

# Executive Summary

## San Marcos Pass - Eastern Goleta Valley Mountainous Communities Community Wildfire Protection Plan

The San Marcos Pass and Eastern Goleta Valley (SMP/EGV) Mountainous Communities Community Wildfire Protection Plan (CWPP) was developed in response to local stakeholders desire to protect communities within the San Marcos Pass and Eastern Goleta Valley area. In late October 2016, Santa Barbara County Fire Department (SBC Fire) hired a consultant to assist in the development of a CWPP.

This CWPP serves to guide future actions of agencies and individuals but does not legally commit any public agency to a specific course of action. Actions identified in this CWPP that exceed environmental thresholds defined in Santa Barbara **County's 2008 *Environmental Thresholds and Guidelines*** or that trigger permit requirements of the County Land Use and Development Code (LUDC) ESH/RC Overlays within the *Eastern Goleta Valley Community Plan* area, will likely require, at a minimum, an initial study (state) or categorical exclusion (federal) following state or federal environmental laws for evaluating potential environmental impacts. The CWPP meets all requirements for the Healthy Forest Restoration Act (HFRA) and adheres to the CWPP development process established by the County. The following summarizes the sections within the CWPP:

### Section 1 – INTRODUCTION

The purpose of this CWPP is to identify wildfire hazard mitigation strategies for communities in the SMP/EGV mountainous areas that are in balance with sustainable ecological management and fiscal resources. Additionally, the CWPP provides educational resources for residents to enhance wildfire preparedness.

As defined by the HFRA, a CWPP must be collaboratively developed, must identify and prioritize areas for hazardous fuel reduction treatments, and must recommend measures to reduce the ignitability of structures. The Santa Barbara County Board of Supervisors has an approved CWPP Development Process that identifies the need to engage interested parties and to collaborate with applicable federal and state agencies. The *Community Wildfire Protection Plan Development Process for Santa Barbara County* consists of eight steps that describe a standardized approach for the CWPP planning process in Santa Barbara County. This process enhanced engagement and participation with stakeholders and ensured this CWPP not only meets the intent of the HFRA, but exceeds it. It also provided the basis for development of the CWPPs goals and objectives.

Goals of this CWPP:

- Reduce the wildfire threats within the wildland urban interface (WUI)/intermix to promote life safety; provide Agencies and the environmental community guidance and direction for future actions; and, ensure that the SMP/EGV CWPP adheres to all local, state, and federal policy and regulatory framework related to community wildfire protection in the Planning Area.
- Enhance protection of values at risk from wildfire (e.g., homes, businesses, critical infrastructure, natural resources, cultural resources, agricultural resources, watershed resources).
- Balance wildfire protection strategies with natural and cultural resource sustainability.
- Identify funding opportunities including grants for wildland fire protection.

## Section 2 – COMMUNITY OVERVIEW

The Planning Area is located in an unincorporated area of Santa Barbara County north of the cities of Goleta and Santa Barbara (See Figure 2, Planning Area Map in the CWPP). The Planning Area includes over 29 square miles and 19,588 acres, including approximately 8,534 acres of private land, 10 acres of California Department of Parks and Recreation lands, 238 acres of local government managed lands, and 9,930 acres of federally managed lands. There are 12 communities identified within the San Marcos Pass and Eastern Goleta Valley Mountainous Planning Area, including:

- Lower Paradise Road/Stagecoach.
- Paradise Canyon.
- Stagecoach/Cold Springs.
- Rosario Park.
- San Marcos Pass/Kinevan.
- West Camino Cielo.
- East Camino Cielo.
- Painted Cave.
- San Marcos Trout Club.
- Old San Marcos Road.
- Twin Ridge.
- San Marcos Foothills.

### *Values at risk*

The primary focus of a CWPP is to protect life safety, structures, and infrastructure; however, actions taken to protect those values, when applied carefully, can also enhance the protection of natural and cultural values that are also part of the communities.

Stakeholders identified the following values for the Planning Area:

- Life safety.
- Homes and neighborhoods.
- Critical infrastructure.
- Natural and cultural resources.
- Recreational amenities and facilities.

### *Land Use and Zoning*

The Planning Area includes unincorporated portions of Santa Barbara County, federal lands administered by the Los Padres National Forest, and a small portion of California Department of Parks and Recreation land (State Parks) directly adjacent to Painted Cave Road. Each of these jurisdictional authorities have specific land use requirements addressed in agency specific planning documents.

### *Fire Protection*

Wildland fire protection in the State of California is the combined responsibility of local, state, and federal governments. Fire protection responsibility areas represent areas of jurisdictional authority for fire protection, including local, state, and federal governments (See Figure 9, Direct Protection Area Map in the CWPP). Santa Barbara County Fire Department (SBC Fire) and the United States Forest Service (Forest Service), Los Padres National Forest (LPF) have primary wildland fire suppression responsibility within the Planning Area.

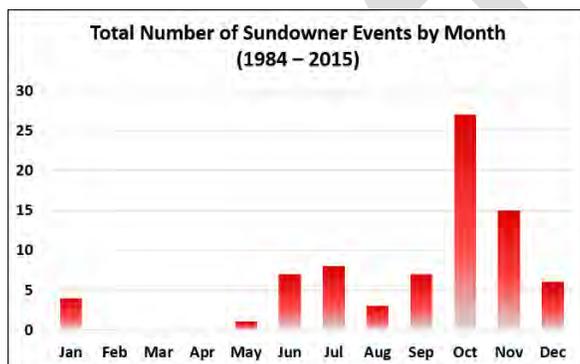
## Agreements

Automatic aid agreements exist with SBC Fire, Forest Service, City of Santa Barbara, Carpinteria/Summerland Fire Protection District, and Montecito Fire Protection District. These agreements assure that the closest available resources are dispatched to emergencies.

### Section 3 - DEFINING THE WILDFIRE PROBLEM

The wildfire problem in the Planning Area was evaluated using large fire history, wildfire ignition data, weather data, slope, and fuel data up to the end of 2016.

Fire history shows that the predominance of large fires that have burned within or immediately adjacent to the Planning Area have occurred during a weather event featuring offshore winds, high temperatures, and low relative humidity. These conditions are known locally as Sundowners and can occur in almost any month of the year (see graphic below).



Continuous heavy fuels, steep slopes, strong winds, low fuel moistures, and a rich history of wildfire ignitions along major transportation routes and recreation areas all contribute to the development of large wildfires.

While the wildfire problem is well known among longtime residents of the local area, many have not proactively addressed needs of their own residences to reduce the potential of structure ignition during a wildfire. Basic structure hardening techniques and the effective development of personal and community defensible space can enhance protection of these structures during a wildfire.

While many local residents understand the wildfire hazard associated with native vegetation, the impacts of ornamental vegetation on fire spread in an urban environment and on structure loss are often under appreciated. The Urban Creeks Council has provided a list of native vegetation that residents should consider removing or maintaining in a less flammable state through active management of the landscape elements (see Section 3 in CWPP, Table 9).

### Section 4 - COMMUNITIES AT RISK

Due to potential fire behavior within and adjacent to communities in the Planning Area, a refined WUI boundary beyond the description provided in the HFRA was developed for the Planning Area (See Section 4 in CWPP, Figure 19, CWPP WUI Map).

As part of the requirements of the HFRA, **State Forester's across the nation were tasked with the identification** of communities at risk of damage from wildfire that were in the *vicinity* of federal lands. Within and adjacent to the Planning Area, the following communities are designated by the State Forester as communities at risk:

- Santa Barbara.

- Goleta.

The *Santa Barbara County 2018 Unit Fire Plan* and *2017 Multi-Jurisdictional Hazard Mitigation Plan* designates the following communities within the Planning Area as **"other communities at risk"**:

- Rosario Park.
- Paradise.
- San Marcos Trout Club.
- Painted Cave.

As part of this CWPP, 12 communities in specific geographic areas having similar physical and structural components were included for evaluation in this Plan. These communities are not officially designated **"communities at risk"** or **"other communities at risk"** as defined in the *2018 Unit Fire Plan* and *2017 Multi-Jurisdictional Hazard Mitigation Plan*, but are designated to facilitate a better understanding of the potential impacts of wildfire on specific geographic locations within the Planning Area (See Figure 2, Planning Area Map in Section 2 of the CWPP).

## Section 5 - WILDFIRE ANALYSES

The contractor performed analyses to assist in better understanding the wildfire environment associated with the Planning Area. The primary analyses were:

- **Hazard Assessment** - Two fire-modeling scenarios were analyzed. Figure 21 in Section 5 of the CWPP spatially displays where problem fire behavior occurs. The factor considered was flame lengths greater than eight feet under 90th percentile weather conditions with no Sundowner wind event. Locations near Twin Ridge, Trout Club, Painted Cave and Lower Paradise Road have elevated wildfire hazard.

As stronger winds, such as Sundowner winds, enter the fire environment, the modeled flame lengths significantly increase. Figure 22 in Section 5 of the CWPP depict fire behavior under 90th percentile conditions with an offshore wind event. Larger portions of the Planning Area display flame lengths in excess of eight feet, the threshold where fire suppression actions at the flaming front of a wildfire are less likely to be successful.

Under these moderately strong offshore winds, the probable success of firefighting operations decreases, and the importance of structure hardening and adequate defensible space will be required. Strong wind events, such as Sundowner winds, create significant problem fire behavior.

- **Risk Assessment** – The risk assessment is based on wildland fire burn frequency over a 75-year period. Areas that burn more frequently received a higher relative risk rating. Three categories relative risk include:
  - Zero to one wildfire occurrence – Low Risk.
  - Two wildfire occurrences – Moderate Risk.
  - Three or more wildfire occurrences – High Risk.

Based on our analysis, western Paradise Canyon and areas west of San Marcos Trout Club, and north of San Marcos Foothill communities are at high risk.

- **Safe Operational Space** – This analysis evaluated whether Santa Barbara **County's required defensible** space standards are sufficient to allow firefighters and the public an opportunity to safely engage in structure protection activities. Primary data for this analysis was not available for the Planning Area but a dataset from nearby Mission Canyon served as a proxy for the Planning Area since the vegetation and

topography are similar. Results based on Mission Canyon indicate that most parcels require vegetation management greater than 100 feet in order to achieve a Safe Separation Distance for firefighters and the public. These results support the concept of "*community level defensible space*", whereby homeowners work together to leverage the effectiveness of the hazard mitigation work currently required by Santa Barbara County Fire Department.

- Structure Defensibility and Vulnerability - The results from this analysis show a number of challenges to firefighters when protecting structures and that much of the Planning Area has low potential for defensibility (See Section 5 in the CWPP, Figure 25, Defensibility Potential Map).
- Ember Exposure and Spot Fire Distance – Spot fires are known to accelerate fire spread by moving fire ahead of the main flaming front of the fire. Embers are a common cause of structure loss, as they can ignite flammable vegetation near a structure or interact with a receptive fuel on a structure not fully hardened against ember exposure.

Results show that Paradise Road, Stagecoach/Cold Springs, East Camino Cielo, San Marcos Pass/Kinevan, West Camino Cielo, and San Marcos Trout Club have the highest ember exposure in the Planning Area (Section 5 in the CWPP, Figure 27, Ember Exposure Map).

- Fuel Treatment Effectiveness – When evaluating if a fuel treatment can reduce fire hazard, the type, location, and intensity of the fuel treatment needs to be determined. This is typically associated with site-specific project planning. This CWPP does not provide spatially explicit treatment information, rather it focuses on locations where treatments may be appropriate to reduce fire hazard. Table 17 in Section 5 in the CWPP provides a guide for determining how fuels change when treated and subsequently, how fire behavior changes with a fuel treatment. Planners can use this table to evaluate the effectiveness of the proposed fuel treatments.

## Section 6 - RECOMMENDED FUTURE ACTIONS

Utilizing the results from the wildfire analyses, recommendations for follow up actions were developed. These include recommendations concerning community preparedness, structure survivability, fuel treatment strategy, recommended treatment standards, best management practices, environmental protection measures, and evacuations.

- Community preparedness summarizes services and programs available to the public in order to enhance their individual readiness for a wildfire.
- Structure survivability looks at structure hardening practices that individual homeowners should undertake to improve the likelihood of their home surviving a wildfire (Section 6 in the CWPP, Table 18, Structure Hardening Mitigation Actions). By making structural improvements to harden points of entry against embers and by managing ornamental and native vegetation immediately adjacent to a house to provide space from radiant and convective heat, the survivability of a structure during a wildfire can be enhanced.
- Fuels Modification Strategy looks at existing and potential fuel reduction projects that can be implemented or maintained to enhance community protection without creating significant environmental impacts. Projects were identified across jurisdictional boundaries and include work that has or may occur on private, County, state or federal lands. The greatest degree of wildfire protection may be obtained through leveraging the work of all involved agencies and private landowners. The "*Potential Projects*" will require further environmental analysis under California Environmental Quality Act (CEQA)

or National Environmental Policy Act (NEPA), and possibly permitting from the County prior to implementation. Existing projects are assumed to have current environmental documentation or permits for ongoing maintenance actions.

To prioritize potential projects, burn frequency (a measure of risk) and flame lengths (a measure of hazard) were used to determine a "Relative Hazard Rating". This rating was applied to all 30 x 30 meter pixels within a treatment area. The areas **with the highest percentage of "Very High Relative Hazard"** were ranked the highest priority. Using the percentage of "Very High Relative Hazard", treatments were ranked from highest to lowest priority (see Section 6 in CWPP, Table 20 and Appendix E).

- Evacuations from an evolving wildfire require coordination between fire, law enforcement, and the public to efficiently move people and their animals from **harm's** way. Sheltering in place or staying and attempting to protect a home can lead to entrapment of individuals placing law enforcement and firefighter personnel at risk should they be required **to execute a rescue. The County's Ready! Set! Go!** Program informs the public of proper actions to take before and during an evacuation. The CWPP provides recommended evacuation routes established by SBC Fire and special consideration for vulnerable population, people with special needs, and small and large animals.

## Section 7 - FISCAL RESOURCES

The actions proposed in this CWPP are discretionary and should be addressed as agency funds and staffing become available for this work or as residents are financially able to improve the survivability of their individual structure.

Special funding obtained through grants provides the least fiscal impact on local government and, in many cases, empowers citizen groups such as Fire Safe Councils to address specific local priorities. Current sources of grant funding include:

- California Fire Safe Clearinghouse – [www.cafiresafecouncil.org/grants-clearinghouse](http://www.cafiresafecouncil.org/grants-clearinghouse).
- CAL FIRE - [www.fire.ca.gov/grants/grants](http://www.fire.ca.gov/grants/grants).
- Federal Emergency Management Agency (FEMA) - [www.fema.gov/hazard-mitigation-grant-program](http://www.fema.gov/hazard-mitigation-grant-program).
  - Hazard Mitigation Grant Program.
  - Pre-Disaster Mitigation grants.

## Section 8 - MONITORING

### *CWPP Monitoring*

This CWPP serves as a foundation for wildfire protection of the Planning Area. Review and revision of these **elements are necessary to maintain a viable plan. SBC's Fire Marshal is** responsible for conducting a thorough review of this plan at 5-year intervals and should seek input from the Working Group. Significant changes in policy, budget, and/or environmental conditions may warrant a more frequent review.

### *Fuel Treatment Monitoring*

Currently, there is no fuel treatment monitoring program within the Planning Area. Fuel treatment effectiveness monitoring should be established on implemented projects in order to validate that treatment standards, as presented in this CWPP, are effective and do not lead to environmental degradation. Information on the methodology associated with photo monitoring can be found at [www.fs.fed.us/pnw/pubs/gtr526](http://www.fs.fed.us/pnw/pubs/gtr526).

## Section 9 - RECOMMENDATIONS

Recommendations are summarized below:

- Based on results of the wildfire analyses and potential life safety issues, consider increasing the defensible space requirements for property owners within high hazard communities in the CWPP area. This effort could enhance protection of life safety for firefighters and the public.
- Develop an ongoing educational program for area residents on structure hardening and maintenance of defensible space.
- Consider applying for a FEMA grant for structure hardening measures.
- Cooperate with County of Santa Barbara to create PACE program make low-cost loans available for structure hardening measures.
- Revise the existing CWPP Development Process to address the interaction of a contractor with the Development Team. Consider using the contractor for technical support, only if the Development Team is to be tasked as the principal author.
- Develop Vulnerable/Special Needs Population Preparedness Guide for emergency wildfire evacuation.
- Support state or local legislation to provide tax structures with incentives for structure hardening and hazardous fuel treatment mitigation.
- Create a short informational video about fuel management and the process. Footage could be taken by firefighters in the field and a link placed on the CWPP webpage as well as the SBC Fire, WRA, and Fire Safe Council websites.
- Consider the implementation of parking restrictions during time of elevated fire danger on narrow roadways that serve as primary access and egress routes into the communities. These restrictions would require a new County Ordinance and should be included in an update to the existing Red Flag Warning program managed by SBC Fire.
- Consider establishing a SBC Fire, Forest Service, and private landowner fuel treatment monitoring program for the Planning Area.
- Encourage private landowners, recreational-based businesses, and organizations within the Planning Area to develop individual evacuation plans.
- Consider assessing the fire suppression water system and water supply for the Santa Barbara Front (Planning Area south of the Camino Cielo ridgeline) to determine if existing water sources are adequate for fire suppression resources and exterior fire sprinkler systems.
- Augment budget of SBC Planning & Development to provide for staff time to support development of CWPPs and other fire safety plans.
- Maintain the SMP/EGV CWPP Development Team as an advisory committee to meet on an annual basis to ensure CWPP currency. The SMP/EGV CWPP Advisory Committee would also engage with SBC Fire and LPF for project planning and implementation ensuring community involvement and participation in the process.