gates. Solstice Canyon and Corral Canyon parks are popular with outdoor enthusiasts. Pepperdine University campus has at least 4,000 residents plus thousands more staff, commuter students, and facilities users.²³ There are many large and small domestic animals in this planning unit. Evacuation plans should include all these considerations and be coordinated with community emergency service providers and law enforcement. Pepperdine hosts areas that could potentially be used during evacuations. The campus is designated as a command center for emergencies, but this use may pose a conflict for evacuations.

13.3. Corral Canyon – Pepperdine University Community Meeting Summary

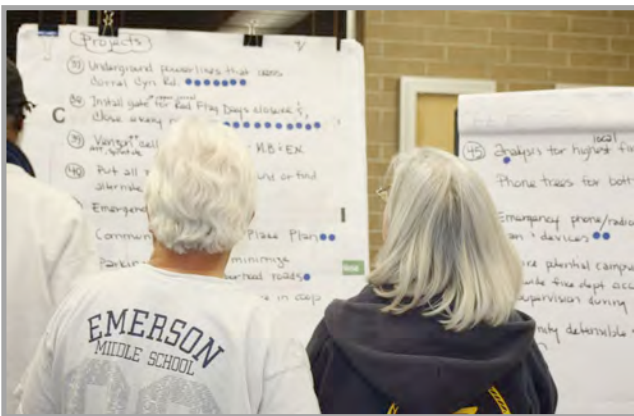
The Corral Canyon–Pepperdine University community meeting was held at Los Angeles County Waterworks District No. 29 offices on January 12, 2010. Twenty residents, one facilities manager, and five non-residents attended.

The following assets at risk were identified at the community meeting. These can be located on Map II.13-1 at the end of this document.

FIGURE II.13-1. COMMUNITY-IDENTIFIED ASSETS AT RISK

- Cell repeater(s)
- Charter Internet
- Future volunteer call-firefighter location/staging area
- Pepperdine
- Water tank (Las Virgenes Municipal Water District)

13.3.1. Community-Identified Potential Projects



The following items are community-identified projects from the community meeting. Residents were encouraged to “think big,” and not be concerned about project cost or property ownership for the project brainstorming process. Following the brainstorming, residents prioritized projects based on which were most realistic and most important. Residents at this meeting tended to vote for projects that were beyond their capacity to do internally. These project locations can be seen on Map II.13-1 at the end of this document.

²² Corral Canyon (2010), www.corralcanyon.org.

²³ Pepperdine University (2010), www.pepperdine.edu.

FIGURE II.13-2. CORRAL CANYON–PEPPERDINE UNIVERSITY COMMUNITY-IDENTIFIED PROJECTS

IDENTIFIED ITEM DESCRIPTION	PROPOSED PROJECT CATEGORY	PRIORITY RANK
Install gate at Upper Corral for Red Flag days closures and close every night	Risk Reduction	1
Require that potential campsite be served by 20-foot-wide fire department access roads with water and supervision during Red Flag days	Risk Reduction	2
Underground power lines that cross Corral Canyon Road	Risk Reduction	3
Verizon, AT&T, Sprint, etc., cell phone tower for Malibu Bowl and El Nido	Emergency Preparedness	4
Emergency sirens	Fire Protection / Equipment	
Put all power lines underground or find alternate technology	Risk Reduction	
Emergency phone/radio community plan and devices	Emergency Preparedness	
Community shelter-in-place plan	Evacuation	
Parking program to minimize obstructions of neighborhood roads	Policy	
Community defensible-space education program	Education	
Phone trees for both communities	Emergency Preparedness	
Enforce trash can compliance in cooperation with waste company	Policy	
Analysis for highest local fire hazard zones	Risk Assessment	

13.4. Corral Canyon – Pepperdine University Action Plan

The following projects are the initial priorities for community action for the Corral Canyon–Pepperdine University Planning Unit.

- Work through CCFSA to educate residents on the need to keep ingress and egress/evacuation routes clear, including Seabreeze, Searidge, Coral Glen, Sequit, McAlpine, and Valmere in El Nido, and Fairside, Idlewild, Ingleside, Lookout, Newell, and Cool Glen in Malibu Bowl. Residents need to understand the dangers involved in imprudent parking or long-term street storage of unused vehicles. Because natural disasters can strike at any time, key evacuation ingress/egress routes must be kept free of parked vehicles, especially trailers and other large objects that are difficult to move quickly. Trash cans and other items should be kept off the roadway and out of key turnout/passing areas.²⁴ A neighborhood-organizing project would include creating off-street parking where it is limited. Neighbors can work together to help each other stay in compliance.
- Evacuation out of Corral Canyon during a wildfire could be problematic. These neighborhoods need to be ready to survive wildfire if residents are not able to evacuate. To this end, ensure that at least one team from each sub-neighborhood undergoes Community Emergency Response training (CERT).
- CCFSA organize local residents to create hardened (fire-resistant) homes and significantly reduce urban fuels in the home ignition zone based on the Conservation Principles and Best Management Practices outlined in Chapters 1, 4, and 5 of this CWPP. Fuels maintenance should be a routine and ongoing practice for all homes and landscapes in the Santa Monica Mountains.
- Implement a hazard tree removal/thinning program through CCFSA, focusing in both El Nido and Malibu Bowl in priority order:
 - Along main evacuation routes, starting with Corral Canyon, Seabreeze, Lookout, and Lockwood,

²⁴ The law in Los Angeles County states that trash cans can only be on the street after 5 pm of the day preceding, and until 8 pm on the day of waste collection.

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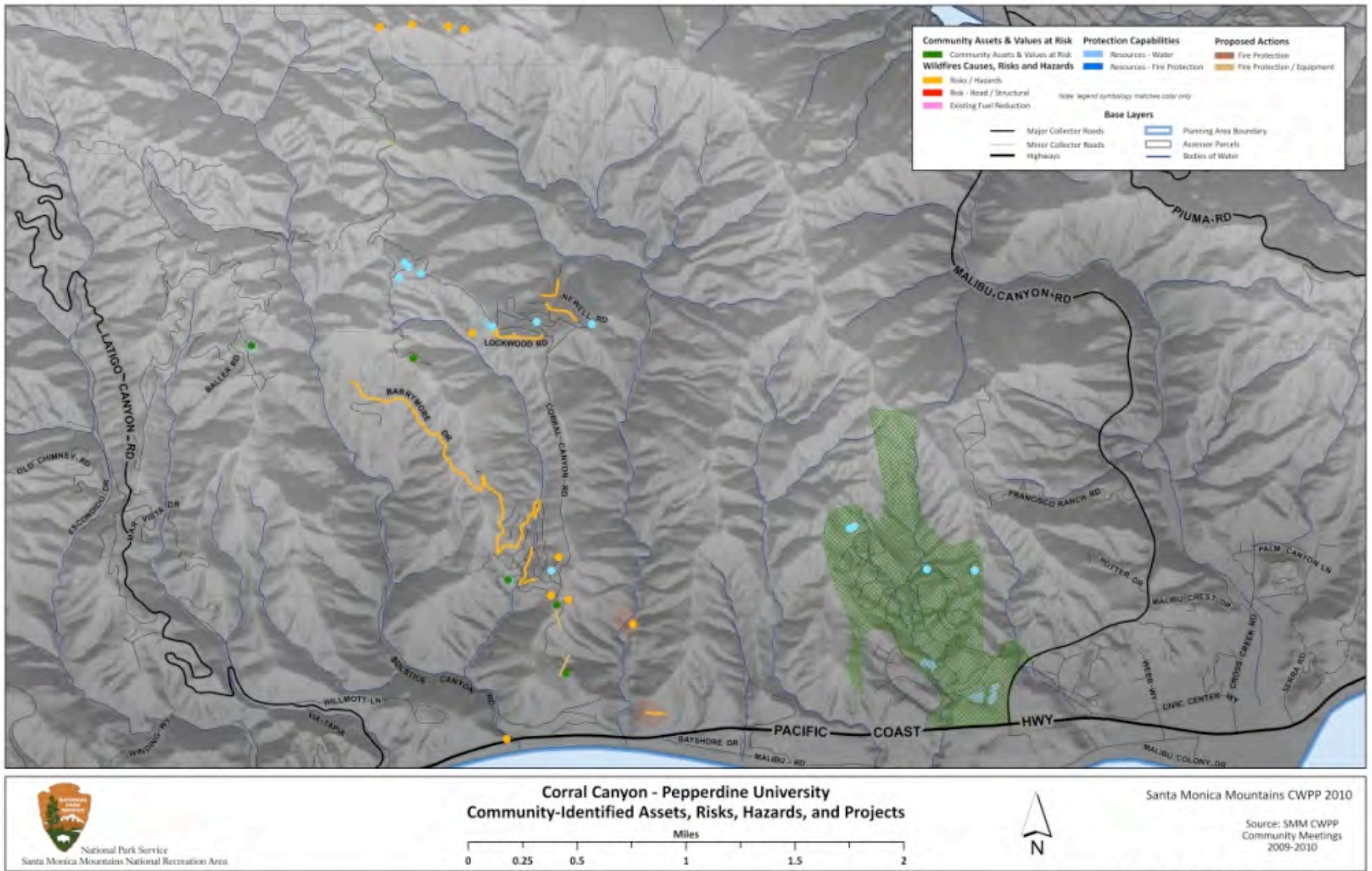
- Along all spur roads to main evacuation roads,
- Near homes, especially trees that threaten more than one home,
- Trees in or near power lines.
- CCFSA implement a local community education and preparedness campaign. Identify local emergency communication options including phone trees, potentially using a commercial option as discussed in Chapters 4 and 8. Include community education on pool pumps, generators, and home fire-preparedness equipment. This can be done in cooperation with Los Angeles County Fire Department and the National Park Service.
- Residents here have been especially concerned with how to reduce the chance of local ignitions following the 2007 Corral Fire. To this end, they would like to limit access to nearby public lands during times of high fire danger, including installing a gate on Corral Canyon Road directly above Malibu Bowl. The community can raise funds and work through CCFSA with the Santa Monica Mountains Conservancy (whose approval is required), Los Angeles County Fire Department, and California State Parks to explore this option for limiting public access on Red Flag days. Clear agreements would need to be established regarding who has the right and/or responsibility to maintain and close and open the gate, and at what times.



- Explore community purchase and installation of wildland-urban interface (WUI) building products to upgrade homes to current WUI building standards. All residents upgrade homes to current California WUI Fire and Building Standards.
- CCFSA continue to work with law enforcement and Los Angeles County Fire Department to develop a local evacuation plan and ensure that any local gates (roads and driveways) are open or accessible during Red Flag conditions--with the exception of the above-mentioned public-access gate(s) to wild areas.
- Community continue to expand local Arson Watch program, including cooperation with agencies that manage neighboring public properties.

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MAP II.13-1. CORRAL CANYON – PEPPERDINE UNIVERSITY: COMMUNITY-IDENTIFIED ASSETS, RISKS, HAZARDS, AND PROJECTS²⁵



²⁵ This map prints best at 11x17. Visit to www.forevergreenforestry.com/smmcwpp_pub.html to download a print version.