PUBLIC DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT

SCH 2020070069

CITY OF SANTA BARBARA
COMMUNITYWILDFIRE PROTECTION PLAN

Prepared for:
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Deputy Project Manager

September 2020

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Acronyms and Abbreviations

Acronyms and Abbreviations	
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ADU	Accessory Dwelling Unit
AFY	acre-feet per year
amsl	above mean sea level
ATCM	Airborne Toxic Control Measure
Basin Plan	Water Quality Control Plan for the Central Coast Basin
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
Cal/OSHA	California Occupational Health and Safety Administration
CalARP	California Accidental Release Program
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection GEncy
CAL FIRE	California Department of Forestry and Fire Protection
CalGEM	California Geologic Energy Management Division
CALGreen	California Green Building Standards
CALAND	California Natural and Working Lands Carbon and Greenhouse Gas
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CalVTP	California Vegetation Treatment Program
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCIC	Central Coast Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	California Fire Code
CFTN	Community Fuels Treatment Network
CHRIS	California Historical Resources Information System
City	City of Santa Barbara
CNEL	community noise equivalent level
County	County of Santa Barbara
CRHR	California Register of Historical Resources
CRTP	Cultural Resources Treatment Plan
CWA	Clean Water Act
CWPP	Community Wildfire Protection Plan
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DTSC-SLs	DTSC-modified screening levels

Acronyms and Abbreviations	
du/ac	dwelling unit per acre
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESHA	environmentally sensitive habitat area
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
GHG	greenhouse gas
GIS	geographic information system
GPS	Global Positioning System
GWP	Global Warming Potential
HAER	Historic American Engineering Record
HERO	DTSC Human and Ecological Risk Office
HFHA	High Fire Hazard Area
HFHSZ	High Fire Hazard Severity Zone
HHRA	Human Health Risk Assessment
HLC	Historic Landmarks Commission
HU	Hydrologic Unit
Hz	hertz
IAB	Incident Action Plan
IFC	International Fire Code
IPCC	Intergovernmental Panel on Climate Change
JADU	Junior Accessory Dwelling Unit
LCP	Local Coastal Program
L_{eq}	equivalent sound level
$L_{eq(h)}$	1-hour A-weighted equivalent sound level
LRA	Local Responsibility Area
LUP	Land Use Plan
LUST	leaking underground storage tank
MEA	Master Environmental Assessment
MFPD	Montecito Fire Protection District
MLD	Most Likely Descendant
MMT	million metric tons
MS4	Municipal Separate Storm Sewer System
MT CO_2E	metric tons carbon dioxide equivalent
MTD	Santa Barbara Metropolitan Transit District
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NHTSA	National Highway Traffic Safety Administration
NOA	naturally occurring asbestos
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OA	Operation Areas
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research

Acronyms and Abbreviations	
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbon
PCE	passenger car equivalent
PCR	California Public Resources Code
PDF	project design feature
PEIR	Program Environmental Impact Report
PEL	Permissible Exposure Limit
$PM_{2.5}$	particulate matter with an aerodynamic diameter equal to or less than 2.5 microns
PM_{10}	particulate matter with an aerodynamic diameter equal to or less than 10 microns
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRD	Parks and Recreation Department
proposed project	Community Wildfire Protection Plan
RAQS	Regional Air Quality Strategy
RCRA	Resource Conservation and Recovery Act
RMS	root mean square
ROC	reactive organic gas
RPS	Renewables Portfolio Standard
RSL	regional screening level
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SBCAG	Santa Barbara County Association of Governments
SBCAPCD	Santa Barbara County Air Pollution Control District
SBCFD	Santa Barbara County Fire Department
SBFD	Santa Barbara Fire Department
SBPD	Santa Barbara Police Department
SCCAB	South Central Coastal Air Basin
SCS	Sustainable Communities Strategy
SCRTS	South Coast Recycling and Transfer Station
SLCP	short-lived climate pollutant
SOI	Secretary of the Interior
SR	State Route
SRA	State Responsibility Area
SWIS	Solid Waste Information System
SWRCB	State Water Resources Control Board
SYBCI	Santa Ynez Band of Chumash Indians
TAC	toxic air contaminant
TCR	tribal cultural resources
TISG	Transportation Impact Study Guide
USGS	U.S. Geological Survey
UST	underground storage tank
VdB	vibration decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VMU	Vegetation Management Unit
VOC	volatile organic compound

Acronyms and Abbreviations	
WDR	Waste Discharge Requirement
WEAP	Workers Environmental Awareness Program
WFSAD	Wildland Fire Suppression Assessment District
WUI	Wildland-Urban Interface

1 Executive Summary

This section provides a summary for the Draft Program Environmental Impact Report (PEIR) for the City of Santa Barbara Community Wildfire Protection Plan (proposed project or CWPP). The California Environmental Quality Act (CEQA) requires environmental impact reports (EIRs) to contain a brief summary of the project and its consequences. The summary must include each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; areas of controversy known to the lead agency, including issues raised by agencies and the public; and issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects (14 CCR 15123). In accordance with these requirements, this chapter provides a summary of the CWPP impacts, lists mitigation measures and alternatives, describes areas of known controversy, and discusses issues to be resolved. this executive summary exceeds the guideline to keep the summary to 15 pages.

1.1 Introduction

CEQA requires the preparation and certification of an EIR for any project that a lead agency determines may have a significant effect on the environment. This PEIR has been prepared in compliance with criteria, standards, and procedures of the CEQA Guidelines. This document has been prepared as a Program EIR (pursuant to Section 15168 of the CEQA Guidelines) and represents the independent judgment of the City as lead agency (14 CCR 15050).

The City prepared a Notice of Preparation (NOP) and Initial Study in July 2020 that included a checklist from Appendix G of the CEQA Guidelines as modified by the City. For certain topical areas such as agriculture and forestry resources, energy, mineral resources, and population and housing, it was determined that the CWPP would have no impact or less than significant impacts; the rationale for these determinations is provided in the Initial Study (attached as Appendix A to this PEIR). These resource topics are not further analyzed in this PEIR. However, due to public comments raised during the public comment period between July 3, 2020 and August 3, 2020 and at the Scoping Hearing before the City Planning Commission on July 16, 2020, population and housing is evaluated in this PEIR.

1.2 Project Location

The proposed project would encompass the jurisdictional limits of the City of Santa Barbara, with the exception of the Santa Barbara Airport. The City is located between the coastal Santa Ynez Mountains and the Pacific Ocean, approximately 100 miles northwest of Los Angeles. The City borders the Los Padres National Forest and unincorporated areas of Montecito, Mission Canyon, Hope Ranch, and Eastern Goleta Valley.

1.3 Project Summary

The City of Santa Barbara Fire Department (SBFD) is proposing to implement a comprehensive fire management program, called a Community Wildfire Protection Plan (CWPP or proposed project), to protect lives, property, and natural resources threatened by wildland fire. The proposed CWPP updates the City's 2004 Wildland Fire Plan consistent with the federal Healthy Forests Restoration Act passed in 2003 and subsequent guidance booklet "Preparing a Community Wildfire Protection Plan; A Handbook for Wildland-Urban Interface Communities" issued in 2004, accounting for changes in the City of Santa Barbara's (City's) fire environment and work completed under that 2004 Plan. While not a governing document requiring action, a CWPP is a strategic plan that outlines a series

of policies and action items which are intended to guide implementation of the CWPP. The policies and actions focus on codes and standards, funding, fire rehabilitation, evacuation, fire protection, vegetation/fuels management, and public education. The proposed CWPP includes various goals, policies, and actions that represent a compilation of existing and newly proposed policies and actions related to Codes and Standards, Funding, Fire Rehabilitation, Evacuation, Fire Protection, Vegetation/Fuels Management, and Public Education. Current activities conducted by the SBFD under the 2004 Wildland Fire Plan were analyzed in the Final Program Environmental Impact Report (PEIR) for the 2004 Wildland Fire Plan (SBFD and CDD 2004) and are incorporated herein by reference. This description only addresses new proposed policies and/or actions that could result in impacts to the environment, which include the following categories:

- Proposed Modifications to the High Fire Hazard Area (HFHA)
- Proposed Modifications to the Vegetation Management Units (VMUs)
  - Defensible Space
  - Road Clearing
  - City Vegetation Management Units (VMUs)
  - Community Fuels Treatment Network (CFTN)
  - Neighboring Jurisdiction Vegetation Management Areas
- Proposed Modifications to the Vegetation Management Methods
- Community Facility Maintenance

The proposed CWPP also includes several other policies and actions that would not involve any physical impacts to the environment, including public education, interagency coordination, acquisition of funding, data gathering and management, acquisition of firefighting equipment, and evacuation planning.

1.4 Project Objectives

Section 15124(b) of the CEQA Guidelines requires an EIR's project description to include a statement of the project's objectives. The objectives noted below will help the City evaluate the proposed CWPP and its environmental impacts, and aid in its consideration of potential alternatives, as described in Chapter 6. The objectives of the CWPP are as follows:

- Develop a comprehensive plan that incorporates procedures and programs to mitigate wildfire risks to the City.
- Engage stakeholders including the people, businesses, and organizations that live and work in the City, especially in the City's High Fire Hazard Areas, as well as the adjacent jurisdictions.
- Inform and educate stakeholders about wildfire risk and shared community and individual responsibilities for fire safety.
- Add, remove, or leave unchanged High Fire Hazard Areas based on technical data and fire modeling.
- Consolidate and rename City High Fire Hazard Area and severity zones to be consistent with California Department of Forestry and Fire Protection.
- Provide guidance for future vegetation maintenance activities, future roadway access strategies; and, development strategies, defensible space and home hardening within the High Fire Hazard Area.

- Maintain consistency between the Community Wildfire Protection Plan and existing City plans and policies, including but not limited to the City of Santa Barbara General Plan, Climate Action Plan, and Coastal Land Use Plan.
- Balance fire mitigation strategies with the City's goals of maintaining a vibrant economy and protecting natural resources, historic resources and community character.
- Provide a basis to seek grant funding or other funding mechanisms to support the goals and policies of the proposed Community Wildfire Protection Plan;
- Reduce potential greenhouse gas emissions resulting from a wildfire by reducing vegetative fuel and structural ignition potential.
- Provide a policy framework to enable property owners in areas with wildland fire risk to work with private insurance companies on issues of coverage and cost of insuring private property.

1.5 Areas of Controversy/Issues to Be Resolved

Pursuant to CEQA Guidelines Section 15123(b)(2), a lead agency is required to identify known areas of controversy associated with the project covered in an EIR, including those raised by agencies and the public during the scoping process. During the scoping period, multiple stakeholders commented on concern about potential insurance increase due to being located within CWPP high fire hazard areas in emailed or comment letters in response to the NOP and Initial Study. Copies of the Initial Study and the NOP are provided in Appendix A to the PEIR. The Planning Commission also expressed concern limitations on housing. As noted above, population and housing is considered in this PEIR as a result of these areas of controversy. Additionally, the public and agencies included the following potential issues. The EIR section that addresses the issue raised is provided in parentheses.

- Several public agencies requested coordination when work would be conducted near their facilities or in areas requiring prior approval or permits
- Potential impacts to habitat areas, wildlife, and special status species (Section 4.3 Biological Resources)
- Concerns about new and expanded HFHA classifications and accompanying impacts to property owners, such as development restrictions, potential for increased insurance rates, and property value impacts (Section 4. Population and Housing)

1.6 Summary of Environmental Impacts

This PEIR has been prepared to assess the potentially significant effects on the environment that could result from implementation of the proposed project. For a detailed discussion regarding potential significant impacts, please see Chapter 4.0, Environmental Analysis, of this PEIR.

As required by CEQA, a summary of the proposed project's impacts is provided in Table 1-1, Summary of Project Impacts, below. Table 1-1 also provides a list of the proposed mitigation measures that are recommended in response to the potentially significant impacts identified in the EIR, as well as a determination of the level of significance of the impacts after implementation of the recommended mitigation measures.

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
AES-1. Would the project have a substantial adverse effect on a scenic vista?	Potentially significant	**MM-AES-1.** The following measures shall be implemented when conducting vegetation management on private and public parcels to the extent feasible: • Straight line boundaries and other strong linear configurations that tend to detract from the natural appearance of the landscape shall be avoided. • Vegetation removal or thinning shall follow natural or existing landscape features such as stream courses, vegetation type lines, ridgetops, and existing roads. • Vegetation removal or thinning shall be feathered into the natural landscape, with brush cuttings used to disguise the lines and maintain a natural appearance.	Less than significant
AES-2. Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Potentially significant	**MM-AES-1**	Less than significant
AES-3. In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than significant	No mitigation measure is required	Less than significant
AES-4. Result in substantial grading on steep slopes or permanent substantial changes in topography.	Potentially significant	**MM-GEO-1 Erosion Control.** The Santa Barbara Fire Department (SBFD) shall implement the following Best Management Practices when	Less than significant with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		conducting vegetation management on slopes greater than 10%: • To the extent feasible, field crews shall not create footpaths to and from the work areas that remove leaf litter and expose mineral soils to potential future erosion. If crews must use a single path that becomes worn and vulnerable, the path shall be rehabilitated after vegetation management to reduce erosion potential. Rehabilitation would include replacement of leaf litter and chippings on the path, and piling dirt and organic matter at periodic intervals along the path to act as water bars and prevent the concentration of flows. • Crews shall avoid stripping the leaf litter from slopes or creek banks when dragging vegetation from the cutting location to the chipper. If the removal of vegetation and leaf litter is unavoidable, the SBFD shall restore the affected areas by spreading leaf litter and chippings back over the stripped areas. • If the SBFD field supervisor determines that an erosion potential has been created due to vegetation reduction work, and that the spreading of leaf litter and chippings is insufficient protection from future winter rains, the SBFD shall consider temporary biodegradable erosion control blankets and barriers, such as coconut fiber blankets and straw wattles. These materials shall be placed strategically to	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		reduce the amount and velocity of flow over the affected areas, to prevent gullying and soil loss by water erosion, and to facilitate the natural regeneration and colonization by native plants.	
Cumulative Aesthetics	Potentially Significant	**MM-AES-1 and MM-GEO-1**	Significant Unavoidable
Air Quality			
AQ-1. Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less than significant	No mitigation measure is required	Less than significant
AQ-2. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Potentially significant	**MM-AQ-1 Prescribed Burning.** The City shall not exceed a hand-built burn pile size of 5 feet x 5 feet x 5 feet and burn in excess of 22 piles of this size in any one day. **MM-AQ-2 Air Curtain Burner.** The City shall implement the following measures prior to the use of an air curtain burner. The City shall coordinate with the Santa Barbara County Air Pollution Control District (SBCAPCD) during the air curtain burner planning process to address any health risk concerns and properly mitigated in coordination with the SBCAPCD, as necessary. The City shall obtain the necessary operating permits (i.e., Title V/Part 70 of the Clean Air Act) with the SBCAPCD for the use of an air curtain burner, when applicable. If the City is using an air curtain burner from another agency or rental company, the City shall ensure that the air curtain burner has air	Less than significant with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		operating permits in place acceptable to the SBCAPCD prior to use. **MM-AQ-3** **Covers**. Trucks transporting cut vegetation material shall be covered from the point of origin. **MM-AQ-4** **Haul Route Approval**. The haul route(s) for all construction-related trucks, three tons or more, entering or exiting the sites, shall be approved by the transportation engineer. **MM-AQ-5** **Disturbed Soil**. After clearing, grading, earth moving, or excavation is completed, the entire area of disturbed soil shall be treated to prevent wind pickup of soil. This may be accomplished by seeding and watering until vegetative cover is grown, spreading soil binders, sufficiently wetting the area down to form a crust on the surface with repeated soakings as necessary to maintain the crust and prevent dust pickup by the wind, or other methods approved in advance by the Santa Barbara County Air Pollution Control District.	
AQ-3. Would the project expose sensitive receptors to substantial pollutant concentrations?	**Potentially significant**	**MM-AQ-1 through MM-AQ-5**	Less than significant with mitigation
AQ-4. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than significant	No mitigation measure is required	Less than significant
Cumulative Air Quality	Potentially significant	MM-AQ-1 through MM-AQ-5	Significant Unavoidable

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Biological Resources			
BIO-1. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Potentially significant	**MM-BIO-1 Special-Status Species Surveys and Mitigation.** For any program-level projects identified in this program environmental impact report (PEIR) that may result in a significant impact to a special-status species, a biological reconnaissance of the project site will be conducted by a City qualified biologist within ten days prior to the start of activities to determine if suitable habitat for special-status species occurs on the project site. If suitable habitat is present on or within the immediate vicinity (100–500 feet) of the project site, additional focused surveys and subsequent mitigation measures will be required as described below. The following species-specific measures will be implemented for projects identified with a potential to contain suitable habitat for special-status species. *Southern Steelhead (Oncorhynchus mykiss)*. If the biological survey identifies the potential for southern steelhead to occur, coordinate with the National Marine Fisheries Service to confirm whether vegetation management has the potential to result in take of that species. As part of future projects that require work within 50-feet of City creeks with potential steelhead habitat or their riparian areas, all such work shall be conducted between June 15 and October 15 or as approved by a City	Less than significant with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		qualified biologist in coordination as required with USACE, NMFS, and CDFW. *California Red-Legged Frog (Rana draytonii)*. For program-level projects that occur within suitable California red legged frog habitat, specifically projects within riparian corridors, , surveys shall be conducted by a permitted 10(a)(1)(A) biologist is required (refer to introduction section for information on how to apply for a section 10(a)(1)(A) permit This Guidance recommends a total of up to eight (8) surveys to determine the presence of CRF at or near a project site. Two (2) day surveys and four (4) night surveys are recommended during the breeding season; one (1) day and one (1) night survey is recommended during the non-breeding season. Each survey must take place at least seven (7) days apart. At least one survey must be conducted prior to August 15th. The survey period must be over a minimum period of 6 weeks (i.e., the time between the first and last survey must be at least 6 weeks). Throughout the species' range, the non-breeding season is defined as between July 1 and September 30. If the species is observed at any time, no additional surveys shall be conducted in the area. If California red legged frog are found and cannot be avoided by the project, additional mitigation will be required to comply with the Endangered Species Act and California Endangered Species Act, such as applying for	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		an Incidental Take Permit prior to project implementation. MM-BIO-2 **Riparian Protection.** Prior to conducting work in a creek, or within 25 feet of the top of bank, the SBFD shall consult with a City qualified biologist during the preparation of the site-specific Work Plan to identify methods to achieve the vegetation management without significant impacts to riparian resources. Based on this consultation, the SBFD shall develop site-specific measures to avoid or reduce impacts to riparian resources. These measures shall include (among others) the following: a. To the extent feasible, all work near a creek shall be conducted when surface water is absent. b. Vegetation shall not be thinned, removed, or pruned, nor shall dead wood be removed, within 25 feet of a creek channel when flowing water is present. c. The only plants that can be removed from a creek bed (that is, below the line of the ordinary high water mark) are live or dead eucalyptus trees and dead native shrubs/trees that are deemed to be a fire hazard, and invasive exotics (including, but not limited to giant reed). d. Cut stems, tree trunks or other vegetative debris shall not be dragged across a creek bed that contains riparian vegetation, wetlands, or surface water.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		e. No trees shall be felled across a creek while there is flowing water. f. No eucalyptus chipping or cut stems shall be left on the creek banks or any upper stream terrace, when present. g. Chipped native vegetation shall not be placed on creek banks, unless a qualified biologist determines that placement of the chipping would provide needed erosion protection without an adverse impact on aquatic habitats and water quality in the creek. Native plant chippings can be spread outside the top of bank. MM-BIO-3 **Property Owner Educational Material.** Defensible space management by property owners could potentially cause inadvertent impacts to sensitive plant and wildlife species, especially near creeks. The SBFD shall create property owner educational material in consultation with a City qualified biologist that will be available at the SBFD website and in a printable brochure that advises property owners about regulatory obligations with defensible space and specifying measures that owners can take, such as avoiding bird nests, when performing vegetation management. MM-BIO-4 **Nesting Bird Avoidance.** Construction activities for project-level and program-level projects shall avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potential significant impact to birds that may be nesting within 500 feet of project	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		sites. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and suitable habitat within 500 feet of the site shall be conducted for protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified biologist meeting the standards in the field within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code, Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and an appropriate buffer established around the nest, which shall be determined by the biologist based on the species' sensitivity to disturbance (up to 300 feet for passerines and up to 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. No project activities may encroach into the buffer until a qualified biologist has determined that the nestlings have fledged, and the nest is no longer active.	
BIO-2. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Potentially Significant	MM-BIO-1 through MM-BIO-4 **MM-BIO-5 Jurisdictional Waters and Wetlands**. Direct impacts to jurisdictional waters that may occur through program-level activities, shall be addressed during project-level California Environmental Quality Act review of the project prior to implementation through first a biological reconnaissance conducted by a City qualified biologist, and a delineation of waters and wetlands to determine potential	Less than significant impact with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		regulatory agency jurisdiction. If the reconnaissance and delineation determine potentially jurisdictional waters or wetlands occur and may be impacted by the project, mitigation to reduce impacts will be determined through the regulatory application process to implement Clean Water Act Section 401 and Section 404, the Porter-Cologne Water Quality Act, and California Fish and Game Code Section 1602.	
BIO-3. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially significant	**MM-BIO-1 through MM-BIO-5**	Less than significant with mitigation
BIO-4. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Potentially significant	MM-BIO-1 through MM-BIO-5	Less than significant with mitigation
BIO-5. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant	**MM-BIO-6 CWPP Appendix E Update.** The Community Wildfire Protection Plan Appendix E shall be updated with the mitigation measures contained in this Program Environmental Impact Report. Appendix E shall be updated in the Final CWPP prior to consideration by City County and CAL FIRE	Less than significant with mitigation
BIO-6. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No impact	No mitigation measure is required	No impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Cumulative Biological Resource Impacts	Potentially Significant	MM-BIO-1 through MM-BIO-6	Significant Unavoidable
Cultural Resources			
CUL-1. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	Potentially significant	**MM-CUL-1 Cultural Resource Treatment Plan.** Potential impacts to cultural resources shall be either minimized or eliminated through development of protocols for practical adherence of mitigation measures MM-CUL-2 and MM-CUL-3 prior to and after the occurrence of vegetation management activities within Community Wildfire Protection Plan (CWPP) Cultural Resource Sensitivity Zones. These protocols shall be outlined in a Cultural Resource Treatment Plan (CRTP). The CRTP shall be developed by a City-qualified archaeologist, meeting the Secretary of Interior Standards (SOI), prior to the implementation of any CWPP ground disturbing activities and include wording of each mitigation measure MM-CUL-2 through MM-CUL-4, specific and detailed explanation for implementation of each mitigation measure and contact protocol. The CRTP shall be provided to all agency personnel, consulting tribes, contractors and archaeological personnel. The existence and necessity for adherence to the CRTP shall be noted on all plans, handbooks, or the like associated with tasks that may incur ground disturbance either intentionally or inadvertently. **MM-CUL-2 Workers Environmental Awareness Program (WEAP) Training.** All personnel participating in tasks that may incur ground disturbance	Less than significant with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		either intentionally or inadvertently shall be briefed regarding unanticipated discoveries prior to the start of said activities. A basic presentation shall be prepared by a City-qualified archaeologist, meeting the Secretary of the Interior (SOI) Professional Qualification Standards to inform all City-retained personnel working on the project about the archaeological sensitivity of proposed project areas located within Community Wildfire Protection Plan Cultural Resource Sensitivity Zones. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during project activities and explain the importance of and legal basis for the protection of cultural resources. Each personnel shall also be instructed the proper procedures to follow in the event that cultural resources or human remains are encountered. These procedures include work curtailment or redirection, and the immediate contact of the site supervisor, SOI- and City-qualified archaeologist, and if human remains are encountered, the County Coroner. MM-CUL-3 **Archaeological Construction Monitoring.** Archaeological monitoring shall be conducted during all ground disturbance activities within public space, and when possible private properties, existent within the Community Wildfire Protection Plan Cultural Resource Sensitivity Zone B and during all activities that have the potential to	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		disturb the ground including vegetation removal by hand and mechanical removal when such activity is within or near to a known site. A Secretary of the Interior (SOI)- and City-qualified archaeologist shall be retained to oversee and adjust monitoring efforts as needed (increase, decrease, or discontinue monitoring frequency) based on the observed potential for vegetation management activities to encounter cultural deposits or material. The archaeological monitor shall have the authority to halt all ground-disturbing activities until discovered cultural material can be properly assessed. The archaeological monitor shall be responsible for maintaining daily monitoring logs and immediately contacting the project archaeologist upon discovery of cultural material. If the project archaeologist determines the discovery to be of a nature requiring further evaluation, the project archaeologist shall contact the City as soon as possible and at least within the same working day. Further treatment of cultural material may include redirection or discontinuing ground-disturbing tasks, subsurface testing and/or evaluation and/or data recovery and/or temporary/permanent avoidance. Following the completion of ground disturbing activities, the SOI- and City-qualified archaeologist shall provide an archaeological monitoring report memo to the agency. The project archaeologist shall also submit the same memo to the Central	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Coastal Information Center for inclusion in the California Historical Research Information System database. **MM-CUL-4 Intensive Archaeological Pedestrian Surveys of Community Wildfire Protection Plan (CWPP) Cultural Resource Sensitivity Zone.** An intensive Pedestrian survey shall be conducted prior to the initial implementation of all CWPP ground disturbance activities within public space, and when possible private properties, existent within the CWPP Cultural Resource Sensitivity Zone B. Initial implementation of all CWPP ground disturbance activities is defined as the first occurrence of vegetation removal after approval of the CWPP. No additional archaeological pedestrian surveys shall be required once the initial survey of the area has been conducted except any circumstance that is subject to other mitigation measure outlined therein. If necessary and depending on the vegetation condition within the "CWPP Cultural Resource Sensitivity Zone" areas (where ground surface visibility is limited such that the survey would results would not be reliable), the survey may be conducted concurrently or immediately subsequent to vegetation removal. The City shall retain a Secretary of the Interior (SOI)- and City-qualified archaeologist/s to conduct Phase I archaeological survey studies within the CWPP Cultural Resource Sensitivity Zone B; the result of which will be a Phase I	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Archaeological Resources Report consistent with the California Environmental Quality Act and City Master Environmental Assessment guidelines. The report will include methodology, background research, survey results, interpretation and recommendations. Background research shall start with a review of the City's archaeological database created as a result of this study, but may, if determined necessary by the SOI- and City-qualified archaeologist, include a California Historical Research Information System (CHRIS) records search. Additional records search should be authorized by the City first. Upon completion, the Phase I Archaeological Resources Report shall be submitted to the Central Coastal Information Center for inclusion in the CHRIS database. MM-CUL-5 **Inadvertent Discovery of Archaeological Resources.** In the event that archaeological resources (sites, features, or artifacts) are exposed during ground disturbing activities within the proposed project areas (within or outside the Community Wildfire Protection Plan Cultural Resource Sensitivity Zones A and B), all construction work occurring within 50 feet of the discovery shall immediately stop until a Secretary of the Interior (SOI)- and City-qualified archaeologist can evaluate the nature and significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Environmental Quality Act (14 CCR 15064.5(f); California Public Resources Code Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted. If the discovery is Native American in nature, consultation with and/or monitoring by a tribal monitor ancestrally affiliated with the area and, if possible, included in the most current City Barbareño Chumash Archaeological Site Monitors List, may be necessary. MM-CUL-6 **Inadvertent Discovery of Human Remains.** In the event an inadvertent discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately as well as the City's Environmental Analyst and a Secretary of the Interior (SOI)- and City-qualified archaeologist. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission. (NAHC) who will provide the name and contact information for the Most Likely Descendent (MLD). Treatment of the discovery shall be decided in consultation with the MLD provided by the NAHC. Additionally, an SOI- and City-qualified archaeologist and tribal monitor ancestrally affiliated with the area and, if possible, included in the most current City Barbareño Chumash Archaeological Site	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Monitors List, shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization. **MM-CUL-7 Post-Fire Management Assessment**. In the event that a fire occurs within public space, and when possible private properties, existent within the Community Wildfire Protection Plan Cultural Resource Sensitivity Zones A and B, a Secretary of the Interior (SOI)- and City-qualified archaeologist shall be retained to assess the effects of the fire and/or fire management on known and unknown cultural resources. The retained SOI- and City-qualified archaeologist shall provide to the City, a brief memo outlining the results of the assessment and recommendation for further treatment if necessary. Any exposure of cultural material, change in the nature of a cultural resource, or new information resulting from the fire or fire management, shall be recorded in a site record update. Based on the recommendations provided in the memo, the City may retain a SOI and City-qualified archaeologist to conduct the recommended study or measures. All reports, memos, and site records resulting from post-fire management assessments shall be submitted to the Central Coastal Information Center for inclusion in the California Historical Research Information System database.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
CUL-2. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially significant	**MM-CUL-1 through MM-CUL-7**	Less than significant with mitigation
CUL-3. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially significant	**MM-CUL-1 through MM-CUL-6**	Less than significant with mitigation
Cumulative Cultural Resources	Potentially significant	**MM-CUL-1 through MM-CUL-6**	Less than significant with mitigation
Geology and Soils			
GEO-1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
a. Landslides?	Potentially significant	**MM-GEO-1. Erosion Control.** The Santa Barbara Fire Department (SBFD) shall implement the following Best Management Practices when conducting vegetation management on slopes greater than 10%: • To the extent feasible, field crews shall not create footpaths to and from the work areas that remove leaf litter and expose mineral soils to potential future erosion. If crews must use a single path that becomes worn and vulnerable, the path shall be rehabilitated after vegetation management to reduce erosion potential. Rehabilitation would include replacement of leaf litter and chippings on the path, and piling dirt and organic matter at periodic intervals along the path to act as water bars and prevent the concentration of flows. • Crews shall avoid stripping the leaf litter from slopes or creek banks when dragging vegetation from the cutting	Less than significant with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		location to the chipper. If the removal of vegetation and leaf litter is unavoidable, the SBFD shall restore the affected areas by spreading leaf litter and chippings back over the stripped areas. • If the SBFD field supervisor determines that an erosion potential has been created due to vegetation reduction work, and that the spreading of leaf litter and chippings is insufficient protection from future winter rains, the SBFD shall consider temporary biodegradable erosion control blankets and barriers, such as coconut fiber blankets and straw wattles. These materials shall be placed strategically to reduce the amount and velocity of flow over the affected areas, to prevent gullying and soil loss by water erosion, and to facilitate the natural regeneration and colonization by native plants.	
GEO-2. Would the project result in substantial soil erosion or the loss of topsoil?	Potentially significant	**MM-GEO-1**	Less than significant with mitigation
GEO-3. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less than significant	No mitigation measure is required	Less than significant
Cumulative Geology and Soils	Potentially significant	**MM-GEO-1**	Less than significant with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Greenhouse Gas Emissions			
GHG-1. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than significant	No mitigation measure is required	Less than significant
GHG-2. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than significant	No mitigation measure is required	Less than significant
Cumulative Greenhouse Gas Emissions	Less than significant	No mitigation measure is required	Less than significant
Hazards and Hazardous Materials			
HAZ-1. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than significant	No mitigation measure is required	Less than significant
HAZ-2. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially significant	**MM-HAZ-1. Non-interference**. Vegetation management activities at Elings Park will be coordinated so that they do not interfere with enforced monitoring and reporting activities on the former Las Positas Landfill as described in Enforcement Order R3-2004-0006.	Less than significant
HAZ-3. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less than significant	No mitigation measure is required	Less than significant
HAZ-4. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No impact	No mitigation measure is required	No impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
HAZ-5. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Less than significant	No mitigation measure is required	Less than significant
Cumulative Hazards and Hazardous Materials	Less than significant	No mitigation measure is required	Less than significant
Hydrology and Water Quality			
HYDRO-1. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Potentially significant	**MM-GEO-1** **MM-HYDRO-1 Sedimentation Control.** The Santa Barbara Fire Department (SBFD) shall implement the following when conducting vegetation management on slopes greater than 10%, within 25 feet of the top of a creek, or within a creek: • The SBFD shall prepare an erosion control plan that evaluates the potential for erosion from vegetation management actions and identifies Best Management Practices to avoid significant erosion impacts through modifying vegetation removal methods, utilizing alternative access methods, and/or rehabilitating affected areas after the work. If the SBFD field supervisor determines that an erosion potential has been created due to vegetation reduction work, and that the spreading of leaf litter and chippings is insufficient protection from future winter rains, the SBFD shall consider temporary biodegradable erosion control blankets and barriers, such as	Less than significant with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		coconut fiber blankets and logs. These materials shall be placed strategically to reduce the amount and velocity of flow over the affected areas, to prevent gullying and soil loss by water erosion, and to facilitate natural regeneration and colonization by native plants.	
HYDRO-2. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			
h. result in substantial erosion or siltation on or off site;	Potentially significant	**MM-GEO-1** **MM-HYDRO-1**	Less than significant with mitigation
i. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	Potentially significant	**MM-GEO-1** **MM-HYDRO-1**	Less than significant with mitigation
j. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Potentially significant	**MM-GEO-1** **MM-HYDRO-1**	Less than significant with mitigation
k. impede or redirect flood flows?	No impact	No mitigation measure is required	No impact
HYDRO-3. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	Less than significant	No mitigation measure is required	Less than significant
Cumulative Hydrology and Water Quality	Potentially Significant	**MM-GEO-1** **MM-HYDRO-1**	Less than significant with mitigation

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Land Use and Planning			
LU-1. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less than significant	No mitigation measure is required	Less than significant
Cumulative Land Use and Planning	Less than significant	No mitigation measure is required	Less than significant
Noise			
NOI-1. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than significant	**MM-NOI-1 Equipment Maintenance.** All construction equipment, including trucks, shall be professionally maintained and fitted with standard manufacturers' muffler and silencing devices. **MM-NOI-2 Hearing Protection**. All workers using or within close proximity to operating chain saws, chippers and other noisy equipment shall utilize noise protection (ear plugs) consistent with Cal OSHA Federal OSHA requirements and other legal workplace requirements **(Note that these mitigation measures were carried forward from the Wildland Fire Plan PEIR)**	Less than significant with mitigation
NOI-2. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Less than significant	**MM-NOI-1** **MM-NOI-2**	Less than significant with mitigation
Cumulative Noise	Potentially Significant	MM-NOI-1 MM-NOI-2	Less than significant with mitigation
Population and Housing			
POP-1. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly	Less than significant	No mitigation measure required	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
(for example, through extension of roads or other infrastructure)?			
POP-2. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No impact	No mitigation measure required	No impact
Cumulative Population and Housing	Less than significant	No mitigation measure is required	Less than significant
Recreation			
REC-1. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	Potentially significant	**MM-REC-1** The Santa Barbara Fire Department shall consult with the Parks and Recreation Department prior to the commencement of vegetation management in parks, open space areas, and public recreational spaces to ensure that recreational opportunities are not precluded simultaneously in several parks in the same portion of the City.	Less than significant
REC-2. Result in substantial loss or interference with existing park space or other public recreational facilities (such as hiking, cycling or horse trails)?	Potentially significant	**MM-REC-1**	Less than significant
Cumulative Recreation	Potentially Significant	MM-REC-1	Less than significant with mitigation
Transportation			
TRAF-1. Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Less than significant	No mitigation measure required	Less than significant
TRAF-2. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less than significant	No mitigation measure required	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
TRAF-3. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than significant	No mitigation measure required	Less than significant
TRAF-4. Would the project result in inadequate emergency access?	Less than significant	No mitigation measure required	Less than significant
Tribal Cultural Resources			
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Potentially significant	**MM-CUL** 1 through **MM-CUL 7** **MM-TCR-1 Pre-Fire and Vegetation Management Assessment.** The City shall notify all consulting Tribes prior to conducting Intensive Archaeological Pedestrian Surveys of Community Wildfire Protection Plan Cultural Resource Sensitivity Zones (MM-CUL-4). Upon request, Tribes will be provided contact information for the Secretary of the Interior (SOI)- and City-qualified archaeologist retained to conduct the surveys as well as logistical information regarding the surveys. Tribes shall be invited, but are not required, to accompany the SOI- and City-qualified archaeologist during the surveys. No survey	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		shall be delayed or aborted due to the absence of Tribal representatives. MM-TCR-2 **Native American Construction Monitoring.** Native American monitoring shall be conducted during all pre-planned ground disturbance activities within known prehistoric archaeological sites or historic archaeological sites identified as associated with Native American history. A Native American monitor ancestrally affiliated with the area and, if possible, included in the most current City Barbareño Chumash Archaeological Site Monitors List, shall be retained by the City prior to the commencement of all pre-planned ground-disturbance activities. The Native American monitor shall have the authority to halt all ground-disturbing activities until discovered tribal cultural resource (TCR) material can be properly assessed. The Native American monitor shall be responsible for reporting any discovered TCR material to the Secretary of the Interior- and City-qualified archaeologist retained to monitor the same pre-planned ground-disturbance activities. MM-TCR-3 **Post-Fire Management Assessment**. The Santa Barbara Fire Department shall meet with the Chumash Fire Department at least biannually (i.e., every other year) to discuss ongoing fire management planning and practices within the City to avoid potential impacts to tribal cultural resources. Due to the sensitive nature of certain Native	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		American resources, meeting minutes shall be prepared and maintained by the City and provided upon request to the Chumash Fire Department and the Santa Ynez Band of Chumash Indians Cultural Resources Manager.	
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Potentially significant	**MM-CUL-1** through **MM-CUL-7** **MM-TCR-1** **MM-TCR-2**	Less than significant
Cumulative Tribal Cultural Resources	Potentially significant	**MM-CUL-1** through **MM-CUL-7** **MM-TCR-1 through MM-TCR-3**	Less than significant with mitigation
Public Services and Utilities			
PSU-1. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Less than significant	No mitigation measure is required.	Less than significant
PSU-2. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less than significant	No mitigation measure is required.	Less than significant
Wildfire			
WLD-1. Would the project expose people or structures to significant risks, including downslope or downstream flooding or	Potentially significant	**MM-GEO-1** **MM-WLD-1** **Erosion Control**. Revise City Ordinance No. 5290 (High Fire Hazard Area Landscape Requirements) to require that landscape	Less than significant

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
landslides, as a result of runoff, post-fire slope instability, or drainage changes?		plans for defensible space areas on slopes exceeding 10% gradient incorporate erosion control techniques and/or best management practices to minimize erosion potential resulting from vegetation management and maintenance activities. MM-WLD-2 **Post-fire Assessment.** Following any wildfire that burns into the Community Wildfire Protection Plan area, a post-fire field assessment shall be conducted by an engineering geologist to identify any areas that may be subject to increased risk of post-fire flooding, landslide or erosion. Any recommendations identified by the geologist to mitigate such risk shall be implemented by the City.	

1.7 Alternatives to the Proposed Project

Section 15126.6(a) of the CEQA Guidelines states that an EIR shall describe "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project," as well as provide an evaluation of "the comparative merits of the alternatives." Under CEQA Guidelines Section 15126.6(a), an EIR does not need to consider alternatives that are not feasible, nor need it address every conceivable alternative to the project. The range of alternatives "is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice" (14 CCR 15126.6[f]).

1.7.1 Alternatives Considered but Rejected

The activities in the proposed CWPP are generally projects at specific locations with increased fire risk due to vegetation, communication limitations or other features so relocation of an activity is not possible to address the fire risk. For this reason, identification of feasible alternatives for the proposed CWPP was limited. As described in detail in Chapter 6, alternatives considered but rejected include the location and deferred maintenance alternatives.

Use of Pesticides

The Use of Pesticides Alternative would enable the use of pesticides (including herbicides) for vegetation management. The application of pesticides could reduce the need to remove vegetation using mechanized equipment and hand-held power tools by limiting plant growth and thereby limiting mowing, felling, masticating, etc. It could also reduce the need for follow-up maintenance of treated vegetation using mechanized equipment and hand-held power tools (e.g., chainsaws). The reduction of mechanized equipment would result in fewer air emissions and lower potential for a spill of fuel (e.g., gasoline or diesel). However, this alternative was rejected due to incompatibility with the City's Integrated Pest Management Strategy and based on prior SBFD practices. Enacted in 2004, the Integrated Pest Management Strategy avoids the use of pesticides wherever feasible and only as a last resort with the least toxic pesticides being the preferred choice. Pesticides may be applied according to a zone system (red, yellow, green) based on potential for exposure to humans and sensitive habitats. Green zones are areas of high exposure potential, and only pesticides designated as "Green," which show very limited human and environmental impacts, may be used. Yellow zones are areas with less potential for harm from exposure, and a broader range of "Yellow" materials are permitted (City of Santa Barbara 2006). Several City parks within both the Very High Fire Hazard Severity Zone (VHFHSZ) and High Fire Hazard Severity Zone (HFHSZ) are classified as "Green Parks," thereby requiring a very limited use of pesticides. Existing vegetation management practices under the 2004 Wildland Fire Plan do not rely on pesticide use (SBFD 2004). As such, this alternative was rejected.

1.7.2 Alternatives Evaluated

The following alternatives are evaluated in this PEIR:

- No Project Alternative
- Vegetation Management Unit (VMU) Alternative

Each alternative's environmental impacts are compared to the proposed project and determined to have fewer impacts than the proposed project, the same or similar impacts, or greater impacts than the proposed project (refer to Chapter 6, Alternatives, for further details).

No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the impacts of a no project alternative. The "purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project" (14 CCR 15126.6[e][1]). When defining the no project alternative, the analysis shall be informed by "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (14 CCR 15126.6([e][2]).

The No Project Alternative assumes that SBFD would continue to implement fire management practices consistent with the existing 2004 Wildland Fire Plan. There would be no changes to the existing names or boundaries of the High Fire Hazard Area. The current quantity, location, and extent of Vegetation Management Units (VMUs) and the community Fuels Treatment Network (CFTN) would remain, and vegetation management activities would continue consistent with the 2004 Wildland Fire Plan.

When the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the No Project Alternative will be the continuation of the plan, policy, or operation into the future. Therefore, the No Project Alternative assumes implementation of the 2004 Wildland Fire Plan with no changes to the boundaries or nomenclature of the Extreme Foothill/Foothill areas to VHFHSZ and Coastal/Coastal Interior to HFHSZ. VMUs and the CFTN would remain unchanged and as described in the 2004 Wildland Fire Plan. Vegetation management practices would continue as currently implemented by the SBFD. The No Project Alternative would result in fewer impacts in five resources areas (aesthetics, air quality, biological resources, noise, and recreation) and similar impacts in eight resources areas (cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, population and housing, transportation, and public services and utilities). The No Project Alternative would result in greater impacts than the proposed project related to greenhouse gas emissions, tribal cultural resources, and wildfire.

Vegetation Management Unit Alternative

The Vegetation Management Unit Alternative assumes that the existing City HFHA would be consolidated and renamed such that the Foothill and Extreme Foothill Zones would be renamed as the City's Very High Fire Hazard Severity Zone (VHFHSZ), and the Coastal and Coastal Interior Zones would be renamed High Fire Hazard Severity Zone (HFHSZ). No expansion or other changes to the boundaries of the HFHA would occur. This alternative would also add new VMUs within the consolidated HFHA. No changes to the CFTN would be made under this alternative.

The VMU Alternative would have fewer impacts in five resource areas (aesthetics, air quality, biological resources, noise, and recreation) and similar impacts in nine resource areas (cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, population and housing, transportation, tribal cultural resources, and public services and utilities). The VMU Alternative would have greater impacts in two resource areas: GHG emissions and wildfire.

However, the VMU Alternative would only partially meet the objectives set by the SBFD. The VMU Alternative would not add or remove HFHAs based on technical data and fire modeling and would therefore not reduce wildfire risk in these areas and in the City; and it would not reduce the potential for release of GHG emissions by reducing vegetative fuel and structural ignition potential.

1.7.3 Environmental Superior Alternative

An EIR must identify an "environmentally superior" alternative; and, where the no project alternative is environmentally superior, the EIR is then required to identify an alternative from among the others evaluated as environmentally superior (14 CCR 15126.6[e][2]).

If an alternative is considered clearly superior to the proposed project relative to identified impacts, Section 15126.6 of the CEQA Guidelines requires that alternative to be identified as the environmentally superior alternative. By statute, if the environmentally superior alternative is the No Project Alternative, an EIR must also identify an environmentally superior alternative among the other alternatives. One alternative was considered and dismissed, and two alternatives to the proposed CWPP were considered: the No Project Alternative and the VMU Alternative. As further discussed in Chapter 6, the VMU Alternative is considered to be the environmentally superior alternative.

1.8 References

14 CCR 15000–15387 and Appendices A–N. Guidelines for Implementation of the California Environmental Quality Act, as amended.

SBFD (Santa Barbara Fire Department). 2004. Wildland Fire Plan. January 21, 2004. Accessed March 19, 2020. https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=14539.

SBFD and CDD (Santa Barbara Fire Department and Community Development Department). 2004. Final Program Environmental Impact Report, Wildland Fire Plan. SCH No. 2003041053. City of Santa Barbara Community Development Department and Fire Department. February 2004. Accessed on March 19, 2020. https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=14532.

2 Introduction

2.1 Project Background

Since the beginning of 2020, there have been over 8,000 wildfires that have burned well over 3.6 million acres in California. Since August 15, 2020, when California's fire activity elevated, there have been 26 fatalities and over 7,000 structures destroyed (CAL FIRE 2020). Fire is a part of the California landscape and with increasing frequency has disrupted the lives and economy of Californians and destroyed millions of acres of habitat for plants and wildlife. The City of Santa Barbara (City) is no stranger to wildfire. Several significant fires have scorched the landscape, damaged or destroyed homes, and tragically caused the loss of life.

In 2004, the City took proactive measures to adopt the Wildland Fire Plan (SBFD 2004) and certify the associated Program Environmental Impact Report (PEIR). These measures aligned with the federal Healthy Forests Restoration Act passed in 2003 and subsequent guidance booklet "Preparing a Community Wildfire Protection Plan; A Handbook for Wildland-Urban Interface Communities." In recognition of the changing fire characteristics within the City, the Santa Barbara Fire Department (SBFD) is proposing to implement a comprehensive, coordinated Community Wildfire Protection Plan (CWPP or proposed project) to protect lives, property, and natural resources threatened by wildland fire. The proposed CWPP updates the City's 2004 Wildland Fire Plan accounting for changes in the City's fire environment and work completed under that 2004 Wildland Fire Plan.

The proposed CWPP includes various goals, policies, and actions that represent a compilation of existing and newly proposed policies and actions related to codes and standards, funding, fire rehabilitation, evacuation, fire protection, vegetation/fuels management, and public education. Current activities conducted by the SBFD under the 2004 Wildland Fire Plan were analyzed in the PEIR for the 2004 Wildland Fire Plan (SBFD and CDD 2004) and are incorporated herein by reference. The proposed CWPP only addresses new proposed policies and/or actions that could result in impacts to the environment, which include the following categories:

- Proposed modifications to the High Fire Hazard Area
- Proposed modifications to the Vegetation Management Units
- Proposed modifications to the Vegetation Management Methods
- Communication Facility Maintenance

The proposed CWPP also includes several other policies and actions that would not involve any physical impacts to the environment, including public education, interagency coordination, acquisition of funding, data gathering and management, acquisition of firefighting equipment, and evacuation planning.

2.2 Purpose of the PEIR

The California Environmental Quality Act (CEQA) requires examination and public disclosure of potential impacts on the environment for projects undertaken in the State of California involving a discretionary action of a public decision-making body, so that those decision makers can consider the impacts prior to approving or denying the project. Pursuant to CEQA Guidelines Section 15168, a PEIR is a type of environmental impact report (EIR) that examines and discloses impacts of a series of projects that can be characterized and evaluated as one large project or program because they are related to each other in any of the following ways:

- Geographically
- As logical parts in the chain of contemplated actions
- In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program
- As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways

CEQA Guidelines Section 15168 identifies the following advantages to preparing a PEIR:

- Provide for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action
- Ensure consideration of cumulative impacts that might not be evident in a case-by-case or project-by-project analysis
- Avoid duplicative consideration of basic policy issues
- Allow the lead agency to consider broad policy alternatives and program-wide mitigation measures early in the process when the agency has greater flexibility to deal with basic problems or cumulative impacts
- Facilitate a reduction in paperwork

When preparing to implement an individual project or activity under the program covered in the CWPP, the lead agency must consider whether the project falls within the scope of the PEIR, including confirmation that the project would not result in any new significant environmental impacts or require new mitigation measures beyond those identified in the PEIR. If the individual project or activity is deemed within the scope of the PEIR, the lead agency can proceed without preparing a subsequent CEQA document. If a later activity conducted under the program would have effects that were not examined in the PEIR and not qualify for a categorical or statutory exemption, a new Initial Study would need to be prepared, leading to either a subsequent EIR, EIR addendum, or a negative declaration, which may tier from the PEIR to focus solely on the new environmental impacts and/or mitigation measures not captured in the PEIR (California Public Resources Code Section 21166; CEQA Guidelines Sections 15162 and 15168).

2.3 Scope of the PEIR

This PEIR has been prepared by the City with support from Dudek to provide objective information to the Santa Barbara City Council and to the general public regarding potential environmental effects of implementing the overall CWPP. The City deemed it appropriate to prepare a PEIR for implementation of the CWPP because of the geographic relationship between the proposed fire management activities within the City, and because of the similarity of many projects' impacts, enabling programmatic analysis and identification of master mitigation measures that can be applied to many individual projects within the program.

2.4 Notice of Preparation, Initial Study, and Project Scoping

The City, as lead agency, performed a preliminary evaluation of the proposed CWPP and determined that it does not fall under any of the statutory or categorical exemptions listed in the 2018 CEQA Statute and Guidelines (California Public Resources Code, Section 21000 et seq.; 14 CCR 15000 et seq., respectively). Following the preliminary review, the City prepared an initial study in accordance with CEQA Guidelines Section 15063. The initial study determined that the proposed CWPP could have a significant effect on the environment in the following resource areas: aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, recreation, transportation, tribal cultural resources, public services and utilities, and wildfire; however, some of these categories had subcategories dismissed from further analysis due to the analysis concluding impacts would be less than significant. The initial study found that impacts to agricultural and forestry resources, energy, mineral resources, and population and housing would be less than significant.

The City determined that given the geographic scope and interrelationship of actions within the proposed CWPP, the EIR would be analyzed at a program level (CEQA Guidelines Section 15168(a)). This draft PEIR evaluates the potential short-term, long-term, and cumulative impacts of the proposed CWPP and represents the independent judgment of the City as lead agency (14 CCR 15050).

Pursuant to CEQA Guidelines Section 15082, a Notice of Preparation (NOP) dated July 3, 2020, was circulated to interested agencies, organizations, and individuals. The NOP was sent to approximately 254 agencies, stakeholders, and individuals and was available for viewing at https://cwpp.santabarbaraca.gov/. Due to the COVID19 pandemic, hard copies were not available. The NOP and initial study were also posted with the State Clearinghouse at the California Governor's Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2020070069) to the PEIR. Additionally, an informational postcard was sent to approximately 5,890 individuals residing in the high fire and extreme high fire hazard area.

The NOP and Initial Study were circulated for public comment from July 3, 2020, to August 3, 2020. Pursuant to CEQA Guidelines Section 15082, recipients of the NOP were requested to provide responses within 30 days after their receipt of the NOP. A virtual public scoping hearing before the City Planning Commission was held on July 16, 2020, to gather additional public input on the scope of the environmental document. One individual provided public comment during the scoping hearing. Based on public comments received during the scoping period and at the scoping hearing, population and housing was incorporated into the PEIR. The 30-day public scoping period ended on August 3, 2020. All comments received during the NOP public notice period were considered during the preparation of this PEIR. Appendix A contains a summary table and copies of all comment letters received. Comment letters were provided by agencies, property owners, and other interested stakeholders.

2.5 Public Review of Draft PEIR and Final PEIR Preparation

This Draft PEIR will be made available to interested individuals, organizations, government representatives, and agencies for a 45-day review period, commencing September 28, 2020, and ending November 13, 2020. The City

provided notice of availability of the Draft PEIR with a Notice of Completion sent to the California Governor's Office of Planning and Research State Clearinghouse, by publication of an advertisement in the *Santa Barbara News Press* on September 28, 2020, and by direct notice to the parties included in the NOP distribution list. During the public review period, the Draft PEIR will be available for review electronically on the City's website.

Agency and public comments on the adequacy of the Draft PEIR and the lead agency's compliance with CEQA may be submitted to the City, in writing, prior to the end of the public review period. Publication of the Draft PEIR marks the beginning of the 45-day public review period, during which written comments may be submitted to:

Amber Anderson, City of Santa Barbara, Public Health - Fire
P.O. Box 1990, Santa Barbara, California 93102-1990
or electronically to cwpp@SantaBarbaraCA.gov

Following the public review period, the City will prepare a Final PEIR that will incorporate and respond to comments received during public review of the Draft PEIR. The Final PEIR will be made available to parties commenting on the Draft PEIR, and then will be sent to the City Council for certification.

2.6 Uses of the PEIR

This Draft PEIR is intended for use by both decision makers and the public. It provides relevant information concerning the potential environmental effects associated with the implementation of the proposed CWPP. Additionally, in accordance with CEQA Guidelines Section 15152, agencies, including but not limited to the SBFD, are encouraged to tier off of this PEIR for future projects within the CWPP project area to focus analysis and minimize unnecessary or duplicative analysis. In addition to City's approvals to initiate CWPP projects, approvals of other agencies that may be required for various projects in the program include the following:

- Santa Barbra County Air Pollution Control District – use of equipment potentially requiring permit
- Regional Water Quality Control Board – Stormwater Pollution Prevention Plans and General Construction Permit
- California Department of Fish and Wildlife – Streambed Alteration Agreement

Because of their potential need to issue permits or approvals on individual CWPP projects, the agencies and land use jurisdictions listed above are considered responsible agencies in this PEIR, pursuant to Section 21069 of the CEQA statute.

2.7 Areas of Known Controversy

Pursuant to CEQA Guidelines Section 15123(b)(2), a lead agency is required to identify known areas of controversy associated with the project covered in an EIR, including those raised by agencies and the public during the scoping process. Multiple stakeholders commented on concern about potential insurance increases due to being located within CWPP High Fire Hazard Area. The Planning Commission also expressed concern limitations on housing. As noted above, population and housing is considered in this PEIR as a result of these areas of controversy.

2.8 Contents and Organization of the PEIR

The PEIR is organized as shown in the outline below. Note that a list of documents consulted during preparation of the PEIR is presented in a "References" section at the end of each chapter and at the ends of Sections 4.1 through 4.15.

- Chapter 1, Executive Summary, outlines the conclusions of the environmental analysis and provides a summary of the project as compared to the alternatives analyzed in the PEIR. This section also includes a table summarizing all environmental impacts identified in this PEIR along with the associated mitigation measures proposed to reduce or avoid each impact.
- Chapter 2, Introduction, serves as a foreword to the PEIR, introducing the project background, the applicable environmental review procedures, and format of the PEIR.
- Chapter 3, Project Description, provides a thorough description of the proposed project components and required discretionary approvals.
- Chapter 4, Introduction to Environmental Analysis, includes a discussion of the approach to the analysis of potentially significant impact areas and an overview of the organization of each of these categories.
- Sections 4.1 through 4.16, which constitute the project's environmental analysis, provide an analysis of the potentially significant environmental impacts identified for the proposed project, as well as proposed mitigation measures to reduce or avoid any potentially significant impacts. The following impact areas are discussed:
    - 4.1 Aesthetics
    - 4.2 Air Quality
    - 4.3 Biological Resources
    - 4.4 Cultural Resources
    - 4.5 Geology and Soils
    - 4.6 Greenhouse Gas Emissions
    - 4.7 Hazards and Hazardous Materials
    - 4.8 Hydrology and Water Quality
    - 4.9 Land Use and Planning
    - 4.10 Noise
    - 4.11 Population and Housing
    - 4.12 Recreation
    - 4.13 Transportation
    - 4.14 Tribal Cultural Resources
    - 4.15 Public Services and Utilities
    - 4.16 Wildfire
- Chapter 5, Other CEQA Considerations, includes a summary of impacts found not to be significant, which is a discussion of potential environmental topics that have been found, through the Initial Study process, to have a less-than-significant effect or no effect on the environment. This chapter also includes a summary of significant irreversible environmental changes, which addresses environmental areas where significant environmental effects cannot be avoided and any significant irreversible environmental changes that would result from implementation of the proposed project. The growth-inducing impacts associated with the proposed project are also discussed.

- Chapter 6, Alternatives, discusses alternatives to the proposed project, including the No Project Alternative and the Vegetation Management Unit (VMU) Alternative.
- Chapter 7, List of Preparers.
- Appendices include various technical studies prepared for the proposed project, as listed below:
  - Appendix A – Initial Study/NOP and Comments Received
  - Appendix B – Air Quality and Greenhouse Gas Emission Calculations
  - Appendix C – Special-Status Plants with Potential to Occur in the CWPP Area
  - Appendix D – Special-Status Wildlife Species with Potential to Occur in the CWPP Area
  - Appendix E (Confidential) – CHRIS Archaeological Records Search Results
  - Appendix F (Confidential) – NAHC Sacred Land Files Search Results and AB-52 Consultation Record

2.9 References

CAL FIRE (California Department of Forestry and Fire Protection). 2020. "Daily Wildfire Report." Accessed September 2020. https://www.fire.ca.gov/daily-wildfire-report/.

SBFD (Santa Barbara Fire Department). 2004. Wildland Fire Plan. January 21, 2004. Accessed March 19, 2020. https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=14539.

SBFD and CDD (Santa Barbara Fire Department and Community Development Department). 2004. Final Program Environmental Impact Report, Wildland Fire Plan. SCH No. 2003041053. City of Santa Barbara Community Development Department and Fire Department. February 2004. Accessed on March 19, 2020. https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=14532.

3 Project Description

The City of Santa Barbara Fire Department (SBFD) is proposing to implement a comprehensive fire management program, called a Community Wildfire Protection Plan (proposed project or CWPP), to protect lives, property, and natural resources threatened by wildland fire. The proposed CWPP updates the City's 2004 Wildland Fire Plan consistent with the federal Healthy Forests Restoration Act passed in 2003 and subsequent guidance booklet "Preparing a Community Wildfire Protection Plan; A Handbook for Wildland-Urban Interface Communities" issued in 2004, accounting for changes in the City of Santa Barbara's (City's) fire environment and work completed under that 2004 Plan. While not a governing document requiring action, a CWPP is a strategic plan that outlines a series of policies and action items which are intended to guide implementation of the CWPP. The policies and actions focus on codes and standards, funding, fire rehabilitation, evacuation, fire protection, vegetation/fuels management, and public education. Action items identify tasks to be implemented by the SBFD, and other responsible City departments, to achieve the stated goal of protecting lives, property, and natural resources threatened by wildland fire. The CWPP process is intended to provide the community a forum for identifying values at risk from wildfire, which may include people, property, natural resources, cultural values, economic interests, and infrastructure. The identification of these values at risk by the community strongly influences the potential wildfire hazard mitigation projects identified in the proposed CWPP.

The proposed CWPP includes various goals, policies, and actions that represent a compilation of existing and newly proposed policies and actions related to Codes and Standards, Funding, Fire Rehabilitation, Evacuation, Fire Protection, Vegetation/Fuels Management, and Public Education. Current activities conducted by the SBFD under the 2004 Wildland Fire Plan were analyzed in the Final Program Environmental Impact Report (PEIR) for the 2004 Wildland Fire Plan (SBFD and CDD 2004) and are incorporated herein by reference. This description only addresses new proposed policies and/or actions that could result in impacts to the environment, which include the following categories:

- Proposed Modifications to the High Fire Hazard Area (HFHA)
- Proposed Modifications to the Vegetation Management Units (VMUs)
  - Defensible Space
  - Road Clearing
  - City VMUs
  - Community Fuels Treatment Network (CFTN)
  - Neighboring Jurisdiction Vegetation Management Areas
- Proposed Modifications to the Vegetation Management Methods
- Community Facility Maintenance

The proposed CWPP also includes several other policies and actions that would not involve any physical impacts to the environment, including public education, interagency coordination, acquisition of funding, data gathering and management, acquisition of firefighting equipment, and evacuation planning.

3.1 Project Location

The CWPP would encompass the jurisdictional limits of the City of Santa Barbara, with the exception of the Santa Barbara Airport. The airport property was excluded from the CWPP as it does not exhibit high wildfire hazard conditions, as identified in the 2017 Santa Barbara Airport Master Plan. The City is located between the coastal

Santa Ynez Mountains and the Pacific Ocean, approximately 100 miles northwest of Los Angeles. The City borders the Los Padres National Forest and unincorporated areas of Montecito, Mission Canyon, Hope Ranch, and Eastern Goleta Valley (Figure 3-1, Project Location).

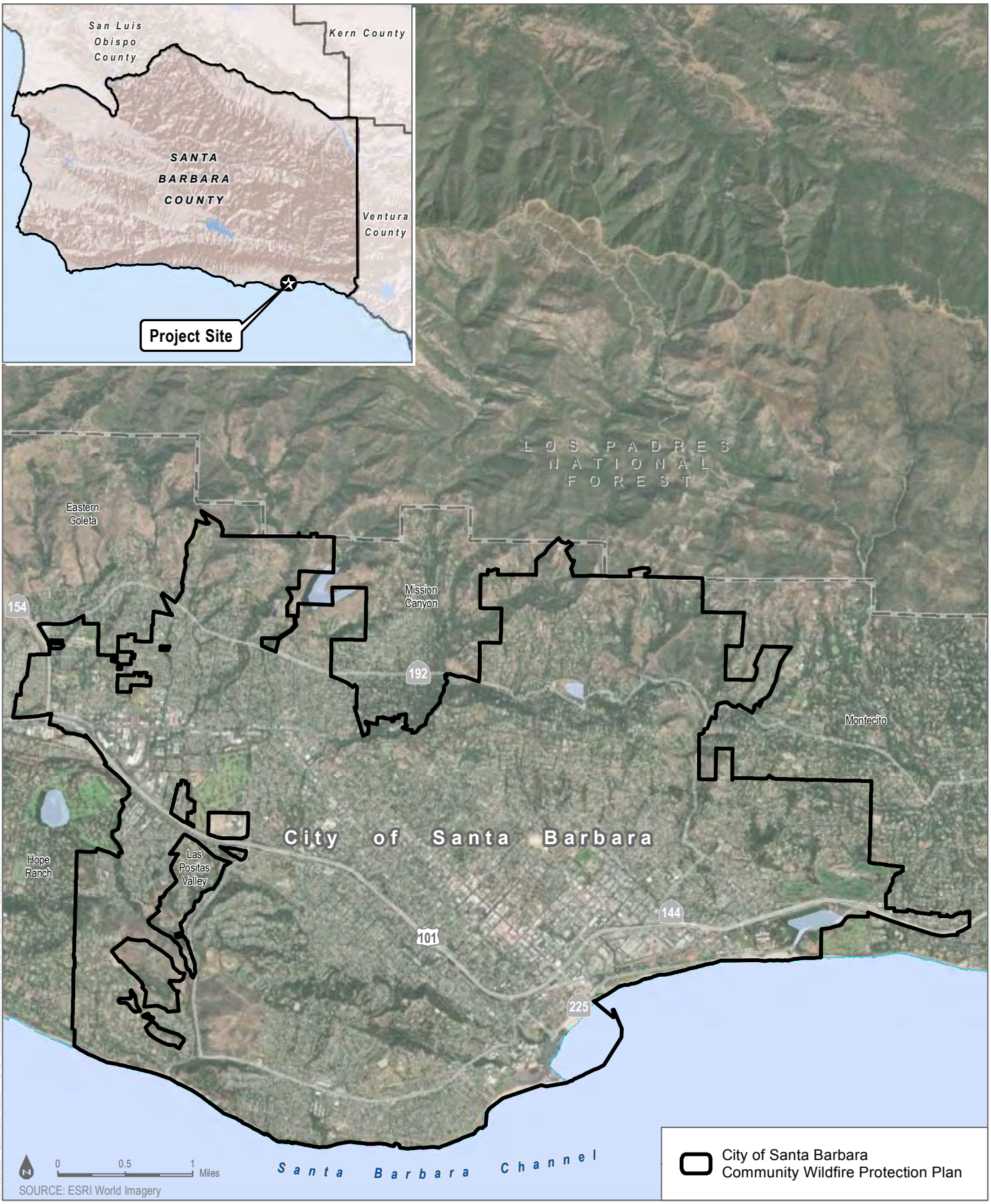
3.2 Purpose, Need, and Objectives

The purpose of the proposed project is to update the 2004 Wildland Fire Plan to account for changes in the City's fire environment and work completed under the 2004 Plan. The intended result is a comprehensive, coordinated plan to mitigate the impact of wildland fire to the City. The need for the proposed project stems from the inherent risk of wildfire hazards, the history of which is presented in Table 3-1 and shown on Figure 3-2, Fire History in the Santa Barbara Area. The proposed project's objectives include:

- Develop a comprehensive plan that incorporates procedures and programs to mitigate wildfire risks to the City.
- Engage stakeholders including the people, businesses, and organizations that live and work in the City, especially in the High Fire Hazard Area, as well as the adjacent jurisdictions.
- Inform and educate stakeholders about wildfire risk and shared community and individual responsibilities for fire safety.
- Add, remove, or leave unchanged High Fire Hazard Area based on technical data and fire modeling.
- Consolidate and rename City High Fire Hazard Area and severity zones to be consistent with California Department of Forestry and Fire Protection.
- Provide guidance for future vegetation maintenance activities, future roadway access strategies, and development strategies, defensible space, and home hardening within the High Fire Hazard Area.
- Maintain consistency between the Community Wildfire Protection Plan and existing City plans and policies, including but not limited to the City of Santa Barbara General Plan, Climate Action Plan, and Coastal Land Use Plan.
- Balance fire mitigation strategies with the City's goals of maintaining a vibrant economy and protecting natural resources, historic resources, and community character.
- Provide a basis to seek grant funding or other funding mechanisms to support the goals and policies of the proposed Community Wildfire Protection Plan.
- Reduce potential greenhouse gas emissions resulting from a wildfire by reducing vegetative fuel and structural ignition potential.
- Provide a policy framework to enable property owners in areas with wildland fire risk to work with private insurance companies on issues of coverage and cost of insuring private property.

3.2.1 Regional Fire History

Fire history is an important component of fire planning and can provide an understanding of fire frequency, fire type and behavior, most vulnerable community areas, and significant ignition sources, among others. Several large-scale fires have been recorded by fire agencies in the area, primarily associated with the Santa Ynez Mountain foothills. The topography, vegetation, and climatic conditions in the Santa Barbara area combine to create a unique situation capable of supporting large-scale, high-intensity, and sometimes damaging wildfires, such as the 2017 Thomas Fire. The history of regional wildfires in the Santa Barbara area is summarized in Table 3-1 and graphically presented in Figure 3-2.



COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA
DUDEK

FIGURE 3-1

Project Location

City of Santa Barbara Community Wildfire Protection Plan

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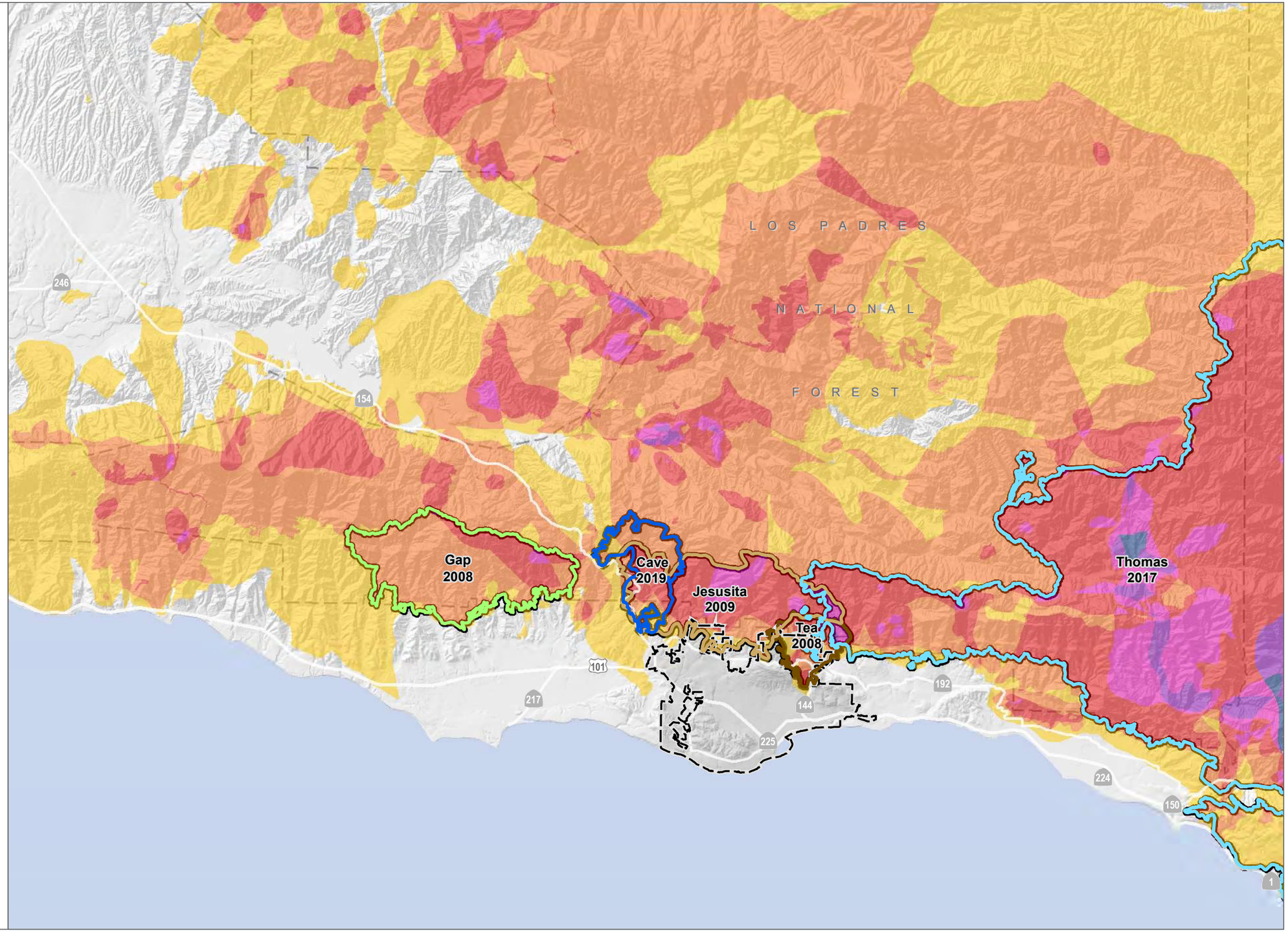
City of Santa Barbara / CWPP Area

Most Recent South Coast Front Country Fire Perimeters

- Gap 2008
- Tea 2008
- Jesusita 2009
- Thomas 2017
- Cave 2019

Fire Frequency (Number of Times Burned)

- 1
- 2
- 3
- 4
- 5
- 6



0 1 2 4 Miles

SOURCE: CAL FIRE

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

DUDEK

FIGURE 3-2

Fire History in the Santa Barbara Area

City of Santa Barbara Community Wildfire Protection Plan

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Table 3-1. History of Wildfires in the Santa Barbara Area

Fire	Date	Cause	Acres Burned	Structures Damaged or Destroyed	Deaths
Cave	November 2019	Under investigation by U.S. Forest Service Los Padres National Forest	3,126	0	0
Holiday	July 2018	Power lines	113	24 structures destroyed	0
Thomas	December 2017	Power lines	281,893	1,063 structures destroyed, 280 structures damaged	2
Alamo	July 2017	Under Investigation by San Luis Obispo County/CAL FIRE	28,687	1 residence destroyed, 1 structure damaged	0
Whittier	July 2017	Vehicle	18,430	16 residences destroyed, 1 residence damaged, 30 outbuildings destroyed, 6 outbuildings damaged	0
Rey	August 2016	Under investigation by U.S. Forest Service	32,606	0	0
Sherpa	June 2016	Misc. – disposal of burning log from fireplace	7,474	1	0
Gibraltar	October 2015	Arson	21	0	0
White	May 2013	Escaped embers from approved fire-use day site	1,984	0	0
La Brea	August 2009	Campfire associated with illegal marijuana plantation/grow	91,622	1	0
Jesusita	May 2009	Equipment use	8,733	80	0
Tea	November 2008	Campfire	1,940	238	0
Gap	July 2008	Arson	9,443	4	0
Zaca	July 2007	Equipment use	240,207	1	0
Perkins	July 2006	Lightning	14,988	0	0
Gaviota	July 2004	Lightning	7,440	1	0
Marre	September 1993	Smoking	43,882	0	0
Paint	June 1990	Arson	4,270	673	1
Wheeler	July 1985	Miscellaneous	119,361	26	0
Sycamore	July 1977	Kite into power lines	806	234	0
Romero	October 1971	Arson	14,538	N/A	4
Coyote	September 1964	Undetermined	65,338	94	1
Refugio	September 1955	Structure fire	79,428	20	0

Sources: CAL FIRE 2020; SBCFD 2018; VCFD 2020.

As presented in Table 3-1, nearly all significant wildfires have burned in the months of July, September, or October. This timeframe coincides with the end of the dry summer season, when vegetation has lower fuel moistures and Sundowner winds are prominent. While not all the fires shown in Table 3-1 were associated with Sundowner winds, the largest and most damaging fires have occurred during such winds.

The history of wildfire ignitions in the Santa Barbara area is directly related to human activity. Wildfire occurrence in the Santa Barbara area predominately occurs in the Santa Ynez Mountains. Mechanized and power equipment use (e.g., mowers) is a potential ignition source and was responsible for the Jesusita and Zaca Fires. Arson, campfires, and a vehicle fire have also been sources of significant wildland fires in the Santa Barbara area, including the Whittier, Gibraltar, Brea, Tea, and Gap fires. However, the largest recorded fire within the County, the Thomas Fire, ignited as a result of line slap (lines coming into contact with each other, creating an electrical arc, which deposits hot, burning or molten material onto the ground into a receptive fuel bed).

Interestingly, most vegetation fires ignited within the City occur in the more urban areas rather than in the foothill areas. However, ignitions in the foothill areas have the potential to spread throughout large expanses of wildland fuels and cause more widespread landscape damage than would a vegetation ignition in an urban setting (SBFD 2014).

3.2.2 Regional Fire Management

Fire management in the region spans the City and adjacent jurisdictions. The City boundaries adjoin the Los Padres National Forest and County of Santa Barbara (County). Within southern Santa Barbara County, there are several agencies that also have approved CWPPs for their jurisdictions. These CWPPs include:

- **County of Santa Barbara – San Marcos Pass/Eastern Goleta Valley Mountainous Areas**: The San Marcos Pass and Eastern Goleta Valley Mountainous Communities CWPP is the result of efforts by members of the CWPP Development Team. This CWPP is written to ensure that recommended actions developed during the CWPP planning process are in balance with sustainable ecological and cultural resource management practices and fiscal resources.
- **County of Santa Barbara – Mission Canyon**: The Mission Canyon CWPP recommends priorities and strategies in the Wildland-Urban Interface and vicinity and identifies surrounding lands, including federal and state lands, at risk from catastrophic wildland fire. The CWPP also recommends best practices fuel reduction treatments to protect lives and reduce structural ignitability of property while protecting other ecological, social, and economic values.
- **Montecito Fire Protection District (MFPD)**: Montecito's CWPP includes fuel mitigation strategies and community programs to guide future actions of the MFPD, property owners, business owners, homeowners' associations, and other interested parties in their efforts to reduce the wildfire threat to the community of Montecito.
- **Carpinteria-Summerland Fire Protection District**: The Carpinteria-Summerland Fire District CWPP identifies communities and individuals that collaborate to form an action plan to mitigate wildfire risk in the Wildland-Urban Interface communities. Additionally, the Carpinteria-Summerland Fire District CWPP assesses wildfire risks, increasing the community's ability to prepare for, respond to, and recover from wildland fires, and protects economic, social, and ecological resources by utilizing sound "best practices" for fuel reduction and structural ignitability improvements.

- **City of Goleta**: Goleta's CWPP identifies measures such as community actions plans, development standards, fuel mitigation, and maintenance and monitoring strategies.
- **Chumash Fire Department**: The Chumash Fire Department is a division of the tribal government of the Santa Ynez Band of Chumash Indians addressing fire and emergency medical and disaster preparedness services for the Santa Ynez Reservation. The Chumash Fire Department are the first responders to wildfires on federal land through an arrangement with the U.S. Forest Service and support mutual aid in Santa Barbara County, Central Coast, and in other western states (SYBCI 2020).

The City's proposed CWPP takes into account the planning and policies of these adjacent CWPPs.

3.3 Proposed Modifications to the High Fire Hazard Area

3.3.1 Current High Fire Hazard Area

The 2004 Wildland Fire Plan established an HFHA with four zones based on results of the City's hazard and risk assessment. The hazard assessment classified topography, weather, and fuels (vegetation) as the three variables to influence fire behavior and severity. The risk assessment looked at factors that had the potential to increase the loss of life, property, and natural resources. Six factors were evaluated: roof type, proximity of structures to other structures, road systems, water supply, fire response times, and historic fire starts. Four fire hazard zones were identified within the HFHA: (1) Extreme Foothill Zone, (2) Foothill Zone, (3) Coastal Zone, and (4) Coastal Interior Zone (Figure 3-3, Current High Fire Hazard Area). Each zone is described below.

Extreme Foothill Zone

The Extreme Foothill Zone is located along the northern boundary of the City and includes the areas of West Mountain Drive, upper Gibraltar Road, Parma Park, Coyote Road, upper San Roque Road, and upper Santa Teresita Drive in the Cielito and Foothill residential neighborhoods. Elevations of this zone range from approximately 450 to 1250 feet above mean sea level (AMSL). This zone is defined by dense chaparral and oak forests along steep (higher than 30% gradient) south to southwest oriented slopes. Canyons in this zone are typically aligned north to south, which can act to funnel and accelerate down-slope Sundowner winds to result in frequent and severe, hot, dry wind conditions. These combined hazards make this zone vulnerable to extreme fire behavior (SBFD 2004, 2020; USGS 2015). Building density in this zone is low. Roads are steep and winding, and many properties have long driveways. Notable resources or developments in this zone include Parma Park, Skofield Park, the Skofield Pump Station, and St. Mary's Seminary. This zone is strategically important to SBFD since it is the last line of defense for fire protection resources to suppress a wildfire before it enters more highly populated areas of the City (SBFD 2004).

Foothill Zone

The Foothill Zone is located within the northwest and northeast portions of the lower foothills, which includes either entirely or portions of the residential neighborhoods of Cielito, Riviera, Lower Riviera, Eucalyptus Hill, Foothill, Upper East, and the San Roque area surrounding Stevens Park. Elevations range from approximately 100 feet AMSL to the north of Andree Clark Bird Refuge and Highway 101 to approximately 1,050 feet AMSL near Mount Calvary Road. This zone typically contains a mixture of flammable chaparral, oak forest, riparian vegetation, eucalyptus

groves, and landscaped fuels intermixed with residential areas. The eucalyptus groves within this area are extensive, dense, and have significant accumulations of dead fuel that threaten the surrounding area. Most slopes in this area have a gradient of 20% to 40% and are oriented to the southeast, south, and southwest. As with the Extreme Foothill Zone, canyons in this zone are aligned north to south and can act to funnel and accelerate down-slope Sundowner winds, which contributes to extreme fire behavior conditions (SBFD 2004, 2020; USGS 2015).

Building density in this zone is typically low to moderate. A few areas of high structure density are present in the Foothill Road/Laurel Canyon Road area and in the southern portion of the Riviera. Roads in the zone are variable, with some portions in the south including wider, more heavily traveled roadways (e.g., Alameda Padre Serra, Sycamore Canyons Road, and Foothill Road) and other portions including steep, narrow, and winding roadways (e.g., Las Alturas Road, Mission Canyon Road, and Conejo Road). Notable resources or developments in this zone include the Mission, Hale Park, Montecito Country Club, Stevens Park, Riviera Campus and El Encanto Hotel, the Santa Barbara Bowl, the Cater Water Treatment Plant, the Sheffield Treatment Plant, City Public Works buildings, and City Fire Station No. 7.

Coastal Zone

The Coastal Zone is located along the southwest boundary of the City and includes the Campanil Hill and Hidden Valley residential neighborhoods. Elevation within this zone ranges from 150 to 600 feet AMSL. The majority of fuels are coastal sage scrub, grassland, and ornamental plants and intermixed with residential areas. Slopes in this zone range from 10% to 35%. The ocean influence dominates this area for much of the year, resulting in lower temperatures and increased fuel moistures, which reduces fire hazard. However, there are several canyons directly aligned to result in periodic hot, dry wind conditions that occur during our late summer and fall months. This zone has many pockets of moderate fuel made up of chaparral and landscape vegetation. Isolated areas of heavy fuel consisting of eucalyptus and oak vegetation increase the hazard in specific areas within this zone (SBFD 2004, 2020; USGS 2015).

Building density in this zone is typically low. Moderate and high building density occurs in the southern portion of the zone, in the Alan Road/Vista del Mar area. Roads in the zone are variable in width, and the zone includes numerous long, dead-end driveways. Notable resources or developments in this zone include Arroyo Burro Creek and Arroyo Burro Beach.

Coastal Interior Zone

The Coastal Interior Zone includes portions of the Alta Mesa, mountain areas of the Westside neighborhood, portions of the East and West Mesa and Bel Air residential neighborhoods, and part of Elings Park. Elevation in this zone ranges from approximately 250 to 450 feet AMSL. This zone is defined as areas within the City where the majority of fuel is made up of diverse pockets of vegetation consisting of dense chaparral, oak forests, coastal sage shrub, landscaped vegetation, agricultural lands, and eucalyptus groves. Slopes in this zone range from 10% to 35%. The canyons in this area are dissected and are not in direct alignment to receive hot, dry winds, although these winds are funneled through many of these areas. For the majority of the year, this area is greatly affected by the ocean influence resulting in lower temperatures and increased fuel moistures, which reduce fire hazard; however, when late summer and fall Sundowner winds surface, the risk to this area is significantly increased (SBFD 2004, 2020; USGS 2015).

Building density in this zone is typically moderate. A few areas of low structure density are present in the Elings, Thornbury, and Honda Valley Park areas. Roads in the zone are variable, with some portions in the south including wider, more heavily traveled roadways (e.g., West Carrillo Street) and other portions including more steep and winding roadways (e.g., Miramonte Drive). Notable resources or developments in this zone include Vic Trace Reservoir, Hilda McIntyre Ray Park, Elings Park, Thornbury Park, and Honda Valley Park.

City of Santa Barbara / CWPP Area

Existing City of Santa Barbara High Fire Hazard Area Zones

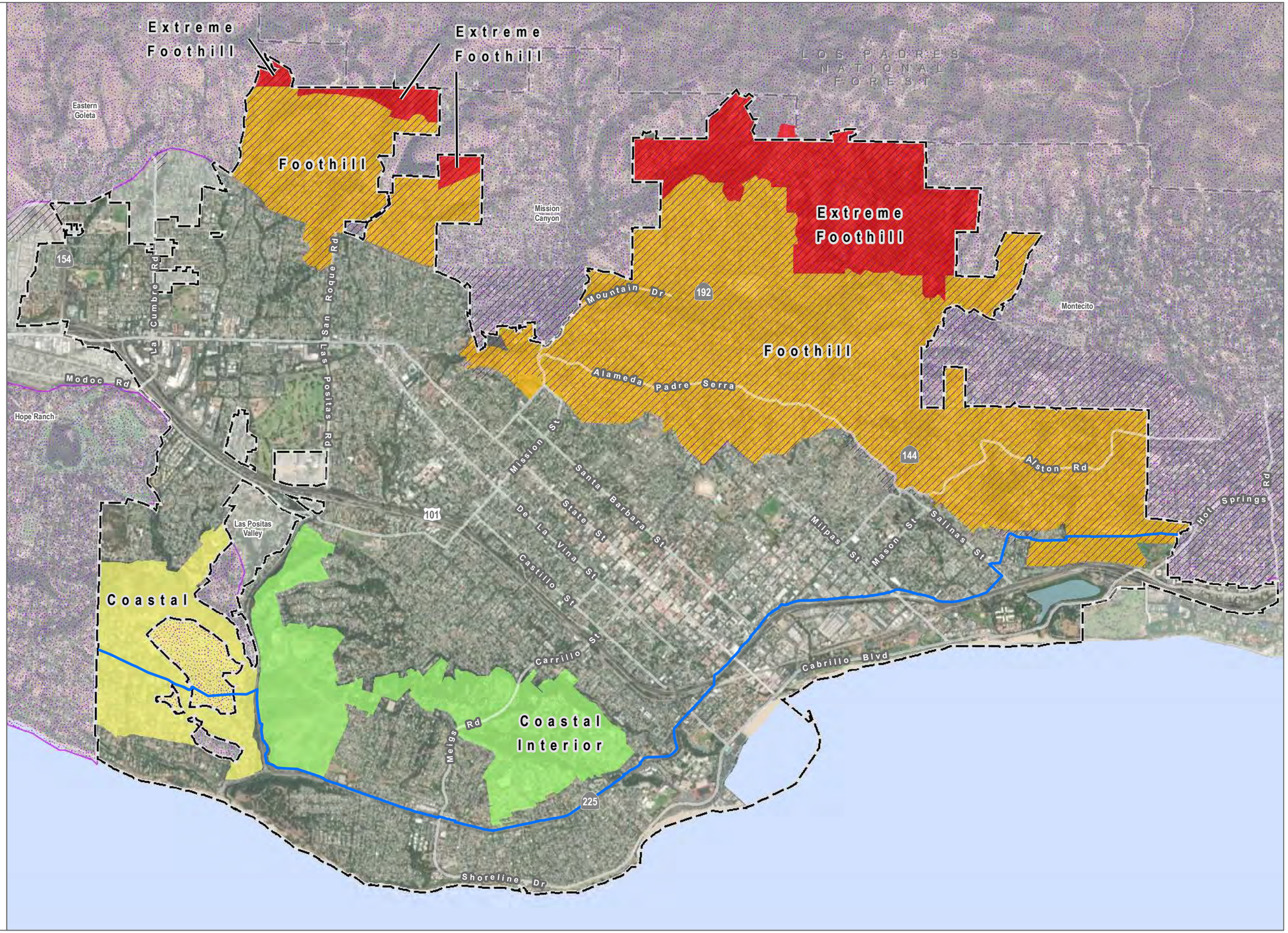
- Coastal Interior
- Coastal
- Foothill
- Extreme Foothill

CAL FIRE Adopted Very High Fire Hazard Severity Zone - 2007 (Within City Limits)

- Very High (State VHFHSZ)

Santa Barbara County High Fire Hazard Area (Outside City Limits)

- High Fire Hazard Area
- Coastal Zone Boundary



0 1,000 2,000 Feet

SOURCE: City of Santa Barbara, County of Santa Barbara, CAL FIRE

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

DUDEK

FIGURE 3-3

Current High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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3.3.2 Proposed High Fire Hazard Area

As a component of the CWPP, the City proposes to consolidate and rename the HFHA following the California Department of Forestry and Fire Protection's (CAL FIRE's) Very High Fire Hazard Severity Zone (VHFHSZ). California law requires CAL FIRE to identify areas based on the severity of fire hazard that is expected to prevail there. These areas, or "zones," are based on factors such as fuel (material that can burn), slope, and fire weather. There are three zones, based on increasing fire hazard: medium, high, and very high. The proposed renaming is in alignment with the National Incident Management System (NIMS) and California Standard Emergency Management System (SEMS) to establish common standards for communication and information management, especially related to common terminology. Common terminology helps by reducing confusion and enhancing interoperability, including organizational functions, resource descriptions, and incident facilities (FEMA 2020). The proposed renaming would be as follows:

- Merge the Foothill and Extreme Foothill Zones and rename as the City's Very High Fire Hazard Severity Zone (VHFHSZ)
- Merge the Coastal and Coastal Interior Zones and rename as the City's High Fire Hazard Severity Zone (HFHSZ)

As shown in Table 3-2, in addition to the renaming, certain changes to the boundaries of these zones are proposed. Parcels are proposed to be added to the CWPP's high fire hazard zones due to City incorporation boundaries and re-assessment of fire behavior modeling and vegetation data. Additions were based on the City's parcel data (e.g., entire parcels were added, rather than portions of parcels), and the potential additions were extended to logical boundaries (streets, blocks).

Table 3-2. High Fire Hazard Area Modifications

Existing					Proposed	
Classification	*Acreage Existing*	*Proposed Addition*	*Proposed Removal*	Total (acres)	*Classification*	*Acreage*
Coastal Interior	702.18	270.74	1.65	971.27	High Fire Hazard Severity Zone	1,657.74
Coastal	523.51	264.44	101.48	686.47		
Foothill	2,827.18	118.56	0.0	2,945.74	Very High Fire Hazard Severity Zone	3,666.22
Extreme Foothill	723.91	1.68	5.11	720.48		

Source: SBFD 2020.

Areas proposed to be removed from the existing HFHA are outside of City boundaries but were included in the 2004 Wildland Fire Plan (Figure 3-4, Proposed Modifications to High Fire Hazard Area). Table 3-3 provides a more detailed summary of the areas proposed to be modified as part of the CWPP.

Table 3-3. High Fire Hazard Area IDs

Area ID	Status	Area	Change	Comments	Acres
A	Existing	Extreme Foothill	Existing	Existing	723.91
B	Proposed	Extreme Foothill	Add	Parcel added, incorporated into City after 2004 Plan adopted.	1.68
C	Proposed	Extreme Foothill	Remove	Parcel removed, outside of City.	5.11

Table 3-3. High Fire Hazard Area IDs

Area ID	Status	Area	Change	Comments	Acres
D	Existing	Foothill	Existing	Existing	2,827.18
E	Proposed	Foothill	Add	Parcels added, as they back to High Fire Hazard Area with modeled extreme fire behavior, brings boundary down to street (Scenic Drive).	6.25
F	Proposed	Foothill	Add	Parcels added; fire behavior modeling indicates extreme fire behavior associated with lower Mission Canyon vegetation.	25.26
G	Proposed	Foothill	Add	Parcel added; area omitted from previous High Fire Hazard Area mapping effort as it was previously outside the City.	5.31
H	Proposed	Foothill	Add	Parcels added; fire behavior modeling indicates extreme fire behavior associated with San Roque Creek vegetation.	26.84
I	Proposed	Foothill	Add	Parcels added; fire behavior modeling indicates extreme fire behavior associated with Cieneguitas Creek vegetation.	54.90
J	Existing	Coastal Interior	Existing	Existing	702.18
K	Proposed	Coastal Interior	Add	Parcels added due to modeled extreme fire behavior in adjacent High Fire Hazard Area.	12.45
L	Proposed	Coastal Interior	Add	Parcels added due to modeled extreme fire behavior in adjacent park land, capacity for defensible space on these lots is significantly reduced due to limited structure setbacks.	24.62
M	Proposed	Coastal Interior	Add	Parcels added due to modeled extreme fire behavior; brings zone boundary to streets.	223.37
N	Proposed	Coastal Interior	Add	Parcels added due to modeled extreme fire behavior in adjacent High Fire Hazard Area.	1.41
O	Proposed	Coastal Interior	Add	Parcels added due to modeled extreme fire behavior present in adjacent High Fire Hazard Area; brings zone boundary to streets.	8.89
P	Proposed	Coastal Interior	Remove	Road parcel removed from existing High Fire Hazard Area.	1.65
Q	Existing	Coastal	Existing	Existing	523.51
R	Proposed	Coastal	Add	Parcels added due to modeled extreme fire behavior present.	62.27
S	Proposed	Coastal	Remove	Parcels removed as they are in County jurisdiction.	101.48
T	Proposed	Coastal	Add	Parcels added due to modeled extreme fire behavior present. This area is entirely within the state's Coastal Zone Boundary.	202.17

City of Santa Barbara / CWPP

Existing City of Santa Barbara High Fire Hazard Area

Santa Barbara County High Fire Hazard Area (Outside City Limits)

CAL FIRE Adopted Very High Fire Hazard Severity Zone - 2007

Coastal Zone Boundary

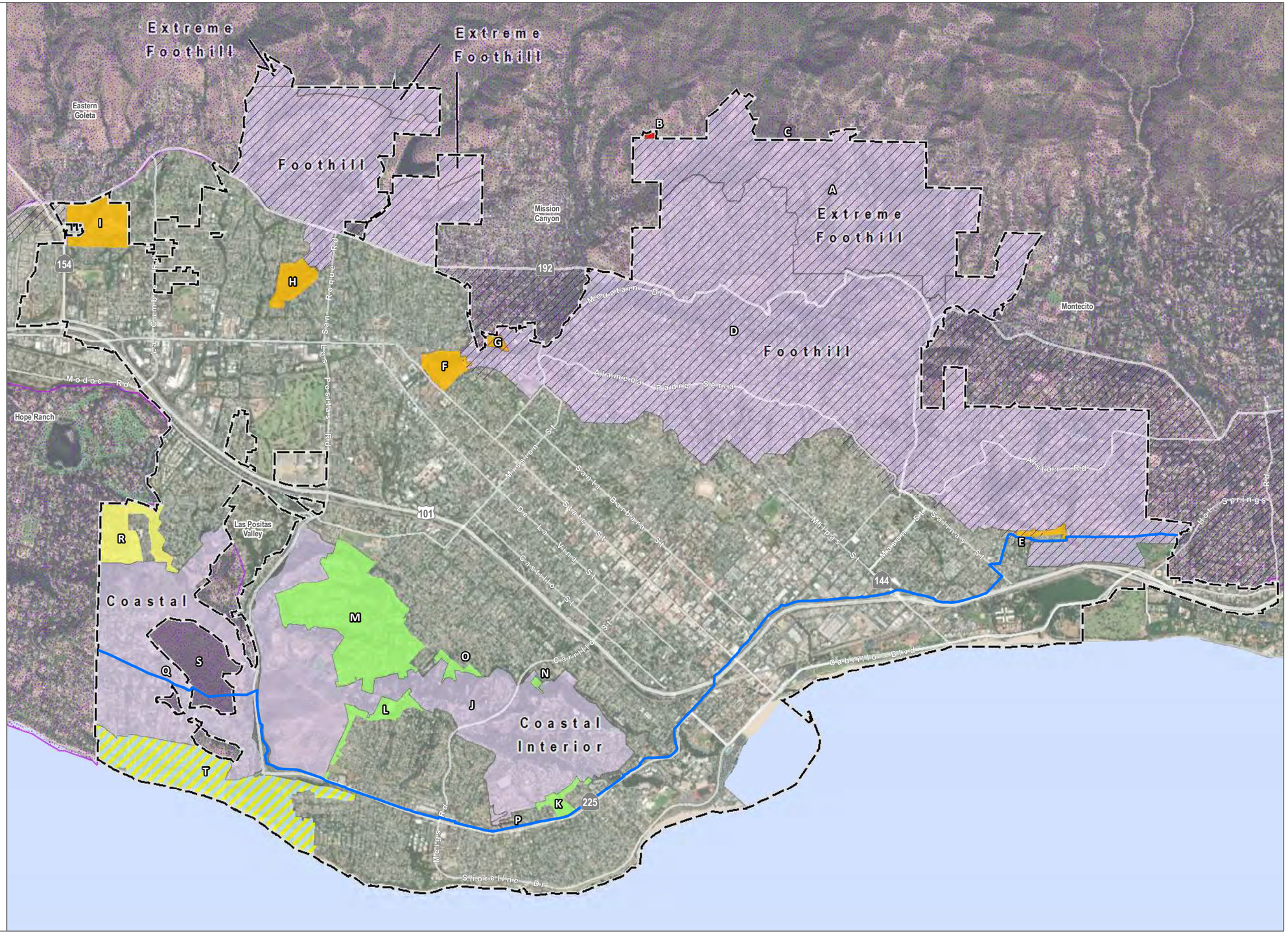
Proposed High Fire Hazard Areas

Proposed Additions in the Inland

- Extreme Foothill
- Coastal Interior
- Coastal
- Foothill
- Proposed Removals

Proposed Additions in the Coastal

- Coastal



SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

DUDEK

FIGURE 3-4

Proposed High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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As noted, Area T exists entirely within the state's Coastal Zone Boundary. Vegetation management and defensible space activities conducted in this Area are to be consistent with the City's Local Coastal Program (LCP) and may be subject to additional approvals.

3.4 Proposed Vegetation Management

As a component of the CWPP, vegetation management on both private and public land would occur. Vegetation management is often dependent on the location and proximity to structures and vegetation types (fuels) present in the City and their contribution to fire hazard. Hazardous fuels include live and dead vegetation that exist in a condition that readily ignites; transmits fire to adjacent structures or ground, surface, or overstory vegetation; and/or is capable of supporting extreme fire behavior. Funding for vegetation management is obtained through several sources, including private landowners, grants, the City general fund budget, and the City Wildland Fire Suppression Assessment District[1] (Figure 3-5, City Wildland Fire Suppression Assessment District).

Table 3-4 summarizes the different potential vegetation types identified and mapped in the City, and Figure 3-6, Santa Barbara City Vegetation Types, presents the distribution of potential vegetation types in the City. The map is used as a screening tool for planners and the public to evaluate the types of site-specific biological resource studies that may be necessary for development projects. The presence or lack of vegetation types depicted on the map would need to be confirmed in the field on a case-by-case basis.

Table 3-4. Vegetation Communities and Land Covers in the CWPP Area

Community/Land Cover	Acres	Percentage
Herbaceous Communities		
California Annual Grassland	535	4.5%
Coastal Perennial Grassland	36	0.3%
Subtotal	*571*	*4.8%*
Upland Scrub Communities		
Coastal Sage Scrub	1,182	10.0%
Chaparral	238	2.0%
Subtotal	*1,420*	*12.0%*
Woodland and Forest Communities		
Riparian Woodland/Creek	173	1.5%
Southern Oak Woodland	1,140	9.7%
Subtotal	*1,313*	*11.1%*
Barren Natural Land Covers		
Coastal Bluff	15	0.1%
Coastal Strand/Beach	123	1.0%
Subtotal	*137*	*1.2%*

[1] In 2006, the City of Santa Barbara adopted the Wildland Fire Suppression Assessment District (WFSAD). The WFSAD encompasses 3,480 acres and was created pursuant to California Government Code Section 50078 and Article XIIID of the California Constitution. The voters of the WFSAD agreed to a levy to fund certain services designed to reduce the severity and damage from wildland fires in the Foothill and Extreme Foothill Zones of the HFHA. These areas were included in the WFSAD based on the potential for high-severity wildfire in this portion of the City as presented in the City's 2004 Wildland Fire Plan. WFSAD funds are used to provide services such as defensible space evaluations, chipping, road clearance, and vegetation management.

Table 3-4. Vegetation Communities and Land Covers in the CWPP Area

Community/Land Cover	Acres	Percentage
Anthropogenic and Other Land Covers		
Golf Course	219	1.9%
Orchard	236	2.0%
Parkland	60	0.5%
Urban	7,686	65.1%
Unmapped	162	1.4%
Subtotal	*8,363*	*70.8%*
Total	**11,805**	**100.0%**

Source: City of Santa Barbara 2008.

Types of Vegetation Communities

Grass/Herbaceous

Grass/herbaceous fuels in the City are represented by the California annual grassland and coastal perennial grassland vegetation types and are found primarily in the southern, coastal area of the City, although smaller areas exist in the foothills along the City's northern boundary. Grassland types may include scattered and widely spaced trees and/or shrubs, although grasses are the dominant cover type. Grasses are fine fuels that are loosely compacted with a low fuel load. Grasses have a high surface area-to-volume ratio, requiring less heat to remove fuel moisture and raise fuel to ignition temperature. They are also subject to early seasonal drying in late spring and early summer. Live fuel moisture content in grasses typically reaches its low point in early summer, and grasses begin to cure soon after. Due to these characteristics, grasses have potential for a high rate of spread, rapid ignition, and facilitation of extreme fire behavior. Grasses are the vegetation type in the City with the highest risk for wildfire ignition. Their low overall fuel loads typically result in faster moving fires with lower flame lengths and heat output. Untreated grasses can help spread fire into other adjacent surface fuel types (e.g., shrubs) or facilitate surface-to-crown fire transition where they exist beneath tree canopies.

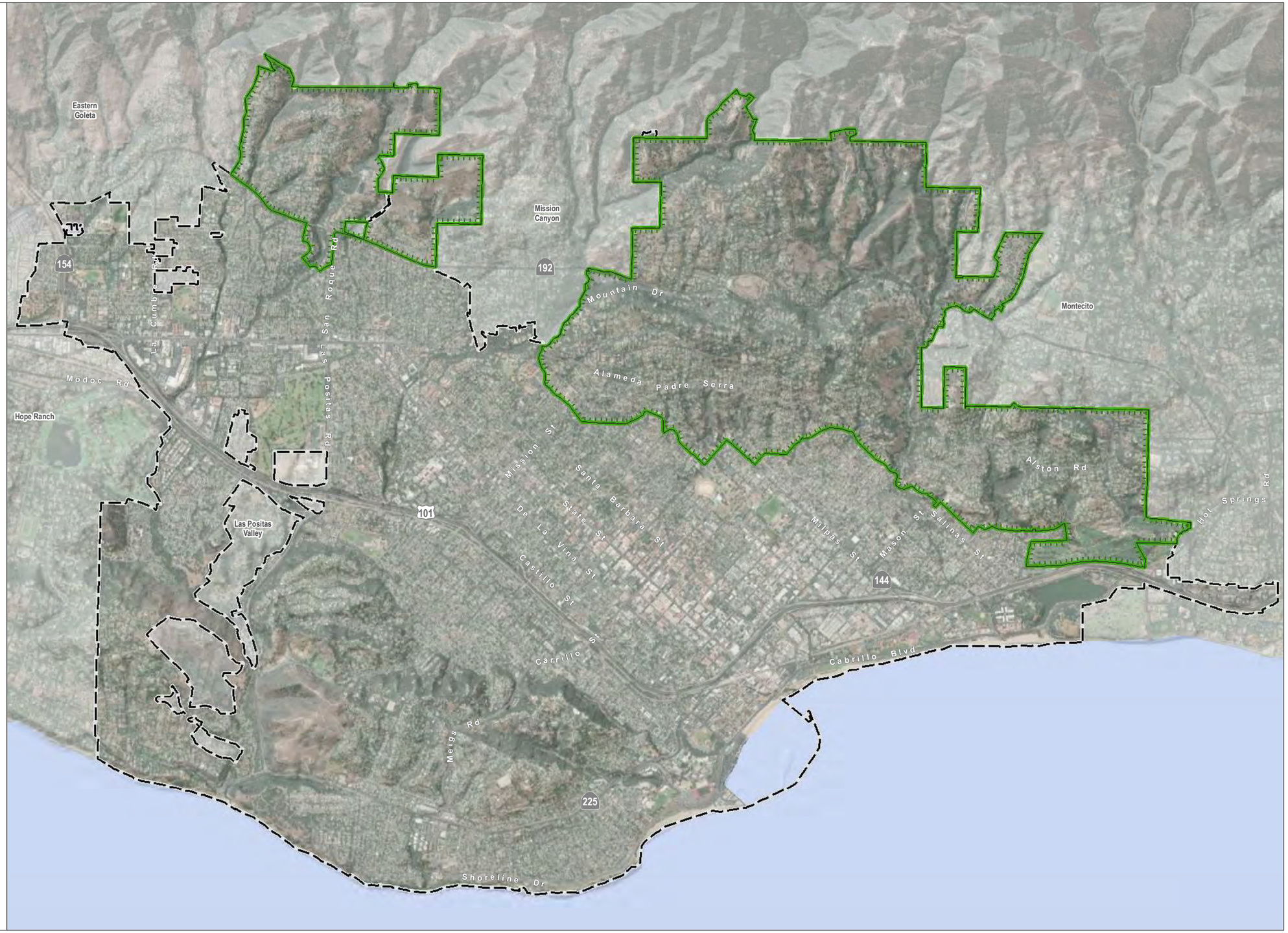
Brush/Scrub

Brush/scrub fuels in the City are represented by the chaparral and coastal sage scrub vegetation types. Brush/scrub types may include scattered and widely spaced trees, small patches of grass/herbaceous vegetation, or grass herbaceous vegetation occurring beneath shrub canopies, although shrubs are the dominant cover type. Chaparral is found primarily in the foothills along the City's northern boundary, while coastal sage scrub is distributed evenly between the southern, coastal area of the City and the foothills along the City's northern boundary.

Chaparral and coastal sage scrub are considered moderately fine fuels that are loosely compacted. Chaparral has a high fuel load, and coastal sage scrub has a moderate fuel load. Both types have high surface area-to-volume ratios, requiring less heat to remove fuel moisture and raise fuel to ignition temperature. Both are subject to early seasonal drying in the late spring and early summer, but do not fully cure in the way that grasses do. The live fuel moisture content reaches its low point in the late summer and early fall months. Dead fuels consist mainly of 1-hour and 10-hour fuel sizes, or twigs and small stems ranging from 0.25 inches to 1 inch in diameter. Chaparral and coastal sage scrub have the potential for a high rate of spread, rapid ignition, and extreme fire behavior. Chaparral also has a high content of volatile organic compounds, which also contributes to extreme fire behavior potential.

City of Santa Barbara / CWPP Area

Wildland Fire Supression Assessment District (WFSAD) Boundary



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SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

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FIGURE 3-5

Wildland Fire Suppression Assessment District

City of Santa Barbara Community Wildfire Protection Plan

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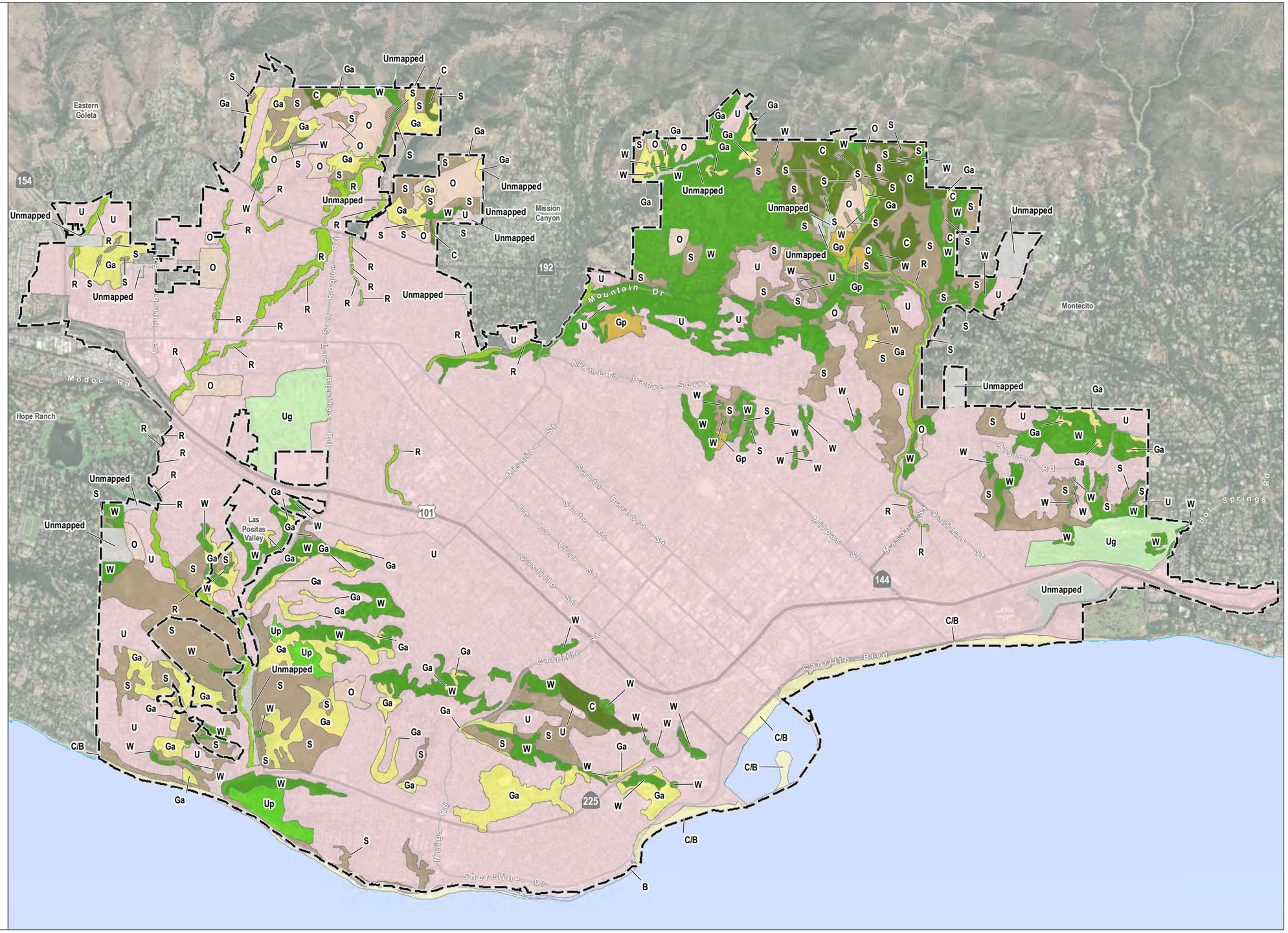
City of Santa Barbara / CWPP Area

Vegetation Communities and Land Cover Types

- B - Coastal bluff
- C/B - Coastal strand/beach
- C - Chaparral
- W - Southern oak woodland
- R - Riparian woodland
- Ga - California annual grassland
- Gp - Coastal Perrennial grassland
- S - Coastal sage scrub
- O - Orchard
- U - Urban
- Ug - Golf course
- Up - Parkland
- None/Unmapped



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SOURCE: USGS National Map

COMMUNITYWILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

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FIGURE 3-6

Vegetation Types

City of Santa Barbara Community Wildfire Protection Plan

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Tree/Woodland

Tree/woodland fuels in the City are represented by the southern oak woodland and riparian woodland vegetation types. Eucalyptus is included in this type of vegetation due to its prevalence in the City. Tree/woodland types may also include scattered shrubs or shrub groupings, small patches of grass/herbaceous vegetation, or shrub and grass herbaceous vegetation occurring beneath tree canopies, although trees are the dominant cover type. In closed-canopy oak woodlands, understory fuel loads are low. The reduction of fire as an ecosystem process in oak woodlands, however, allows for an accumulation of fuels that had previously been consumed during regular, low-intensity fires. This can cause a build-up of woody vegetation in the understory, including significant increases in dead and down woody material and ladder fuels connecting ground vegetation to tree canopies. As a result, some oak woodlands are more susceptible to severe, crown-consuming fires (McCreary 2004). Oak woodlands are found in the City's drainages and canyons and along north-facing slopes throughout the foothills and southern, coastal area. Riparian woodlands are concentrated in narrow corridors primarily along San Roque Creek, Mission Creek, Sycamore Creek, and Arroyo Burro Creek.

Vegetation Management Categories

Vegetation management is categorized into five categories, including the following (See Exhibit 1):

- **Roadside Clearance**: maintenance of vegetation adjacent to roadways
- **Defensible Space**: area adjacent to buildings or structures managed by landowners
- **City Vegetation Management Units**: vegetation in areas outside of defensible space where vegetation management occurs in cooperation between the affected landowners and City
- **Community Fuels Treatment Network**: area along the northern portion of the City limits to provide a break between continuous decadent stands of chaparral fuel and a strategic last line to protect more highly populated areas
- **Neighboring Jurisdictions Vegetation Management Areas**: vegetation management areas adjacent to the City limits and within the Montecito Fire District and Santa Barbara County Fire District boundaries. (The CWPP does not propose treatment within these areas; included for informational purposes.)

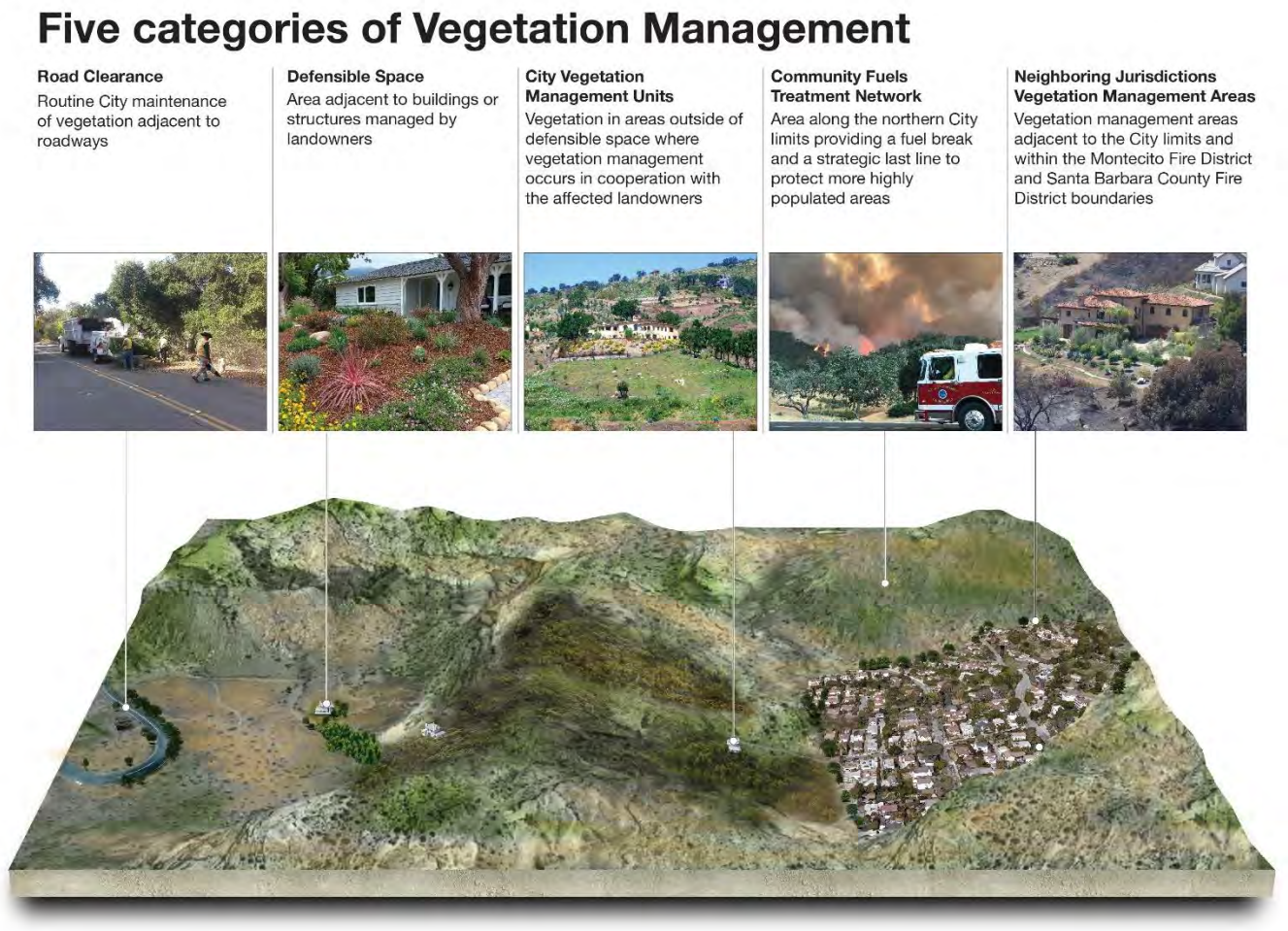


Exhibit 1: Five Categories of Vegetation Management

3.4.1 Road Clearance

The City Municipal Code requires property owners to clear flammable vegetation and combustible growth horizontally and vertically (i.e., overhanging vegetation) on the portions of their property that abut highways and private streets ordinarily used for vehicle traffic as provided in Table 3-5. As funding is available, the SBFD conducts roadside vegetation management to reduce the amount of vegetation along roadways, enhance evacuation during a wildfire, and allow greater access for fire engines and equipment to respond during a wildfire. Funding is also provided by property owners through the Wildland Fire Suppression Assessment District. Road clearance activities would generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR.

Table 3-5. Road Clearance Requirement

Orientation	Existing	Proposed
Horizontal	10 feet	10 feet
Vertical	13 feet 6 inches	13 feet 6 inches

Source: SBD and CDD 2004.

3.4.2 Defensible Space

Defensible space is an area around a building or structure in which vegetation, debris, and other types of combustible fuels have been treated, cleared, or reduced to slow the spread of fire to and from the building (FEMA 2008). As outlined in Chapter 8.04 of the City of Santa Barbara Municipal Code (adopted by Ordinance #5920), all parcels in the HFHA are required to meet City-defined defensible space requirements year-round. Vegetation within defensible space zones, native or otherwise, must be maintained to create an effective fuel break by thinning dense vegetation and removing dry brush, flammable vegetation, and combustible growth.

Chapter 8.04 outlines treatment standards and identifies exceptions to identified standards and special considerations for increasing defensible space widths (or distances), minimizing erosion potential, and reducing water quality and habitat impacts. Where required defensible space occurs on an adjoining property (e.g., property line setback is less than required defensible space distance), it is up to the adjoining property owner to provide defensible space for their neighbor. In cases where cooperation is not achievable, SBFD may enforce defensible space management requirements on adjoining properties.

The CWPP does not propose modifications to the defensible space distances from buildings and structures as identified in the 2004 Wildland Fire Plan. The actual vegetation management methods within defensible space areas would also generally remain the same as discussed in the 2004 Wildland Fire Plan and PEIR. The proposed HFHSZ would require 30 feet to 70 feet from a building or structure and 100 feet to 150 feet for the new VHFHSZ. Within any HFHSZ, additional defensible space may be required on slopes greater than 30% and may require up to 300 feet of defensible space. Defensible space within the state Coastal Zone would need to be consistent with the City's certified Coastal Land Use Plan. A summary of existing and proposed defensible space requirements is provided in Table 3-6. Based on site-specific circumstances, the Fire Marshal has the authority to determine the appropriate defensible space based on these standards.

Table 3-6. Defensible Space Requirement

Existing		Proposed	
Classification	*Distance (feet)*	*Classification*	*Distance (feet)**
Coastal Interior	30–50	High Fire Hazard Severity Zone	30 - 70
Coastal	50–70		
Foothill	100	Very High Fire Hazard Severity Zone	100 - 150
Extreme Foothill	150		

Source: SBFD and CDD 2004.
Note: *Within any HFHSZ/VHFHSZ, additional defensible space up to 300 feet may be required at the discretion of the fire marshal on slopes greater than 30%.

3.4.3 City Vegetation Management Units

The CWPP proposes certain modifications to the 2004 Wildland Fire Plan VMU boundaries (Figure 3-7, Current Vegetation Management Units, Community Fuels Treatment Network, and Adjacent Vegetation Management Areas). VMUs have unique hazards and include, or are adjacent to, values threatened by wildfire; have the potential for extreme fire behavior; and pose a challenge for fire protection because of dense, flammable vegetation, lack of access due to topography and roads, and firefighter exposure. VMUs encompass land outside defensible space on both City-owned and private property where the City would conduct vegetation management in cooperation with the affected landowners.

Current management is performed in accordance with Mitigation Measure BIO-1 outlined in the 2004 Wildland Fire Plan PEIR (SBFD and CDD 2004). The City consults with a qualified biologist during the preparation of work plans for each VMU. Based on this consultation, site-specific measures to avoid or reduce impacts to biological resources (including Environmentally Sensitive Habitat Areas) known or likely to occur in the VMU are identified. Vegetation management actions are then modified to reduce impacts to special-status species. The biological assessments conducted prior to vegetation management work conducted in VMUs also consider the presence of invasive species. Treatment techniques are identified to minimize potential invasive species spread during vegetation management activities. Finally, the City implements a vegetation treatment hierarchy during work plan development at each VMU where vegetation treatment/removal is prioritized in the following order: dead plant material, dying plant material, invasive species, and native species.

The proposed changes to the VMUs are based on geographic information system (GIS) analysis and compared with fire behavior modeling results, fire hazard mapping data sets, fire history data, and the location of other City and non-City Vegetation Management Areas. A priority has also been assigned. Additions were identified where they would close a gap between existing VMUs, provide additional protection to the community, or where historic fires have burned into the City. Additions were based on the City's parcel data, with the exception of an area identified in Parma Park that follows a ridgeline rather than a parcel boundary. Potential additions were extended to logical boundaries (streets, existing VMUs). Table 3-7 provides the estimated acreage. Figure 3-8, Proposed Modifications to City's Vegetation Management Areas. Proposed vegetation management activities within the VMUs would generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR.

Table 3-7. Vegetation Management Units

	HFHSZ VMU (acres)	VHFHSZ VMU (acres)
Existing	292.95	908.73
Proposed	356.32	318.59
Total (Acres)	**649.27**	**1,227.32**

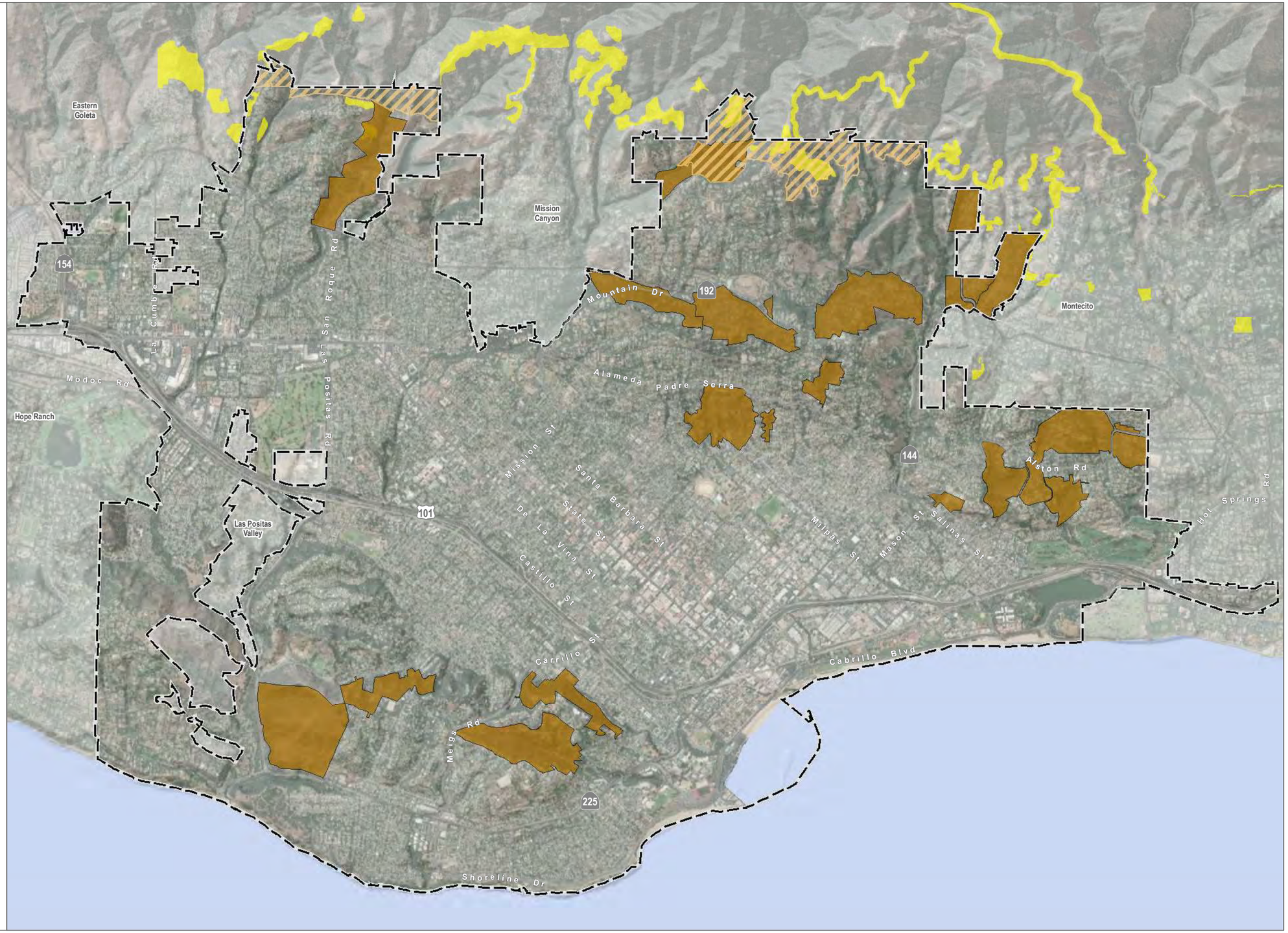
Source: SBFD 2020.

City of Santa Barbara / CWPP Area

Current Vegetation Management Units

Community Fuels Treatment Network

Adjacent Vegetation Management Areas



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SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

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FIGURE 3-7

Current Vegetation Management Units, Community Fuels Treatment Network, and Adjacent Vegetation Management Areas

City of Santa Barbara Community Wildfire Protection Plan

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Table 3-8 provides greater detail regarding the VMUs and CFTN estimated acreage.

Table 3-8. Vegetation Management Unit and Community Fuels Treatment Network Area ID and Modifications

Area ID	Status	Priority	Change	Comments	Acres
7	Existing	Low	Existing	Mountain/Las Tunas VMU	45.18
8	Existing	Low	Existing	Fire Station 7 VMU	2.42
26	Proposed	Low	Addition	Mountain Drive Extension	5.38
27	Proposed	Low	Addition	Las Alturas/Stanwood Connection	30.86
1	Existing	Medium	Existing	Conejo Road VMU	93.80
2	Existing	Medium	Existing	Jimeno/Garcia Canyon VMU	64.54
3	Existing	Medium	Existing	Las Canoas Road VMU	52.77
5	Existing	Medium	Existing	Coyote Road VMU	11.58
10	Existing	Medium	Existing	Eucalyptus Hill Drive VMU	63.02
11	Existing	Medium	Existing	Camino Viejo VMU	23.78
12	Existing	Medium	Existing	Alston Place VMU	39.10
15	Existing	Medium	Existing	Cleveland School Area VMU	7.91
16	Existing	Medium	Existing	Loma Alta VMU	42.05
17	Existing	Medium	Existing	Hondo Valley VMU	84.25
19	Existing	Medium	Existing	Flora Vista VMU	40.95
20	Existing	Medium	Existing	Garcia/Ferrelo Canyon VMU	5.51
21	Existing	Medium	Existing	Hillcrest Road VMU	69.53
22	Existing	Medium	Existing	Alturas Del Sol VMU	18.15
24	Proposed	Medium	Addition	Jesusita Drive	2.92
30	Proposed	Medium	Addition	Alston/Cleveland Connection	8.29
31	Proposed	Medium	Addition	Owen Road Extension	7.22
32	Proposed	Medium	Addition	Via Alicia	15.48
33	Proposed	Medium	Addition	Hondo Valley Extension	8.90
34	Proposed	Medium	Addition	Miramonte	1.75
35	Proposed	Medium	Addition	W. Carillo 1	6.66
36	Proposed	Medium	Addition	Skyline Way	7.28
37	Proposed	Medium	Addition	Loma Alta Extension	1.41
38	Proposed	Medium	Addition	Flora Vista Extension	25.92
39	Proposed	Medium	Addition	W. Victoria	1.79
41	Proposed	Medium	Addition	W. Carillo 2	1.38
42	Proposed	Medium	Addition	Nirvana Rd.	14.04
44	Proposed	Medium	Addition	Bel Air	38.75
45	Proposed	Medium	Addition	Calle de los Amigos	9.34
4	Existing	High	Existing	Upper Coyote Road VMU	23.36
6	Existing	High	Existing	Coyote Circle VMU	11.36
9	Existing	High	Existing	Westmont/Las Barrancas VMU	50.22
13	Existing	High	Existing	Cima Linda Lane VMU	16.96
14	Existing	High	Existing	Owen Road VMU	25.20
18	Existing	High	Existing	Las Positas Road VMU	125.70
23	Existing	High	Existing	San Roque Creek VMU	82.73
25	Proposed	High	Addition	Northridge Road	97.30
28	Proposed	High	Addition	Parma Park	105.83

Table 3-8. Vegetation Management Unit and Community Fuels Treatment Network Area ID and Modifications

Area ID	Status	Priority	Change	Comments	Acres
29	Proposed	High	Addition	Lauro Canyon/Arriba Way	45.49
40	Proposed	High	Addition	Elings Park	91.94
43	Proposed	High	Addition	Campanil	124.71
46	Proposed	High	Addition	Senda Verde	22.44
47	Proposed	High	Existing	Community Fuels Treatment Network	15.31
48	Proposed	High	Existing	Community Fuels Treatment Network	47.62
49	Proposed	High	Existing	Community Fuels Treatment Network	120.55
50	Proposed	High	Existing	Community Fuels Treatment Network	17.97

3.4.4 Community Fuels Treatment Network

The CWPP proposes to maintain the 2004 Wildland Fire Plan CFTN located along the northern portion of the existing Extreme Foothill Zone/proposed VHFHSZ. The CFTN encompasses 242 acres and provides a break between continuous stands of chaparral fuel outside the City boundary and the City area. The CFTN also provides a strategic last line of defense for fire protection resources to suppress a wildland fire before it enters more highly populated areas of the City. Figure 3-7 shows the existing and proposed CTFN and Table 3-9 provides the estimated acreage. The CFTN is an area where multiple property owners interlink their individual defensible space areas and treat continuous strips of hazardous vegetation to form a vegetation management network (SBFD 2004).

Fuels management treatments in this area are focused outside of 150-foot defensible space areas for structures. The activities include the removal of flammable vegetation (brush and understory) by preferentially removing exotic plants; thinning, pruning, and limbing of vegetation to remove fire ladders; limbing up of oak overstory; pruning out of dead material; and thinning out continuous areas of brush using a mosaic pattern. Eucalyptus trees are thinned to obtain 6 to 12 trees per 1,000 square feet. Proposed vegetation management activities within the CFTN would generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR.

Table 3-9. Community Fuels Treatment Network

	VHFSZ
Existing	242
Proposed	—
Total (Acres)	**242**

City of Santa Barbara / CWPP Area

Coastal Zone Boundary

Current Vegetation Management Units

Community Fuels Treatment Network

Proposed Vegetation Management Units

Proposed Additions

0 1,000 2,000 Feet

SOURCE: City of Santa Barbara

COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

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FIGURE 3-8

Proposed Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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3.4.5 Neighboring Jurisdictions Vegetation Management Areas

The CWPP proposes to maintain the 2004 Wildland Fire Plan activities in relation to neighboring jurisdictions. Both the MFPD and the Santa Barbara County Fire Department (SBCFD) have fuel mitigation strategies independent of SBFD, to reduce the potential or slow the progress of wildfires. These programs include fuel reduction through identified VMUs, structural hardening (i.e., defensible spaces), and emergency preparedness. The SBFD coordinates vegetation management efforts with the MFPD and SBCFD in areas adjacent to the City, where feasible. Proposed vegetation management activities performed by the SBFD would generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR.

3.5 Proposed Vegetation Management Methods

The 2004 Wildland Fire Plan outlined a suite of vegetation management methods to reduce wildland fuel hazards. The CWPP proposes to maintain the same general vegetation management methods as described in the 2004 Wildland Fire Plan and PEIR. Before commencing any work, SBFD develops a work plan that identifies the specific areas to be treated, the best methods to be used based on site-specific circumstances, and any subsequent monitoring. Treatment area identification and vegetation management methods are also informed by a site-specific biological evaluation conducted prior to operations. VMUs are prioritized based on the level of hazard; however, implementation of fuels reduction work in VMUs has largely been dependent on funding, recent wildfire activity (e.g., recently burned VMUs would not be prioritized for treatment as fuel loads would be low), and, in the case of private property, landowner permission, as well as dependent on slopes, exposures, vegetation types, and access (SBFD and CDD 2004). Different vegetation management techniques can be used, depending on vegetation type, location, condition, and configuration. Given the dynamic nature of vegetation, a single treatment technique or management prescription may not be appropriate for one site over time. Vegetation management techniques will be identified by SBFD personnel during project development and will be dictated by site-specific conditions and effort needed to meet identified vegetation management standards.

In general, vegetation management techniques can be classified into four categories:

- Manual (e.g., hand pulling, cutting, planting)
- Mechanical (e.g., mowing, masticating, felling, yarding)
- Biological (e.g., grazing)
- Prescribed fire (e.g., burn piles, broadcast burning)

Herbicide can also be used to manage vegetation for wildfire hazard mitigation purposes and is typically applied to control re-sprouting of cut vegetation or to control undesirable plant species. Historically, the City has not used herbicide during implementation of vegetation management projects in VMUs or in the CFTN. The City's Integrated Pest Management Strategy also seeks reduce or eliminate the use of chemicals in treating vegetation. Herbicide use is therefore not proposed as a vegetation treatment technique in the CWPP.

The following discussion presents each of the vegetation management techniques that may be implemented, including information regarding equipment, application, timing, limiting factors, special considerations, and best management practices (BMPs). Selection of a qualified and trained contractor, appropriate training, scheduling, and supervision to carry out vegetation management treatments and any associated BMPs are also key components of an effective vegetation management program. Preparation of the appropriate plans, obtaining necessary permits, and adherence to these standards is required.

3.5.1 Manual Vegetation Management Methods

Manual or hand labor involves pruning, cutting or removal of trees or other vegetation by hand or using hand-held equipment. Other hand labor treatments involve removing dead wood, piling material, and spreading chips/mulch. Hand labor is most effective in small treatment areas or areas with difficult access where the use of heavy equipment is infeasible. Hand labor also allows for selective management or removal of targeted vegetation and is typically used in conjunction with other techniques. Manual treatment may also include multi-cutting. Multi-cutting involves cutting vegetation (using hand tools, chainsaws, weed whips, and mowers), and cut vegetation is then reduced in size by cutting into lengths no longer than 6 inches long. The multi-cut vegetation is then left on the ground within the project area no greater than 12 inches in depth. Minimal ground disturbance results using this method since the root structure of vegetation is left intact and biomass generated from vegetation treatment is left on site.

Proper training and supervision of hand labor forces is necessary to reduce the dangers to workers using sharp tools on steep and/or unstable terrain or where other environmental hazards exist. Hand tools include, but are not limited to, shovels, Pulaski hoes, McLeod fire tools, line trimmers, weed wrenches, chain saws, pruning shears, and loppers. Personal protection equipment typically includes long pants and long-sleeved shirts, gloves, safety goggles, hard hats, chaps, and sturdy boots.

3.5.2 Mechanical Vegetation Management Methods

Mechanical practices include all methods that employ motorized heavy equipment to remove or alter vegetation. Mechanical practices rearrange vegetation structures, compact or chip material, and move material to landings, staging areas, or burn piles. Mechanical equipment is usually equipped with either rubber tires or tracks, although skids and cables are also used. In some instances, two or more pieces of heavy equipment will work in concert to achieve a management standard. Mechanical equipment includes, but is not limited to, masticators, tractors, and chippers. Chippers are moved around as work occurs and placement is dependent on the ability to minimize the distance vegetation must be hauled to the chipper.

Constraints to mechanical equipment use include steep slopes, dense tree cover that prohibits travel, saturated soils, and dry, high fire hazard weather conditions where equipment use could result in ignition. Use of mechanical equipment may also result in damage to retained vegetation. Use of mechanical equipment should consider the terrain, access, vegetation type, and treatment recommendation to effectively treat vegetation and minimize impact potential. Supervision and specialized training are also necessary. The use of mechanical equipment is often done in conjunction with other treatment techniques, particularly hand labor (prior to mechanical treatment) and prescribed fire (following mechanical treatment).

3.5.3 Biological Vegetation Management Methods

Biological management includes using grazing as a method to treat grasses, shrubs, and small trees. Grazing is an effective management tool for maintaining areas previously treated with hand labor or mechanical practices. Livestock each have different grazing habits, and not all livestock are ideally suited for grazing treatments in all areas. Goats are an effective option as they will consume live or dead, tough, woody plant material.

Grazing is typically conducted in the late spring, when growth of annual grasses has slowed, and continues through the summer to reduce fine fuels prior to the onset of peak fire season. Development of site-specific grazing

management plans should be completed for proposed grazing treatments. Management plans should identify goals and implementation techniques to ensure that grazing treatments meet vegetation management standards and to minimize impacts to natural resources. Grazing management plans should also identify the optimal stocking rate and grazing duration, typically measured in pounds per acre of residual dry matter. Control of livestock movements and preventing overgrazing is also important for successful implementation.

3.5.4 Prescribed Fire Method

Prescribed fire can be used to burn piles of cut vegetation (pile burns) or over a designated prepared area (broadcast burn). Broadcast and pile burning are often implemented in conjunction with hand labor and mechanical treatment methods as a means of treating residual materials. Prescribed burning also serves to rapidly break down vegetative material and convert it to soil nutrients, reduce brood material for pests and pathogens, control invasive species, and reduce surface fuel buildup and the threat of severe wildfires. SBFD burning activities must adhere to the standards outlined by the Santa Barbara County Air Pollution Control District (SBCAPCD).

Small pile burning is typically conducted at or near the treatment area. Piles should be constructed by hand and should be free of dirt, debris, and stumps. Material should be piled soon after cutting with the butt end of branches and limbs toward the outside of the pile so that branches are overlapping and forming a series of dense layers. Piles typically range in size from 10 feet x 10 feet x 10 feet to 12 feet x 12 feet x 25 feet. The top of the pile should be covered with a small sheet of heavy paper (e.g., butcher paper) to keep the pile interior dry. One or two limbs should be placed atop the paper to keep it in place. The dry interior portion of the pile should be ignited at the appropriate time using a weed burner or other igniting tool. Alternatively, tractors or hand crews can create piles of material on flat or gently sloping ground that can be burned during wet conditions (pile burn), although the volume of fuel in the piles can produce localized heat, which may impact adjacent retained vegetation.

Broadcast burns are usually done where a maximum amount of fuel treatment can take place and can be used to control invasive species and treat cut material (slash) on the ground surface, or reduce surface and/or ladder fuels beneath tree canopies in shaded fuel breaks. Treatment boundaries are often roads, trails, or other nonburnable features, reducing the number of firebreaks that need to be created. Treatment area is typically less than 1 acre in size. This approach reduces labor costs and preparation time, and minimizes soil disturbance and the potential for soil erosion. Broadcast burns can be used in all forest types, where conditions allow for effective control.

Broadcast burning may occur throughout the year; however, it is usually conducted during the late spring months when the ground is still wet or during fall or winter after plants have completed their yearly growth cycle and their moisture content has declined. Fall burns are more closely aligned with the natural fire cycle found in California. Piles of vegetation may be burned any time after the vegetation has dried. Hand-held tools, such as drip torches, propane torches, and flares, may be used for igniting prescribed fires.

Broadcast burns must be conducted by trained fire protection personnel. Timing is critical to the use of this treatment technique due to variances in weather conditions and the necessity to time treatments to minimize impacts to plant and animal species. Fuel moisture content must be determined to assess if the treatment area is safe to burn. There are typically more appropriate burn days in the spring and early summer months when there is a greater chance of atmospheric conditions conducive to smoke dilution and dispersion.

All prescribed burning would be conducted under safe burning conditions outside of the SBFD's designated fire season and will require a California Air Resources Board-designated burn day and the development of a burn plan that will be approved by the fire chief and SBCAPCD. A pile burn plan will outline weather, topography, and

fuel within the project area; the prescribed burn objectives; the required fire organization and resources needed to control the fire; and the weather parameters under which the burn can be conducted safely and with minimal smoke disturbance.

Prescribed burning of cut vegetation would result in minimal ground disturbance. Hand tools (Pulaskis, McLeods, shovels) would be used to clear a shallow trench or line no more than 2 inches in depth around each pile, group of piles, or broadcast burn area to confine the fire and catch any burned materials that may roll downhill during burning.

Best management practices are provided in Section 3.6, Vegetation Management Best Management Practices.

3.5.5 Schedule, Staff and Equipment Estimates

The SBFD has consistently implemented the vegetation management strategies in the 2004 Wildland Fire Plan. Vegetation management work will occur during the period August 1 through April 1. Prescribed burning would only occur outside the designated fire season, which varies from year to year, but is typically June through October. Hence, prescribed burns would typically occur in the period November through May. Table 3-10 provides a summary of available data related to typical maintenance equipment, estimated noise levels, and staff level required to complete the work.

Table 3-10. Staff and Equipment Estimates (Annually)

Equipment	Noise Level (dB) At 50 feet	Staff Hours	Equipment Hours
Manual (Hand Tools) Vegetation Management Techniques			
Hand tools	-	600	40
Shovels	-		24
Pulaski hoes	-		24
McLeod fire tools	-		
Line trimmers	70		
Weed wrenches	-		
Chainsaws	85		40
Pruning shears	-		24
Loppers	-		40
Weed whips	70		40
Mowers	87		40
Pickup Truck			225
Small Dump Truck			50
Mechanical Vegetation Management Techniques			
Masticators	87	400	
Tractors	84		
Chippers	75		
Skip Loader			50
Biological Vegetation Management Techniques			
Grazing Livestock	34	100	NA

Prescribed Burn Vegetation Management Techniques			
Fire Engine		100	12
Tractors	84		50
Chippers	75		50

Source: City of Santa Barbara 2020b; EPA 1971.
Note: dB = decibels.

3.6 Vegetation Management Project Design Features and Best Management Practices

The CWPP proposes to include the project design features (PDFs) and BMPs identified in Table 3-11 to eliminate or reduce potential environmental effects from vegetation maintenance. BMPs are further described in Appendix E, Vegetation Management Standard and Techniques of the CWPP. The PDFs/BMPs may be applicable to each vegetation management method depending on the site-specific circumstances.

Table 3-11. Project Design Features and Best Management Practices

Resource Area	Focus	CWPP Proposed Best Management Practices
Air Quality	Public Notifications for Prescribed Burning:	• One to three days prior to the commencement of prescribed burning operations, the project proponent would: (1) Post signs along the closest public roadway to the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or smoke concerns. (2) Publish a public interest notification in a local newspapers or other widely distributed media source describing the activity, timing, and contact information. (3) Send the local county supervisor and county administrative officer (or equivalent official responsible for distribution of public information) a notification letter describing the activity, its necessity, timing, and measures being taken to protect the environment and prevent prescribed burn escape. This PDF applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.
Air Quality	Comply with Air Quality Regulations:	• The project proponent would comply with the applicable air quality requirements of the SBCAPCD as set forth in Rule 401. This PDF applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.
Air Quality	Submit Smoke Management Plan	• The project proponent would submit a smoke management plan for all prescribed burns, in accordance with SBCAPCD rules and regulations, and in accordance with 17 CCR Section 80160. Burning will only be conducted in compliance with the burn authorization program of the SBCAPCD. This PDF applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.
Air Quality	Create Burn Plan	• The project proponent would create a burn plan using the CAL FIRE burn plan template for all prescribed burns. The burn plan will include a fire behavior model output of First Order Fire Effects Model and BEHAVE or other fire behavior modeling simulation and that is

Resource Area	Focus	CWPP Proposed Best Management Practices
		performed by a qualified fire behavior technical specialist that predicts fire behavior and calculates consumption of fuels, tree mortality, predicted emissions, greenhouse gas emissions, and soil heating. The project proponent would minimize soil burn severity from broadcast burning to reduce the potential for runoff and soil erosion. The burn plan would be created with input from a qualified technician or certified state burn boss. This PDF applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.
Air Quality	Avoid Naturally Occurring Asbestos	• The project proponent would avoid ground-disturbing treatment activities in areas identified as likely to contain naturally occurring asbestos (NOA) per maps and guidance published by the California Geological Survey, unless an Asbestos Dust Control Plan (17 CCR Section 93105) is prepared and approved by the SBCAPCD. Any NOA-related guidance provided by the SBCAPCD will be followed. This PDF applies to all treatment activities and treatment types, including treatment maintenance.
Air Quality	Prescribed Burn Safety Procedures	• Prescribed burns planned and managed by non-CAL FIRE crews would follow all safety procedures required of CAL FIRE crew, including the implementation of an approved Incident Action Plan (IAP). The IAP would include the burn dates, burn hours, weather limitations, the specific burn prescription, a communications plan, a medical plan, a traffic plan, and special instructions such as minimizing smoke impacts to specific local roadways. The IAP would also assign responsibilities for coordination with the appropriate air district, such as conducting on-site briefings, posting notifications, weather monitoring during burning, and other burn-related preparations. This PDF applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.
Biological	Biological Resources Evaluation	• SBFD will perform a site-specific biological evaluation including a reconnaissance site visit by a City qualified biologist not more than two weeks prior to operations. The evaluation will address the occurrence or potential occurrence of sensitive vegetation communities, special-status species, aquatic resources, and nesting birds. If any creeks occur within the work area, the biologist will map the top of bank.
Biological	Work Plan	• SBFD will develop a site specific Work Plan that will incorporate the results of the biological evaluation. The Work Plan shall be finalized not more than five days prior to the start of operations. The Work Plan may include measures related to special status species avoidance, additional site surveys/documentation and minimizing impacts to riparian habitat and sensitive vegetation communities.
Biological	Removal of Invasive Exotic Plants	• During the site-specific biological evaluation, the SBFD would identify invasive exotic plants (such as Pampas Grass [*Cortaderia* sp.]) for removal consistent with the City's Integrated Pest Management Plan and the 2004 Wildland Fire Plan. To the extent feasible, the vegetation management would preferentially remove exotic plants that pose a fire hazard, and generally remove exotic plants in the work area as the opportunity arises
Biological	Nesting Bird Protection	• Vegetation management work would be completed outside of the defined nesting season for birds (i.e., before February 1 and after August 31). If vegetation management work must occur within the project areas during the breeding season (April 1 to July 30), a site

Resource Area	Focus	CWPP Proposed Best Management Practices
		survey would be conducted by a qualified wildlife biologist to determine any presence of nesting birds. • The qualified biologist will establish a no-disturbance buffer around any nest located during the survey. The extent of the buffer will be determined based on the natural history traits of the nesting species, at the biologist's discretion. Vegetation management activities will not occur within the buffer while the nest remains active..
Biological	Oak Tree Protection	• Vegetation management within 50 feet from the outer edge of the tree canopy would be the minimum necessary to meet SBFD requirements and would be designed to minimize erosion and impacts on habitat values. • No coast live oak trees with one trunk larger than 4 inches in diameter at 4 feet, 6 inches in height above grade will be removed. • Oak saplings less than 4 inches in diameter at 4 feet, 6 inches in height above grade will be protected from damage or cutting during the work. • To the extent feasible, other healthy native understory components such as toyon, lemonade berry and currant will be retained within oak woodlands, as long as they do not create fire ladders. • Lower oak branches (up to 6 feet above grade in height) of oaks should be thinned to eliminate potential fire ladders. • Dried non-native grasses, dead branches, and non-native resinous woody species should be removed in oak tree understory. • Wood chips should not be spread more than 6 to 8 inches in depth, and all chip piles shall be kept at least 5 feet from the outer edge of the tree canopy. • Removed oak limbs should be clean-cut, using the best industry standard practices.
Biological	Sensitive Habitat	• Within the Coastal Zone, vegetation treatment within environmentally sensitive habitat areas (ESHAs), wetlands, and creeks, and within ESHA, wetland, and creek buffers shall be avoided, and where full avoidance is not possible, shall minimize impacts to ESHAs to the extent feasible consistent with Policy 4.1-21 of the Coastal Land Use Plan. • Vegetation treatment within City-designated creek channels outside of the Coastal Zone should be limited to the removal of dead brush that is easily accessible and the removal of exotic or invasive species within a 25-foot buffer along the top of banks, as long as the work does not cause damage to the bank structure. • As a component of the site-specific work plan, for work within a creek channel (both Coastal Zone and non-Coastal Zone areas), a vegetation management plan should be prepared by a qualified biologist and peer reviewed by the City Parks Division. • No placement of cut vegetation should occur within a 25-foot buffer along the top of banks. The top of bank should be defined by the first bank out from the present, active stream channel (denoted by an incised bank and cobble bed). The 25-foot buffer should be measured out from the top of bank, marked in the field by an approved biologist and the City project manager prior to any vegetation management work occurring in drainage areas. • Equipment should not be placed within sensitive habitat areas.

Resource Area	Focus	CWPP Proposed Best Management Practices
		• Vehicles and equipment should arrive at the treatment area clean and weed-free as verified by the SBFD. • Trees should be pruned according to International Society of Arboriculture and American National Standards Institute A300 standards. • Retained trees and vegetation should be protected from tool and equipment damage. • Tools should be serviced and fueled only in areas that will not allow grease, oil, fuel, or other hazardous materials to pass into streams or retained vegetation. • All refuse, litter, trash, and non-vegetative debris resulting from vegetation treatment operations, and other activity in connection with vegetation treatment operations should be removed from the treatment area and properly disposed of. • Chipped material should not be placed or deposited into any streambeds. • Prior to turn-out, streams and watercourses in potential grazing areas should be identified and assessed, and exclusionary fencing should be installed where necessary. • Grazing activities should be monitored in riparian areas to minimize the potential for stream bank damage, soil compaction, and soil deposition into streams and watercourses. • Prior to grazing in riparian areas, thresholds should be identified that would trigger a cessation of grazing activity. • Grazing in unstable slope areas or implement measures should be avoided to minimize impacts to slope stability (e.g., reducing herd size to retain vegetation, avoiding grazing where saturated soil conditions exist). • The timing and level of grazing practices should be considered to promote plant recruitment (e.g., timing prior to seed set of annual grasses to promote perennial species establishment). • The spread of invasive plants and pathogens should be minimized through the use of quarantine periods; holding areas; clean stock water; and personnel, equipment, and vehicle sanitation. • Retained trees and vegetation should be protected from tool and equipment damage.
Hazards/Health & Safety	Worker Training Safety	• Equipment operators and project personnel should have appropriate personal protective equipment and be properly trained in equipment use. • As necessary, tools should be sanitized between project areas to prevent the spread of pathogens.
Noise	Construction Hours	• Work would include weekdays between the hours of 8:00 a.m. to 5:00 p.m. No work will be completed on weekends or designated holidays unless fire conditions (e.g., red flag warning) dictate immediate action.
Transportation	Traffic Circulation and Safety	• Haul trucks entering or exiting public streets shall yield to the public traffic at all times. • All project-related staging of vehicles should be kept out of the adjacent public roadways and should occur on site or within other off-street areas. • Traffic control and associated Traffic Control Plans should be prepared for any lane closure, detour, or other disruption to traffic circulation, including bicycle and pedestrian trails. Bicycle and pedestrian trails

Resource Area	Focus	CWPP Proposed Best Management Practices
		should remain open, to the greatest extent possible, during vegetation management activities or re-routed to ensure continued connectivity. • Bus route and/or a bus stop access impacts associated with vegetation management activities would be coordinated with the Santa Barbara MTD.
Water Quality	Litter Removal	• All refuse, litter, trash, and non-vegetative debris resulting from vegetation treatment operations, and other activity in connection with vegetation treatment operations should be removed from the treatment area and properly disposed of. • Tools should be serviced and fueled only in areas that will not allow grease, oil, fuel, or other hazardous materials to pass into streams or retained vegetation.
Wildfire	Fire Safety	• Appropriate fire safety measures should be implemented. • For safety purposes, necessary signage alerting the public to active operations should be provided.

3.7 Evacuation Planning

Evacuation during a wildfire in Santa Barbara is not necessarily directed by the fire department, except in specific areas where fire personnel may enact evacuations on-scene. The Santa Barbara County Sheriff's Department, SBPD, and other cooperating law enforcement agencies have the 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, the City Fire, Police, and Public Works Departments have worked with a County Pre-Fire Mitigation Task Force to address wildland fire evacuation planning for Santa Barbara. The task force also received input from the MFPD, Carpinteria/Summerland Fire Protection District, California Highway Patrol, the California Department of Transportation, as well as various homeowners' associations throughout the Santa Barbara area (Dudek 2014).

Through supportive measures, the Task Force resulted in an evacuation preplan that outlines the SBFD response routes, probable public evacuation routes, traffic control points, and staging areas. The interagency plan would be used by law enforcement, fire, and public works agencies during a wildfire evacuation. However, based on actual fire conditions occurring in the field, the preplans may be modified at the time of the incident (Dudek 2014).

The evacuation preplans separated the HFHA, including the Extreme Foothill, Foothill, Coastal, and Coastal Interior Zones (proposed VHFHSZ and HFHSZ, respectively), into evacuation areas or "evacuation blocks." The development of the evacuation blocks was determined by landforms, primarily major canyons, and road systems. A total of 26 blocks were identified within the City. The evacuation blocks are based on a variety of features, including watersheds, terrain including ridgelines, population areas, significant landscape transitions including roadways, and vegetation. The 2014 Wildland Fire Evacuation Procedure Analysis Plan (Dudek 2014) recommended maintaining existing preplan evacuation block maps, which are presented in Figure 3-9, Wildfire Evacuation Preplanning Blocks. The 2014 Plan also outlined management recommendations for enhancing evacuation capabilities. The proposed CWPP does not include construction or physical impacts to the environment including, but not limited to, road widening for the purposes of revising the City's evacuation plans, and as such, evacuation planning is noted as part of the CWPP project description for public awareness purposes only. Future evacuation enhancements that could result in physical impacts to the environment may require additional environmental analysis.

3.8 Water Supply

Water systems that supply adequate quantity, pressure, and duration are essential to structure protection. Without adequate water supply, the ability to safely protect structures and suppress fires is compromised. The Fire Department Water Supply and Fire Hydrant standards (City Municipal Code, Ordinance 5920) outline the City's water supply requirements. The Public Works Department has developed an extensive water distribution system that consists of many components, including reservoirs, pump stations, pressure zones, water mains, and fire hydrants. Fire hydrants (with fire flow ratings) and water reservoirs important for fire suppression were identified during development of the 2004 Wildland Fire Plan (Figure 3-10, City Water Mains and Fire Hydrants).

A portion of the Extreme Foothill Zone/proposed VHFHSZ is not connected to the City water system. Most of the water system on West Mountain Drive onto Coyote Road is owned and operated by Montecito Water District. A small section of West Mountain Drive in this area is not serviced by the City or Montecito Water District and does not have fire hydrants. This area has additional requirements included in the City's Municipal Ordinance (No. 5920). Specifically, for buildings, or portions of buildings, constructed within the boundaries of Zone 2, a water tank with a minimum capacity of 10,000 thousand gallons is required to be provided for fire protection purposes only and designated, installed, and maintained in a manner approved by the Fire Code Official. These individual projects would be evaluated on a project-specific level at the time of permitting.

3.9 Communications

California is comprised of 58 counties considered Operational Areas (OA). An OA consists of all political subdivisions within a county's geographical area. It provides communication and coordination between local jurisdictions and California Office of Emergency Services Regions. Coordination between the operational area and local government is accomplished through the OA Emergency Operations Center (City of Santa Barbara 2013).

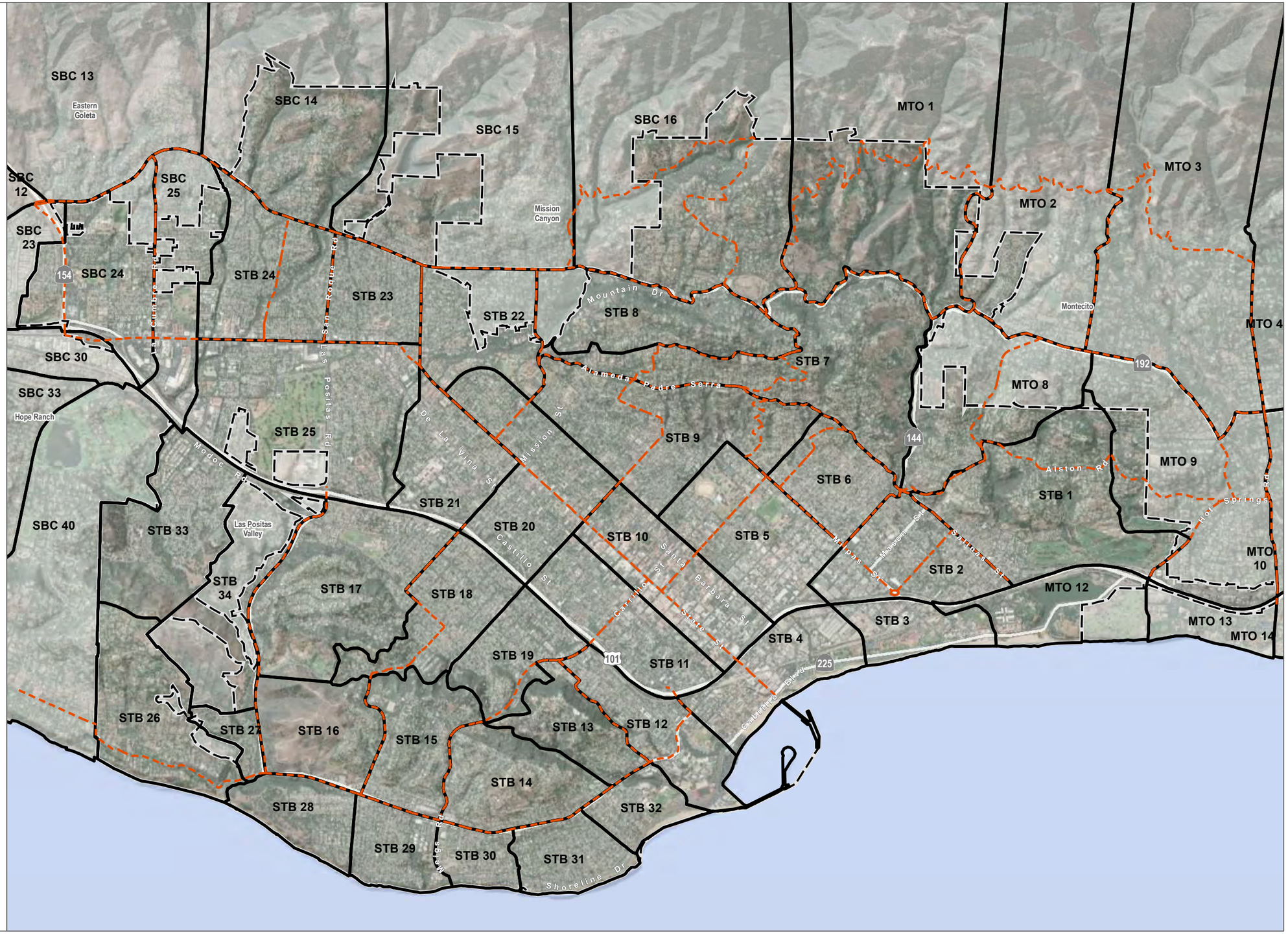
Radio communications systems are critical to fire department response capabilities and the life safety of firefighters, and the public depends on reliable, functional communication tools that work in harsh environments. The SBFD currently operates an analog radio system, which will require an upgrade to a digital platform to comply with Project 25 (P25), a suite of standards developed to provide digital voice and data communication systems suited to public safety and first responders.

The City's current radio system generally functions well, though there are some interoperability issues between this system and other agency systems that operate on digital platforms. Radio coverage in the City is affected by terrain and the current placement of repeaters, which are devices that allow radio communications to be broadcast over greater distances and variable terrain. There are several "dead spots" in the City where radio communications do not work as radio signals are blocked by steep slopes, narrow canyons, or ridgelines. Additionally, the City's radio communications system components are aging and will require routine maintenance of components over time. Replacement of communication facilities may involve replacement of existing support poles with similar size and material new poles, replacement of analog technology systems to support more advanced Internet Protocol (IP)-based networks ground-mounted or pole mounted and other installation of conduit. Maintenance activities would generally be limited to a specialized work truck and two maintenance workers. Staging of equipment would occur on the pad of the communication equipment or on already disturbed and/or paved areas. As with vegetation maintenance activities, the SBFD would develop a work plan that identifies the specific areas to be affected, the best methods to be used based on site-specific circumstances, and any subsequent monitoring. Funding for communication upgrades is not available at this time; however, it could be secured during the forecasted life of the proposed CWPP.

City of Santa Barbara / CWPP Area

Wildland Evacuation Preplanning Blocks

Wildland Evacuation Routes



SOURCE: County of Santa Barbara

COMMUNITYWILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

DUDEK

FIGURE 3-9

Wildfire Evacuation Preplanning Blocks

City of Santa Barbara Community Wildfire Protection Plan

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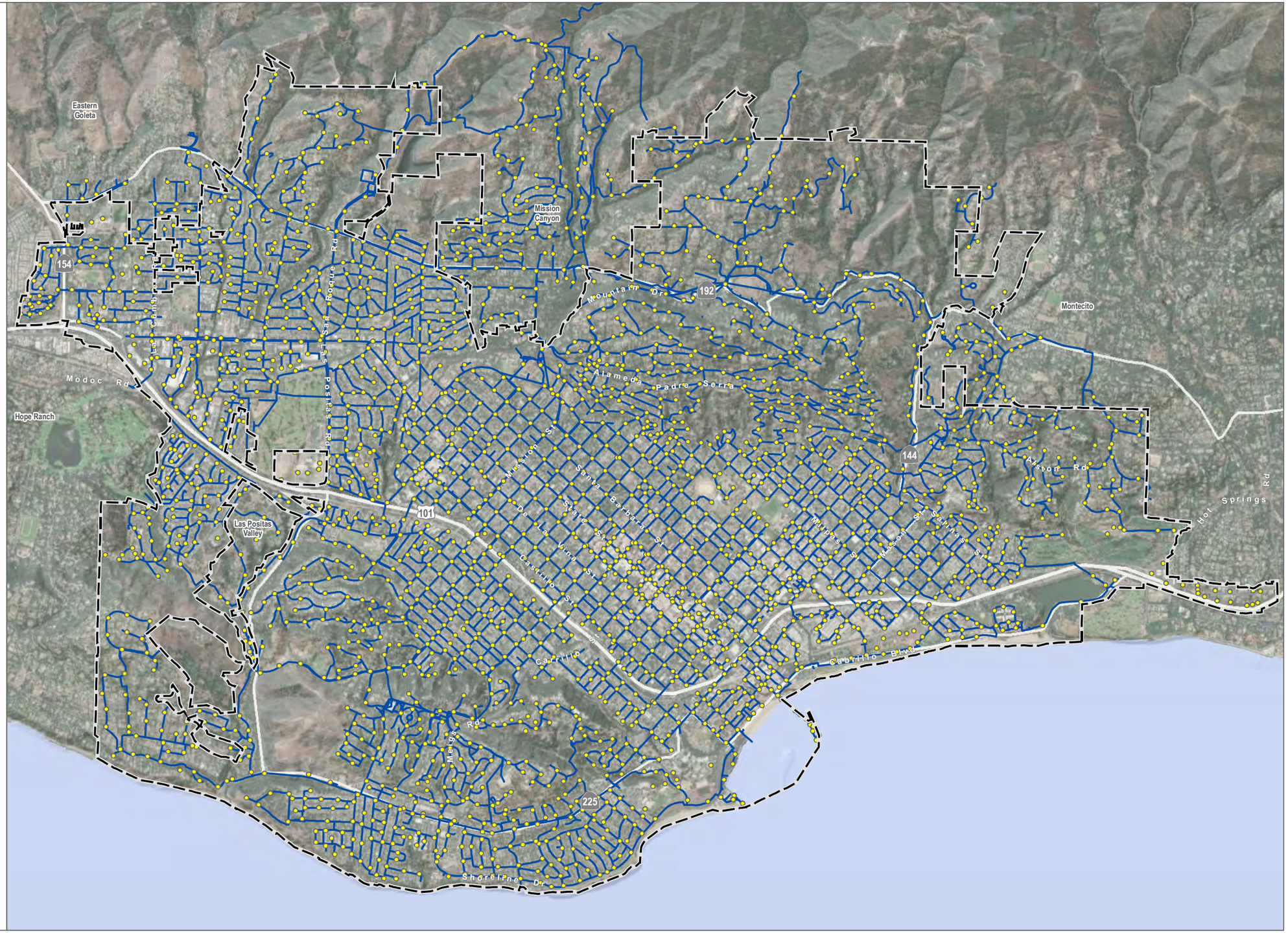
City of Santa Barbara / CWPP Area

City Water Main

City Fire Hydrant



0 1,000 2,000 Feet

SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

DUDEK

FIGURE 3-10

Water Mains and Fire Hydrants

City of Santa Barbara Community Wildfire Protection Plan

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3.10 Public Review Process

Required Permits and Approvals

The City of Santa Barbara as lead agency is responsible for CEQA clearance. A public agency, other than the lead agency, that has discretionary approval over the project is known as a "responsible agency," as defined by the CEQA Guidelines (14 CCR 15000 et seq.). The responsible agencies and their corresponding approvals for this project includes CAL FIRE. CAL FIRE will provide grant funding for the proposed project. California Department of Fish and Wildlife is a responsible agency and requires permits for activities within designated streambeds. The SBFD currently has a streambed alteration agreement for vegetation management activities within streambeds that would expire within the lifetime of the proposed project and would be required to be renewed.

3.11 References

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4 Environmental Analysis

The following environmental analyses provide information relative to 16 environmental topics as they pertain to the Community Wildfire Protection Plan (CWPP or proposed project). Each section of this chapter describes existing environmental and regulatory conditions, presents the criteria used to determine whether an impact would be significant, analyzes significant impacts, identifies mitigation measures for each significant impact, discusses the significance of impacts after mitigation has been applied, discusses cumulative impacts, and provides a list of references consulted in preparation of the analysis.

This chapter includes a separate section for each of the following issue areas:

- Section 4.1, Aesthetics
- Section 4.2, Air Quality
- Section 4.3, Biological Resources
- Section 4.4, Cultural Resources
- Section 4.5, Geology and Soils
- Section 4.6, Greenhouse Gas Emissions
- Section 4.7, Hazards and Hazardous Materials
- Section 4.8, Hydrology and Water Quality
- Section 4.9, Land Use and Planning
- Section 4.10, Noise
- Section 4.11, Population and Housing
- Section 4.12, Recreation
- Section 4.13, Transportation
- Section 4.14, Tribal Cultural Resources
- Section 4.15, Public Services and Utilities
- Section 4.16, Wildfire

Issues for which effects were found not to be significant as discussed in the CWPP Initial Study and included as Appendix A are agricultural and forestry resources, energy, mineral resources, and population and housing. However, at the Scoping Hearing on July 16, 2020, the City Planning Commission determined that population and housing should be addressed in the Program Environmental Impact Report (PEIR). Consistent with the Planning Commission direction, population and housing is analyzed in this PEIR. Effects to population and housing were found not to be significant. These environmental topics are discussed in Section 5.4, Effects Found Not to Be Significant, of Chapter 5, Other CEQA Considerations, of this PEIR, and are not discussed in further detail pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15128 (14 CCR 15000 et seq.). Chapter 6 analyzes alternatives, and Chapter 7 includes the list of preparers.

Methodology

Current activities conducted by the Santa Barbara Fire Department under the 2004 Wildland Fire Plan were analyzed in the Final Program Environmental Impact Report for the 2004 Wildland Fire Plan (SBFD and CDD 2004), which are incorporated herein by reference. This PEIR only addresses new proposed policies and/or actions that could result in physical impacts to the environment, which include the following categories:

- Proposed modifications to the High Fire Hazard Area (HFHA)
- Proposed modifications to the Vegetation Management Units (VMUs)
  - Defensible space
  - Roadside clearing
  - City VMUs
  - Community Fuels Treatment Network (CFTN)
- Proposed modifications to the Vegetation Management Methods
- Communication Facility Maintenance

The proposed CWPP also includes several other policies and actions that would not involve any physical impacts to the environment, including public education, interagency coordination, acquisition of funding, data gathering and management, acquisition of firefighting and communications equipment, and evacuation planning. Where still applicable, mitigation measures from the 2004 PEIR have been incorporated to substantially lessen the significant environmental effects of the proposed project and new mitigation measures applied where feasible and as needed to substantially lessen the proposed project's significant environmental effects.

Analysis Format

This PEIR assesses how the proposed project would impact the issue areas listed above. Each environmental issue addressed in this PEIR is presented in terms of the following subsections:

- **Introduction.** Discusses the resource area to be evaluated and describes the methodology used for the analysis, including any surveys and documentation reviewed to conduct the analysis of existing conditions and potential impacts.
- **Existing Conditions.** Describes the existing setting on or surrounding the project site that may be subject to change as a result of implementation of the project. This setting describes the conditions that existed when the Notice of Preparation (NOP) was sent to responsible agencies and the State Clearinghouse.
- **Relevant Plans, Policies, and Ordinances.** Describes relevant federal, state, and local policies and regulations pertaining to a particular issue area.
- **Thresholds of Significance.** Provides criteria for determining the significance of project impacts for each environmental issue.
- **Impacts Analysis.** Provides a discussion of the characteristics of the proposed project that may have an effect on the environment, analyzes the nature and extent to which the proposed project is expected to change the existing environment, and indicates whether the project impacts meet or exceed the levels of significance thresholds.
- **Mitigation Measures.** Identifies mitigation measures to reduce significant adverse impacts to the extent feasible.

- **Level of Significance after Mitigation.** Provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, and adverse environmental impacts that are not significant.
- **Cumulative Impacts.** Provides a discussion of the past, present, and reasonably foreseeable projects relevant to each resource analysis and documents cumulatively considerable environmental impacts that cannot be feasibly mitigated or avoided; cumulatively considerable environmental impacts that can be feasibly mitigated or avoided; and environmental impacts that are not cumulatively considerable. Mitigation measures to reduce cumulative impacts are included where necessary.
- **References**. Lists the sources consulted during preparation of the PEIR.

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4.1 Aesthetics

This section describes the existing aesthetics and visual resources setting of the City of Santa Barbara (City) Community Wildfire Protection Plan (CWPP) and vicinity, identifies associated regulatory requirements, evaluates potential impacts to aesthetics and visual resources that could result from the CWPP, and identifies mitigation measures related to implementation of the proposed project. As described herein, the proposed CWPP could result in a visual change primarily related to additions to the existing High Fire Hazard Area (HFHA), which includes four zones: (1) Extreme Foothill Zone, (2) Foothill Zone, (3) Coastal Zone, and (4) Coastal Interior Zone. Existing and new additions to the HFHA will be consolidated and renamed as the City's Very High Fire Hazard Severity Zone and High Fire Hazard Severity Zone. Vegetation Management Units (VMUs) would be modified and in some cases expanded. Management activities in VMUs would include trimming and removal of vegetation.

4.1.1 Existing Conditions

The City contains a wide variety of aesthetic qualities and visual resources. According to the City's General Plan, the City's visual resources are considered both as areas that possess aesthetic qualities attributable to natural or structural amenities, and the places from which scenic areas can be viewed. For example, the proximity of the Pacific Ocean and the Santa Ynez Mountains and foothills create a unique visual setting. As identified in the General Plan, scenic resources in the City include local creeks and their riparian environment, hillsides and their native vegetation, the shoreline and its related amenities, specimen and street trees, and open space. The City's Scenic Resources Map identifies local scenic resources such as riparian/creekside open space, hillsides with slopes of 30% or greater, areas of "unique visual sensitivity," Stone Pine street trees (*Pinus pinea*) along Anapamu Street and historic and specimen trees protected by City ordinance. Significant open space, natural landforms, and other visual features are also identified on the scenic resources map. In addition, and when considered in conjunction with the natural surroundings, the architectural character in the City is an important visual resource. The presence of farms and ranches also yields significant aesthetic benefits (City of Santa Barbara 2011).

The General Plan contains an inventory of visual resources, and a summary of aesthetic and visual resources throughout the City is included below. The existing visual setting of the proposed CWPP was documented via a photo survey. Photo locations are depicted on Figure 4.1-1, Existing Conditions and Surrounding Area: Key Map. Examples of available views of scenic resources and other visual elements within and near the CWPP area are included in Figures 4.1-2a through 4.1-2d.

Creeks

Mission, Arroyo Burro, San Roque and Sycamore creeks constitute the major creek systems within the City. The creeks, which provide drainage from the mountains and hills to the sea, are largely natural in appearance and thus provide visual relief from the built environment and contribute significantly to the aesthetic character and quality of the City, while also serving important ecological functions. The creeks also provide the potential for aesthetic enhancement of recreational, residential, and commercial areas.

Hillsides

Major hillside topography provides a transition zone between residential development and the natural mountain areas. Slopes that are 30% or greater are identified as a significant visual resource in the City. Hillside areas are valued for their elevated terrain and natural character coupled with viewpoints and scenic vistas within the hillside

areas that provide views of both the ocean and the mountains. In particular, the Foothill neighborhood in the northeastern portion of the City provides dramatic views of the Santa Ynez Mountains and the ocean; and the Mesa area possesses steep, wooded hillsides that serve as a backdrop for much of the City's downtown area, as well as scenic vistas of the City and the surrounding area. Existing hillside development interrupts the integrity of some of these views.

Shoreline

The shoreline, harbor, and waterfront areas are key aesthetic resources, as the City's location on the coast is fundamental to the visual character of the City. From the beaches, views of the ocean and the islands, with sailboats in the harbor, are dominant visual elements. The shoreline is designated as an area of "unique visual sensitivity" on the City's Scenic Resources map. Scenic corridors providing views of the hills and mountains, as seen from the beach and Cabrillo Boulevard, are also valuable resources along the shoreline.

Specimen and Street Trees

Trees throughout the City provide visual relief and add to the character of the City. While trees throughout the City contribute to this general visual resource, the City's Municipal Code protects certain trees throughout the City that have been designated as an historic or specimen tree by the City Council. Appendix B of the General Plan Environmental Resources Element provides a list of trees that are protected under this ordinance. Additionally, the City's 2014 Urban Forest Management Plan (City of Santa Barbara 2014) identifies additional City-designated specimen and historic trees that are protected.

Open Space

"Significant" open space and natural landforms protected by the General Plan Open Space Element (1972) include the ocean, mountains, and major hillsides. Significant areas of open space and/or visual features are designated on the City's Scenic Resources Map.

Scenic Highways

California's Scenic Highway Program was created by the Legislature in 1963. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. The status of a proposed state scenic highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway. According to the California Department of Transportation (Caltrans), there is one officially designated scenic highway within City limits (Caltrans 2019): a small segment of State Route (SR) 154 (also known as San Marcos Pass Road), (officially designated in 1968) (Cal Trans 2019).

Although not identified by Caltrans, two additional secondary state highway routes are designated by the City's General Plan as potential state scenic highways: Cabrillo Boulevard (former SR 225, which Caltrans transferred to the City in 2014) from US Route 101 (Route 101) to Castillo Street, and Sycamore Canyon Road (SR 144) from Alameda Padre Serra to Stanwood Drive; Stanwood Drive to Mission Ridge Road (192) where it intersects with Mountain Drive; and Mountain Drive (leaving 192, which continues on Foothill Road) to the Old Mission on Los Olivos Street. Additionally, the City has established a City Scenic Route designation for Shoreline Drive from Castillo Street to the end of Shoreline Park (City of Santa Barbara 2011).

City of Santa Barbara / CWPP Area

Photo Point

Vegetation Management Units (VMU) (1-50)

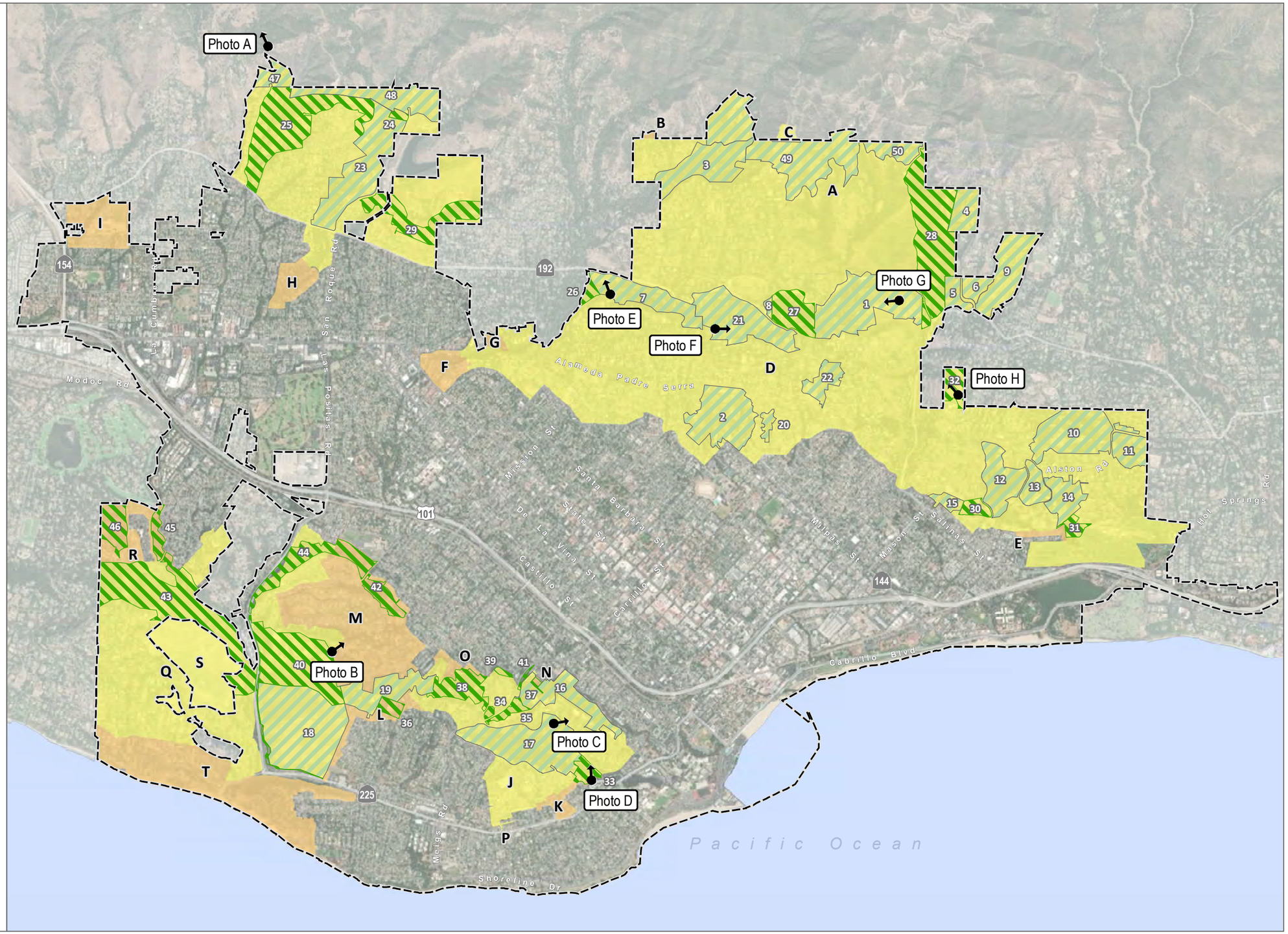
Existing VMU

Proposed VMU

High Fire Hazard Area (HFHA) (A-T)

Existing HFHA

Proposed HFHA



0 1,000 2,000 Feet

SOURCE: ESRI World Imagery, City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

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FIGURE 4.1-1

Existing Conditions and Surrounding Area: Key Map

City of Santa Barbara Community Wildfire Protection Plan

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Photo A: View looking northwest toward foothills and the Santa Ynez Mountains northwest of the project area.

Photo B: View looking northeast across the City, toward foothills and the Santa Ynez Mountains.

FIGURE 4.1-2a

Existing Conditions and Surrounding Area

City of Santa Barbara Community Wildfire Protection Plan

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Photo C: View looking northeast across the City, toward hillside residential areas and the Santa Ynez Mountains.

Photo D: View looking north across the City, toward hillside residential areas and the Santa Ynez Mountains.

FIGURE 4.1-2b

Existing Conditions and Surrounding Area

City of Santa Barbara Community Wildfire Protection Plan

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Photo E: View looking northwest toward Santa Barbara Tennis Club, foothills and the Santa Ynez Mountains.

Photo F: View looking east along a local road within a High Fire Hazard Area and Vegetation Management Unit.

FIGURE 4.1-2c

Existing Conditions and Surrounding Area

City of Santa Barbara Community Wildfire Protection Plan

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Photo G: View looking west toward hillside residential areas, foothills and the Santa Ynez Mountains.

Photo H: View looking northwest toward hillside residential areas, foothills and the Santa Ynez Mountains.

FIGURE 4.1-2d

Existing Conditions and Surrounding Area

City of Santa Barbara Community Wildfire Protection Plan

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Of the scenic routes identified above, the City-designated potential state scenic highway, Sycamore Canyon Road (SR 144)/Stanwood Drive (SR 192)/Mountain Drive/Los Olivos Street, passes through the proposed Very High Fire Hazard Severity Zone (existing Extreme Foothill and Foothill). As stated in the General Plan Scenic Highways Element, this route "runs primarily through rural residential areas of extraordinary scenic value, which should be protected and enhanced for the residents of Santa Barbara as a semi-rural scenic highway." The Scenic Highways Element also states the essence of this highway as a scenic route is its exposure to quiet hillsides, mountainous terrain, natural vegetation, and beautiful views available in Santa Barbara's foothills (City of Santa Barbara 2011). Although the City has indicated that the route may qualify for state scenic highway designation, the City has not prepared a corridor protection program for State's consideration concerning formal designation.

Scenic Vistas

The City has numerous scenic resources and scenic vistas which are identified on the City's Scenic Resources Map. In particular, elevated views from hillside areas toward the ocean or mountains, views of the City and the surrounding area from the Mesa, significant open space areas, and panoramic views from parks or other public lands are identified by the General Plan as scenic vistas that should be protected and maintained for the enjoyment of the public.

4.1.2 Relevant Plans, Policies, and Ordinances

State

California Scenic Highway Program

The California State Legislature created the California Scenic Highway Program in 1963 with the intent "to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment." The state laws that govern the Scenic Highway Program are Sections 260 through 263 of the Streets and Highways Code. A highway may be designated scenic based on the natural landscape visible by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the views of the highway. The Scenic Highway Program includes both officially designated scenic highways and highways that are eligible for designation. A highway may be designated as scenic based on aesthetic quality of viewable landscape, extent of views upon the natural landscape, and the degree to which development impedes these views. It is the responsibility of local jurisdictions to apply for scenic highway approval, which requires the adoption of a Corridor Protection Program (Caltrans 2011).

As discussed in Section 4.1.1, state scenic highways in the City include the officially designated SR 154 and eligible Route 101.

Local

City of Santa Barbara General Plan

Environmental Resources Element

The City's General Plan Environmental Resources Element contains the following goals and policies related to aesthetics and visual resources that may be applicable to the project.

ER29 Visual Resources Protection. New development or redevelopment shall preserve or enhance important public views and viewpoints for public enjoyment, where such protection would not preclude reasonable development of a property.

Possible Implementation Actions to be Considered

ER29.2 Evaluation Criteria. In evaluating public scenic views and development impacts at a particular location, the City shall consider;

a) The importance of the existing view (i.e., whether a view contains one or more important visual resources, has scenic quality, and is viewed from a heavily used public viewpoint, such as public gathering area, major public transportation corridor or area of intensive pedestrian and bicycle use);
b) Whether a proposed change in the existing view would be individually or cumulatively significant (i.e., substantially degrade or obstruct existing important public scenic views, or impair the visual context of the Waterfront area or designated historic resource);
c) Whether changes in the proposed action could be avoided or adequately reduced through project design changes (such as site lay-out, building design, and landscape design).

ER29.4 Vegetation Protection. Prepare guidelines and standards for removal of significant trees and for planting replacement or additional trees, and protect significant natural vegetated areas from inappropriate development.

ER30 Enhance Visual Quality. Not only retain, but improve visual quality of the city wherever practicable.

Conservation Element (contained within the Environmental Resources Element)

The City's 1979 Conservation Element outlines the aesthetic and visual resources described in Section 4.1.1. The following goals, policies, and implementation strategies may be applicable to the project.

Goals

- Restore where feasible, maintain, enhance, and manage the creekside environments within the City as visual amenities, where consistent with sound flood control management and soil conservation techniques.
- Prevent the scarring of hillside areas by inappropriate development.
- Protect and enhance the scenic character of the City.
- Maintain the scenic character of the City by preventing unnecessary removal of significant trees and encouraging cultivation of new trees.
- Protect significant open space areas from the type of development which would degrade the City's visual resources.

Policies and Implementation Strategies

1.0 Development adjacent to creeks shall not degrade the creeks or their riparian environments.
2.0 Development on hillsides shall not significantly modify the natural topography and vegetation.
    2.1 Development which necessitates grading on hillsides with slopes greater than 30% should not be permitted. The Slope Density Ordinance and Grading Ordinance should be so amended.

2.2 Performance Bonds should be required to ensure achievement of revegetation of graded areas.

2.3 Use of native or naturalized and fire retardant vegetation should be encouraged for landscaping on major cut and fill slopes where development occurs on hillsides.

2.4 All development on hillsides should be required to landscape the downslope side so as to hide or break up large surface area views of structures facing down slope.

3.0 New development shall not obstruct scenic view corridors, including those of the ocean and lower elevations of the City viewed respectively from the shoreline and upper foothills, and of the upper foothills and mountains viewed respectively from the beach and lower elevations of the City.

4.0 Trees enhance the general appearance of the City's landscape and should be preserved and protected.

4.1 Mature trees should be integrated into project design rather than removed. The Tree Ordinance should be reviewed to ensure adequate provision for review of protection measures proposed for the preservation of trees in the project design.

4.2 All feasible options should be exhausted prior to the removal of trees.

4.3 Major trees removed as a result of development or other property improvement shall be replaced by specimen trees on a minimum one-for-one basis.

4.4 Private efforts to increase the number of street trees throughout the City should be encouraged.

5.0 Significant open space areas should be protected to preserve the City's visual resources from degradation.

5.2 Parks and other public lands which provide panoramic views or scenic vistas, especially those at higher elevations, shall be protected and maintained for the enjoyment by the public.

6.0 Ridgeline development which can be viewed from large areas of the community or by significant numbers of residents of the community shall be discouraged.

Scenic Highways Element

The Scenic Highways Element of the General Plan is concerned with the development, establishment, and protection of scenic highways. Official state scenic highways are designated by the State Scenic Highways Advisory Committee after land use controls have been adopted by the local jurisdiction to protect the scenic appearance of the highway corridor, and after specific planning, design, and maintenance standards have been established by the State Department of Transportation to ensure the scenic appearance of the highway. Highways eligible for such designation are listed in the Scenic Highways Master Plan found in the California Government Code. The Scenic Highways Element is the initial step toward official designation as it establishes planning, design and maintenance standards for highways, and land use controls.

City of Santa Barbara Coastal Land Use Plan

The California Coastal Act of 1976 (Coastal Act) establishes goals and provisions for a designated Coastal Zone along the entire California coastline. The City's Coastal Land Use Plan (LUP), which includes the kind, location, density and intensity of land uses within the Coastal Zone and coastal access, and identifies coastal resource protection policies and development standards. Chapter 4.3, Scenic Resources and Visual Quality, of the Coastal LUP identifies scenic resources and methods for evaluation of impacts, as well as development standards to minimize scenic resource impacts and protect the visual quality of the Coastal Zone.

Policy 4.3-13 Tree Protection and Replacement.

A. Trees qualifying as ESHA shall be fully protected as required by the Biological Resources protection policies (Policy 4.1-1 et seq.).
B. For non-ESHA trees:
    i. Development shall be sited and designed to preserve and protect, to the extent feasible, mature trees (trees four inches in diameter or greater at four feet six inches above grade in height) and trees important to the visual quality of the property;
    ii. Mature or visually important trees should be integrated into the project design rather than removed or impacted through encroachment into the root zones; and
    iii. Where the removal of mature or visually important trees cannot be avoided through the implementation of project alternatives or where development encroachments into the root zone result in the loss or worsened health of the trees, the removed tree(s) shall be replaced on a minimum 1:1 basis. This standard can also be increased up to 10:1 depending on the type of tree removed, lot size, and size and expected survival rate of replacement trees.

Policy 4.3-14 Minimize Removal of Native Vegetation.

A. Native vegetation that meets the definition of ESHA, creek, or wetland, shall be fully protected as required by the Biological Resource policies (Policy 4.1-1 et seq.).
B. Development shall minimize removal of non-ESHA native vegetation.

Policy 4.3-15 High Fire Area Fuel Modification to Be Minimized. All new development and substantial redevelopment in HFHAs shall incorporate alternative fuel modification measures, where feasible, in order to minimize the visual resource impacts of site disturbance, removal, and thinning of natural vegetation.

City of Santa Barbara Municipal Code

Chapter 15.24 Preservation of Trees

Chapter 15.24 of the City's Municipal Code provides for the protection certain trees throughout the City, including setback trees, parking lot trees, a tree on an approved plan, or trees that have been designated as an historic or specimen tree by the City Council. As outlined in Sections 15.24.030 and 15.24.035, trees may be removed or altered without a permit if the Fire Department has ordered removal of a tree in order to maintain required defensible space or to comply with the City's Wildland Fire Plan.

Chapter 22.76 View Dispute Resolution Process

Chapter 22.76 of the City's Municipal Code provides for the protection of private scenic views and sunlight access. The chapter establishes the right for property owners to preserve scenic views and access sunlight, and establishes a process to address private view disputes related to scenic views, vegetation and sunlight access.

4.1.3 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to aesthetics would occur if the project would:

a) Have a substantial adverse effect on a public scenic vista or a private scenic vista visible to a large portion of the community.
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
d) Result in substantial grading on steep slopes or permanent substantial changes in topography.
e) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The CWPP Initial Study (Appendix A) determined that threshold d) above would have a less than significant impact with implementation of the proposed project. Therefore, this topic has been eliminated from further analysis.

4.1.4 Impacts Analysis

AES-1 Would the project have a substantial adverse effect on a public scenic vista or a private scenic vista visible to a large portion of the community?

The project setting was developed by reviewing available information on aesthetics and visual resources in the City, and specifically in the proposed CWPP area. Materials reviewed in support of the analysis included aerial photography and maps and images from Google Earth and Google's Street View technology.

The City contains several valued scenic resources, many of which are considered scenic vistas that warrant protection. In particular, elevated views from hillside areas toward the ocean or mountains, views from the Mesa of the City and the surrounding area, significant open space areas, and panoramic views from parks or other public lands are identified by the General Plan as scenic vistas that should be protected and maintained for the enjoyment by the public (City of Santa Barbara 2011). As shown in Figure 4.1-3, City Scenic Resources and High Fire Hazard Area, and Figure 4.1-4, City Scenic Resources and Vegetation Management Units, several areas that are designated as scenic resources by the City overlap with the proposed HFHA and VMUs, respectively.

Potential impacts to private scenic vistas would generally be consistent with the impacts associated with public scenic vistas discussed below. Guidance on the City's assessment of private views is provided by the City's Municipal Code Section 22.76 "View Dispute Resolution Process," which establishes the right for property owners to preserve scenic views and access sunlight, and establishes a process to address private view disputes related to vegetation and sunlight access. Section 22.76.010 of the Municipal Code states that "Both views and trees and vegetation contribute to the aesthetic value, quality of life, ambiance and economic value of properties within the City of Santa Barbara. Similarly, access to sunlight across property lines contributes to the health and wellbeing of community members… Trees and vegetation contribute to the visual environment and aesthetics by blending, buffering and reducing the scale and mass of architecture. Trees and vegetation within the City provide botanical variety and a sense of history. Trees and vegetation also create shade and visual screens and provide a buffer between different land uses." View evaluation criteria are set forth in Section 22.76.110 and

address the vantage point, extent and quality of the view and place emphasis on whether the tree or vegetation "is located within a City-designated "High Fire Hazard" zone and constitutes the type of trees or vegetation not generally encouraged for new residential construction within such zones." Vegetation management practices proposed in the CWPP are targeted at vegetation within the proposed HFHA zones and VMUs, and as determined by the Santa Barbara Fire Department (SBFD) to be a potential fire hazard. As such, the removal of vegetation would be consistent with the Municipal Code and consistent with protection of private views and scenic vistas.

Proposed Modifications to the High Fire Hazard Area

The proposed CWPP establishes new HFHA, totaling 665 acres, and removal of 108 acres from the HFHA. The addition of newly designated HFHA would result in expanded defensible space on hillside private property and road clearance, which would be highly visible from public roads and other public viewpoints, and would have the potential for the greatest impact to scenic vistas.

The proposed additional HFHA and associated defensible space and road clearance requirements would result in increased vegetation removal on properties in hillside areas, adjacent to open space areas, and along public and private roads, which would result in the reduction in the density and biomass of native or ornamental vegetation. For example, as with the 2004 Wildland Fire Plan, under the proposed CWPP property owners would be required to establish 30 to 150 feet of defensible space around buildings or structures (required defensible space is dependent on whether the property is within the High Fire Hazard Severity Zone or Very High Fire Hazard Severity Zone designation). In addition, within defensible space, property owners must cut and remove hazardous brush, shrubs, and flammable vegetation such as dry grass and weeds; remove dead wood, trim lower branches, and limb all live trees to six feet above the ground; remove all dead trees; and legally dispose of all cut vegetation. Additionally, vegetation management around roads in HFHA would consists of 10 horizontal feet clearance of on either side of the road, and vertical clearance of overhanging branches not less than 13 feet 6 inches.

Defensible space and road clearance requirements may alter existing views that contain valued scenic resources, such as hillside areas and panoramic views of open space, ocean and mountains from public vantage points. Views to such areas are identified as scenic vistas in the City's General Plan. As with the 2004 PEIR, the magnitude of the visual change and its effect on the larger visual setting and scenic vistas would vary based on the proximity and quality of views from public viewpoints (e.g., parks, public roads) and the extent of vegetation reduction necessary on individual private parcels. Expanded defensible spaces on hillsides that are highly visible from public vantage points would have the potential for the greatest change in the visual setting. Table 4.1-1 provides a summary of the proposed additions to the HFHA and the perceived visibility of these areas. For example, the proposed newly designated HFHA zones L, M, N, and O are located near the Mesa, which provides panoramic views and also serves as a backdrop for much of the City's downtown area, and Elings Park, which provides vegetated open space areas. Further, vegetation management in hillside areas with slopes greater than 30%, which are considered valuable scenic resources, would result in more noticeable visual changes, as greater clearance of defensible space around structures is required in these areas and these hillside and mountain areas are often highly visible from many parts of the City.

However, most private properties in these areas, particularly in hillside areas, are located amongst intervening complex topography and contain both native and invasive species and ornamental vegetation. Views from the coast and the downtown area of the City to the proposed HFHA in the elevated hillside areas and mountains would be distant and changes in vegetation would not be particularly discernible. As shown in Figures 4.1-2a through 4.1-2d, distance and intervening elements would obscure direct views of vegetation management activities. Additionally, 50%–70% of the vegetation would remain intact. As described in Policy 13 outlined in the CWPP, the SBFD would continue its efforts to work with property

owners to educate the public on fire safe landscaping that is visually appealing. Further, the change in visual quality due to expanded vegetation management near structures would be relatively minor and consistent with the current visual setting and ongoing vegetation management under the 2004 Wildland Fire Plan. Thus, vegetation management on private property and along public and private roads in these hillside areas is a commonly observed condition in the City. While establishment of the additional HFHA and associated defensible space and road clearance requirements to reduce fire hazards may alter scenic vistas of hillside and mountain areas throughout the City, the visual changes would be altogether minor and incremental in nature, and would not cause a significant impact on scenic vistas. Further, with implementation of **MM-AES-1**, defensible space and road clearance activities would be implemented such that the natural appearance of vegetated, open space areas would be retained to the extent feasible. Thus, the addition of new HFHA within the City would not significantly alter views from scenic vistas. Impacts to scenic vistas would be less than significant.

Table 4.1-1. Summary of Views to Proposed High Fire Hazard Area Zones

Area ID	Acreage	On Site or Proximate Public Views	Distant Public Views
B	1.68	Views of open space from mountain trails	Distant views of open space within mountain area from various locations throughout City
E	6.25	Views of open space and vegetation from Scenic Drive, Montecito Club	Views of hillside terrain from Route 101
F	25.26	Views of vegetation and creek and riparian environment from State Street, Alamar Avenue, other local roads, trails within Mission Creek corridor	None/Not discernible
G	5.31	Views of vegetation and creek and riparian environment from Mission Canyon Road, other local roads, Museum of Natural History, trails within Mission Creek corridor	None/Not discernible
H	26.84	Views of vegetation and open space from Stevens Park, trails within San Roque Creek corridor, Canon Drive, N. Ontare Road	None/Not discernible
I	54.90	Views of vegetation within Cieneguitas Creek corridor from SR 154 (officially designated State scenic highway), Foothill Road, other local roads	Views from trails within San Marco Foothill Preserve, distant views from elevated terrain
K	12.45	Views of vegetation on private parcels and hillside terrain from Cliff Drive, other local roads	Distant, intermittent views from coast/Shoreline Drive of vegetation and elevated terrain
L	24.62	Views of vegetation within private parcels from adjacent Elings Park land, Escondido Park users, Hilda McIntyre park users	Distant, intermittent of vegetation within elevated terrain from Cliff Drive
M	223.37	Views of vegetation within private parcels from local roads, views of vegetation and open space from trails	Distant, intermittent views of vegetation within elevated terrain from Route 101, Modoc Road
N	1.41	Views of vegetation within private parcels from local roads	Distant, intermittent views of vegetation within elevated terrain from Route 101, Modoc Road
O	8.89	Views of vegetation within private parcels from local roads	Distant, intermittent views of vegetation within elevated terrain from Route 101, Modoc Road

Table 4.1-1. Summary of Views to Proposed High Fire Hazard Area Zones

Area ID	Acreage	On Site or Proximate Public Views	Distant Public Views
R	202.17	Views of vegetation and open space within Arroyo Burro Creek corridor from Hidden Valley Park users, trails within open space, local roads	None/Not discernible
S	62.27	Views of vegetation and open space within Arroyo Burro Creek corridor and surrounding open space from local roads, trails within open space	None/Not discernible

Vegetation Management Areas and Vegetation Management Methods

Vegetation removal would occur through manual (hand removal), mechanical (use of heavy equipment such as masticators, tractors, and chippers), biological (grazing conducted in late spring under site-specific grazing plans), and prescribed burns (broadcast burns over designated and prepared areas or pile burning of cut vegetation, typically applies to areas of less than 1 acre).

Establishment of VMUs and management of vegetation for fire hazard reduction purposes may impact scenic vistas of the hillside, open space, and mountain areas throughout the City. Vegetation management proposed by the CWPP involves thinning and understory ladder fuel treatment, which would retain tree canopies and would result in thinned shrublands in a mosaic pattern where 50% to 70% of existing plant material would remain. Thus, establishment of VMUs and implementation of vegetation management activities would reduce the amount of flammable vegetation within the newly proposed VMUs by thinning or removal of flammable vegetation, limbing of trees, removing lower limbs of oak trees, pruning out of dead material on trees, and reducing the density of eucalyptus trees. The removal of dead branches and understory vegetation and the thinning of shrubs and eucalyptus trees would be perceived as an overall reduction in the density of greenery on the landscape within scenic vistas. However, the change would not be inconsistent with the visual quality of the landscape as viewed from scenic vistas, as the vegetation management activities would not expose bare soil, a mosaic pattern of vegetation would remain, and the chipped debris would be spread on site.

If the prescribed burning method of vegetation management is used, burn piles of cut vegetation (pile burns) or over a designated prepared area (broadcast burn) would be implemented. Prescribed burning would result in a sharply contrasting darkened patches where burn piles were located, or darkened ground areas. However, prescribed burning areas would typically be less than 1 acre in size and would be sited such that they would be difficult to observe from public viewing locations. Further, the visual impact would be temporary, as the darkened vegetative debris and/or ground surface would disappear after rainfall and vegetation regeneration.

Scenic vistas with views of VMUs vary greatly. Table 4.1-2 provides a summary of the visibility of the proposed additional VMUs. On site or proximate public views identified in Table 4.1-2 are considered immediate views from parks, trails, roads, or scenic viewpoints where vegetation management would occur. These areas would have immediate views of altered vegetation. Distant public views are considered views from the coast, downtown areas, roads and highways, and scenic viewpoints that look toward areas where vegetation management would occur. In some cases, there are no public views, while several VMUs would be highly visible because they represent parks, public open spaces, or hillsides that form scenic backdrops. The proposed additional VMUs and management activities would be difficult to detect from more distant public views, as the areas would blend into a large mosaic of trees, vegetation, and houses along the foothills. Additionally, vegetation management activities are ongoing within surrounding existing VMUs areas.

Implementation of vegetation management activities may result in temporary and long-term visual changes to important public views including scenic vistas. However, the proposed CWPP does not include any new structures, and fuel reduction would not result in blockage of views from a scenic vista. In addition, the proposed fuel reduction in Community Fuels Treatment Network (CFTN) is not expected to cause a significant visual impact because the CFTN areas are located in higher elevations of the mountains (see Figure 3-8 in Chapter 3) and these areas are already maintained by the SBFD as part of ongoing activities under the 2004 Wildland Fire Plan. Except for trail users within mountain areas, the majority viewers are located along the coast or in downtown areas of the City, which are approximately 2 or more miles from the CFTN areas. Modifications to vegetation in these areas would not be readily discernible to viewers in the City. Further, with implementation of **MM-AES-1**, vegetation management activities would be implemented such that the natural appearance of vegetated, open space areas would be retained to the extent feasible. Thus, VMUs and vegetation management activities would not significantly alter views from scenic vistas. Impacts to scenic vistas would **be less than significant**.

Table 4.1-2. Summary of Views to Proposed Vegetation Management Units

Area ID	Acres	On Site or Proximate Public Views	Distant Public Views
24	2.92	Views of vegetation and open space from Jesusita Drive, trails within open space	None/Not discernible
25	97.30	Views of vegetation and open space from Northridge Road, Foothill Road (192), other local roads, trails within open space	Views of distant vegetation and elevated terrain from Foothill Road (192)
26	5.38	Views of vegetation and open space from Mountain Drive (City Scenic Route), park and trail users within Mission Oaks Park/Mission Canyon/Mission Creek corridor	None/Not discernible
27	30.86	Views of vegetation and open space from Stanwood Drive (192; City Scenic Route)	None/Not discernible
28	105.83	Views of vegetation, open space and elevated terrain from Parma Park, trails within open space, Sycamore Canyon Road/Stanwood Drive (192; City Scenic Route)	Distant views from mountain trails
29	45.49	Views of vegetation and open space from Laurel Canyon Park, trails within open space of Lauro Canyon, San Roque Road/Arriba Way/other local roads	Intermittent views of vegetation and elevated terrain from Foothill Road
30	8.29	Views of vegetation from Eucalyptus Hill Road/other local roads	None/Not discernible
31	7.22	Views of vegetation and open space from local roads, Montecito Club	Intermittent, brief views of vegetation and elevated terrain from Route 101
32	15.48	Views of vegetation within private parcels and open space from Via Alicia	None/Not discernible
33	8.90	Views of vegetation and hillside terrain from Cliff Drive, other local roads, trails within Honda Valley	Distant, intermittent views of vegetation and elevated terrain from coast/Shoreline Drive

Table 4.1-2. Summary of Views to Proposed Vegetation Management Units

Area ID	Acres	On Site or Proximate Public Views	Distant Public Views
34	1.75	Views of vegetation and open space within Honda Valley from Carrillo Street/other local roads, trails within open space	None/Not discernible
35	6.66	Views of vegetation and open space within Honda Valley from Carrillo Street/other local roads, trails within open space	None/Not discernible
36	7.28	Views of vegetation within private parcels from adjacent Elings Park land, Escondido Park users, Hilda McIntyre park users	Distant, intermittent of vegetation within elevated terrain from Cliff Drive
37	1.41	Views of vegetation and open space within Honda Valley from Carrillo Street/other local roads, trails within open space	None/Not discernible
38	25.92	Views of vegetation and open space within Honda Valley from local roads, trails within open space, Hilda McIntyre park users	None/Not discernible
39	1.79	Views of vegetation and open space within Honda Valley from Carrillo Street, other local roads, trails within open space	None/Not discernible
40	91.94	Views of vegetation and open space within Elings Park by park users	None/Not discernible
41	1.38	Views of vegetation and open space within Honda Valley from Carrillo Street, other local roads, trails within open space	None/Not discernible
42	14.04	Views of dense vegetation from local roads, views of vegetation and open space from trails	Distant, intermittent views of vegetation within elevated terrain from Route 101
43	124.71	Views of vegetation and open space from local roads and trails within open space along Arroyo Burro Creek corridor	Distant, intermittent views of vegetation and elevated terrain from Cliff Drive
44	38.75	Views of dense vegetation from local roads, views of vegetation and open space from trails	Distant, intermittent views of vegetation within elevated terrain from Route 101, Modoc Road
45	9.34	Views of vegetation and open space from Hidden Valley Park, local roads and trails within open space along Arroyo Burro Creek corridor	None/Not discernible
46	22.44	Views of vegetation and open space from local roads and trails within open space	None/Not discernible

City of Santa Barbara / CWPP

High Fire Hazard Area

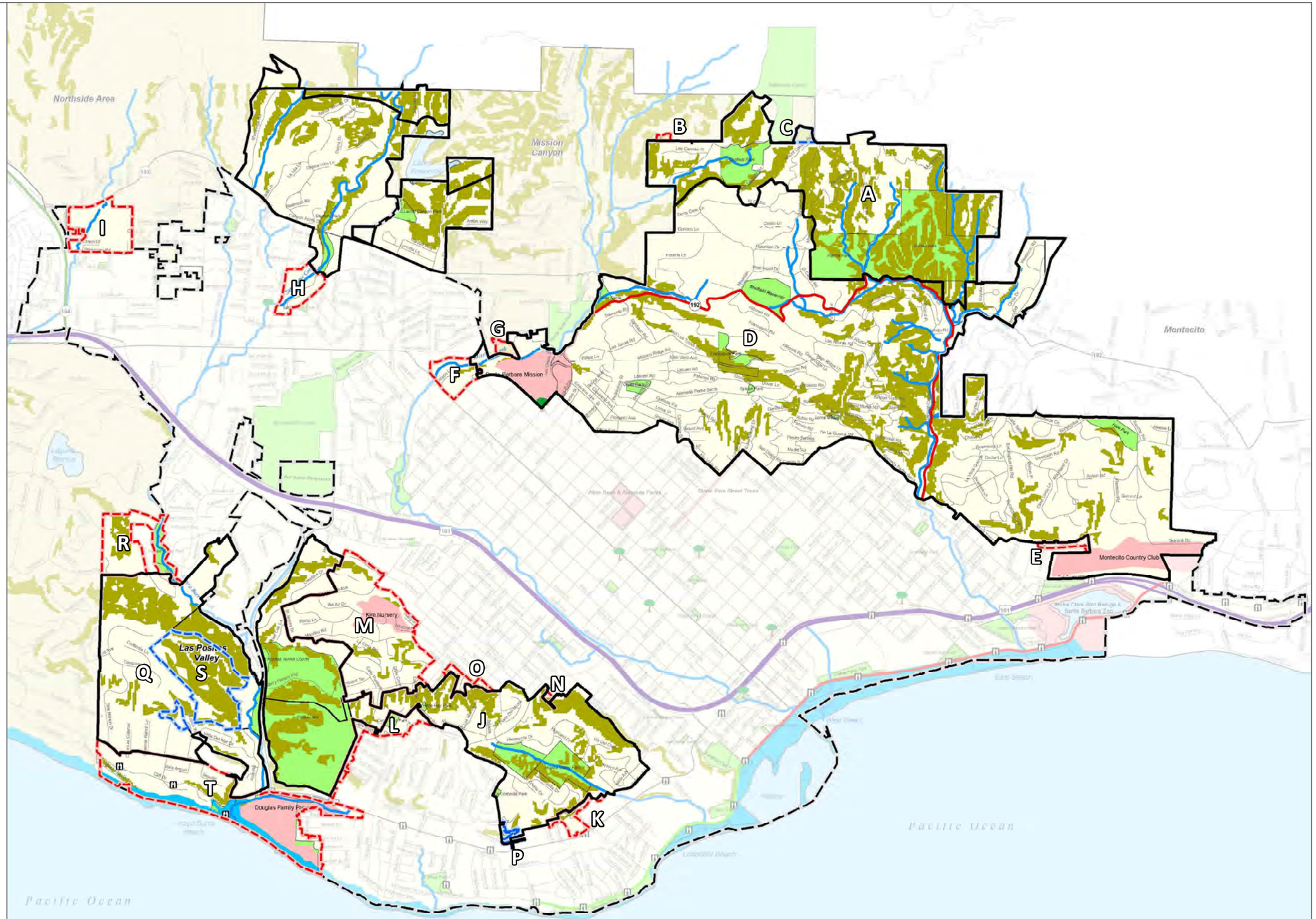
- Existing - Retained
- Existing - Removed
- Proposed

Visual Resources

- Area of unique visual features
- Area of visual sensitivity: major hillside 30% or more slope
- Area of visual sensitivity: coastal bluffs & shoreline
- Parks
- Visual Cone Location - Local Coastal Plan
- Historic Trees
- Creeks

Scenic Highways and Route

- Highway 101 - Scenic Highway
- Highway 154 - Scenic Highway
- Cabrillo Blvd - Potential State Scenic Highway
- Sycamore Canyon Rd - Potential State Scenic Highway
- Shoreline Dr - Potential City Scenic Route



0 1,000 2,000 Feet

SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN DUDEK

FIGURE 4.1-3

City Scenic Resources and High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara / CWPP

Vegetation Management Units

Existing

Proposed

City of Santa Barbara Visual Resources

Area of unique visual features

Area of visual sensitivity: major hillside 30% or more slope

Area of visual sensitivity: coastal bluffs & shoreline

Parks

Visual Cone Location - Local Coastal Plan

Historic Trees

Creeks

Scenic Highways and Route

Highway 101 - Scenic Highway

Highway 154 - Scenic Highway

Cabrillo Blvd - Potential State Scenic Highway

Sycamore Canyon Rd - Potential State Scenic Highway

Shoreline Dr - Potential City Scenic Route

0 1,000 2,000 Feet

SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN DUDEK

FIGURE 4.1-4

City Scenic Resources and Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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AES-2 Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Proposed Modifications to the High Fire Hazard Area

Officially Designated State Scenic Highways

SR 154 is the City's only officially designated state scenic highway, extending from Route 101 in the western portion of the City to Route 101 in Los Olivos. As shown in Figure 3-8, Area I, located immediately east of SR 154, is proposed to be added to the HFHA due to the vegetation in the area surrounding Cieneguitas Creek that could result in extreme fire behavior. The City currently conducts roadside vegetation management to reduce the amount of vegetation along roadways, enhance evacuation during a wildfire, and allow improved access for fire apparatus to respond to a wildfire. Vegetation management near roads in the HFHA would consist of clearance of 10 horizontal feet on either side of the road, and vertical clearance of overhanging branches not less than 13 feet 6 inches. Vegetation management along this portion of SR 154 would result in visible changes to vegetation along the road.

Eligible/Potential State Scenic Highways

SR 154 (officially adopted in 1968 and discussed above) and Route 101 are listed as eligible state scenic highways. Various segments of Route 101 are eligible for listing as it traverses the state, including the entire segment that passes through the City. As shown in Figure 3-4 in Chapter 3, there are existing HFHA zones in close proximity to Route 101, however there are no newly proposed HFHA zones adjacent to the road. Hillside areas that are proposed to be added to the HFHA (Areas E, M, N and O) are intermittently and briefly visible from Route 101 due to the elevated topography of the areas. However, trees along the freeway and other intervening elements (terrain, vegetation and development) largely screen views to these areas. As such, the addition of these zones to the HFHA would not substantially alter or impede views from Route 101.

Cabrillo Boulevard (former SR 225) from 101 to Castillo Street is a City-designated potential state scenic highway (City of Santa Barbara 2011). There are no newly proposed HFHA zones in proximity or visible from Cabrillo Boulevard.

Sycamore Canyon Road (SR 144) from Alameda Padre Serra to Stanwood Drive; Stanwood Drive to Mission Ridge Road (192) where it intersects with Mountain Drive; and Mountain Drive (leaving 192 which continues on Foothill Road) to the Old Mission on Los Olivos Street. While this route passes through a state- and City-designated Very High Fire Hazard Severity Zone, there are no newly proposed HFHA zones in proximity or within viewing distance of the route.

City Scenic Routes

Shoreline Drive (from Castillo Street to the end of Shoreline Park) is designated as a City Scenic Route (City of Santa Barbara 2011). As shown in Figure 3-4, Shoreline Drive is located in the southern portion of the City along the coast. There are no proposed HFHA zones in proximity or viewing distance of Shoreline Drive. This route is entirely within the existing HFHA. No newly proposed HFHA zones are within proximity or viewing distance of the route.

Proposed Modifications to the Vegetation Management Areas and to the Vegetation Management Methods

Officially Designated State Scenic Highways

SR 154 is the City's only officially designated state scenic highway, extending from Route 101 in the western portion of the City to Route 101 in Los Olivos. There are no newly proposed VMUs within proximity or viewing distance of SR 154. Thus, the proposed VMUs and proposed vegetation management methods would not result in any impacts to the City's only officially designated state scenic highway.

Eligible/Potential State Scenic Highways

SR 154 (officially adopted in 1968 and discussed above) and Route 101 are listed as eligible state scenic highways. Proposed additions to the VMUs that are nearest Route 101 include Units 30, 31, 37, 39, 41, 42, 44, and 45. Of these, most are not visible due to intervening terrain, vegetation, and development. Units 31, 42 and 44 are intermittently and briefly visible from Route 101. However, due to dense vegetation and trees along the freeway, these areas are largely screened from view. Further, existing VMUs are intermixed with the newly proposed units, and management activities are ongoing. Thus, it is not anticipated that vegetation management activities in these units would appear out of character or significantly impact views or scenic resources visible from Route 101. More distant proposed additions to the VMUs may be visible from Route 101 due to the elevated terrain. However, due to distance and intervening development, management activities would not be readily perceived by motorists traveling on Route 101.

Cabrillo Boulevard (former SR 225) from 101 to Castillo Street is a City-designated potential state scenic highway (City of Santa Barbara 2011). There are no newly proposed VMUs in proximity or within viewing distance of Cabrillo Boulevard.

Sycamore Canyon Road (SR 144) from Alameda Padre Serra to Stanwood Drive; Stanwood Drive to Mission Ridge Road (192) where it intersects with Mountain Drive; and Mountain Drive (leaving 192 which continues on Foothill Road) to the Old Mission on Los Olivos Street is also a City-designated potential state scenic highway (City of Santa Barbara 2011). Newly proposed VMUs in proximity and visible from this potential state scenic highway include Units 26, 27, 28, and 32, and are adjacent to or overlie the road in some areas (e.g., Units 26, 27, and 28).

Vegetation management activities that are anticipated to be visible from the road include establishment of defensible space around buildings or structures and road clearance activities. City Municipal Code requires flammable vegetation and combustible growth to be cleared horizontally and vertically from the road (10 feet of horizontal clearance and 13 feet, 6 inches of vertical clearance). A variety of vegetation and trees on both public and private property occurs along the road and would be required to be cleared or thinned. As such, trees and vegetation within the potential state scenic highway would be trimmed or removed using a variety of vegetation management methods, which could include manual, mechanical, biological, or prescribed burning of vegetation. However, vegetation management would target accumulated flammable vegetation by removing dead or dying vegetation, trimming low branches, thinning areas of dense understory shrubs and adding space between shrubs and trees. Existing VMUs and management activities are interspersed with the newly proposed areas, and road clearance activities would generally remain the same as considered in the 2004 Wildland Fire Plan. Thus, management activities are not anticipated to appear out of character or unexpected along the road, which passes through the state- and City-designated HFHA. Further, implementation of **MM-AES-1** would ensure vegetation management activities would be conducted such that the natural appearance along scenic routes would be retained to the extent feasible.

City Scenic Routes

Shoreline Drive (from Castillo Street to the end of Shoreline Park) is designated as a City Scenic Route (City of Santa Barbara 2011). As the focus of the view from Shoreline Drive is to the south toward the coast and Pacific Ocean, and all proposed VMUs are north (inland) of this road, the proposed CWPP would result in no impacts to views from Shoreline Drive. Thus, the proposed VMUs and management activities would not impact views from Shoreline Drive.

Summary

The City's only officially designated state scenic highway is located adjacent to a proposed HFHA zone (Zone I). Defensible space and road clearance requirements in this area would alter views of vegetation from SR 154. However, vegetation management would target accumulated flammable materials, and clearance would be limited to 10 horizontal feet on either side of the road and 13 feet 6 inches of vertical clearance. Removal of dead or dying vegetation, overly dense vegetation, low or overhanging branches and other proposed vegetation management activities along the road would reduce fire risk and improve ingress and egress in the case of an evacuation. No VMUs are proposed adjacent to SR 154. The proposed CWPP would result in less than significant impacts to scenic resources within an officially designated state scenic highway. There are no newly proposed HFHA zones or VMUs in proximity or within viewing distance of the City's eligible state scenic highway (Route 101), one potential state scenic highway (Cabrillo Boulevard [former SR 225]) and City Scenic Route (Shoreline Drive). However, one potential state scenic highway, as designated by the City (Sycamore Canyon Road/Stanwood Drive/Mission Ridge Road/Mountain Drive), passes through an existing HFHA and there are newly proposed VMUs along this route, which would result in altered views of vegetation and scenic resources along the route due to vegetation removal. However, vegetation management activities would be conducted such that flammable vegetation would be targeted, and healthy vegetation would remain intact. Implementation of **MM-AES-1** would ensure that the natural appearance of HFHA zones and VMUs visible from scenic roads would be retained to the extent feasible. As such, impacts to scenic resources within a state scenic highway would be less than significant. Further, impacts to locally designated potential scenic highways and City scenic routes would be reduced to a **less than significant level with mitigation**.

AES-3 Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

California Public Resources Code Section 21071 defines an "urbanized area" as "(a) an incorporated city that meets either of the following criteria: (1) Has a population of at least 100,000 persons, or (2) Has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons." The City's population in 2019 was approximately 91,365 people (U.S. Census Bureau 2019). However, the City is bordered by the incorporated City of Goleta to the west, which has an estimated 2019 population of 30,911 (U.S. Census Bureau 2019). The combined population of the two cities is over 100,000 persons. Thus, the proposed CWPP is within an urbanized area and the following analysis considers whether the project would conflict with applicable zoning or other regulations governing scenic quality.

As discussed in Section 4.1.2, the General Plan and Municipal Code outline goals and policies related to visual resources and aesthetics. The proposed CWPP does not involve the change of zoning for any parcel and does not propose land uses that would conflict with the City's Zoning Code. Thus, the proposed CWPP would not conflict with any applicable zoning regulations governing scenic quality.

Section 4.11, Land Use and Planning, of this EIR, provides a review of the General Plan and an analysis concerning the proposed CWPP's consistency with the City goals and policies. The analysis in Section 4.11, Table 4.11-2, determined that the CWPP would be consistent with the General Plan, and would provide a means of implementing the applicable goals and policies of the General Plan, and would not impede the City's ability to meet other goals and policies that are not applicable to the proposed CWPP.

Table 4.1-3, below, provides a summary of project consistency with applicable plans, policies and regulations governing scenic quality. As described in Table 4.1-3, the CWPP would not conflict with applicable regulations governing scenic quality and impacts would be less than significant. Further, as discussed in response to threshold b), above, as viewed from public vantage points with multiple viewers (e.g., along the coast and in downtown areas of the City), as well as scenic vistas, the proposed vegetation management in the HFHA and VMUs would blend into a large mosaic of trees and houses in hillside areas. Further, vegetation thinning and ongoing maintenance can result in visually pleasing landscapes, as properly planned, thinned and maintained vegetation would reduce the accumulation of heavy fuel, dry and dead plant materials. Lastly, the elimination of large stands of dense, dead and decadent brush may also enhance scenic views by decreasing view blockage. Thus, due to complex terrain and vegetation that would remain intact, and the resulting natural appearance that would be retained, proposed vegetation management in the HFHA and VMUs would not degrade the visual quality and character of the City. Impacts would be less than significant.

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
Environmental Resources Element	
Policy ER29. Visual Resources Protection. New development or redevelopment shall preserve or enhance important public views and viewpoints for public enjoyment, where such protection would not preclude reasonable development of a property.	Implementation of the CWPP does not propose new development or redevelopment. Rather, the proposed CWPP includes policies and actions, including, but not limited to, designation of additional HFHA zones and VMUs in the City, and proposes vegetation management in these areas. VMUs encompass land outside defensible space on both City-owned and private property where the City would conduct vegetation management in cooperation with the affected landowners. Implementation of vegetation management activities may result in temporary and cyclical visual changes to important public views such as scenic vistas and along scenic routes due to thinning and removal of vegetation. However, vegetation management activities would be temporary, and vegetation management would target the treatment and removal of flammable vegetation (dead and dying vegetation, grass, brush, and understory plants), pruning trees and limbing low branches, which would retain tree canopies and would result in thinned shrublands in a mosaic pattern where

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
	50% to 70% of existing plant material would remain. Vegetation material would regenerate over time, and management activities would continue on a regular basis, as determined necessary by the SBFD. Therefore, it is not anticipated to alter existing views such that scenic quality would be substantially degraded. Further, since no development or redevelopment is proposed, the CWPP would not interfere with City policy ER29 for visual resource protection.
Policy ER30 Enhance Visual Quality. Not only retain, but improve visual quality of the city wherever practicable.	Implementation of the CWPP includes policies and actions, including but not limited to establishment of additional HFHA zones and VMUs, and proposed vegetation management activities in these areas. Implementation of vegetation management activities may result in temporary and cyclical visual changes to important public views such as scenic vistas and along scenic routes. However, Vegetation management activities would be temporary and would be conducted incrementally. Further, similar vegetation management activities are ongoing under the 2004 Wildfire Plan. Therefore, vegetation management activities and the resulting changes in the landscape would not be abrupt or unexpected. Vegetation management would target removal of flammable vegetation such as dead and dying vegetation, low tree branches, grasses, and understory brush. Vegetation management would result in a mosaic pattern that provides horizontal spacing between retained shrubs and retains tree canopies. Therefore, it is not anticipated that vegetation management would alter existing views such that scenic quality would be degraded. Rather, visual quality would be improved by the reduction in the accumulation of heavy fuel and the elimination of large stands of dense, dry brush. In accordance with the CWPP and with implementation of MM-AES-1, vegetation management would be conducted such that the natural appearance of the landscape would be retained to the extent feasible. As such, the CWPP would not interfere with retaining and enhancing visual quality and would aide to further Policy ER30.
Conservation Element	
Goal: Restore where feasible, maintain, enhance, and manage the creekside environments within the City as visual amenities, where consistent with sound flood control management and soil conservation techniques.	Implementation of the CWPP includes some areas proposed as new HFHA zones and VMUs near and within creekside environments such as oak and riparian woodlands. For example, the CWPP proposes new VMUs and vegetation management activities near

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
	Mission Creek (Area 26), Arroyo Burro Creek (Areas 25, 36, 40, 42–45), and Sycamore Creek (Area 28). Implementation of vegetation management activities in creekside environments would result in visual changes to dense vegetation in these areas as a result of vegetation removal or thinning. However, as indicated in proposed Policy 11.2 of the CWPP, the City would "work with Creeks Division and Community Development Department to develop guidelines for private property owners conducting defensible space adjacent to creek areas that balances riparian values and fire hazard and risk on private lands." Additionally, with implementation of MM-AES-1, the natural appearance of these areas would be preserved to the extent feasible and these areas would be maintained as visual amenities. Further, as proposed in the CWPP, best management practices (BMPs) for erosion control would be implemented. Therefore, the proposed CWPP would not conflict with this goal.
Conservation Element	
Goal: Prevent the scarring of hillside areas by inappropriate development.	The proposed CWPP does not propose any new development or redevelopment. However, vegetation management activities are proposed that would result in altered appearance of vegetation in hillside areas on private and public property. Vegetation management proposed by the CWPP involves thinning and understory ladder fuel treatment, which would retain tree canopies and would result in a mosaic pattern of thinned shrublands where 50% to 70% of existing plant material would remain. This approach differs from fire break construction, which removes all vegetation down to bare soil, a practice that would have a significantly greater impact on public scenic views. If the prescribed burning method of vegetation management is used, burn areas would typically be less than 1 acre in size and would be sited such that they would be difficult to observe from public viewing locations. Further, the visual impact would be temporary, as the darkened vegetative debris and/or ground surface would disappear after rainfall and vegetation regeneration. Further, with implementation of MM-AES-1, the natural appearance of hillside areas would be maintained to the extent feasible. Thus, scarring of hillside areas would be avoided. Therefore, the proposed CWPP would not conflict with this goal.
Goal: Protect and enhance the scenic character of the City.	The proposed CWPP would designate additional land within the City as HFHA zones and VMUs, and vegetation management would occur in these areas. As shown in Figure 4.1-3 and Figure 4.1-4, many of the

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
	City's designated valued scenic resources that contribute to the scenic character of the City coincide with HFHA zones and VMUs where vegetation management would occur. By implementing fuel modification in these areas, the CWPP would reduce the wildfire risk in these valued scenic areas. Wildfire is an existing threat to valued visual resources in the City, such as hillside areas, open space and the mountains, which would have a detrimental effect on these scenic landscapes. As such, the CWPP would contribute to protecting the scenic resources, and thus, the scenic character of the City. Vegetation management methods would target flammable vegetation by removing shrubs, mowing grasses, thinning understory vegetation to add space between shrubs, and removing or treating dead and dying vegetation and low branches. The resulting appearance would consist of a mosaic of vegetation, where 50%–70% of vegetation would remain. The natural appearance of the project area would be maintained to the greatest extent feasible (see MM-AES-1). Therefore, the proposed CWPP would not hinder the ability to protect and enhance the scenic character of the City, and the CWPP would not conflict with this goal.
Goal: Maintain the scenic character of the City by preventing unnecessary removal of significant trees and encouraging cultivation of new trees.	The proposed CWPP includes vegetation management in areas of high fire hazard risk designated as new HFHA zones and VMUs. Thus, vegetation thinning or removal has been determined to be necessary for fire safety and to reduce the risk of wildfire. Therefore, the CWPP does not propose unnecessary removal of significant trees. Rather, vegetation management activities (manual, mechanical, biological, and prescribed burning techniques) would be conducted for safety purposes and at the direction of the SBFD. Therefore, the proposed CWPP would not conflict with this goal.
Goal: Protect significant open space areas from the type of development which would degrade the City's visual resources.	The proposed CWPP does not include new development in open space areas. However, the CWPP proposes vegetation management activities in newly designated HFHA zones and VMUs, some of which occur open space areas that contribute to the City's visual environment. Implementation of vegetation management activities would result in visual changes to vegetation in these areas as a result of vegetation removal or thinning. However, the risk of wildfire poses an existing threat to open space areas, and would have detrimental impact on the City's visual resources. Implementation of vegetation management proposed under the CWPP would help to protect significant open

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
	space areas. Further, as discussed in Section 4.9, Land Use and Planning, development policies for HFHA zones would define criteria for the type of development that may occur in these areas. the natural appearance of these areas would be maintained to the extent feasible. Therefore, the CWPP would not degrade the City's visual resources and would not conflict with this goal.
Policy 1.0 Development adjacent to creeks shall not degrade the creeks or their riparian environments.	The CWPP proposes vegetation management activities near creeks and the surrounding riparian environment, including the establishment of new VMUs and vegetation management activities near Mission Creek (Area 26), Arroyo Burro Creek (Areas 25, 36, 40, 42–45), and Sycamore Creek (Areas 28). Vegetation management would include removing accumulated flammable vegetation, such as dead or dying vegetation, and thinning dense vegetation by creating vertical and horizontal space between shrubs and trees. As indicated in proposed Policy 11.2 of the CWPP, the City would "work with Creeks Division and Community Development Department to develop guidelines for private property owners conducting defensible space adjacent to creek areas that balances riparian values and fire hazard and risk on private lands." Therefore, the CWPP would not degrade creeks or their riparian environments. Further, implementation of MM-AES-1 would help to ensure that vegetation management activities the natural appearance of creeks and the surrounding riparian environments would not be degraded. Therefore, the CWPP would not conflict with General Plan Policy 1.0
Policy 2.0 Development on hillsides shall not significantly modify the natural topography and vegetation. **2.1** Development which necessitates grading on hillsides with slopes greater than 30% should not be permitted. The Slope Density Ordinance and Grading Ordinance should be so amended. **2.2** Performance Bonds should be required to ensure achievement of revegetation of graded areas. **2.3** Use of native or naturalized and fire retardant vegetation should be encouraged for landscaping on major cut and fill slopes where development occurs on hillsides. **2.4** All development on hillsides should be required to landscape the downslope side so as to hide or break up large surface area views of structures facing down slope.	The vegetation management activities proposed in the CWPP would not include grading of hillsides, and thus would not modify the natural topography. Vegetation management activities would ensure that flammable and combustible vegetation is removed or thinned from these areas. Vegetation management would target the treatment or removal of flammable vegetation (e.g., grass, brush and understory plants) by removing/treating dead vegetation; trimming/mowing readily ignitable fuels (e.g., grasses, weeds); selectively removing exotic or invasive plant species; thinning, pruning, and limbing of vegetation to remove fire ladders; limbing up of oak overstory (canopies); pruning out dead material; and thinning continuous stands of brush to create a mosaic pattern that provides horizontal spacing between retained shrubs.

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
	Native or naturalized vegetation that does not create a fire risk would be maintained. Further, the Fire Department will continue its ongoing efforts to educate property owners about fuel reduction guidelines and fire-resistant landscaping that is visually pleasing, while meeting fuel reduction requirements. Thus, the proposed CWPP would not conflict with General Plan Policy 2.0.
Policy 3.0 New development shall not obstruct scenic view corridors, including those of the ocean and lower elevations of the City viewed respectively from the shoreline and upper foothills, and of the upper foothills and mountains viewed respectively from the beach and lower elevations of the City.	The proposed CWPP does not include new development that would obstruct scenic view corridors. Designation of new HFHA zones, VMUs and vegetation management activities may occur within scenic view corridors of the ocean, upper foothills and mountains. Vegetation management activities would result in increased activities within VMUs, such as the presence of crews and equipment to implement manual, mechanical, biological (grazing), and prescribed burning techniques, which could obstruct view corridors. However, management activities and ongoing maintenance would be temporary and cyclical and would result in visual changes to areas of dense vegetation. However, such activities would not result in the obstruction or blockage of scenic view corridors, as no development is proposed, and may also improve scenic view corridors by removing accumulated fuels, including dead and dying material. Thus, the proposed CWPP would not conflict with General Plan Policy 3.0.
Policy 4.0 Trees enhance the general appearance of the City's landscape and should be preserved and protected. **4.1** Mature trees should be integrated into project design rather than removed. The Tree Ordinance should be reviewed to ensure adequate provision for review of protection measures proposed for the preservation of trees in the project design. **4.2** All feasible options should be exhausted prior to the removal of trees. **4.3** Major trees removed as a result of development or other property improvement shall be replaced by specimen trees on a minimum one-for-one basis. **4.4** Private efforts to increase the number of street trees throughout the City should be encouraged.	The proposed CWPP would result in the removal, trimming, or thinning of vegetation, including some trees. In oak and riparian woodlands, dead, dying, and prohibited trees would be removed or treated. In areas dominated by eucalyptus trees, eucalyptus stands would be thinned to reach an average density of 10 to 16 trees per 1,000 square feet, and retention of healthy trees would be prioritized, while trees with trunk diameters measuring less than 8 inches would be removed. All feasible options would be exhausted prior to the removal of trees, such as trimming branches that overhang roads and defensible space areas; thinning, pruning, and limbing of vegetation to remove fire ladders (e.g., by trimming low branches); limbing up of oak overstory (canopies); and pruning out dead material. As such, the proposed CWPP would not be in conflict with General Plan Policy 4.0.
Policy 5.0 Significant open space areas should be protected to preserve the City's visual resources from degradation.	The proposed CWPP does not involve any development or other activities that would remove, damage, or degrade significant open space. Parks, public lands, and open space areas that provide panoramic views or

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
5.2 Parks and other public lands which provide panoramic views or scenic vistas, especially those at higher elevations, shall be protected and maintained for the enjoyment by the public.	scenic vistas may be temporary impacted by the presence of crews and equipment to implement vegetation management activities, which could obstruct views. However, management activities and ongoing maintenance would be temporary and short term. Such activities would result in visual changes to areas of dense vegetation, but would not result in the degradation of open space. Further, vegetation management would be implemented such that the natural appearance of these areas would be retained to the extent feasible and 50%–70% of vegetation would remain. The CWPP does not propose the type of fuel reduction methods that would result in highly noticeable changes, such as creating fire breaks that would expose large areas of bare soil. Further, no development is proposed as part of the CWPP. Rather, as discussed in Section 4.9, Land Use and Planning, development policies that would pertain to the HFHA would define criteria for the type of development that would be allowed. Therefore, the proposed CWPP would not conflict with General Plan Policy 5.0.
Policy 6.0 Ridgeline development which can be viewed from large areas of the community or by significant numbers of residents of the community shall be discouraged.	The proposed CWPP does not include ridgeline development. However, some vegetation management activities may occur on ridgelines or elevated hillside areas. While these areas are highly visible from many areas within the community, vegetation management activities are currently taking place under the 2004 Wildland Fire Plan and proposed management activities would not be out of character or unexpected in ridgeline areas that are subject to fire hazards. The vegetation management and maintenance activities would be implemented to reduce fire hazard by rearranging and maintaining the spatial distribution of vegetation. Therefore, the goal of fuel treatment is not to remove all vegetation, but to minimize the potential for ignitions, crown fires, and extreme fire behavior. Under the proposed CWPP, 50%–70% of existing vegetation would remain. Therefore, since vegetation cover would remain intact and due to the distance between ridgeline areas and large viewer groups, changes in vegetation would not be readily discernible or substantially degrade views of ridgelines. Further, with **MM-AES-1**, the natural appearance of management areas would be maintained to the extent feasible. Therefore, the proposed CWPP would not conflict with General Plan Policy 6.0.

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
Coastal Land Use Plan	
Policy 4.3-13 Tree Protection and Replacement. A. Trees qualifying as ESHA shall be fully protected as required by the Biological Resources protection policies (Policy 4.1-1 et seq.). B. For non-ESHA trees: i. Development shall be sited and designed to preserve and protect, to the extent feasible, mature trees (trees four inches in diameter or greater at four feet six inches above grade in height) and trees important to the visual quality of the property; ii. Mature or visually important trees should be integrated into the project design rather than removed or impacted through encroachment into the root zones; and iii. Where the removal of mature or visually important trees cannot be avoided through the implementation of project alternatives or where development encroachments into the root zone result in the loss or worsened health of the trees, the removed tree(s) shall be replaced on a minimum 1:1 basis. This standard can also be increased up to 10:1 depending on the type of tree removed, lot size, and size and expected survival rate of replacement trees.	Vegetation management activities would include treatment of dead, dying, and prohibited trees and retention of live oak trees, oak saplings, healthy eucalyptus trees and other healthy native understory components. Further, trees would be trimmed and pruned rather than removed to the extent feasible. Therefore, the CWPP would minimize removal of mature or visually important trees would not conflict with Coastal Land Use Policy 4.3-13.
Policy 4.3-14 Minimize Removal of Native Vegetation. A. Native vegetation that meets the definition of ESHA, creek, or wetland, shall be fully protected as required by the Biological Resource policies (Policy 4.1-1 et seq.). B. Development shall minimize removal of non-ESHA native vegetation.	See consistency analysis with Policy 4.3-13. Vegetation management would target flammable vegetation and native vegetation would be retained to the extent feasible. Therefore, the CWPP would minimize removal of native vegetation and would not conflict with Coastal Land Use Policy 4.3-14.
Policy 4.3-15 High Fire Area Fuel Modification to Be Minimized. All new development and substantial redevelopment in High Fire Hazard Areas shall incorporate alternative fuel modification measures, where feasible, in order to minimize the visual resource impacts of site disturbance, removal, and thinning of natural vegetation.	The CWPP does not include the development or redevelopment of structures in the HFHA. Vegetation management proposed by the CWPP involves thinning and removal of flammable vegetation to create defensible space and along roads in the HFHA. Low branches would trimmed, and tree canopies would be retained. Understory shrublands would be thinned, resulting in a mosaic pattern where 50% to 70% of existing plant material would remain. This approach differs from fire break construction, which removes all vegetation down to bare soil, a practice that would have a significantly greater visual change. Thus, the CWPP would be consistent with Coastal Land Use Policy 4.3-15.

Table 4.1-3 CWPP Consistency with Applicable Regulation Governing Scenic Quality

Plan, Policy or Regulation	Consistency Evaluation
City of Santa Barbara General Plan	
City of Santa Barbara Municipal Code	
Chapter 15.24 Preservation of Trees Chapter 15.24 of the City's Municipal Code provides for the protection of certain trees throughout the City, including setback trees, parking lot trees, a tree on an approved plan or trees that have been designated as an historic or specimen tree by the City Council.	The proposed CWPP would not remove setback trees, parking lot trees, a tree on an approved plan, or City Council designated historic or specimen trees. While vegetation management could result in removal of some trees, management of trees would target removal or treatment of dead or dying trees. Further, as outlined in Sections 15.24.030 and 15.24.035 of the Municipal Code, trees may be removed or altered without a permit if the Fire Department has ordered removal of the tree in order to maintain required defensible space or to comply with the City's Wildland Fire Plan. As the CWPP is an update to the Wildland fire Plan, tree removal as part of the CWPP would be conducted at the discretion and with approval by SBFD. Therefore, the CWPP would not conflict with Chapter 15.24 of the Municipal Code.

AES-4 Would the project result in substantial grading on steep slopes or permanent substantial changes in topography?

The City of Santa Barbara is characterized by steeply sloping foothills and narrow canyons to the north, low-lying and gently sloping coastal plains, and an uplifted mesa to the south. The foothills and canyons meet the coastal plain to the south and southeast and slope upward to the east–west trending Santa Ynez Mountains. The Mesa steeply slopes from the coastal plain to form a relatively flat ridgeline and high sheer cliff face. Multiple watersheds, drainages, and hillside areas add to the complex topography of the City as they extend upwards from the boundary of the coastal plain and foothills towards the ridgeline of the Santa Ynez Mountains. Elevations in the City range from sea level to approximately 1,100 feet above mean sea level north of Skofield Park along the northern boundary of the City (USGS 2015; CAL FIRE 2008; City of Santa Barbara 2005). Many of the proposed HFHA zones and VMUs occur in areas with steep slopes and complex topography, as topography has a strong influence on wildfire behavior. Steep terrain typically results in faster upslope wildfire movement and spread. While proposed HFHA zones and VMUs would result in vegetation management in areas of steep slopes, as proposed, the CWPP would be limited to minimal ground disturbance or permanent substantial changes in topography. As vegetation helps stabilize slopes and minimize soil erosion, excessive, haphazard, or indiscriminate vegetation removal can result in potential for erosion and slope failure (Ziemer 1981). As such, vegetation management activities would be conducted in accordance with the Vegetation Management Standards and Techniques manual, which is included as Appendix E of the proposed CWPP. For instance, to minimize soil erosion potential, root systems, which help to stabilize soils, would be left intact. As further discussed in Section 4.5, Geology and Soils, vegetation management that would occur on already over-steepened and potentially unstable slopes, BMPs and mitigation (MM-GEO-1) would be implemented to reduce the potential for unstable slopes. Therefore, the project would not result in substantial grading on steep slopes or permanent substantial changes in topography, and impacts would be less than significant. For further discussion regarding slope stability and topography, please see Section 4.5, Geology and Soils.

4.1.5 Mitigation Measures

As discussed in the analysis above, the designation of additional HFHA zones and VMUs, and vegetation management activities would result in visual changes in existing vegetation in areas designated as valued scenic resources in the City. In particular, hillside areas, open space, creeks, and the mountain areas where HFHA zones and VMUs are proposed may be visible from scenic vistas and from scenic highways. Therefore, the recommended mitigation measure from the 2004 PEIR has been carried forward to the proposed CWPP as the following mitigation measure.

MM-AES-1. The following measures shall be implemented when conducting vegetation management on private and public parcels to the extent feasible:

- Straight line boundaries and other strong linear configurations that tend to detract from the natural appearance of the landscape shall be avoided.
- Vegetation removal or thinning shall follow natural or existing landscape features such as stream courses, vegetation type lines, ridgetops, and existing roads.
- Vegetation removal or thinning shall be feathered into the natural landscape, with brush cuttings used to disguise the lines and maintain a natural appearance.

4.1.6 Level of Significance After Mitigation

With implementation of **MM-AES-1**, the natural appearance of HFHA zones and VMUs would be retained to the extent feasible. Impacts to scenic vistas, impacts to scenic resources within a state scenic highway or locally designated scenic route, and impacts concerning conflicts with regulations governing scenic quality would be reduced to a less than significant level.

4.1.7 Cumulative Impacts

The proposed CWPP would result in the thinning of native and non-native vegetation on public and private properties, including removal of large eucalyptus trees, limbing of oak trees, and removal of dense understory shrubs, grasses and accumulated flammable material in HFHA zones and VMUs. Vegetation management activities at any specific location are not expected to significantly affect public views with regard to scenic vistas and scenic resources within a scenic highway, nor would the CWPP conflict with regulations governing scenic quality. However, as with the 2004 Wildland Fire Plan, vegetation management and the resulting altered appearance of vegetation and landscaping under the CWPP could contribute to a past and ongoing cumulatively significant impact due to land development in the City and outside the City limits that removes vegetation and establishes landscaping elements that are out of character with the native landforms and vegetation.

4.1.8 References

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4.2 Air Quality

This section describes the existing air quality conditions of the Community Wildfire Protection Plan (CWPP or proposed project) project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Plan. Analysis specifically pertaining to greenhouse gas emissions and climate change is discussed in Section 4.8, Greenhouse Gas Emissions, of this Program Environmental Impact Report (PEIR).

4.2.1 Existing Conditions

City of Santa Barbara (City) is approximately 42 square miles and bound by the Pacific Ocean to the south, the Santa Ynez Mountains to the north, the City of Montecito to the east, and unincorporated Santa Barbara County (County) to the west. The City is located within the South Central Coastal Air Basin (SCCAB), Figure 4.2-1, South Central Coastal Air Basin, which includes San Luis Obispo, Santa Barbara, and Ventura counties. The project is located within the jurisdiction of the Santa Barbara County Air Pollution Control District's (SBCAPCD).

Climate

Air quality in the City is influenced by its meteorological conditions. The Mediterranean climate is characterized by warm summers and mild winters with relatively dry weather. The annual precipitation is on average 17.7 inches per year and the average maximum temperature is 70.8°F and the average minimum temperature is 50.2 °F (WRCC 2016).

The climate of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the high-pressure cell in the northeastern Pacific. With a Mediterranean-type climate, the project area is characterized by warm, dry summers and cool winters with occasional rainy periods. Cool, humid marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in the late spring and early summer months. The project area is subject to a diurnal cycle in which daily onshore winds from the west and northwest are replaced by mild offshore breezes flowing from warm inland valleys during night and early morning hours. This alternating cycle can create a situation where suspended pollutants are swept offshore at night, and then carried back onshore the following day. Dispersion of pollutants is further degraded when the wind velocity for both day and nighttime breezes is low. The region is also subject to seasonal "Santa Ana" winds. These are typically hot, dry northerly winds that blow offshore at 15 to 20 mph, but can reach speeds in excess of 60 mph.

Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but it is most evident during the summer months. Radiational, or surface, inversions are formed by the more rapid cooling of air near the ground during the night, especially during winter. This type of inversion is typically lower (0 to 500 feet at Vandenberg Air Force Base, for example) and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion.

Sources of Air Pollution

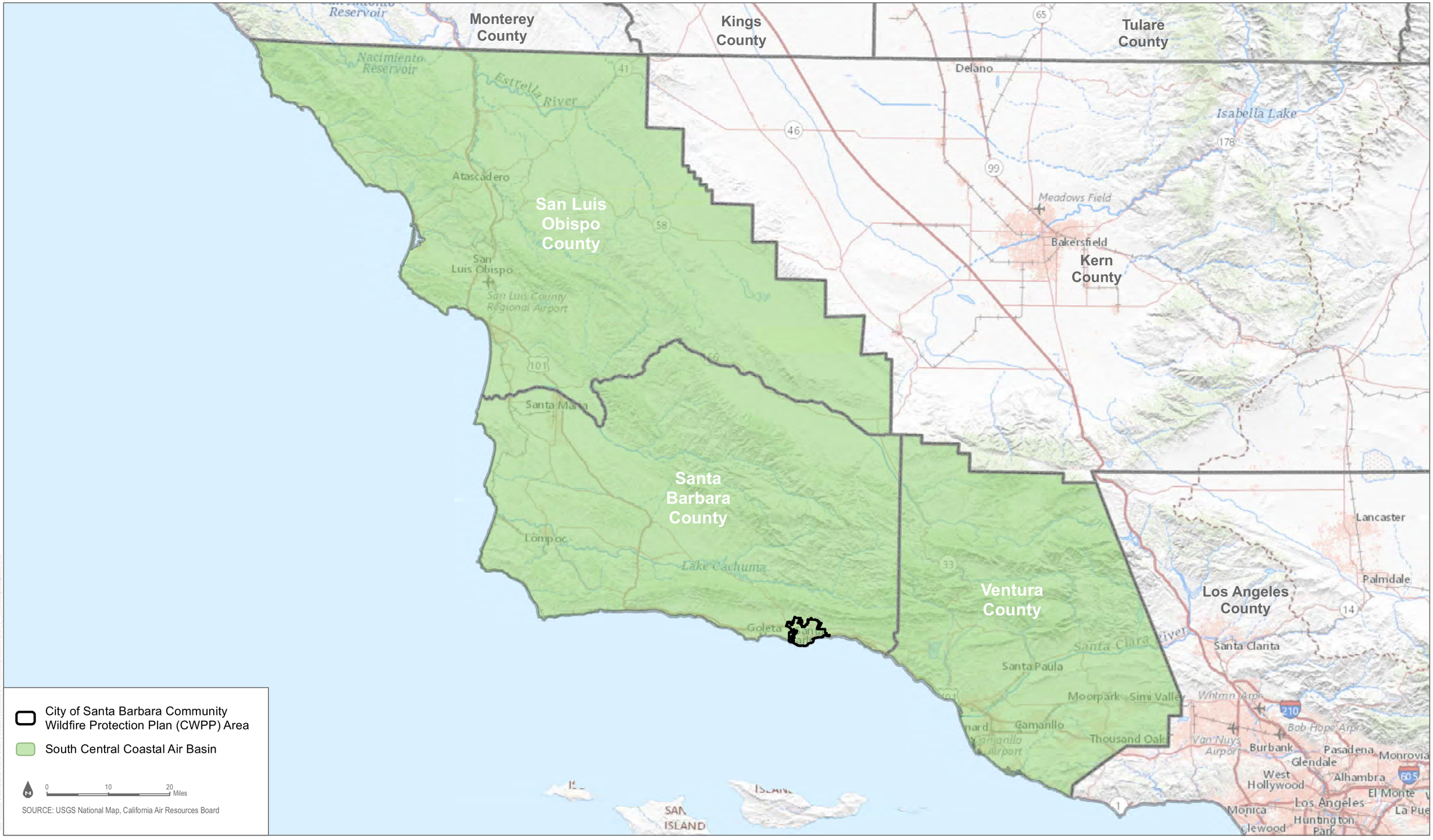
Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established minimum ambient air quality standards, or criteria, for outdoor pollutant concentrations in order to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), and lead (Pb). These pollutants, as well as toxic air contaminants (TACs), are discussed below. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone (O_3). O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors, such as hydrocarbons and NO_x. These precursors are mainly NO_x and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ozone). O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide (NO_2). NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. Nitrogen oxides (NO_x) play a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections.

Carbon Monoxide (CO). CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, fossil, or fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily, wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.



COMMUNITYWILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA
DUDEK

FIGURE 4.2-1

South Central Coastal Air Basin

City of Santa Barbara Community Wildfire Protection Plan

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Sulfur Dioxide (SO_2). SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter ($PM_{2.5}$) is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs. Respirable particulate matter, or coarse particulate matter (PM_{10}), is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body.

Additionally, these substances can transport absorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle, as well as producing haze and reducing regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$. Other groups considered sensitive are smokers, people who cannot breathe well through their noses, and exercising athletes (because many breathe through their mouths).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and

childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Volatile Organic Compounds (VOCs). Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants (TACs). A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples of TACs include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. The California Air Resources Board (CARB) classified "particulate emissions from diesel-fueled engines" (i.e., DPM) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars, and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000).

Wildland Fires

The City periodically experiences wildland fires, as discussed in Section 4.9 Hazards and Hazardous Materials and Section 4.20 Wildfire. Wildland fires can cause severe temporary impacts on air quality due to airborne particulate matter generated from the fire's ash and smoke. In addition, cleanup of ash, soot, and dust from a fire can also affect human health well after a fire event has ended. Houses burnt in a fire can also release asbestos fibers from the building materials, which can remain in the air for long periods of time, potentially creating health risks.

Sensitive Receptors

Sensitive receptors are populations most likely to incur health effects due to poor air quality. These include children, the elderly, the ill, and those with some chronic medical conditions. Locations of sensitive receptors include schools, parks and playgrounds, hospitals, day cares, assisted living facilities, and residential communities (CARB 2005). Federal, state and local regulations, including land use plans, can influence the proximity to which a sensitive receptor can be located near a significant source of air pollution. According to the SBCAPCD, sensitive receptors include schools, daycare facilities, hospitals, and care facilities (adult/elderly) (SBCAPCD 2020).

Sensitive receptors are dispersed throughout the City, and some are located near stationary sources. While many of the action items recommended in the Community Wildfire Protection Plan (CWPP) focus on the High Fire Hazard Area situated in the City's foothill and coastal areas, the CWPP covers all portions of the City, except the Santa Barbara Airport property located to the west of and disconnected from the City proper. As such, receptors such as those indicated above are located throughout the City and in some cases in close proximity to CWPP activities.

4.2.2 Relevant Plans, Policies, and Ordinances

Air quality is addressed in adopted City, County, state, and federal plans, policies and regulations. The primary responsibility for regulating stationary sources of air pollution falls under the jurisdiction of the SBCAPCD, while CARB has regulatory authority over air pollutants from mobile sources, such as motor vehicles and off-road mobile equipment.

Federal

Federal Clean Air Act

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants, setting hazardous air pollutant standards, approving state attainment plans, setting motor vehicle emission standards, issuing stationary source emission standards and permits, and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and standards based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

State

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.2-1, Ambient Air Quality Standards.

Table 4.2-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 μg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³

Table 4.2-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
Lead[j,k]	30-day Average	1.5 µg/m³	—	—
	Calendar Quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24 hours	25 µg/m³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016; EPA 2016.

Notes: O_3 = ozone; ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; NO_2 = nitrogen dioxide; CO = carbon monoxide; mg/m³= milligrams per cubic meter; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

g To attain the national 1-hour standard, the three-year average of the annual 98th percentile of the one-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

h On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the three-year average of the annual 99th percentile of the one-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

i On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12 µg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over three years.

j California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling three-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

California Clean Air Act of 1988

The California Clean Air Act requires air quality management districts to adopt and enforce regulations to achieve and maintain air quality that is within state air quality standards. The act also requires preparation of a Clean Air Plan (CAP).

Toxic Air Contaminants

A TAC is defined by California law as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. Federal laws use the hazardous air pollutants to refer to the same types of compounds that are referred to as TACs under state law. California regulates TACs primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588).

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. Pursuant to AB 2588, existing facilities that emit air pollutants above specified levels were required to (1) prepare a TAC emission inventory plan and report; (2) prepare a risk assessment if TAC emissions were significant; (3) notify the public of significant risk levels; and (4) if health impacts were above specified levels, prepare and implement risk reduction measures.

The following regulatory measures pertain to the reduction of DPM and criteria pollutant emissions from off-road equipment and diesel-fueled vehicles.

Idling of Commercial Heavy Duty Trucks (13 CCR 2485)

In July 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to control emissions from idling trucks. The ATCM prohibits idling for more than 5 minutes for all commercial trucks with a gross vehicle weight rating over 10,000 pounds. The ATCM contains an exception that allows trucks to idle while queuing or involved in operational activities.

In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.)

In July 2007, CARB adopted an ATCM for in-use off-road diesel vehicles. This regulation requires that specific fleet average requirements be met for NO_x emissions and for particulate matter emissions. Where average requirements cannot be met, best available control technology requirements apply. The regulation also includes several recordkeeping and reporting requirements.

In response to AB 8 2X, the regulations were revised in July 2009 (effective December 3, 2009) to allow a partial postponement of the compliance schedule in 2011 and 2012 for existing fleets. On December 17, 2010, CARB adopted additional revisions to further delay the deadlines reflecting reductions in diesel emissions due to the poor economy and overestimates of diesel emissions in California. The revisions delayed the first compliance date until no earlier than January 1, 2014, for large fleets, with final compliance by January 1, 2023. The compliance dates for medium fleets were delayed until an initial date of January 1, 2017, and final compliance date of January 1,

2023. The compliance dates for small fleets were delayed until an initial date of January 1, 2019, and final compliance date of January 1, 2028. Correspondingly, the fleet average targets were made more stringent in future compliance years. The revisions also accelerated the phaseout of older equipment with newer equipment added to existing large and medium fleets over time, requiring the addition of Tier 2 or higher engines starting on March 1, 2011, with some exceptions; Tier 2 or higher engines on January 1, 2013, without exception; and Tier 3 or higher engines on January 1, 2018 (January 1, 2023, for small fleets).

On October 28, 2011 (effective December 14, 2011), the executive officer approved amendments to the regulation. The amendments included revisions to the applicability section and additions and revisions to the definition. The initial date for requiring the addition of Tier 2 or higher engines for large and medium fleets, with some exceptions, was revised to January 1, 2012. New provisions also allow for the removal of emission control devices for safety or visibility purposes. The regulation also was amended to combine the particulate matter and NO_x fleet average targets under one, instead of two, sections. The amended fleet average targets are based on the fleet's NO_x fleet average, and the previous section regarding particulate matter performance requirements was deleted completely. The best available control technology requirements, if a fleet cannot comply with the fleet average requirements, were restructured and clarified. Other amendments to the regulations included minor administrative changes to the regulatory text.

In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025)

On December 12, 2008, CARB adopted an ATCM to reduce NO_x and particulate matter emissions from most in-use on-road diesel trucks and buses with a gross vehicle weight rating greater than 14,000 pounds. The original ATCM regulation required fleets of on-road trucks to limit their NO_x and particulate matter emissions through a combination of exhaust retrofit equipment and new vehicles. The regulation limited particulate matter emissions for most fleets by 2011, and limited NO_x emissions for most fleets by 2013. The regulation did not require any vehicle to be replaced before 2012 and never required all vehicles in a fleet be replaced.

In December 2009, the CARB Governing Board directed staff to evaluate amendments that would provide additional flexibility for fleets adversely affected by the struggling California economy. On December 17, 2010, CARB revised this ATCM to delay its implementation along with limited relaxation of its requirements. Starting on January 1, 2015, lighter trucks with a gross vehicle weight rating of 14,001 to 26,000 pounds with 20-year-old or older engines need to be replaced with newer trucks (2010 model year emissions equivalent as defined in the regulation). Trucks with a gross vehicle weight rating greater than 26,000 pounds with 1995 model year or older engines needed to be replaced as of January 1, 2015. Trucks with 1996 to 2006 model year engines must install a Level 3 (85% control) diesel particulate filter starting on January 1, 2012, to January 1, 2014, depending on the model year, and then must be replaced after 8 years. Trucks with 2007 to 2009 model year engines have no requirements until 2023, at which time they must be replaced with 2010 model year emissions-equivalent engines, as defined in the regulation. Trucks with 2010 model year engines would meet the final compliance requirements. The ATCM provides a phase-in optio2n under which a fleet operator would equip a percentage of trucks in the fleet with diesel particulate filters, starting at 30% as of January 1, 2012, with 100% by January 1, 2016. Under each option, delayed compliance is granted to fleet operators who have or will comply with requirements before the required deadlines.

On September 19, 2011 (effective December 14, 2011), the Executive Officer approved amendments to the regulations, including revisions to the compliance schedule for vehicles with a gross vehicle weight rating of 26,000 pounds or less to clarify that *all* vehicles must be equipped with 2010 model year emissions equivalent engines by 2023. The amendments included revised and additional credits for fleets that have downsized; implemented early particulate matter retrofits; incorporated hybrid vehicles, alternative-fueled vehicles, and vehicles with heavy-duty pilot ignition engines; and implemented early addition of newer vehicles. The amendments included provisions for

additional flexibility, such as for low-usage construction trucks, and revisions to previous exemptions, delays, and extensions. Other amendments to the regulations included minor administrative changes to the regulatory text, such as recordkeeping and reporting requirements related to other revisions.

California Health and Safety Code Section 41700

Section 41700 of the California Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Regional

Santa Barbara County Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The SBCAPCD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the South Central Coastal Air Basin, where the proposed project is located. The following SBCAPCD rules would be applicable to the project:

Rule 302 – Visible Emissions: A person shall not discharge into the atmosphere from any single source of emission any air contaminants for a period or periods aggregating more than three minutes in any one hour that is as dark or darker in shade as that designated as number 1 on the Ringelmann Chart.

Rule 303 – Nuisance: A person shall not discharge from any source whatsoever such quantities of air contaminants or other material in violation of Section 41700 of the Health and Safety Code which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety or any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

Rule 305 – Particulate Matter Concentration – Southern Zone: A person shall not discharge into the atmosphere from any source, particulate matter in excess of the concentration shown in Table 305(a).

Rule 307 – Particulate Matter Emissions Weight Rate – Southern Zone: A person shall not discharge into the atmosphere from any source, solid particulate matter in excess of the rate shown in Table 307(a).

Rule 401 – Agricultural and Prescribed Burning: This rule requires a person or agency to obtain a valid burn permit from the SBCAPCD for any agricultural or prescribed burn events.

2019 Ozone Plan

The 2019 Ozone Plan (2019 Plan) is the ninth triennial update to the initial state Air Quality Attainment Plan adopted by the SBCAPCD Board of Directors in 1991 (other updates were done in 1994, 1998, 2001, 2004, 2007, 2010, 2013, and 2016) (SBCAPCD 2019). Each of the plan updates have implemented an "every feasible measure" strategy to ensure continued progress toward attainment of the state ozone standards. Since 1992, Santa Barbara County has adopted or amended more than 25 control measures aimed at reducing emissions from stationary

sources of air pollution. These measures have substantially reduced ozone precursor pollutants, which includes NO_x and reactive organic compounds (ROCs).

Along with the implementation of statewide measures, the SBCAPCD's control measure strategy has successfully improved the County's air quality, as we've witnessed a downward trend in ozone exceedances. For the last 4 years, Santa Barbara County had three or fewer exceedances of the state 8-hour ozone standard, and the County was designated as nonattainment-transitional in April 2017 (SBCAPCD 2019). This designation means that the SBCAPCD is getting close to attaining the standard and must determine whether additional control measures are necessary to accomplish expeditious attainment of the state standard.

Santa Barbara County Association of Governments

Fast Forward 2040

The Santa Barbara County Association of Governments (SBCAG) Fast Forward 2040 continues the vision laid out in the Regional Transportation Plan and Sustainable Communities Strategy adopted in 2013 (SBCAG 2017). It relies on the same core strategies and planning assumptions and strives to achieve the same, broad goals as the prior plan. In particular, Fast Forward 2040 is based on the same Regional Growth Forecast and Regional Housing Needs Allocation as well as essentially the same land use assumptions and growth allocation as the prior plan. Transportation projects and programs have been updated to reflect funding source changes and projects completed and new projects added in the interim.

Development of the Sustainable Communities Strategy involved the study of eight, separate land use and transportation scenarios, each analyzing different combinations of land use and transportation variables (SBCAG 2017). The preferred scenario was selected from these scenario options on the basis of scenario performance as quantified by the adopted performance measures tied to the overall Fast Forward 2040 goals. All scenarios applied the same region-wide population, employment and housing projections from the 2012 SBCAG Regional Growth Forecast. Sub-regional distribution of forecast population growth varies by scenario consistent with allowable land uses, residential land use capacity, and policy assumptions.

Local

City of Santa Barbara General Plan Environmental Resources Element

The City's General Plan, Environmental Resources Element contains goals, policies, and implementation strategies that speak to maintaining air quality above federal and state standards and reducing dependence on the automobile (City of Santa Barbara 2011). The following air quality policies are found within the Environmental Resources Element:

ER7. **Highway 101 Set-Back.** New development of residential or other sensitive receptors on lots of record within 250 feet of U.S. Hwy 101 will be prohibited in the interim period until CARB phased diesel emissions regulations are implemented and/or until the City determines that diesel emission risks can be satisfactorily reduced or that a project's particulate exposure level is sufficiently reduced. The City will monitor the progress of CARB efforts and progress on other potential efforts or measures to address diesel emissions risks.

ER8. Low-Emission Vehicles and Equipment. Expand infrastructure and establish incentives for use of lower emission vehicles and equipment (e.g., parking priority, electric vehicle plug-ins). Support the amendment of speed limit restrictions to permit the wider use of electric vehicles.

ER10. Development Mitigation. Establish ordinance requirements to apply standard air-quality mitigation measures for new development and construction projects. These include measures to minimize construction dust and vehicle emissions; provide landscaping; conserve energy and reduce vehicle trips.

4.2.3 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the project would:

a) Conflict with or obstruct implementation of the applicable air quality plan.
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
c) Expose sensitive receptors to substantial pollutant concentrations.
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

In addition, Appendix G of the CEQA Guidelines indicates that where available, the significance criteria established by the applicable air district may be relied upon to determine whether the project would have a significant impact on air quality. The SBCAPCD has prepared criteria and thresholds for determining significance under CEQA. According to the SBCAPCD's Scope and Content of Air Quality Sections in Environmental Documents (SBCAPCD 2017), a project would have a significant air quality effect on the environment if operation of the project would:

- Emit (from all project sources, both stationary and mobile) more than the daily trigger for offsets or air quality impact analysis set in the SBCAPCD New Source Review Rule,[1] for any pollutant (i.e., 240 pounds per day for ROC or NO_x and 80 pounds per day for PM_{10});
- Emit 25 pounds per day or more of NO_X or ROC from motor vehicle trips only;
- Cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone);
- Exceed the SBCAPCD health risk public notification thresholds adopted by the SBCAPCD Board for non-cancer risk; and
- Be inconsistent with the latest adopted federal and state air quality plans for Santa Barbara County.

As stated in the SBCAPCD's Scope and Content of Air Quality Sections in Environmental Documents, the SBCAPCD does not currently have quantitative thresholds of significance in place for short-term or construction emissions; however, the SBCAPCD uses 25 tons per year for ROC or NO_X as a guideline for determining the significance of construction impacts (SBCAPCD 2017).

[1] The SBCAPCD New Source Review Rule as it existed at the time the SBCAPCD Environmental Review Guidelines were adopted in October 1995 (SBCAPCD 2017).

Due to the relatively low background ambient CO levels in Santa Barbara County, localized CO impacts associated with congested intersections are not expected to exceed the CO health-related air quality standards (SBCAPCD 2017). The most stringent ambient air quality standard for CO is the CAAQS at 20 parts per million (ppm) for the 1-hour standard and 9.0 ppm for the 8-hour standard. The Canon Perdido monitoring station, located at 700 East Canon Perdido, is the closest monitoring station to the project site where CO concentrations are measured. The Canon Perdido monitoring station reported 1-hour concentrations in ppm of 1.8, 2.1, and 1.5, and 8-hour concentrations of 0.8, 0.8, and 0.9 during the 2016–2018 monitoring period, which is the most recent CO data available for the Canon Perdido monitoring station (CARB 2020). As such, CO "hot spots" analyses are not required anymore (SBCAPCD 2017).

The City has also established thresholds based on the state CEQA Guidelines, SBCAPCD impact significance guidelines, and City policies (Charter, Conservation Element, and Master Environmental Assessment). A significant project-specific air quality impact may be identified if any of the following guidelines are exceeded, unless measures are implemented to avoid or lessen the significant effect (City of Santa Barbara 2010):

- Exceeding adopted Clean Air Plan growth projections and emission forecasts
- Exposure of sensitive receptors to substantial pollutant emissions
- Exceeding SBCAPCD health risks public notification thresholds
- Creation of objectionable odors affecting a substantial number of people in violation of SBCAPCD regulations

In addition, a significant citywide project-specific air quality impact may also constitute a considerable contribution to a cumulative impact to the regional air basin.

4.2.4 Impacts Analysis

AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable SBCAPCD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Zoning changes, specific plans, general plan amendments, and similar land use plan changes that do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to comply with the applicable air quality plan (SBCAPCD 2017).

Consistency with land use and population forecasts in local and regional plans, including the CAP, is required under CEQA for all projects. SBCAPCD further describes consistency with the CAP for projects subject to these guidelines, which means that direct and indirect emissions associated with the project are accounted for in the CAP's emissions growth assumptions, and the project is consistent with policies adopted in the CAP. The 2019 Ozone Plan was adopted by the District Board on December 19, 2019, and is the most recent applicable air quality plan. The 2019 Ozone Plan is the 3-year update required by the state to show how the SBCAPCD plans to meet the state 1-hour and 8-hour O_3 standard (SBCAPCD 2019). On December 12, 2019, the CARB designated Santa Barbara County as attainment for the state O_3 standards.

The Ozone Plan relies primarily on the land use and population projections provided by the Santa Barbara County Association of Governments and CARB on-road emissions forecast as a basis for vehicle emission forecasting. The project would not introduce new housing, population, or employment within the region and would not otherwise be growth-inducing. As such, the project would be included within the SBCAPCD 2019 Ozone Plan and State Implementation Plan.

The project includes reoccurring maintenance and fuels management activities throughout the City. The project would not conflict with or propose to change existing land use or applicable land use policies as designated in the City's General Plan; therefore, the project was included in the 2019 Ozone Plan. Similarly, the project does not have any growth-inducing features. As such, the project would not conflict with the applicable air quality plan. Therefore, this impact would be **less than significant**.

AQ-2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and SBCAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

Operational Emissions

The project would not entail one-time emissions such as during construction of a project. The project would include recurring maintenance and fuels management activities. The vegetation management techniques can be classified into four categories: manual (hand pulling, cutting, planting); mechanical (mowing, masticating, felling, yarding); biological (grazing); and prescribed fire (burn piles, broadcast burn). It should be noted that historically, the City has not used herbicide during implementation of vegetation management projects in Vegetation Management Units or in the Community Fuels Treatment Network. The City's Integrated Pest Management Strategy also seeks reduce or eliminate the use of chemicals in treating vegetation. Herbicide use is therefore not proposed as a vegetation treatment technique in this CWPP. The following discusses these fuel treatment techniques in more detail as found within Appendix E of the CWPP.

Manual

Hand labor involves pruning, cutting or removal of trees or other vegetation by hand or using hand-held equipment. Other hand labor treatments involve removing dead wood, piling material, and spreading chips/mulch. Hand labor is most effective in small treatment areas or areas with difficult access where the use of heavy equipment is infeasible. Hand labor also allows for selective management or removal of targeted vegetation and is typically used in conjunction with other techniques. Manual treatment may also include multi-cutting. Multi-cutting involves cutting vegetation (using hand tools, chainsaws, weed whips, and mowers) and cut vegetation is then reduced in size by cutting into lengths no longer than 6 inches long. The multi-cut vegetation is then left on the ground within the project area no greater than 12 inches in depth. Minimal ground disturbance results using this method since the root structure of vegetation is left intact and biomass generated from vegetation treatment is left on site.

Mechanical

Mechanical practices include all methods that employ motorized heavy equipment to remove or alter vegetation. Mechanical practices rearrange vegetation structures, compact or chip material, and move material to landings, staging areas, or burn piles. Mechanical equipment is usually equipped with either rubber tires or tracks, although skids and cables are also used. In some instances, two or more pieces of heavy equipment will work in concert to achieve a management standard. Mechanical equipment includes, but is not limited to, masticators, tractors, and chippers. Chippers are moved around as work occurs and placement is dependent on the ability to minimize the distance vegetation must be hauled to the chipper.

Biological

Biological management includes using grazing as a method to treat grasses, shrubs, and small trees. Grazing is an effective management tool for maintaining areas previously treated with hand labor or mechanical practices. Livestock each have different grazing habits and not all livestock are ideally suited for grazing treatments in all areas. Goats are an effective option as they will consume live or dead, tough, woody plant material.

Prescribed Burn

Prescribed fire can be used to burn piles of cut vegetation (pile burns) or over a designated prepared area (broadcast burn). Broadcast and pile burning are often implemented in conjunction with hand labor and mechanical treatment methods as a means of treating residual materials. Prescribed burning also serves to rapidly break down vegetative material and convert it to soil nutrients, reduce brood material for pests and pathogens, control invasive species, and reduce surface fuel buildup and the threat of severe wildfires. Prescribed burning is regulated under SBCAPCD Rule 401, Agricultural and Prescribed Burning and requires the City to obtain a valid burn permit, coordinate the events with the SBCAPCD and City Fire Department, and burn on days designated as permissive burn days by CARB.

Small pile burning is typically conducted at or near the treatment area. Piles should be constructed by hand and should be free of dirt, debris, and stumps. Material should be piled soon after cutting with the butt end of branches and limbs toward the outside of the pile so that branches are overlapping and forming a series of dense layers. Piles typically range in size from 10 x 10 x 10 feet to 12 x 12 x 25 feet. The top of the pile should be covered with a small sheet of heavy paper (e.g., butcher paper) to keep the pile interior dry. One or two limbs should be placed atop the paper to keep it in place. The dry interior portion of the pile should be ignited at the appropriate time using a weed burner or other igniting tool. Alternatively, tractors or hand crews can create piles of material on flat or gently-sloping ground that can be burned during wet conditions (pile burn), although the volume of fuel in the piles can produce localized heat, which may impact adjacent retained vegetation.

An alternative to pile burning is utilization of an air curtain burner. Air curtain burners allow for more complete combustion of wood waste and were developed to reduce the PM, or smoke, which results from burning. Using a technology called an “air curtain,” the smoke particles are trapped and reburned, resulting in a cleaner (less PM) burn. Where feasible, the use of an air curtain burner is recommended to dispose of wood waste. Air curtain burners may be available as a shared resource between City and other local municipal or land management agencies and can be temporarily sited at work locations to facilitate wood waste treatment.

Broadcast burns are usually done where a maximum amount of fuel treatment can take place and can be used to control invasive species and treat cut material (slash) on the ground surface, or reduce surface and/or ladder fuels beneath tree canopies in shaded fuel breaks. Treatment boundaries are often roads, trails, or other nonburnable features, reducing the number of firebreaks that need to be created. Treatment area is typically less than 1 acre in size. This approach reduces labor costs and preparation time, and minimizes soil disturbance and the potential for soil erosion. Broadcast burns can be used in all forest types, where conditions allow for effective control.

Broadcast burning may occur throughout the year; however, it is usually conducted during the late spring months when the ground is still wet or during fall or winter after plants have completed their yearly growth cycle and their moisture content has declined. Fall burns are more closely aligned with the natural fire cycle found in California. Piles of vegetation may be burned any time after the vegetation has dried. Hand-held tools, such as drip torches, propane torches, and flares, may be used for igniting prescribed fires.

Broadcast burns must be conducted by trained fire protection personnel. Timing is critical to the use of this treatment technique due to variances in weather conditions and the necessity to time treatments to minimize impacts to plant and animal species. Fuel moisture content must be determined to assess if the treatment area is safe to burn. There are typically more appropriate burn days in the spring and early summer months when there is a greater chance of atmospheric conditions conducive to smoke dilution and dispersion.

All prescribed burning would be conducted under safe burning conditions outside of the SBFD's designated fire season and will require a CARB-designated burn day and the development of a burn plan that will be approved by the fire chief and SBCAPCD. The SBCAPCD's Prescribed Burn Program (www.ourair.org/prescribed-burning) outlines burn requirements and the need for land managers to contact the SBCAPCD to acquire access to the Prescribe Fire Incident Reporting System for the purpose of submitting Smoke Management Plans. A pile burn plan will outline weather, topography, and fuel within the project area; the prescribed burn objectives; the required fire organization and resources needed to control the fire; and the weather parameters under which the burn can be conducted safely and with minimal smoke disturbance.

Emissions Estimation

As a worst-case air quality modeling scenario, the City would perform a prescribed burn event. It is possible that this would occur at the same time mechanical vegetation removal is occurring at another site. Therefore, the worst-case day assumes that both would occur within the same day. It is estimated that the first year of operation would be 2021.

Prescribed Burning Emissions

To estimate emissions from the prescribed burn, a maximum of 2 acres was considered with up to 20 burn piles per acre, or a total of 40 burn piles. Although the use of an air curtain burner is an alternative to open burning, it would result in less emissions compared to the open-pile burns. Therefore, the most conservative emissions scenario includes the use of open-pile burning.

As the burn piles are hand-assembled, the size was assumed to be 10 x 10 x 10 feet. Larger burn piles would be machine-assembled and are not appropriate for use within the City. The U.S. Forest Service Piled Fuels and Emissions Calculator was used to estimate the total pile biomass (USFS 2014). It was assumed

that the pile would be a combination of shrubs and hardwood, and the consumption efficiency would be 90%. Emission factors from the U.S. Department of Agriculture's Estimating Volume, Biomass, and Potential Emissions of Hand-Piled Fuels and the EPA AP-42 Section 13.1 was used (USDA 2010; EPA 1996). For prescribed burning events, the piles would not be created the same day of the burn so there is no overlap in creating the piles and the actual burn. It was assumed that a fire truck and crew and the City's vegetation management crew would be on site during the burn event. Detailed emissions calculations are included in Appendix B of this PEIR.

Mechanical Vegetation Removal Emissions

The mechanical removal of vegetation emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. Activity data for each vegetation removal unit was provided by the City. Emission sources include the use of offroad equipment (chainsaws, skip loaders, chippers) and vehicles. As the City only has one crew performing mechanical vegetation removal, there is no overlap assumed in the various sites. The City only performs the vegetation removal once per year at each site. The site with the most equipment and manpower needed was assumed for modeling. CalEEMod default emission factors, load factors, and horsepower were assumed for each piece of equipment except the chainsaws. For chainsaws, the concrete/industrial saw equipment category was selected with the horsepower amended to reflect actual chainsaws used. No other equipment or dust suppression is anticipated during these activities. For mobile sources, the CalEEMod default fleet mix, trip length, and trip characteristics were assumed. It was assumed that there would be 1,000 feet of unpaved road travel per trip. Detailed emissions calculations are included in Appendix B.

The following project design features (PDFs) are included as a part of the project description (see Chapter 3) and incorporated to reduce emissions of criteria air pollutants during operation.

PDF-AQ-1 **Public Notifications for Prescribed Burning**: One to three days prior to the commencement of prescribed burning operations, the project proponent will: (1) Post signs along the closest public roadway to the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or smoke concerns. (2) Publish a public interest notification in a local newspapers or other widely distributed media source describing the activity, timing, and contact information. (3) Send the local county supervisor and county administrative officer (or equivalent official responsible for distribution of public information) a notification letter describing the activity, its necessity, timing, and measures being taken to protect the environment and prevent prescribed burn escape. This PDF applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.

PDF-AQ-2 **Comply with Air Quality Regulations:** The project proponent will comply with the applicable air quality requirements of the SBCAPCD as set forth in Rule 401. This PDF applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.

PDF-AQ-3 **Submit Smoke Management Plan:** The project proponent will submit a smoke management plan for all prescribed burns, in accordance with SBCAPCD rules and

regulations, and in accordance with 17 CCR Section 80160. Burning will only be conducted in compliance with the burn authorization program of the SBCAPCD. This PDF applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.

PDF-AQ-4 **Create Burn Plan:** The project proponent will create a burn plan using the CAL FIRE burn plan template for all prescribed burns. The burn plan will include a fire behavior model output of First Order Fire Effects Model and BEHAVE or other fire behavior modeling simulation and that is performed by a qualified fire behavior technical specialist that predicts fire behavior and calculates consumption of fuels, tree mortality, predicted emissions, greenhouse gas emissions, and soil heating. The project proponent will minimize soil burn severity from broadcast burning to reduce the potential for runoff and soil erosion. The burn plan will be created with input from a qualified technician or certified state burn boss. This PDF applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.

PDF-AQ-5 **Avoid Naturally Occurring Asbestos:** The project proponent will avoid ground-disturbing treatment activities in areas identified as likely to contain naturally occurring asbestos (NOA) per maps and guidance published by the California Geological Survey, unless an Asbestos Dust Control Plan (17 CCR Section 93105) is prepared and approved by the SBCAPCD. Any NOA-related guidance provided by the SBCAPCD will be followed. This PDF applies to all treatment activities and treatment types, including treatment maintenance.

PDF-AQ-6 **Prescribed Burn Safety Procedures.** Prescribed burns planned and managed by non-CAL FIRE crews will follow all safety procedures required of CAL FIRE crew, including the implementation of an approved Incident Action Plan (IAP). The IAP will include the burn dates, burn hours, weather limitations, the specific burn prescription, a communications plan, a medical plan, a traffic plan, and special instructions such as minimizing smoke impacts to specific local roadways. The IAP will also assign responsibilities for coordination with the appropriate air district, such as conducting on-site briefings, posting notifications, weather monitoring during burning, and other burn-related preparations. This PDF applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.

Table 4.2-2 presents the maximum daily emissions associated with the operation of the project. Complete details of the emissions calculations are provided in Appendix B of this document. Emissions represent maximum of summer and winter. “Summer” emissions are representative of the conditions that may occur during the O_3 season (May 1 to October 31), and “winter” emissions are representative of the conditions that may occur during the balance of the year (November 1 to April 30).

Table 4.2.2. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions – Unmitigated

Emissions Source	ROC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Prescribed burning (area and equipment)	240.14	0.00	3,552.23	0.00	1,045.57	910.66
Mechanical (equipment)	0.70	5.39	6.60	0.01	0.32	0.31
Mobile	0.11	1.53	0.95	0.01	7.83	0.83
Total	**240.95**	**6.92**	**3,559.78**	**0.02**	**1,053.72**	**911.80**
Vehicle source emission threshold	*25*	*25*	—	—	—	—
Vehicle source emissions threshold exceeded?	**No**	**No**	—	—	—	—
Area + vehicle source emissions threshold	*55*	*55*	—	—	*80*	—
Area + vehicle source emissions threshold exceeded?	**Yes**	**No**	—	—	**Yes**	—

Notes: ROC = reactive organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
See Appendix B for complete results.

As shown in Table 4.2-2, the project would exceed the SBCAPCD operational criteria pollutant emissions thresholds for ROC and PM_{10} emissions. Therefore, the project would have a **potentially significant** impact during operation, and mitigation is required.

AQ-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Health Impacts of Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute (immediate) and/or chronic (cumulative) non-cancer health effects. A toxic substance released into the air is considered a TAC. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC. There may be sensitive receptors located in close proximity to the VMUs.

TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, AB 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills.

Project operation would result in emissions of DPM from heavy equipment, trucks accessing the sites, and from prescribed burning. DPM is characterized as a TAC by the State of California. The Office of Environmental Health Hazard Assessment (OEHHA) has identified carcinogenic and chronic

noncarcinogenic effects from long-term exposure, but has not identified health effects due to short-term exposure to diesel exhaust. Wildfire smoke also contains significant quantities of respiratory irritants that can act in concert to produce eye and respiratory irritation and potentially exacerbate asthma. Additionally, TACs are also present in wildfire smoke (Reinhardt and Ottmar 2004). Hazardous air pollutants may contribute to adverse health effects in infants, children, pregnant women and their fetuses, elderly persons, those with existing lung, heart, or liver diseases, and persons engaging in physical activity. Among the extensive list of TACs, acetaldehyde, acrolein, formaldehyde and benzene, are of concern because of their differential impact on infants and children compared to adults.

Exposure to Short-Term Acute Health Effects

Exposure to the types of TACs found in smoke could result in acute short-term health impacts such as eye and respiratory irritation and exacerbated asthma symptoms. Studies evaluating exposure of firefighters to smoke from prescribed burns have compared measured exposure levels at or next to burn sites to the Permissible Exposure Limits (PEL) established by the U.S. Occupational Safety and Health Administration's (OSHA) and to more stringent OELs established by Cal/OSHA and the National Institute for Occupational Safety and Health. Although studies have not found the time-weighted average TAC exposure levels that would exceed OSHA's PELs, up to 14% of firefighters evaluated in the studies were exposed to short-term respiratory irritant levels above the more stringent OELs (NWCG 2018; Reinhardt et al. 2000). Studies also found that the level of acute health risk experienced by firefighters from short-term exposure to formaldehyde, acrolein, benzene, and CO exceeded a Hazard Index of 1.0 (NWCG 2018). The highest levels of exposure to TACs occurred when burn personnel were maintaining prescribed burns within designated containment lines and performing direct attack of spot fires that crossed containment lines. These events and the associated smoke exposures occur more frequently during stronger winds, which hamper fire management and can carry the convective plume of smoke into the breathing zone of firefighters (Reinhardt and Ottmar 2004).

Prescribed burn smoke exposure, like other emissions, is dependent on proximity to the source. The studies described above focused on exposure of firefighters, which are by necessity the nearest receptor to smoke during prescribed burning. The general population would be further from smoke than firefighters but may also be exposed. However, because smoke generally disperses over distance, any nearby people would experience lower concentrations of TAC-containing smoke than fire personnel working within or adjacent to burn areas.

CAL FIRE and other agencies that plan and implement prescribed burns have agency-specific planning tools, planning and safety documents, public notification protocols, and best management practices to reduce safety risks and protect workers and the general population from excessive smoke exposure. CAL FIRE also requires approval of an Incident Action Plan (IAP) which, among other things, requires real-time monitoring of smoke conditions, reduces the potential for smoke exposure, and reduces inhalation hazards. For safety reasons, the public would be restricted from areas where active burns would take place, which would also avoid and minimize smoke exposure. SPR AD-4 requires adequate public notice and signage about prescribed burns including timing, contact information, and description of the activity. This would alert the public to planned burns and give them adequate notice to take precautionary measures such as using respirators, closing windows, or temporarily vacating the area. Additionally, per PDF AQ-3, burn managers must submit and obtain approval for each smoke management plan, which would identify nearby locations where people spend time and specify the prescription to reduce smoke exposure. CAL FIRE typically assigns one crew member to report weather conditions to the Incident Commander every 30

minutes to make sure the burn is staying within its prescription. If conditions ever deviate from the burn plan, the burn is rescheduled, and crews transition from managing active burning activities to patrolling and/or extinguishing the burn. In the event a prescribed burn extends beyond the perimeter of its planned area, hand crews are onsite to control the escape.

The prescription in the burn plan, best management practices, safety protocols, and PDFs discussed above are intended to ensure that burns stay within their prescription and minimize the exposure of the public to smoke. However, despite adherence to a smoke management plan, IAP, and other precautionary measures, there is no guarantee that smoke from every burn will behave as predicted and that people would not be exposed to TACs from smoke. Common reasons that prescribed burns have gone out of prescription are abnormal weather conditions, greater fuel loading than anticipated, and unexpected winds (Dether 2005). However, prescribed burning is a rarely used technique within the CWPP and will only be used when other methods are not appropriate. Furthermore, the CWPP prescribed burns are limited to a maximum of 2 acres and pile burning only; broadcast burning would not be allowed. Therefore, prescribed burns implemented under the CWPP would not expose receptors to substantial TAC concentrations over the short term.

It should be noted that the use of an air curtain burner would result in a shorter exposure of TAC emissions from prescribed burning compared to open-burn piles. The air curtain burners operate at a higher temperature and thus consume the same amount of vegetation in a much shorter time, also with fewer emissions of particulate matter. However, the locations of the use of an air curtain burner are speculative at this time; therefore, short-term acute impacts to sensitive receptors may be **potentially significant**. As such, mitigation is required.

Exposure to Long-Term Cancer and Chronic Health Effects

Exposure to the types of TACs contained in smoke generated by prescribed burns could result in chronic long-term health risk, including elevated cancer-risk. The long-term public health impacts of prescribed burning are not well studied; however, a human health risk assessment conducted on wildland firefighters found that the levels of polycyclic aromatic hydrocarbons (PAHs) wildland firefighters were exposed to in smoke were not found to be the major contributors to their overall level of cancer risk (NWCG 2018). Short-term elevated exposures (i.e., over days to weeks) to carcinogens found in wildfire smoke were found to be small relative to total lifetime exposures to carcinogens in other, more common combustion sources (CARB and CDPH 2016).

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of concentration over time. Prescribed burns typically last 1 day in any given location and most do not go out of prescription and result in the movement of smoke plumes to areas where residences or other people are present. Thus, it is not anticipated that the dose resulting from the prescribed burns that would occur under the CWPP would expose any people to a level of chronic, noncarcinogenic risk that exceeds SBCAPCD significance thresholds.

According to OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project. The project would operate for up to 3 days per site annually. Any prescribed pile burns would occur over 1 day. Therefore, the exposure duration would be a small fraction compared to the OEHHA

recommended 30-year exposure duration. Furthermore, although it is possible for the vegetation management activities to be in close proximity to sensitive receptors, the duration of each activity would not cause receptors to be exposed to substantial TAC emissions. The health risk public-notification thresholds adopted by the SBCAPCD Board is 10 excess cancer cases in a million for cancer risk and a hazard index of more than one (1.0) for non-cancer risk. The hazard index of more than 1.0 means that predicted levels of a toxic pollutant are greater than the reference exposure level, which is considered the level below which adverse health effects are not expected. The impact to sensitive receptors would be **less than significant** during operation.

Health Impacts of Carbon Monoxide

Mobile-source impacts occur on two basic scales of motion. Regionally, project-related travel would add to regional trip generation and increase the vehicles miles traveled within the local airshed and the SCCAB. Locally, project-related traffic would be added to the City's roadway system. If such traffic occurs during periods of poor atmospheric ventilation, consists of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and operates on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. Because of continued improvement in mobile emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCCAB is steadily decreasing.

Smoke emissions contain CO, which at high concentrations can cause dizziness, nausea, and impaired mental function. CO levels are highest during the smoldering stages of a fire, and resultant concentrations are especially high in areas close to the fire. CO disperses rapidly with distance such that fire-generated CO will not adversely affect nearby receptors unless a large fire occurs and inversion conditions trap the CO in areas where people are present. However, due to the small size of the prescribed burns and duration of only 1 day, it is not likely that the project would generate substantial quantities of CO emissions.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. Due to the relatively low background ambient CO levels in Santa Barbara County, localized CO impacts associated with project traffic alone are not expected to exceed the CO health-related air quality standards. Therefore, CO hotspot analyses are no longer required (SBCAPCD 2017). Therefore, a CO hotspot analysis is not needed, and the proposed project would have a **less than significant** impact.

Health Effects of Other Criteria Air Pollutants

Operation of the proposed project would result in ROC and PM_{10} emissions that exceed the SBCAPCD's emission thresholds. Regarding ROCs, some VOCs are associated with motor vehicles and offroad equipment, while others are associated with prescribed burning, the emissions of which would result in the exceedance of the SBCAPCD's thresholds.

In addition, ROCs and NO_x are precursors to O_3, for which the SCCAB is designated as attainment with respect to the NAAQS and CAAQS. The health effects associated with O_3 are generally associated with reduced lung function. The contribution of ROCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SCCAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the ROC emissions would occur, because exceedances of the O_3 ambient air quality standards tend to occur between April and October when solar radiation is highest.

Regarding NO_2, according to the emissions analysis, operation of the project would not contribute to exceedances of the NAAQS and CAAQS for NO_2. Health impacts from exposure to NO_2 and NO_x are associated with respiratory irritation, which may be experienced by nearby receptors during the periods of heaviest use of off-road equipment. However, these operations would be relatively short term. Additionally, off-road equipment would operate at various portions of the site and would not be concentrated in one portion of the site at any one time. Operation of the proposed project would not require any stationary emission sources that would create substantial, localized NO_x impacts.

The NO_x emissions, as described previously, would minimally contribute to regional O_3 concentrations and its associated health effects. The ROC emissions, as described previously, may contribute to regional O_3 concentrations and its associated health effects without mitigation. In addition to O_3, NO_x emissions would not contribute to potential exceedances of the NAAQS and CAAQS for NO_2. Thus, it is not expected that the proposed project's operational NO_x emissions would result in exceedances of the NO_2 standards or contribute to the associated health effects. CO tends to be a localized impact associated with congested intersections. The associated CO hotspots were discussed previously as a less-than-significant impact. Thus, the proposed project's CO emissions would not contribute to significant health effects associated with this pollutant.

Although the project would exceed the daily significance threshold for PM_{10}, it would only be exceeded for one day per year and is not likely to cause a regional exceedance of the NAAQS or CAAQS. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Based on the preceding considerations, health impacts associated with criteria air pollutants would be **potentially significant**.

AQ-4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of the receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicles and equipment exhaust emissions during project activities. Potential odors produced would be attributable to concentrations of unburned hydrocarbons from tailpipes of equipment. Such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people.

Land uses and industrial operations associated with odor complaints include fast food restaurants, bakeries, coffee roasting facilities, agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities (SBCAPCD 2017). The project would create short-term odors during mechanical and prescribed burning techniques. However, activities would be limited to 3 days per location for mechanical and 1 day for prescribed burning and thus would not affect a substantial number of people at any one location or time. Therefore, project operations would result in an odor impact that is **less than significant**.

Impact AQ-1 The project would have a potentially significant cumulative ROC and PM_{10} impact during operation.

Impact AQ-2 The project may expose sensitive receptors to substantial pollutant concentrations.

4.2.5 Mitigation Measures

Mitigation measure **MM-AQ-1 Prescribed Burning** shall be implemented to reduce emissions of ROC and PM_{10} generated during prescribed burn events. **MM-AQ-2 Air Curtain Burner** shall be implemented to reduce short-term non-cancer impacts to sensitive receptors. **MM-AQ-3 Covers**, **MM-AQ-4 Haul Route Approval,** and **MM-AQ-5 Disturbed Soil** shall be implemented to reduce emissions of ROC and PM_{10} and exposure of sensitive receptors.

MM-AQ-1 **Prescribed Burning**. The City shall not exceed a hand-built burn pile size of 5 feet x 5 feet x 5 feet and burn in excess of 22 piles of this size in any one day.

MM-AQ-2 **Air Curtain Burner**. The City shall implement the following measures prior to the use of an air curtain burner.

The City shall coordinate with the Santa Barbara County Air Pollution Control District (SBCAPCD) during the air curtain burner planning process to address any health risk concerns and properly mitigated in coordination with the SBCAPCD, as necessary.

The City shall obtain the necessary operating permits (i.e., Title V/Part 70 of the Clean Air Act) with the SBCAPCD for the use of an air curtain burner, when applicable. If the City is using an air curtain burner from another agency or rental company, the City shall ensure that the air curtain burner has air operating permits in place acceptable to the SBCAPCD prior to use.

MM-AQ-3 **Covers**. Trucks transporting cut vegetation material shall be covered from the point of origin.

MM-AQ-4 **Haul Route Approval**. The haul route(s) for all construction-related trucks, three tons or more, entering or exiting the sites, shall be approved by the transportation engineer.

MM-AQ-5 **Disturbed Soil**. After clearing, grading, earth moving, or excavation is completed, the entire area of disturbed soil shall be treated to prevent wind pickup of soil. This may be accomplished by seeding and watering until vegetative cover is grown, spreading soil binders, sufficiently wetting the area down to form a crust on the surface with repeated soakings as necessary to maintain the crust and prevent dust pickup by the wind, or other methods approved in advance by the Santa Barbara County Air Pollution Control District.

4.2.6 Level of Significance After Mitigation

Table 4.3-3 presents the maximum daily emissions associated with the operation of the project incorporating mitigation measure **MM-AQ-1**. Complete details of the emissions calculations are provided in Appendix B of this document.

Table 4.2-3. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions – Mitigated

Emission Source	ROC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Prescribed burning (area and equipment)	16.18	0.00	239.35	0.00	70.45	61.36
Mechanical (equipment)	0.70	5.39	6.60	0.01	0.32	0.31
Mobile	0.11	1.53	0.95	0.01	7.83	0.83
Total	**16.99**	**6.92**	**246.90**	**0.02**	**78.60**	**62.50**

Table 4.2-3. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions – Mitigated

Emission Source	ROC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Vehicle source emission threshold	*25*	*25*	—	—	—	—
Vehicle source emissions threshold exceeded?	**No**	**No**	—	—	—	—
Area + vehicle source emissions threshold	*55*	*55*	—	—	*80*	—
Area + vehicle source emissions threshold exceeded?	**No**	**No**	—	—	**No**	—

Notes: ROC = reactive organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
See Appendix B for complete results.

As shown in Table 4.2-3, the project would not exceed the SBCAPCD operational criteria pollutant emissions thresholds with implementation of **MM-AQ-1**. Therefore, the project would have a **less than significant** impact during operation with mitigation.

With implementation of **MM-AQ-2**, the City would ensure that TAC emissions during the use of air curtain burners would not cause cancer or non-cancer impacts that would exceed the SBCAPCD significance thresholds. With the implementation of **MM-AQ-3 Covers**, **MM-AQ-4 Haul Route Approval,** and **MM-AQ-5 Disturbed Soil,** emissions of ROC and PM_{10} and exposure of sensitive receptors would be **less than significant with mitigation**.

4.2.7 Cumulative Impacts

In considering cumulative impacts from the proposed project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SCCAB is designated as nonattainment for the CAAQS and NAAQS. If a project's emissions would exceed SBCAPCD's significance thresholds, it would be considered to have a cumulatively considerable contribution to nonattainment status in the SCCAB. If a project does not exceed thresholds and is determined to have less than significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality. The basis for analyzing the project's cumulatively considerable contribution is if the project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact) and consistency with SBCAPCD's 2019 Ozone Plan, which addresses cumulative emissions in the SCCAB.

The SCCAB has been designated as a state attainment area for O_3. The attainment status is the result of SBCAPCD control measures for various sources of air pollutants and their precursors within the SCCAB, including motor vehicles, off-road equipment, marine vessels, and commercial and industrial facilities. Implementation of the project would generate ROC and NO_x emissions (which are precursors to O_3). As indicated in Table 4.2-2, project-generated operational emissions would exceed SBCAPCD's emission-based significance thresholds for ROC and PM_{10}.

Based on the previous considerations, the project may result in a cumulatively considerable increase in emissions of nonattainment pollutants, and cumulative impacts would be **potentially significant**.

4.2.8 References

CARB (California Air Resources Board). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October 2000. Accessed May 21, 2015. http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf.

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4.3 Biological Resources

This section describes the existing biological resources conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Community Wildfire Protection Plan (CWPP or proposed project).

4.3.1 Existing Conditions

The proposed CWPP includes the City limits with the exception of the Santa Barbara Airport as it does not exhibit high fire characteristics. A variety of sources are available on the existing biological resources of the proposed CWPP area. These sources include vegetation data, databases of occurrences of special-status plants and special-status wildlife, databases on known aquatic resources, and a variety of Geographic Information System (GIS) data on biological resources maintained by the City. Other sources provide information on local occurrences and status of special-status species. City planning documents also provide important information on biological resources in the City and their sensitivity. Among others, the following sources were consulted for describing the existing conditions and potentially occurring sensitive resources for this section:

- City of Santa Barbara Vegetation data (City of Santa Barbara 2008)
- California Manual of Vegetation Online (CNPS 2020a)
- General Plan, Environmental Resources Element (City of Santa Barbara 2011, which includes the 1979 Conservation Element)
- City of Santa Barbara Local Coastal Program/Coastal Land Use Plan (City of Santa Barbara 2019)
- California Natural Diversity Database (CNDDB; CDFW 2020)
- Inventory of Rare and Endangered Plants of California (CNPS 2020b)
- Rare Plants of Santa Barbara County (Wilken 2012)
- Information on Wild California Plants (Calflora 2020)
- National Wetlands Inventory (USFWS 2020)
- National Hydrography Dataset (USGS 2020)
- Birds of Santa Barbara County, California (Lehman 2020)
- Collections and Research Online Databases (SBMNH 2020)

4.3.1.1 General Biological Setting

As described in Section 3.1 in Chapter 3, Project Description, the City of Santa Barbara (City) is located between the Santa Ynez Mountains and the Pacific Ocean, and south of Los Padres National Forest (see Figure 3-1 in Chapter 3). The section of coast occupied by the City consists of the steeply sloping Santa Ynez Mountain foothills and canyons in the north and a coastal plain supporting areas of both rolling hills and level terrain in the south. A series of watersheds supporting intermittent and ephemeral streams extend from above the project area in the Santa Ynez Mountains southward to the ocean. Major streams include, from east to west, Sycamore Creek, Mission Creek, San Roque Creek, and Arroyo Burro. Several smaller stream courses occur as tributaries to the major streams or as parts of minor watershed confined to the coastal plain and lower foothills. Elevations in the City range from sea level to approximately 1,100 feet above mean sea level north of Skofield Park along the northern boundary of the City (USGS 2015; CAL FIRE 2008; City of Santa Barbara 2005). The Mediterranean climate of the region is characterized by warm, dry summers and mild, wet winters. Marine-influenced fog often predominates in the late spring and early summer, particularly in morning hours.

Within the mostly urban landscape are a variety of natural habitats, such as oak woodlands, riparian communities, grasslands, and coastal scrub, including patches of habitat that connect with more extensive natural habitats in the Santa Mountains and the Los Padres National Forest to the north. In addition to the ribbons of natural communities occurring along City creeks, the proposed CWPP area supports several pockets of natural habitats, or modified versions of these habitats, such as within the Arroyo Burro Open Space, the Douglas Family Preserve, and portions of Elings Park in the southwestern part of the proposed CWPP area; the Andrée Clark Bird Refuge in the southeast; and Parma Park in the northeast. Other important areas for supporting wildlife and other natural resources within and adjacent to the City include the beaches and the Lauro Reservoir area (Figure 4.3-1, General Wildlife Habitats). A variety of special-status plant and wildlife species persist in the natural areas within and surrounding the City. In addition, the creeks and other blocks of habitat provide opportunities for movement for terrestrial wildlife, as well as facilitating gene flow for a variety of organisms living within and adjacent to City boundaries.

4.3.1.2 Vegetation Communities and Land Covers

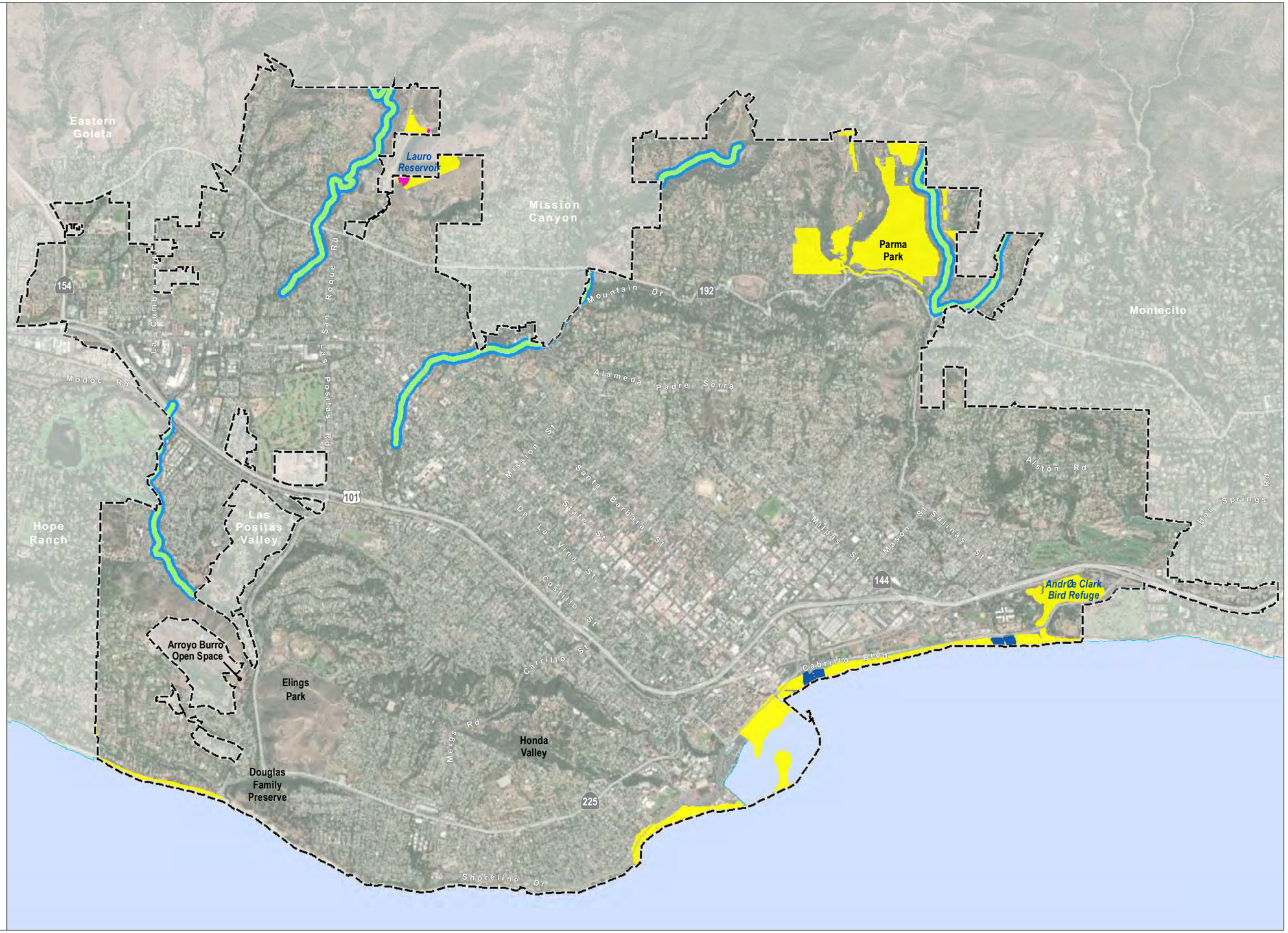
City GIS data include vegetation mapped throughout the proposed CWPP area (City of Santa Barbara 2008). The City's 2008 GIS vegetation layer is based on generalized communities and land covers described in the 1979 Conservation Element (City of Santa Barbara 1979) of the General Plan, which is included within the more recent Environmental Resources Element (City of Santa Barbara 2011). Data included in Table 4.3-1 and shown on Figure 3-6 in Chapter 3, Project Description, incorporate this layer, with several updates provided by Dudek in preparation of the proposed CWPP. Specifically, the data included in Figure 3-6 and Table 4.3-1 include acreages for areas not mapped in the City data, but for which the proposed CWPP provided data relevant to fuel characteristics. This is explained further in the characterizations of the vegetation communities and land covers below.

All communities and land covers shown in Figure 3-6 are mapped very generally. Currently accepted sources for detailed mapping in California are the Manual of California Vegetation Online (CNPS 2020a), which is a web-based version of *Manual of California Vegetation, Second Edition* (MCV2; Sawyer et al. 2009), and the California Department of Fish and Wildlife's (CDFW's) California Natural Community List (NCL; CDFW 2019). The MCV2 and NCL focus on a quantified, hierarchical approach to vegetation classification that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages). CNPS launched the web-based version of MCV2 in 2015 that provides up-to-date state and global rankings and vegetation community descriptions (CNPS 2020a). Communities described within this framework that have state rankings (S1 to S3) or global rankings (G1 to G3) identifying them as sensitive may occur within the more generally mapped communities in the City (City of Santa Barbara 2008) database, shown in Table 4.3-1 and Figure 3-6, and described below. The Environmental Resources Element of the City General Plan (City of Santa Barbara 2011) also includes information on the sensitivity of vegetation communities, and the City's certified Local Coastal Program (LCP; City of Santa Barbara 2019) provides policies for determining the location of environmentally sensitive habitat areas (ESHAs) in the state-designated coastal zone. Table 4.3-2 summarizes information on the sensitivity of vegetation types occurring in the proposed CWPP area.

City of Santa Barbara / CWPP Area

General Wildlife Habitat

- Important Wildlife Areas
- Waterfowl and Woodland Birds; Aquatic Habitat
- Shorebirds
- Riparian Bird Habitat Areas



0 0.5 1 Mile

SOURCE: ESRI World Imagery, City of Santa Barbara

COMMUNITYWILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

DUDEK

FIGURE 4.3-1

General Wildlife Habitats

City of Santa Barbara Community Wildfire Protection Plan

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Table 4.3-1. Vegetation Communities and Land Covers Summary

Community/Land Cover	Plan Area	High Fire Hazard Area (existing)	High Fire Hazard Area (proposed)	High Fire Hazard Area (total)	VMUs (existing)	VMUs (proposed)	VMUs (total)
Herbaceous Communities							
California Annual Grassland	535	354	76	430	96	90	186
Coastal Perennial Grassland	36	36	0	36	2	–	2
Subtotal	*571*	*390*	*76*	*466*	*98*	*90*	*188*
Upland Scrub Communities							
Coastal Sage Scrub	1,182	1,068	122	*1,190*	301	231	*532*
Chaparral	238	229	0	*229*	85	33	*118*
Subtotal	*1,420*	*1,297*	*122*	*1,420*	*386*	*264*	*650*
Woodland and Forest Communities							
Riparian Woodland/Creek	173	94	25	*119*	22	21	*43*
Southern Oak Woodland	1,140	955	109	*1,064*	369	134	*503*
Subtotal	*1,313*	*1,049*	*133*	*1,182*	*391*	*155*	*547*
Barren Natural Land Covers							
Coastal Bluff	15	–	–	–	–	–	–
Coastal Strand/Beach	123	–	9	*9*	–	–	–
Subtotal	*137*	*0*	*9*	*9*	–	–	–
Anthropogenic and Other Land Covers							
Golf Course	219	94	0	*94*	–	2	*2*
Orchard	236	43	11	*183*	37	20	*57*
Parkland	60	22	38	*60*	–	19	*19*
Urban	7,686	1,643	328	*1,972*	233	93	*326*
Unmapped	162	109	45	*154*	34	28	*62*
Subtotal	*8,363*	*2,040*	*422*	*2,463*	*304*	*163*	*467*
Total	**11,805**	**4,777**	**764**	**5,540**	**1,180**	**672**	**1,852**

Source: City of Santa Barbara 2020.

Table 4.3-2. Vegetation Communities Sensitivity

Community/Land Cover	General Plan Sensitivity Level	Potential for State and Globally Ranked Sensitive Communities?
Herbaceous Communities		
California Annual Grassland	Low	No
Coastal Perennial Grassland	Very High	Yes
Upland Scrub Communities		
Coastal Sage Scrub	Medium	Yes

Table 4.3-2. Vegetation Communities Sensitivity

Community/Land Cover	General Plan Sensitivity Level	Potential for State and Globally Ranked Sensitive Communities?
Chaparral	Medium	Yes
Woodland and Forest Communities		
Riparian Woodland/Creek	Medium*	Yes
Southern Oak Woodland	High*	Yes
Barren Natural Land Covers		
Coastal Bluff	Very High	No
Coastal Strand/Beach	Very High	No
Other Potentially Occurring Natural Communities		
Freshwater Marsh	High*	Yes
Coastal Saltmarsh	High*	Yes
Eucalyptus Woodland	NA	No
Anthropogenic and Other Land Covers		
Golf Course	NA	No
Orchard	NA	No
Parkland	NA	No
Urban	NA	No

Source: City of Santa Barbara 2011.
Note:
* Considered ESHA when occurring in the coastal zone, per the LCP (City of Santa Barbara 2019). Additional communities may be considered ESHA, depending on factors such as whether they support special-status species.

Grassland and Herbaceous Communities

California Annual Grassland

California annual grassland is characterized by a mixture of weedy, introduced annuals, primarily grasses, as well as native annuals (Sawyer and Keeler-Wolf 1995; Holland 1986). Typically, communities described in MCV2 and NCL (CNPS 2020a; CDFW 2019) that are consistent with California annual grassland are not considered sensitive. Wild oats and annual brome grasslands (CNPS 2020a) is a community included in MCV2 that most typifies California annual grassland in region. California annual grassland may include oats (*Avena* spp.), bromes (*Bromus diandrus*, *B. madritensis*, *B. hordeaceus*), black mustard (*Brassica nigra*), stork's bill (*Erodium* spp.), dove weed (*Croton setiger*), weedy herbs such as prickly Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*), but it also often includes a variety of native forbs and may include native grasses such as purple needlegrass (*Stipa pulchra*). California annual grassland may occur where disturbance by maintenance (e.g., mowing, scraping, disking, and spraying), grazing, repetitive fire, agriculture, or other mechanical disruption has altered soils and removed native seed sources from areas formerly supporting native vegetation (Holland 1986). This community "is found on the gently rolling hillsides of the City," particularly in areas of human disturbance (City of Santa Barbara 2011). Small wildlife found here include those feeding on vegetation and seed-eaters, including songbirds and some small burrowing mammals. Raptors prey on many of these species in this open habitat type. Most of the California annual grassland mapped in the City occurs in the southwest, such as within Elings Park, and the northwest adjacent to Los Padres National Forest (Figure 3-6). The proposed CWPP area supports approximately 535 acres (5%) mapped as California annual grassland (Table 4.3-1).

Coastal Perennial Grassland

Coastal perennial grassland within the proposed CWPP area refers to areas where native bunchgrasses such as purple needlegrass (*Stipa pulchra*) occur. Communities recognized in MCV2 and NCL (CNPS 2020a; CDFW 2019) that equate to coastal perennial grassland, such as purple needlegrass grassland, may be considered sensitive according to rankings listed in NCL. In addition, this community, and native grasslands in general, are rated in the General Plan Environmental Resources Element as having a "high sensitivity" (City of Santa Barbara 2011), and native grasslands are considered ESHA in the LCP (City of Santa Barbara 2019). Generally, the wildlife species occurring here are similar to those occurring in California annual grassland. Species occurring here are those relying, at least in part, on open areas with the moderately dense vegetative structure provided by this community. Also, "native grasses are the only food plants for several insect species" (City of Santa Barbara 2011). Native bunchgrasses are mapped on a hillside in Parma Park, at the northeast end of Anapamu Street, and on the Riviera in an area surrounding the intersection of Las Tunas Road and East Las Tunas Road (Figure 3-6). In 1979, the Conservation Element noted only the stands in Parma Park and near East Anapamu Street, and noted that native grasses occurred only in scattered clumps there (City of Santa Barbara 2011). In addition, aerial images suggest that both the Anapamu site and the Las Tunas Road site are mostly developed. The LCP includes an additional area of native grasses in the coastal zone at the Arroyo Burro Open Space (City of Santa Barbara 2019). Other as yet unidentified areas of coastal perennial grassland may exist in less urban parts of the City. The CWPP area supports approximately 36 acres (0.3%) mapped as coastal perennial grassland (Table 4.3-1).

Scrub Communities

Coastal Sage Scrub

Coastal sage scrub is a native plant community characterized by a variety of soft, low, aromatic, drought-deciduous shrubs. Some of the locally occurring communities recognized in MCV2 and NCL equating to this community are California sagebrush scrub, lemonade berry scrub, and California brittle bush scrub (CNPS 2020a; CDFW 2019). Lemonade berry scrub and California brittle bush scrub, and potentially others occurring in the proposed CWPP area, have state or global rarity rankings indicating they are sensitive. These communities are considered only of "medium" sensitivity under the Environmental Resources Element (City of Santa Barbara 2011). But they are considered sensitive under the General Plan and are considered ESHA under the LCP when they support special-status species (City of Santa Barbara 2019). Coastal sage scrub typically develops on south-facing slopes and other xeric situations. Species occurring within this community include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), California brittle bush (*Encelia californica*), sages (*Salvia* spp.), and scattered evergreen shrubs, including lemonade berry (*Rhus integrifolia*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*). The Environmental Resources Element characterizes coast sage scrub as consisting "primarily of low (one to four feet), drought-deciduous, aromatic, semi-woody shrubs and subshrubs, with some larger evergreens and annual or perennial grasses" (City of Santa Barbara 2011). The diverse wildlife, including songbirds, reptiles, and some small mammals, relies on this community for its diversity of forage plants and availability of cover. This community occurs widely in the less urban portions of the proposed CWPP area, particularly on portions of the Mesa area, the Riviera, and the vicinity of San Roque Canyon and Lauro Reservoir (Figure 3-6). The proposed CWPP area supports approximately 1,182 acres (12%) mapped as coastal sage scrub (Table 4.3-1).

Chaparral

Chaparral is a drought- and fire-adapted community of broad-leafed shrubs, 1.5 to 3.0 meters (3 to 10 feet) tall, typically forming dense, impenetrable stands. Communities recognized in MCV2 and NCL and occurring in the vicinity include bog pod ceanothus scrub, scrub oak chaparral, and chamise scrub (CNPS 2020a; CDFW 2019). Some communities included in MCV2 and NCL (CNPS 2020a; CDFW 2019) that equate to chaparral, such as coastal sage scrub oak chaparral, may have state or global rarity rankings indicating they are sensitive. However, while some special-status plant and wildlife species may occur in chaparral communities, these communities themselves are considered only of "medium" sensitivity under the Environmental Resources Element (City of Santa Barbara 2011) and are not considered sensitive under the LCP (City of Santa Barbara 2019). Chaparral is found on hot, dry slopes, ridges, and mesas, generally on thin, rocky soils. In addition, "several of the shrubs are also capable of condensing fog, thereby creating more moist conditions for growth" (City of Santa Barbara 2011). This community is a mixture of chamise (*Adenostoma fasciculatum*), ceanothus (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), laurel sumac, and black sage (*Salvia mellifera*), but may include nearly pure stands of these or other species. The variety of shrubs occurring here mostly "show similar adaptations to summer drought, such as stiff, thick, heavily cutinized and generally evergreen leaves" (City of Santa Barbara 2011). Vertebrate species resident in this community are those adapted to living within dense, impenetrable stands of shrubs, including songbirds such as California thrasher (*Toxostoma redivivum*) and wrentit (*Chamaea fasciata*), and several small mammal and terrestrial reptile species. The Environmental Resources Element notes that "Decomposer species are somewhat lacking in chaparral communities because the drought adaptations . . . inhibit organic breakdown and soil conditions are generally unfavorable" (City of Santa Barbara 2011). This community occurs mostly in the northeastern part of the CWPP area, in the general vicinity of Parma Park, but a small area is mapped on the north-facing slope of the eastern Mesa (Figure 3-6). Additional, unmapped areas are most likely to occur in the northern part of the proposed CWPP area. The proposed CWPP area supports approximately 238 acres (2%) mapped as chaparral (Table 4.3-1).

Woodland and Forest Communities

Riparian Woodland/Creek

Although included here under woodland and forest communities, riparian woodland/creek communities include aquatic/stream habitat as well as the riparian vegetation supported by these streams. These habitats may include a variety of forest and scrub communities included in MCV2 and NCL, such as arroyo willow scrub, Fremont cottonwood forest, California sycamore woodlands, white alder groves, and riparian forms of coast live oak woodlands (CNPS 2020a; CDFW 2019). Some of these communities, such as Fremont cottonwood forest and California sycamore woodlands, have state and global rarity rankings indicating they are sensitive, but others do not. However, all are generally considered sensitive as aquatic resources and are protected under policies of the Environmental Resources Element (City of Santa Barbara 2011) and the LCP (City of Santa Barbara 2019). Under the latter, riparian habitats are typically considered ESHA. Riparian communities in the region may be those where dominant species include California sycamore (*Platanus racemosa*), coast live oak (*Quercus agrifolia*), arroyo willow (*Salix lasiolepis*), and Fremont cottonwood (*Populus fremontii*), and they support a variety of other shrub and herbaceous species. The Environmental Resources Element notes that "Water is the major limiting factor to the abundance and diversity of terrestrial organisms, and, within the City, the creeks are the major natural supply of readily available water" (City of Santa Barbara 2011). Riparian communities support a great variety of terrestrial, aquatic, and semiaquatic wildlife species, both vertebrate and invertebrate. Riparian communities and aquatic stream habitats support a variety of special-status species within the City, such as southwestern pond-turtle (*Actinemys pallida*), yellow warbler (*Setophaga petechia*), and the federally endangered southern steelhead

(*Oncorhynchus mykiss*), and some of these habitats may have potential to support the federally threatened California red-legged frog (*Rana draytonii*). Most riparian woodland/creek habitat mapped in the City occurs along Sycamore Creek, Mission Creek, San Roque Creek, Arroyo Burro, and their tributaries (Figure 3-6). The LCP data on "potential sensitive vegetation" shows additional, small amounts of riparian scrub along Mesa Creek on the north side of the Douglas Family Preserve, south of Cliff Drive near Santa Barbara City College, and at the Andrée Clark Bird Refuge (City of Santa Barbara 2019). Additional riparian vegetation occurs along City creeks in locations where not shown in Figure 3-6. The proposed CWPP area supports approximately 172 acres (1%) mapped as riparian woodland/creek (Table 4.3-1).

Southern Oak Woodland

Southern oak woodland in the City refers primarily to coast live oak woodland. This community is not considered sensitive in NCL, but the Environmental Resources Element (City of Santa Barbara 2011) and the LCP (City of Santa Barbara 2019) have both prioritized its preservation and protection. Coast live oak woodland, as the primary local community in MCV2 and NCL (CNPS 2020a; CDFW 2019) equating to southern oak woodland, is dominated by coast live oak and has a canopy height usually ranging from 30 to 80 feet. The shrub layer of coast live oak woodland is poorly developed, but may include toyon, gooseberry (*Ribes* spp.), laurel sumac, or blue elderberry (*Sambucus nigra* ssp. *caerulea*). The herb component is continuous and dominated by a variety of introduced species, such as brome grasses (Holland 1986). Within the proposed CWPP area, coast live oak woodland, and southern oak woodland generally, is subject to more disturbance than it is in less urban settings. The oak trees in this community "control the micro-environment around them as their extensive shade produces significantly lower summer temperatures and their leaf litter creates acidic soil conditions" (City of Santa Barbara 2011). Southern oak woodland provides shelter, food, and space for a variety of animals. Special-status wildlife potentially occurring here includes Cooper's hawk (*Accipiter cooperii*), which may nest in the stands of oaks in semi-urban areas, and Northern California legless lizard (*Anniella pulchra*). White-tailed kites (*Elanus leucurus*) may breed in southern oak woodland where adjacent to suitable foraging habitat. Also, the variety of conditions in which this community occurs in the proposed CWPP area, including residential areas where stands of trees have been preserved, relatively natural upland woodland communities, and riparian areas, further influences the variety of organisms occurring here. In the northern part of the CWPP area, southern oak woodlands occurring along creeks may support species such as California newt (*Taricha torosa*) and southwestern pond turtle (*Actinemys pallida*). Southern oak woodland is concentrated in the less urban parts of the City, including the north side of the Mesa and the nearby Arroyo Burro watershed, the northeastern-most part of the City, and areas north of the Riviera (Figure 3-6). The proposed CWPP area supports approximately 1,141 acres (10%) mapped as southern oak woodland (Table 4.3.1).

Barren Natural Land Covers

Coastal Bluff

This community is limited to the steep bluffs below Shoreline Drive. No communities that equate to coastal bluff are included in MCV2 or NCL, and therefore it does not have a state or global rarity ranking. However, its sensitivity level is considered "very high" in the Environmental Resources Element (City of Santa Barbara 2011). In addition, vegetated areas of coastal bluff may be considered ESHA, as "coastal bluff scrub," under the LCP (City of Santa Barbara 2019). Sparsely distributed perennial shrubs and hardy annuals vegetate the slopes of this community. Many of the plants are reduced to a mat form by prevailing winds, and many are succulent species. These areas support few wildlife species, which tend to include a limited number of birds, several other terrestrial small vertebrates, and some arthropods. Coastal bluff mapped in the City is limited to the Mesa area, along Shoreline Park and westward to Lighthouse Point (Figure 3-6). The CWPP area supports approximately 15 acres (0.1%) mapped as coastal bluff (Table 4.3-1).

Coastal Strand/Beach

This land cover includes unvegetated beach sand as well as areas of vegetation consisting of low-growing (two feet) perennial shrubs and herbs found on the loose sand above the high-tide line. No communities that equate to coastal strand/beach are included in MCV2 or NCL, and therefore it does not have a state or global rarity ranking. However, its sensitivity level under the Environmental Resources Element (City of Santa Barbara 2011) is considered "very high," and the presence of special-status species often results in beaches being considered ESHA under the LCP (City of Santa Barbara 2019). Recreational use of coastal strand/beach areas has created disturbance and limited vegetation growth to small, scattered areas. Relatively few species are adapted to survive in this land cover, but within the City, it may support wintering and migration habitat, and occasionally breeding habitat, for the federally threatened western snowy plover (*Charadrius nivosus*). It may also support habitat for runs of California grunion (*Leuresthes tenuis*) and for a variety of shorebirds. The CWPP area supports approximately 123 acres (1%) mapped as coastal strand/beach (Table 4.3-1).

Anthropogenic and Other Land Covers

Several anthropogenic communities and other land covers in Figure 3-6 and Table 4.3-1 are not described in the Environmental Resources Element (City of Santa Barbara 2011). These communities range from those that are largely unvegetated to those that are relatively natural but not classifiable under the communities described above. Despite the anthropogenic nature of most of these land covers, any may potentially support sensitive biological resources.

Golf Course

Golf courses are maintained, landscaped areas that are largely vegetated. MCV2 and NCL include no communities that equate to this land cover type. The variety of vegetation occurring in these areas, and the water source from irrigation, make them suitable for many disturbance-tolerant wildlife species, including several songbird species and common invertebrates. Maintenance activities and human disturbance limit the potential for many other species to occur here, such as burrowing mammals. The only golf courses within the City are the Santa Barbara Municipal Golf Course, on the north side of U.S. Route 101 and west of Las Positas Road, and the Montecito Country Club, immediately north of U.S. Route 101 in the far eastern part of the City (Figure 3-6). The proposed CWPP area supports approximately 219 acres (2%) mapped as golf course (Table 4.3-1).

Orchard

Orchards are an anthropogenic, agricultural habitat consisting of planted trees. MCV2 or NCL include no communities that equate to this land cover type. Some orchards may be irrigated, while others may not be. A limited number of wildlife species are associated with this land cover, but some songbirds nest here and several bat species may have the potential to establish roosts (although maternity roosts are not likely). The prevalence of arthropods may be limited by pest control practices in some cases. Orchards mapped in the City are mostly limited to the northern, foothill areas. Several areas shown elsewhere on Figure 3-6 may be incorrectly mapped, or mapped based on out-of-date information. The proposed CWPP area supports approximately 236 acres (2%) mapped as orchard (Table 4.3-1).

Parkland

Several areas either mapped as "barren" or not mapped in the City GIS data are mapped as "parkland" in the proposed CWPP. This designation is a catch-all for several relatively extensively vegetated areas that otherwise would have gone unmapped, and each of the three areas has distinct characteristics, so each is discussed separately here. The three areas are the coastal mesa portion of the Douglas Family Preserve, the athletic fields of Elings Park, and a hillside in the northwestern portion of Elings Park (Figure 3-6). The proposed CWPP area supports approximately 59 acres (1%) mapped as parkland (Table 4.3-1).

Douglas Family Preserve. This location includes elements of areas mapped as California annual grassland, coastal sage scrub, and southern oak woodland elsewhere in the proposed CWPP area. It likely supports a relatively high diversity of vertebrate wildlife species, including birds, mammals, and reptiles, as well as invertebrates, due to the diversity of upland habitat types here.

Elings Park athletic fields. This is an irrigated, landscaped, maintained area very similar to areas mapped elsewhere in the City as "golf course" and historically was a landfill for the City (See Section 4.7 Hazards and Hazardous Material). As it is an anthropogenic, highly disturbed area, it provides little habitat for wildlife, although some birds may occupy landscaping around the borders of the playing fields.

Elings Park hillside. Based on aerial imagery, this area is a hillside supporting vegetation that may have been subject to past disturbances from off-road vehicle activity. It appears to support sparse scrub vegetation. Mapping is general and overlaps a residential area on the top of the hill.

Urban

Urban areas are heavily developed parts of the City that by far occupy the largest part of the proposed CWPP area. MCV2 and NCL include no communities that equate to this land cover type. These areas include pockets of natural vegetation, but largely consist of structures, hardscape, landscaped and maintained areas, and ornamental vegetation. Urban areas occur throughout downtown Santa Barbara and across all other residential and commercial parts of the City. Although this land cover occurs throughout the proposed CWPP area, it is least prevalent in the northern foothill area north of the Riviera. The CWPP area supports approximately 7,686 acres (65%) mapped as urban (Table 4.3-1).

Unmapped

No vegetation or land cover information was available for several scattered locations around the CWPP area (Figure 3-6). Based on aerial imagery, these locations, most of which are less than 10 acres, vary from residential areas to relatively natural locations. Two notable locations include the Andrée Clark Bird Refuge, which consists mostly of open water but also includes vegetation consistent with coastal sage scrub and freshwater marsh, and a portion along Arroyo Burro within the coastal zone. Approximately 161 acres (2%) of the CWPP area are not mapped (Table 4.3-1).

Other Potentially Occurring Natural Communities

The Conservation Element includes additional vegetation communities or land covers not shown among the generally mapped communities and land covers in Table 4.3-1 and on Figure 3-6. Two of these are land covers occurring most extensively in the City at the Santa Barbara Airport, outside the proposed CWPP area, but that also are known to occur in limited patches elsewhere.

Freshwater Marsh

Although not shown on Figure 3-6 or Table 4.3-1, this community is described in the Environmental Resources Element (City of Santa Barbara 2011). As described there, "Vegetation in this community is composed of floating, emergent, and submerged herbaceous perennials with little or no woody tissue" (City of Santa Barbara 2011). A variety of wildlife is associated with this community. Many terrestrial bird species may place their nests or forage in this community, and several more water-dependent species may anchor nests at water level, adjacent to foraging habitat. Several amphibian and invertebrate species have aquatic larval forms that are dependent on this community. The Environmental Resources Element (City of Santa Barbara 2011) does not identify any locations where this community occurs in the CWPP area, but a fairly extensive area of freshwater marsh occurs adjacent to open water at the Andrée Clark Bird Refuge. Elements of this community are also found in reservoirs, creeks, and ditches throughout the City.

Coastal Saltmarsh

Although not shown on Figure 3-6 or Table 4.3-1, this community is described in the Environmental Resources Element (City of Santa Barbara 2011). Coastal saltmarsh "is distinguished by salt-loving herbaceous plant species lying in the intertidal zone of Goleta Slough [outside the proposed CWPP area] and, to a small extent, at the mouth of Mission Creek" (City of Santa Barbara 2011).

Eucalyptus Woodland

Although not shown on Figure 3-6 or Table 4.3-1, this community is included here because of its prevalence in the proposed CWPP area. Eucalyptus woodland – semi-natural alliance is a community described in MCV2 and NCL (CNPS 2020a; CDFW 2019) and consists of planted trees, groves, and windbreaks that are naturalized on uplands or bottomlands and adjacent to stream courses, lakes, or levees. It consists of a continuous canopy of trees less than 60 meters (approximately 195 feet) and has an intermittent to sparse shrub layer. Eucalyptus woodland occurs in many places in the City. Tasmanian blue gum (*Eucalyptus globulus*) and redgum (*Eucalyptus camaldulensis*) are species that commonly occur in this community in the proposed CWPP area. Stands of eucalyptus supporting particular environmental conditions of shading, temperature, and wind protection may support wintering monarchs (*Danaus plexippus*). A variety of migratory birds may occur in this community, and it may provide good raptor nesting and roosting habitat. Monarch butterflies establish fall migration and overwintering roosts in eucalyptus woodlands that provide specific conditions related temperature, wind protection, and shading. But relatively few special-status plant or wildlife species are associated with eucalyptus woodland.

4.3.1.3 Sensitive Resources

Special-Status Plants

Special-status plants, as discussed in this section, include those:

- Designated as threatened or endangered under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA), or that are considered candidates or proposed for listing under ESA or that are proposed for listing under CESA
- Considered as candidates or proposed for listing under either the ESA or CESA

- Designated as having a California Rare Plant Rank of 1, 2, 3, or 4 in the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2020b), classified as follows:
  - List 1A: plants presumed extinct in California
  - List 1B: plants rare, threatened, or endangered in California and elsewhere
  - List 2: plants rare, threatened, or endangered in California, but more common elsewhere
  - List 3: Plants about which we need more information – A review list
  - List 4: plants of limited distribution – a watch list
- Considered locally rare, due to inclusion on the list in Rare Plants of Santa Barbara County (Wilken 2012)
- Additional species considered rare in the Environmental Resources Element of the General Plan (City of Santa Barbara 2011)

The wide array of vegetation communities and habitats occurring in the proposed CWPP area are known to support, and have supported, many different special-status species. In fact, while special-status plants are unlikely to occur within urban and other anthropogenic land covers, they have potential to occur in all the natural land covers occurring in the CWPP area, although the often disturbed versions of these communities that occur are less likely to support special-status plants than more pristine versions of these communities. The locations of known occurrences of special-status plants, based on CNDDB and City data (City of Santa Barbara 2020), are shown on Figure 4.3-2, Special Status Plant Occurrences. All special-status plants potentially occurring in the proposed CWPP area are discussed in Appendix C, along with the general mapped vegetation communities where these species potentially occur. Appendix C excludes several species that occur within 5.0 miles that are known to occur only at elevations above the upper portions of the proposed CWPP area, including Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*) and Mexican earthmoss (*Pleuridium mexicanum*). The proposed CWPP area is outside the known range of several additional species, including Refugio manzanita (*Arctostaphylos refugioensis*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), Lompoc yerba santa (*Eriodictyon capitatum*), and Mount Diablo cottonweed (*Micropus amphibolus*). There are 53 special-status plant species with at least a low potential to occur in the CWPP area.

Special-Status Wildlife Species

Special-status wildlife species, as discussed in this section, include those:

- Designated as threatened or endangered under the ESA or the CESA, or that are considered candidates or proposed for listing under ESA or that are proposed for listing under CESA
- Considered as candidates or proposed for listing under either ESA or CESA
- Designated as California Species of Special Concern (SSC) by CDFW (2019b)
- Additional species considered rare in the Environmental Resources Element of the General Plan (City of Santa Barbara 2011)
- Vertebrate species described as fully protected (FP) species in the California Fish and Game Code
- Included on the CDFW Watch List for reptiles and amphibians or birds
- Designated as Birds of Conservation Concern by the U.S. Fish and Wildlife Service (USFWS)
- Considered sensitive under the Environmental Resources Element (City of Santa Barbara 2011) or the LCP (City of Santa Barbara 2019)

Appendix D provides habitat preferences and potential occurrence for wildlife species meeting the above definition. Several species recorded in the City's database of biological resources that do not meet the above definition of a special-status wildlife species, such as snowy egret (*Egretta thula*) and double-crested cormorant (*Phalacrocorax auritus*), are not included in Appendix D. Both of these species are colonial nesting water birds whose habitats are unlikely to be affected by implementation of the proposed CWPP. Several bird species that occur during winter or migration and that only meet the above definition of special-status species during the breeding portion of their life cycles are also excluded. These include such species as sharp-shinned hawk (*Accipiter striatus*), northern harrier (*Circus cyaneus*), black skimmer (*Rynchops niger*), elegant tern (*Thalasseus elegans*), marbled murrelet (*Brachyramphus marmoratus*), and short-eared owl (*Asio flammeus*). In addition, two species mentioned in the Environmental Resources Element (City of Santa Barbara 2011) as rare, endangered, or threatened wildlife occurring in the City, Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) and light-footed Ridgway's rail (=light-footed clapper rail; *Rallus obsoletus levipes*), are also omitted from Appendix D. Both of these listed species are known to occur in the City only at the Santa Barbara Airport, and no suitable habitat occurs in the proposed CWPP area.

The vegetation communities and habitats occurring in the proposed CWPP area have at least a low potential to support the remaining species. As with special-status plants, the often disturbed and fragmented version of the communities occurring in the CWPP area have a lower potential to support these species than more pristine examples that are better connected to other suitable habitats. Locations of occurrences in the CNDDB and the City database are shown in Figure 4.3-3, Special Status Wildlife Occurrences. There are 39 wildlife species with at least a low potential to occur in the proposed CWPP area, including 2 invertebrate species, 2 fish species, 2 amphibian species, 5 reptile species, 20 bird species, and 8 mammal species.

Aquatic Resources

No aquatic resources delineation was conducted in preparation of this Program Environmental Impact Report (PEIR), and no CWPP area-wide dataset is available showing the locations of aquatic resources under the jurisdiction of the U.S. Army Corps of Engineers, the Regional Water Quality Control Board (RWQCB), or CDFW, or those considered coastal wetlands. However, several data sets provide important information for determining the potential location of aquatic resources.

Most aquatic resources within the City are associated with creeks. Occurring within the City creeks are stream courses and riparian vegetation, as well as wetlands, under jurisdictions of U.S. Army Corps of Engineers, CDFW, and RWQCB. Major creeks within the City boundaries include Sycamore Creek, Mission Creek, Arroyo Burro, and San Roque Creek (tributary to Arroyo Burro). The locations of City creeks are shown on Figure 4.3-4, Aquatic Resources. The presence and extent of riparian vegetation, under the jurisdiction of CDFW and under the jurisdiction of RWQCB as Waters of the State, varies along the courses of these creeks, with relatively little riparian vegetation present in some of the more urban areas, such as lower Mission Creek, and more extensive riparian vegetation present in areas of less dense development, such as in foothill areas, and in areas where greater amounts of open, undeveloped space occur in otherwise developed areas, such as along Arroyo Burro in the Hidden Valley area. The City biological resources data include information on the more extensive identified areas of riparian vegetation within the proposed CWPP area (Figure 4.3-4). Aquatic resources not specifically associated with creeks also occur in the CWPP area. One larger area is the wetland vegetation associated with the Andrée Clark Bird Refuge, in the coastal zone at the eastern edge of the proposed CWPP area. If other isolated wetlands occur, they are likely smaller features occurring in less-developed parts of the proposed CWPP area.

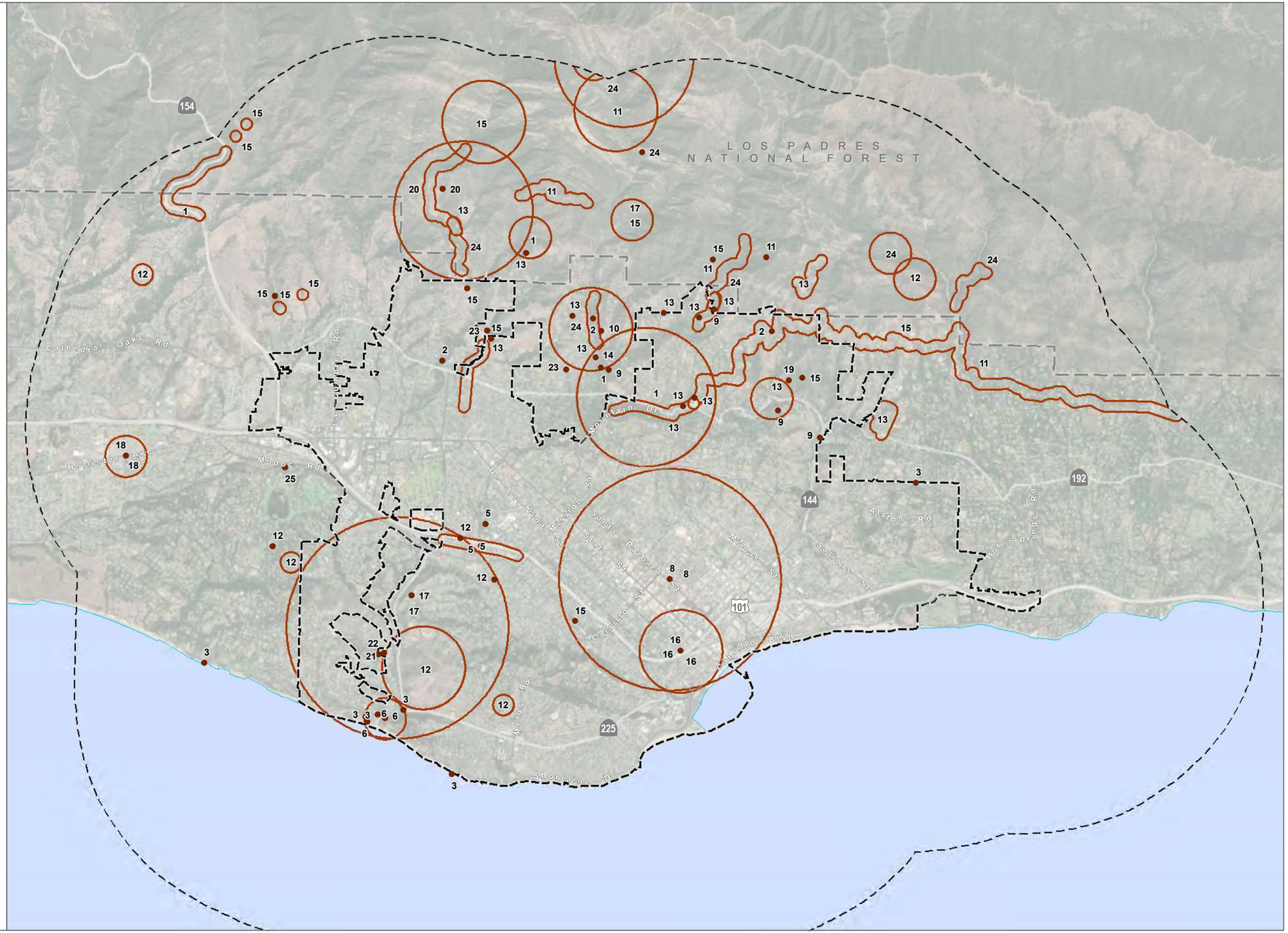
City of Santa Barbara / CWPP Area

2-mile Project Buffer

City of Santa Barbara Sensitive Plant Occurrence

CNDDB Sensitive Plant Occurrence

1 - black-flowered figwort
2 - Catalina mariposa-lily
3 - cliff aster
4 - Coulter's goldfields
5 - Coulter's saltbush
6 - Davidson's saltscale
7 - estuary seablite
8 - Gambel's water cress
9 - Hoffmann's bitter gooseberry
10 - Hoffmann's sanicle
11 - late-flowered mariposa-lily
12 - mesa horkelia
13 - Nuttall's scrub oak
14 - Santa Barbara bedstraw
15 - Santa Barbara honeysuckle
16 - Santa Barbara morning-glory
17 - Sonoran maiden fern
18 - southern tarplant
19 - thimbleberry
20 - umbrella larkspur
21 - upright burhead
22 - water pipernel
23 - white-flowered sticky phacelia
24 - white-veined monardella
25 - yerba mansa



SOURCE: ESRI World Imagery, City of Santa Barbara, CNDDB, USFWS

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

0 0.5 1 Mile

DUDEK

FIGURE 4.3-2

Special-Status Plant Occurrences

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara / CWPP Area

2-mile Project Buffer

USFWS Critical Habitat

Tidewater Goby

Western Snowy Plover

Steelhead

CNDDB Sensitive Wildlife Occurrence

City of Santa Barbara Sensitive Wildlife Habitat

Steelhead Rearing Habitat

Tidewater Goby Habitat

City of Santa Barbara Sensitive Wildlife Occurrence

CNDDB Sensitive Wildlife Occurrence

1 - American peregrine falcon
2 - bald eagle
3 - bank swallow
4 - Belding's savannah sparrow
5 - big free-tailed bat
6 - black-flowered figwort
7 - burrowing owl
8 - California black rail
9 - California brown pelican
10 - California horned lark
11 - California least tern
12 - California newt
13 - California red-legged frog
14 - Blainville's horned lizard
15 - coast patch-nosed snake
16 - Cooper's hawk
17 - Crotch bumble bee
18 - eastern annual saltmarsh aster
19 - grasshopper sparrow
20 - hoary bat
21 - least Bell's vireo
22 - least bittern
23 - light-footed Ridgway's rail
24 - loggerhead shrike
25 - merlin
26 - monarch butterfly
27 - Northern California legless lizard
28 - snowy egret
29 - Southern California rufous-crowned sparrow
30 - southern steelhead
31 - southwestern pond turtle
32 - sturdy bulrush
33 - tidewater goby
34 - Townsend's big-eared bat
35 - tricolored blackbird
36 - two-striped gartersnake
37 - western mastiff bat
38 - western pond turtle
39 - western red bat
40 - western snowy plover
41 - white-tailed kite
42 - yellow warbler

SOURCE: ESRI World Imagery, City of Santa Barbara, CNDDB, USFWS

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

0 0.5 1 Mile

DUDEK

FIGURE 4.3-3

Special-Status Wildlife Occurrences

City of Santa Barbara Community Wildfire Protection Plan

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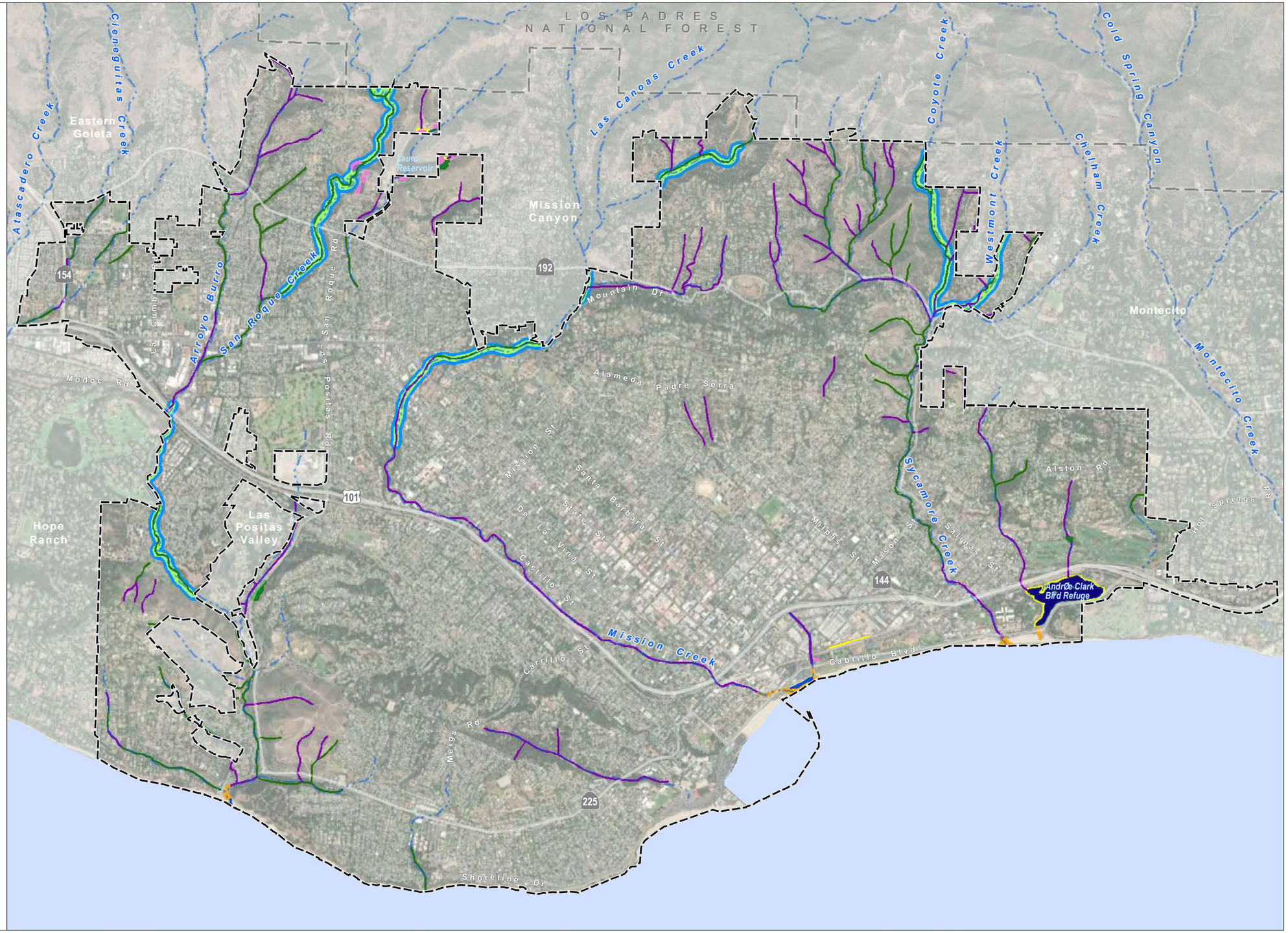
City of Santa Barbara / CWPP Area

Riparian Bird Habitat Area

Creeks (USGS NHD)

Wetland (NWI)

- Riverine
- Lake
- Freshwater Pond
- Freshwater Forested/Shrub Wetland
- Freshwater Emergent Wetland
- Estuarine and Marine Wetland
- Estuarine and Marine Deepwater



0 0.5 1 Mile

SOURCE: ESRI World Imagery, City of Santa Barbara, USGS, NWI

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

DUDEK

FIGURE 4.3-4

Aquatic Resources

City of Santa Barbara Community Wildfire Protection Plan

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Wildlife Corridors and Movement

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for dispersal or migration of animals and dispersal of plants (e.g., via wildlife vectors). Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, which helps maintain genetic diversity. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation.

The City has identified several wildlife movement corridors within the proposed CWPP area (Figure 4.3-5, Wildlife Movement Corridors). The majority of the areas identified as corridors are the major creeks in the proposed CWPP area: Sycamore Creek, Mission Creek, San Roque Creek, and Arroyo Burro. Several tributaries of these creeks in the northern part of the proposed CWPP area also provide wildlife movement opportunities, and portions of Cieneguitas Creek and Barger Canyon in the northwest do as well. Several features near the Pacific Ocean, Honda Valley in the Mesa area and Lighthouse Canyon in the La Mesa Park/Lighthouse Point area, provide wildlife habitat but are isolated from other habitats. Laguna Channel is connected with Mission Creek at East Beach, but is also more or less isolated from other habitats. Functionally, the City's creeks in general provide relatively little opportunity for larger terrestrial animals to move between suitable habitat patches. They do provide habitat for medium-sized mammals that allows them to persist in urban parts of the City, and avenues for occasional access to northern parts of the proposed CWPP area for larger animals, such as coyotes (*Canis latrans*), bobcat (*Lynx rufus*), and mule deer (*Odocoileus hemionus*). Some of these species may also reach the more natural areas in the western part of the proposed CWPP area along Arroyo Burro and at Elings Park and the Douglas Family Preserve area. For animals that inhabit the City's creeks and access surrounding, more urban areas, as well as occasional pockets of natural habitats, these areas also provide genetic exchange that promotes healthy, genetically diverse populations. In addition, the intermittent aquatic habitats provide connectivity for aquatic and semi-aquatic species, including the federally endangered southern steelhead (*Oncorhynchus mykiss*), which uses Sycamore Creek, Mission Creek, and Arroyo Burro/San Roque Creek to move between spawning habitats and the Pacific Ocean (National Marine Fisheries Service (70 FR 52488–52627).

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

The ESA was enacted in 1973 to conserve threatened and endangered species and their ecosystems. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered "take" under the ESA. Take of a federally listed threatened or endangered species is prohibited without a special permit. The ESA allows for take of a threatened or endangered species incidental to development activities once a habitat conservation plan has been prepared to the satisfaction of the USFWS and an incidental take permit has been issued. The ESA also allowed for the take of threatened or endangered species after consultation with the USFWS has deemed that development of the federal action associated with activities will not jeopardize the continued existence of the species.

"Critical habitat" is a term within ESA designed to guide actions by federal agencies (as opposed to state, local, or other agency actions) and defined as "an area occupied by a species listed as threatened or endangered within which are found physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species, which is itself essential to the conservation of the species.

Federal Clean Water Act

The Clean Water Act provides wetland regulation at the federal level as well as a structure for regulating discharges into the waters of the United States. The purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all waters of the United States. Through this act, the U.S. Environmental Protection Agency is given the authority to implement pollution control programs. These include setting wastewater standards for industry and water quality standards for contaminants in surface waters. The discharge of any pollutant from a point source into navigable waters is illegal unless a permit under its provisions is acquired. In California, the State Water Resources Control Board and the nine RWQCBs are responsible for implementing the Clean Water Act.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was enacted in 1918 to protect native migratory birds or any part, nest, or egg of such bird unless allowed by another regulation adopted in accordance with the act. Enforced in the United States by the USFWS, the MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in the Code of Federal Regulations, Title 50, Chapter 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR, Chapter 21). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered "take" and is potentially punishable by fines and/or imprisonment. "Take" under the MBTA has frequently been interpreted as including incidental killing or destruction of birds, their nests, or their eggs in the course of otherwise lawful activities. Therefore, many activities resulting in impacts to bird nests have been interpreted as violating the MBTA. However, in December 2017, the Deputy Solicitor of the Department of the Interior issued an opinion (M-37050) interpreting the MBTA as not prohibiting incidental take, and applying only to actions with the intent of taking birds, their nests, or their eggs ("intentional take"). The MBTA may not currently be applied as prohibiting incidental take, but several legal challenges have been posed to the deputy solicitor's opinion, and the future application of the law is currently uncertain.

State

California Fish and Game Code

California Endangered Species Act

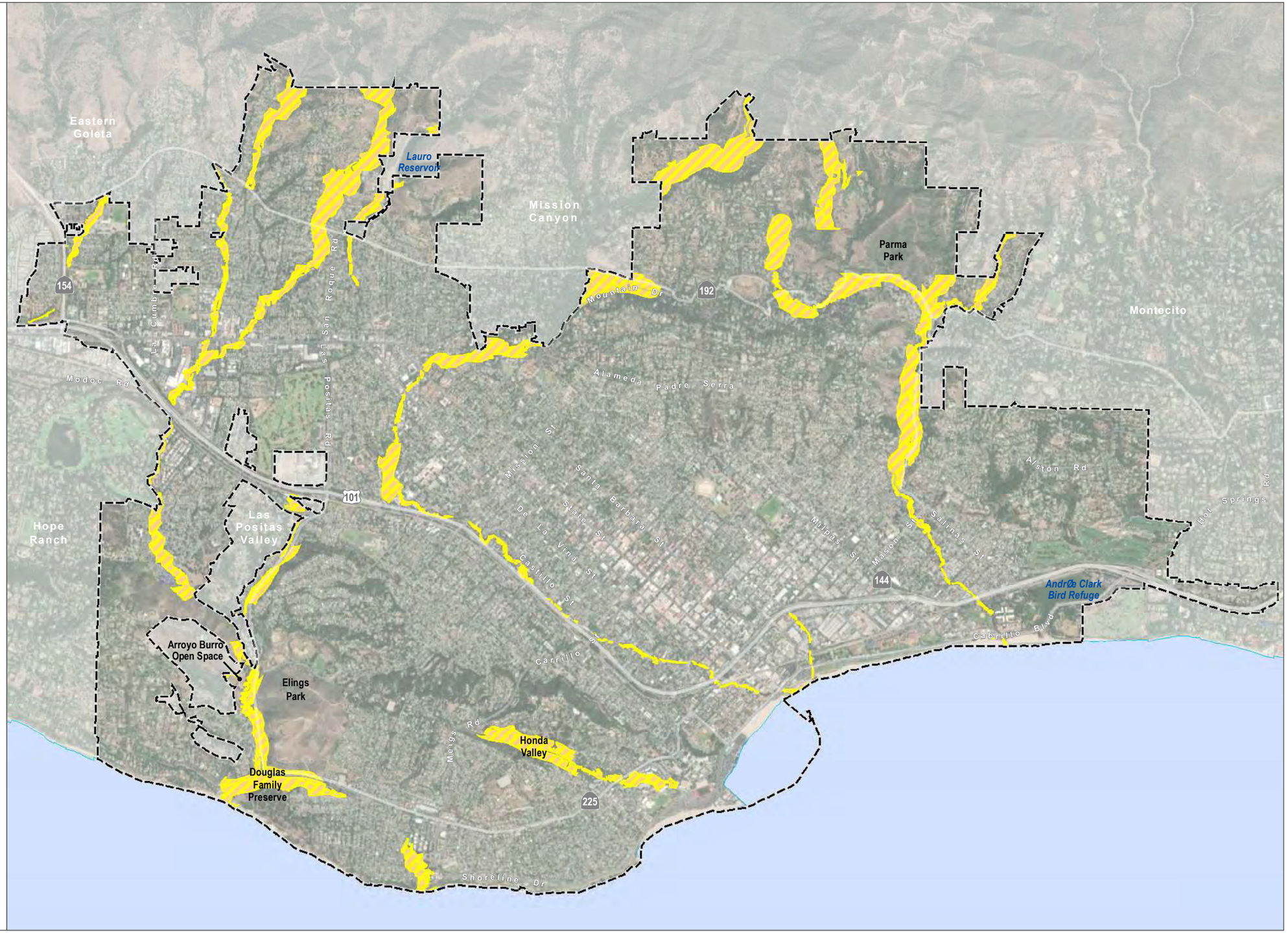
CESA(California Fish and Game Code Section 2050 et seq.) prohibits take of state-listed threatened and endangered species. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification. CDFW additionally prohibits take for species designated as fully protected under various sections of the California Fish and Game Code.

Section 1600: Lake and Streambed Alteration Agreement

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the California Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

City of Santa Barbara / CWPP

Wildlife Movement Corridor



0 0.5 1 Mile

SOURCE: ESRI World Imagery, City of Santa Barbara

COMMUNITYWILDFIRE PROTECTION PLAN CITY OF SANTA BARBARA

DUDEK

FIGURE 4.3-5

Wildlife Movement Corridors

City of Santa Barbara Community Wildfire Protection Plan

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Section 1900: Native Plant Protection Act

CDFW also has authority to administer the Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.), which requires CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c), the owner of land where a rare or endangered native plant is growing is required to notify CDFW at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Section 2081: Incidental Take Permit

California Fish and Game Code Sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (California Fish and Game Code Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Species of Special Concern (SSC) is a category used by the CDFW for those species considered to be indicators of regional habitat changes or considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the California Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands, and these species are considered sensitive as described under the California Environmental Quality Act (CEQA) Appendix G threshold questions.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act provides for statewide coordination of water quality regulations. The California State Water Resources Control Board was established as the statewide authority, and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis. The SWRCB has issued general Waste Discharge Requirements regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The local RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

Local

City of Santa Barbara General Plan

The Environmental Resources Element of the City of Santa Barbara 2011 General Plan includes goals to protect the biological resources found within the City. The Environmental Resources Element also contains the 1979 Conservation Element, retaining many of the policies and implementation strategies of that document. The following goals, policies, and implementation strategies are applicable to projects in Santa Barbara. The City's Local Coastal Program (City of Santa Barbara 2019) includes policies for protecting biological resources within the Coastal Zone of Santa Barbara.

2011 Environmental Resources Element

Biological Resources Policies

ER11. **Native and Other Trees and Landscaping.** Protect and maintain native and other urban trees, and landscaped spaces, and promote the use of native or Mediterranean drought-tolerant species in landscaping to save energy and water, incorporate habitat, and provide shade.

ER12. **Wildlife, Coastal and Native Plant Habitat Protection and Enhancement.** Protect, maintain, and to the extent reasonably possible, expand the City's remaining diverse native plant and wildlife habitat, including ocean, wetland, coastal, creek, foothill, and urban-adapted habitats.

Hydrology, Water Quality and Flooding Policies

ER19. **Creek Resources and Water Quality.** Encourage development and infrastructure that is consistent with City policies and programs for comprehensive watershed planning, creeks restoration, water quality protection, open space enhancement, storm water management, and public creek and water awareness programs.

ER21. **Creek Setbacks, Protection, and Restoration.** Protection and restoration of creeks and their riparian corridors is a priority for improving biological values, water quality, open space and flood control in conjunction with adaptation planning for climate change. Chapter 4.8 Hydrology and Water Quality includes additional information regarding hydrology, water quality, and flooding policies.

1979 Conservation Element

Goal 1. Enhance and preserve the city's critical ecological resources in order to provide a high-quality environment necessary to sustain the City's ecosystem.

Biological Resources Policies Relevant to the Proposed CWPP

4.0 Remaining Coastal Perennial Grasslands and Southern Oak Woodlands shall be preserved, where feasible.

5.0 The habitats of rare and endangered species shall be preserved.

City of Santa Barbara Local Coastal Program

The City's LCP (City of Santa Barbara 2019) includes biological resources policies describing ESHAs, creeks, and wetlands, and protections for these resources. These policies also address the conducting of fuel modification within ESHAs and ESHA habitat buffers.

Policy 4.1-6 Allowed Uses in Terrestrial ESHAs.

G. Fuel modification required by the Fire Department to meet the Fire Code Defensible Space Requirements for existing development in High Fire Hazard Areas.

Policy 4.1-17 Development within Habitat Buffer Areas. New development and substantial redevelopment shall only be allowed in ESHA, wetland, and creek habitat buffers if it does not significantly disrupt the habitat values of ESHAs, wetlands, or creeks and may include:

viii. Fuel modification required by the Fire Department to meet the Fire Code Defensible Space Requirements for existing development in High Fire Hazard Areas.

xi. The following uses may be allowed where the encroachment into the habitat buffer is minimized to the extent feasible, where all feasible mitigation measures have been provided to minimize adverse environmental effects, and the maximum feasible habitat buffer between the development and the habitat is provided:

c. Fuel modification only when required by the City Fire Department to meet the Fire Code Defensible Space Requirements for a new or substantially redeveloped primary structure in a High Fire Hazard Area. New and substantially redeveloped accessory structures shall be sited to ensure that vegetation management necessary to meet City Fire Code Defensible Space Requirements does not occur within habitat buffers to ESHAs, wetlands, or creeks;

Policy 4.1-21 Vegetation Management for Fire Hazard Reduction.

A. Vegetation management programs to reduce fire fuel loads, as well as project-related landscape and maintenance plans, shall protect and preserve ESHAs, wetlands, and creeks and balance fire risk reduction benefits with possible aesthetic, habitat, and erosion impacts to the extent feasible. Potential adverse environmental impacts resulting from fuel management activities shall be avoided or minimized as feasible.

B. Where vegetation management in ESHAs, wetlands, creeks, and required habitat buffers is required by the City Fire Department to meet City Fire Code Defensible Space Requirements for existing structures in High Fire Hazard Areas, the vegetation management shall be the minimum necessary to meet the City Fire Department requirements and shall be designed to minimize erosion and impacts on habitat values.

C. New development and substantial redevelopment shall be sited to ensure that vegetation management to reduce fire risks (including clearing, landscaping, irrigating, and thinning) does not intrude within any ESHAs, wetlands, or creeks. Vegetation management necessary to meet City Fire Code Defensible Space Requirements for a new or substantially redeveloped primary structure may occur within habitat buffers to ESHAs, wetlands, or creeks, only when all of the following criteria is met:

- There is no feasible alternative to site and design the primary structure such that fuel modification is located completely outside of the required habitat buffer;
- Encroachment into the habitat buffer is minimized to the extent feasible through siting and design of structures;
- Thinning and clearing are the minimum necessary to meet the City Fire Department requirements; and
- The vegetation management is designed to avoid habitat and erosion impacts.

D. New and substantially redeveloped accessory structures shall be sited to ensure that vegetation management necessary to meet City Fire Code Defensible Space Requirements does not occur within habitat buffers to ESHAs, wetland, or creeks.

E. Applications for new development or substantial redevelopment near or adjacent to ESHAs, wetlands, and creeks in High Fire Hazard Areas shall include a landscaping and vegetation management plan demonstrating compliance with this policy for review by the City's Fire Department and the Environmental Analyst.

City of Santa Barbara Municipal Code

Title 22, Environmental Policy and Construction

Chapter 22.10.060, City Vegetation Removal Ordinance. The purpose of this ordinance is to control the removal of vegetation from hillside areas of the City of Santa Barbara and areas designated as open space in the Open Space Element of the General Plan in order to prevent erosion damage, reservoir siltation, denuding, flood hazards, soil loss, and other dangers created by or increased by improper clearing activities; and to establish the administrative procedure for issuance of permits for vegetation removal.

Chapter 15.20 through 15.24, Tree Planting and Maintenance. This ordinance is also known as the "Street Tree Ordinance of the City of Santa Barbara." Chapter 15.20 requires a comprehensive plan for planting and maintaining trees along streets and in public areas, and establishes general elements to be included in the plan. The Street Tree Master Plan was adopted by City Council in 1977; it provides a formalized guide to City staff and the community on approved tree species.

4.3.3 Thresholds of Significance

Appendix G of the CEQA Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to biological resources would occur if the project would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The CWPP Initial Study (Appendix A) determined that threshold f) above would have less than significant impact with implementation of the proposed project. Therefore, this topic is eliminated from further analysis.

4.3.4 Impacts Analysis

The SBFD's current fire management program is performed under the City's 2004 Wildland Fire Plan (SBDF 2004) and Final PEIR for the 2004 Wildland Fire Plan (SBFD and CDD 2004). The 2004 Wildland Fire Plan is considered the environmental baseline for purposes of this PEIR, which analyzes potential environmental impacts to biological resources resulting from changes proposed by the CWPP. These changes are briefly discussed below, then discussed by CEQA threshold in the following impact discussions. With the exception of herbicide application (which is not included in the proposed CWPP), vegetation management methods are unchanged. Therefore, the analysis in this section does not focus on impacts from activities in the existing High Fire Hazard Area (HFHA) or VMUs, but to the changes (additions) in these areas. Also, the Community Fuels Treatment Networks and Neighboring Jurisdiction Management Areas remain the same under the proposed CWPP. Therefore, impacts associated with these areas are not addressed. For each threshold in this section, the following activities associated with proposed modifications of the HFHA and proposed modifications to the VMUs are discussed.

Establishment of New HFHA and Defensible Space (private property owner responsibility). The proposed CWPP would establish new HFHA, totaling 655 acres, including all vegetation and land cover types. The proposed CWPP would also remove 108 acres of HFHA, for a net increase in HFHA acreage of 547. Within the proposed HFHA, private property owners would be responsible for establishing defensible space and areas clear of vegetation along roads and driveways. The proposed CWPP requires property owners to establish 30 to 150 feet of defensible space around buildings or structures, depending on where (in which Fire Hazard Severity Zone [FHSZ]) the space occurs. As described in Section 3.4 in Chapter 3, additional horizontal clearance may be required on slopes greater than 30%. Within defensible space, property owners must cut and remove brush, shrubs, and flammable vegetation, and maintain grasses and weeds; remove dead wood, trim lower branches, and limb all live trees to 6 feet above the ground; remove all dead trees; and legally dispose of all cut vegetation (SBFD 2020a). Shrubs may be retained, as long as they are spaced at least 18 inches from other shrubs or structures. Oak and other native trees may be retained, as long as they are maintained according to the standards described above. In the HFHA, road clearance is 10 feet horizontally from roads and 13 feet, 6 inches vertically from tree canopies.

Establishment of New Vegetation Management Units. (SBFD responsibility). The proposed CWPP would establish 23 new VMUs, totaling approximately 675 acres, where the City Fire Code official has the authority to work with landowners to reduce the amount of flammable vegetation outside defensible space. These areas would be subject to vegetation management practices described in Section 3.9 and in Appendix E of the proposed CWPP (SBFD 2020b). Specific vegetation management practices implemented by the SBFD would include:

- **Grassland Habitats (California annual grassland, coastal perennial grassland):** Mowing or grazing of grasses to no more than 4 inches; retention of oak saplings and seedlings; removal of dead ground cover; removal of dead limbs, branches, and twigs in shrub overstory.
- **Scrub Habitats (coastal sage scrub, chaparral):** Increasing spacing between shrubs by twice the height of the shrubs; increasing vertical spacing between shrubs and trees to create at least 8 feet of space beneath the tree canopy.
- **Woodland Habitats (including southern oak woodland):** Increasing vertical spacing between canopies and shrub and grasses below; removing dead and dying trees; no removal of oaks 4 inches or more in diameter at 4 feet, 6 inches above the ground; prioritizing the retention of healthy native understory shrubs; removing limbs less than 6 feet above the ground; creating at least 8 feet of vertical space underneath the tree canopy and above understory shrubs.
- **Eucalyptus Stands:** Canopy thinning from selective removal of trees; thinning from removal of trees below the canopy; thinning of stands supporting 10 to 16 trees per 1,000 square feet; prioritizing retention of healthy trees and removal of trees less than 8 inches in diameter; removal of loose, stringy bark.

Vegetation removal can occur through hand removal; use of heavy equipment such as masticators, tractors, and chippers; biological management, specifically, grazing conducted in late spring under site-specific grazing plans; and prescribed fire either through broadcast burns over designated and prepared areas or through pile burning of cut vegetation (typically applies to areas of less than 1 acre).

BIO-1. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

As described in Section 4.3.1.4, the CWPP area potentially supports habitat for a variety of special-status plant species (52 total) and wildlife species (27) that could potentially be activities under the proposed CWPP. These species occur in a variety of habitats where vegetation management may occur. Vegetation and habitat types, with acres affected are in Table 4.3-3 (proposed HFHA zones) and Table 4.3-4 (proposed VMUs). The locations of vegetation communities and habitats within the HFHA are shown on Figure 4.3-6, Vegetation Communities and Land Cover Types within High Fire Hazard Area, and the locations of vegetation communities and habitats within the VMUs are shown on Figure 4.3-7, Vegetation Communities and Land Cover Types within Vegetation Management Units. Direct and indirect impacts to special-status species may occur to these habitats that support or have the potential to support special-status species, and they may occur to individuals of special-status species. This section analyzes impacts to special-status plants and to special-status wildlife separately.

Direct and Indirect Impacts to Special-Status Plant Species

Impacts could occur to special-status plant species habitat and individuals from both proposed modifications to the HFHA and proposed modifications to the vegetation management areas, specifically to the VMUs.

Proposed Modifications to the High Fire Hazard Area

Creation of defensible space and road clearance in the proposed HFHA could result in direct and indirect impacts to special-status plant species *habitats* and to individual special-status plants occurring in the proposed CWPP area. Although creation of defensible space in the proposed HFHA would not result in development or grading that would remove special-status plant species habitat, it could cause habitat degradation and habitat conversion, resulting in formerly suitable habitats no longer being suitable. Several indirect impacts could also occur. By removing vegetation, creation of defensible space and road clearance could result in soil destabilization, erosion, increased sedimentation, and resulting water quality impacts to special-status plant species habitats. Water quality impacts in riparian areas could also result from the accumulation of debris left in place from vegetation clearance activities and subsequently washed into streams. Vegetation clearance could also assist in the establishment of invasive, non-native plants, resulting in further degradation of special-status plant species habitats, including surrounding habitats that remain intact outside defensible space and road clearance areas.

Table 4.3-3. Vegetation Communities, Habitats, and Land Covers in Proposed High Fire Hazard Area Zones

Community/Land Cover	High Fire Hazard Area ZoneTotal													
	B	*E*	*F*	*G*	*H*	*I*	*K*	*L*	*M*	*N*	*O*	*R*	*T*	*Total*
California Annual Grassland	–	–	–	–	–	6.1	5.6	5.5	29.1	–	1.0	–	12.4	59.7
Coastal Perennial Grassland	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0
Coastal Sage Scrub	–	0.7	–	–	–	1.0	–	–	–	<0.1	–	2.5	37.2	41.5
Chaparral	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0
Riparian Woodland/ Creek	–	–	2.7	–	9.2	5.6	–	–	–	–	–	7.3	–	24.9
Southern Oak Woodland	–	1.0	5.4	–	–	–	–	<0.1	58.2	1.4	1.1	9.3	28.5	104.8
Coastal Bluff	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0
Coastal Strand/Beach	–	–	–	–	–	–	–	–	–	–	–	–	9.5	9.5
Golf Course	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0
Orchard	–	–	–	–	–	–	–	0.1	1.6	–	–	8.9	–	10.6
Parkland	–	–	–	–	–	–	–	–	–	–	–	–	38.3	38.3
Urban	–	4.6	17.2	0.2	17.6	34.0	6.8	19.0	134.5	<0.1	6.9	10.1	75.4	326.3
None/Unmapped	1.7	–	–	5.1	–	8.1	–	–	–	–	–	24.2	0.8	39.9
Total	**1.7**	**6.3**	**25.3**	**5.3**	**26.8**	**54.9**	**12.5**	**24.6**	**223.4**	**1.4**	**8.9**	**62.3**	**202.2**	**655.4**

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Table 4.3-4. Vegetation Communities and Land Covers in Proposed VMUs

Community/ Land Cover	Vegetation Management Unit																						
	24	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*	*33*	*34*	*35*	*36*	*37*	*38*	*39*	*40*	*41*	*42*	*43*	*44*	*45*	*46*	*Total*
California Annual Grassland	0.7	32.1	–	–	1.0	7.8	–	–	–	1.7	–	0.1	4.7	–	1.7	–	29.8	–	–	<0.1	10.4	–	–	90.0
Coastal Perennial Grassland	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0
Coastal Sage Scrub	1.3	21.8	–	10.4	44.0	12.8	1.1	2.9	–	1.1	0.4	1.6	–	<0.1	–	–	33.9	0.3	–	97.8	–	–	1.8	231.3
Chaparral	–	3.7	–	–	26.9	2.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	32.8
Riparian Woodland/Creek	–	–	3.5	–	2.1	2.2	–	–	–	–	–	–	–	–	–	–	–	–	–	9.4	–	4.3	–	21.5
Southern Oak Woodland	0.9	5.3	0.9	14.9	31.6	3.9	–	1.6	–	1.2	0.4	2.4	–	1.4	13.6	0.9	2.9	0.9	10.5	8.9	22.3	–	9.3	133.8
Coastal Bluff	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0
Coastal Strand/Beach	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0
Golf Course	–	–	–	–	–	–	–	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2.1
Orchard	–	10.9	–	–	–	4.6	–	–	–	–	–	–	–	–	–	–	3.0	–	–	<0.1	–	–	1.6	20.0
Parkland	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	19.5	–	–	–	–	–	–	19.5
Urban	–	23.4	1.0	5.6	0.3	9.6	7.2	0.6	0.3	4.9	0.9	2.5	2.6	<0.1	10.6	0.9	3.0	0.2	3.6	4.6	6.1	5.0	0.7	93.3
None/Unmapped	–	–	–	–	–	1.4	–	–	14.6	–	–	–	–	–	–	–	–	–	–	3.5	–	–	8.6	28.1
Total	**2.9**	**97.2**	**5.4**	**30.9**	**105.8**	**44.6**	**8.3**	**7.2**	**14.9**	**8.9**	**1.8**	**6.7**	**7.3**	**1.4**	**25.9**	**1.8**	**91.9**	**1.4**	**14.0**	**124.2**	**38.8**	**9.2**	**21.9**	**672.4**

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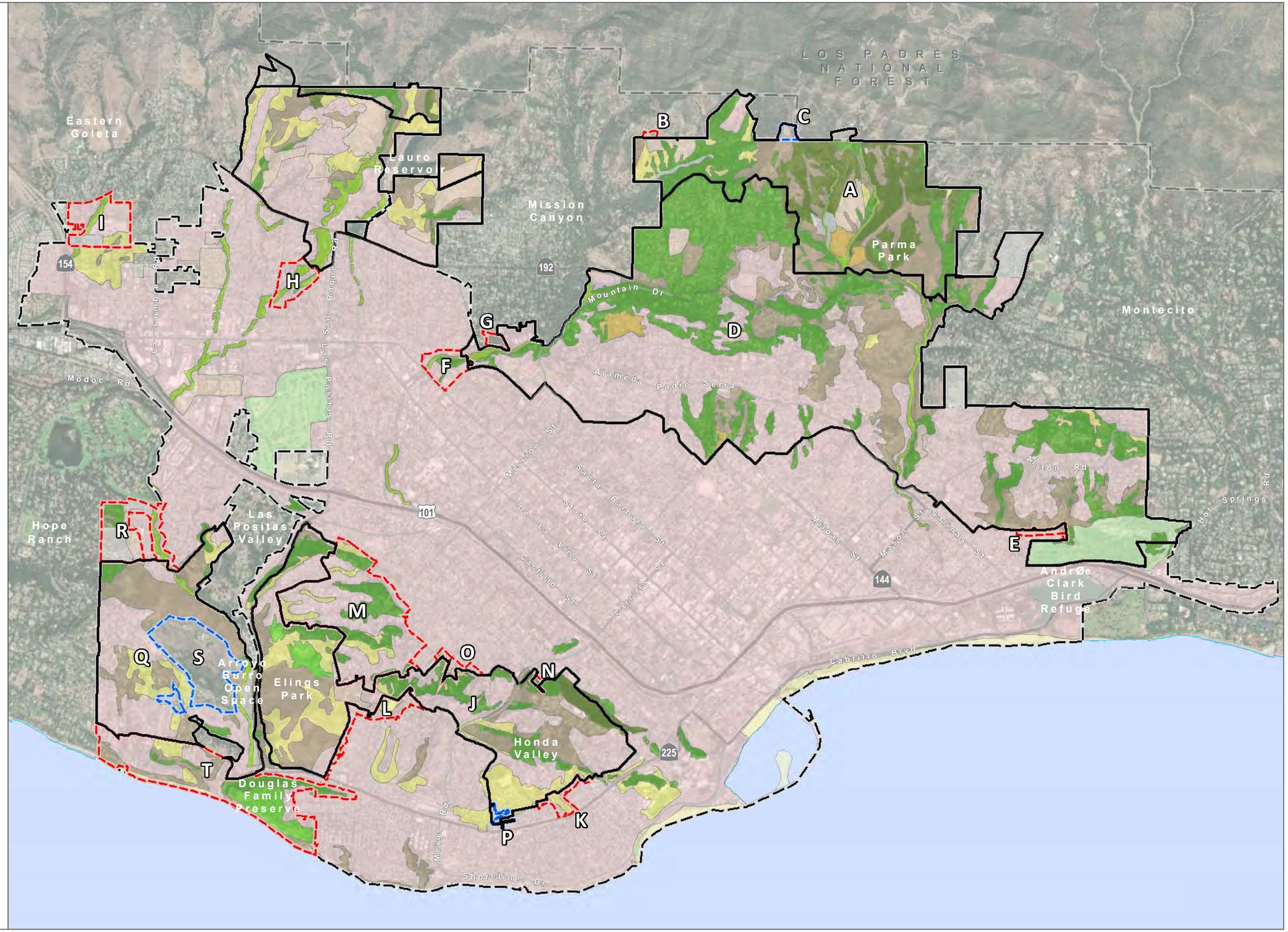
City of Santa Barbara / CWPP Area

High Fire Hazard Area

- Existing - Retained
- Existing - Removed
- Proposed

Vegetation Communities and Land Cover Types

- Coastal bluff
- Coastal strand/beach
- Chaparral
- Southern oak woodland
- Riparian woodland
- California annual grassland
- Coastal Perrennial grassland
- Coastal sage scrub
- Orchard
- Urban
- Golf course
- Parkland
- None/Unmapped



0 0.5 1 Mile

SOURCE: ESRI World Imagery, City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

DUDEK

FIGURE 4.3-6

Vegetation Communites and Land Cover Types within High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara / CWPP Area

Coastal Zone Boundary

Vegetation Management Units

Existing

Proposed

Vegetation Communities and Land Cover Types

Coastal bluff

Coastal strand/beach

Chaparral

Southern oak woodland

Riparian woodland

California annual grassland

Coastal Perrennial grassland

Coastal sage scrub

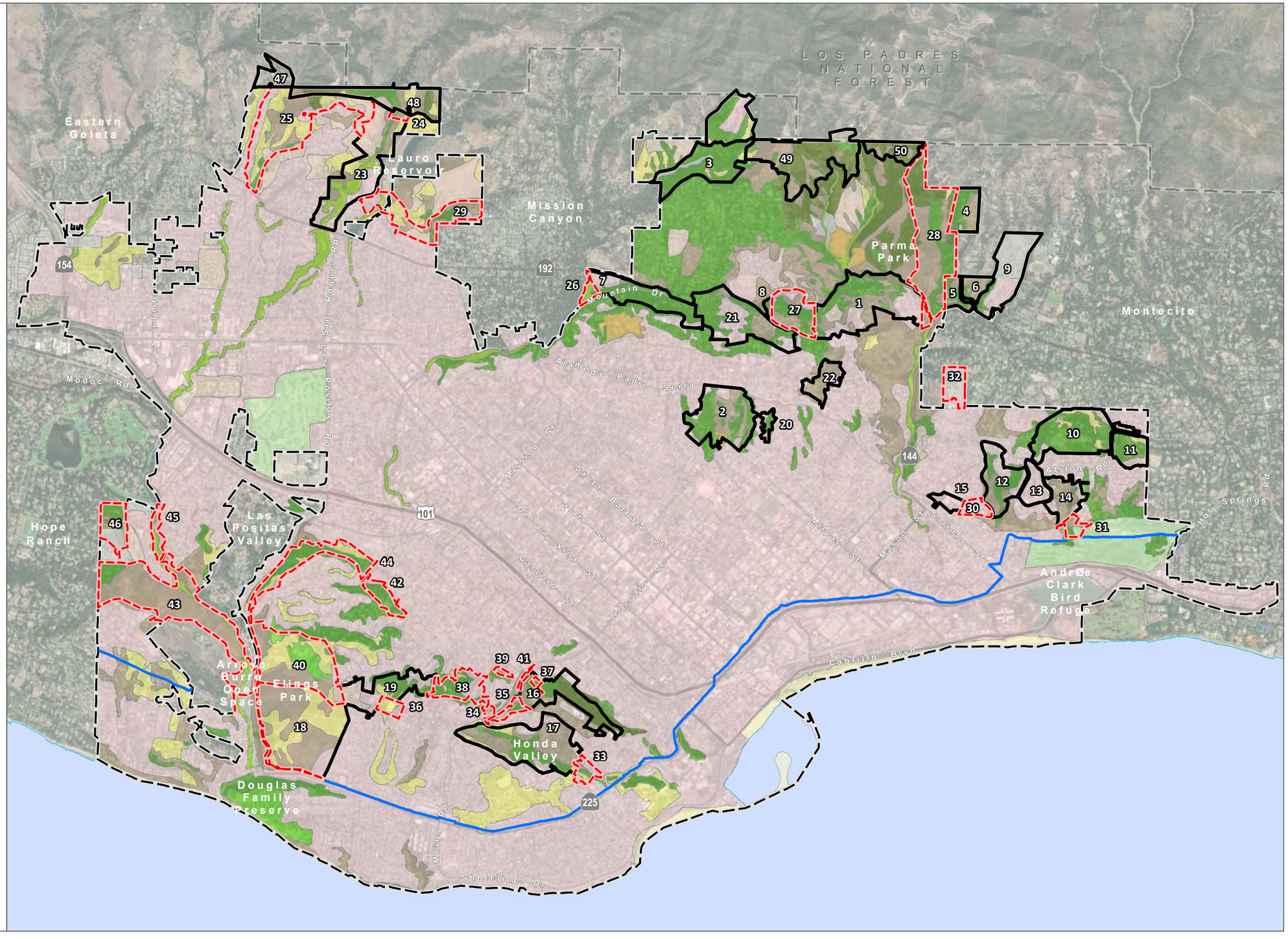
Orchard

Urban

Golf course

Parkland

None/Unmapped



0 0.5 1 Mile

SOURCE: ESRI World Imagery, City of Santa Barbara

COMMUNITYWILDFIRE PROTECTION PLAN CITY OF SANTA BARBARA

DUDEK

FIGURE 4.3-7

Vegetation Communites and Land Cover Types within Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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Creation of defensible space within the HFHA would occur in relatively narrows strips adjacent to development. Most of the habitats that would be affected are already fragmented by roads, driveways, fences, landscaping, and structures. Some are in largely urban areas. Also, special-status plant species occurring in the HFHA do not include federally or state-listed species subject to take provisions under the ESA or CESA. Although the species that do occur meet the definition of special-status species under CEQA and as provided in Section 4.3.1, because of fragmentation and human disturbance, habitats are generally degraded. Therefore, impacts to special-status plant species habitat from implementation of the proposed CWPP would be **less than significant**.

Creation of defensible space and road clearance in the proposed HFHA could also result in direct and indirect impacts to special-status plant *individual*s. Creation of defensible space and road clearance on private properties could result in destruction of perennial plants and, if conducted during the growing season, could destroy annual plants. Destruction of annuals before they go to seed could hinder the future potential for these species to survive after fuel modification activities have been conducted. Annual fuel modification activities in defensible space, such as mowing, could result in the elimination of small populations of special-status plants. Several indirect impacts could also occur to special-status plant species in the proposed HFHA. Vegetation clearance could also assist in the establishment of invasive, non-native plants that would compete with special-status plants.

Because creation of defensible space and road clearance within the HFHA would occur in relatively narrows strips within habitat already fragmented and degraded from development and human disturbance, the presence of special-status plants would be limited in these areas. Therefore, impacts to individuals of special-status plants would also be less than significant. And impacts overall to special-status plant species from the proposed modifications to the HFHA would be **less than significant**.

Proposed Modifications to the Vegetation Management Areas

Vegetation management outside of defensible space in proposed VMUs and City-maintained roadway clearance areas could result in direct and indirect impacts to special-status species habitat occurring in the proposed CWPP area. Potential impacts are similar to those that could occur during creation of defensible space, described above. Direct impacts could include habitat degradation and habitat conversion. Potential indirect impacts could result from erosion, sedimentation, and degrading of water quality, and from establishment of invasive, exotic species. Also, use of heavy machinery for vegetation management could result in soil compaction that could further deter regrowth of native vegetation, or could contribute to additional soil disturbance. The presence of heavy machinery in or adjacent to sensitive habitats could also result in chemical leaks or spills that could result in habitat degradation.

Potential direct impacts to special-status plant species individuals in the proposed VMUs would be similar to those in the proposed HFHA, including destruction of perennial and annual plants for vegetation removal and hindering the future potential for species to survive in currently occupied habitat. Use of heavy machinery could potentially result in greater impacts to herbaceous species that may not be intentionally removed, but could be crushed during machinery operation. Indirect impacts could include the establishment of invasive, non-native plants that would compete with special-status plants. Substantial reductions or eliminations of local populations of special-status plant species could be considered a significant impact.

Habitat for several special-status plant species potentially occurs in all of the vegetation communities in the VMUs (Table 4.3-5). The actual location of special-status plant species habitat is not completely known. However, locations of suitable habitats would be identified through the requirement in Section 3.6, Vegetation Management Project Design Features and Best Management Practices (also described in Appendix E of the proposed CWPP) that a City qualified biologist conduct a biological evaluation including reconnaissance site survey not more than ten days prior to operations and development of a Work Plan to determine the presence of sensitive biological resources and identify avoidance and minimization measures. However, the reconnaissance survey may identify special status species requiring further protocol level surveys to identify, avoid or minimize potential impacts to these species. As such, mitigation measure **MM-BIO-1 Special-Status Species Survey and Mitigation** requires the completion of species specific protocol surveys within the area of proposed activities. Other best management practices (BMPs) would also result in avoidance and minimization of these impacts. These would include:

- Limiting vegetation management within 25 feet from stream banks to removal of easily accessible dead brush, which may only be conducted if the work will not damage the bank structure.
- Requiring an approved biologist to measure out the 25-foot buffer and mark it in the field, prior to any vegetation management in the vicinity of the streambed.
- Implementing protective measures against grazing, use of heavy equipment, and prescribed fire in the vicinity of trees and vegetation designated for protection.
- Ensuring heavy equipment is kept out of biologically sensitive areas.
- Limiting the size and quantity of equipment used.
- Routinely monitoring grazing activities in riparian areas to limit stream bank damage, soil compaction, and soil deposition; and avoidance of grazing on unstable slopes.

Table 4.3-5. Special-Status Plant Species and Potential to Occur by Community

Species	Vegetation Community							
	California Annual Grassland	*Coastal Perennial Grassland*	*Coastal Sage Scrub*	*Chaparral*	*Riparian Woodland /Creek*	*Southern Oak Woodland*	*Coastal Saltmarsh*	*Saltwater Marsh*
black-flowered figwort	X	X	X	X	X	X		
Brewer's calandrinia			X	X	X			
Carmel Valley malacothrix			X	X				
Catalina mariposa lily			X	X				
cliff malacothrix	X	X	X	X		X		
Contra Costa goldfields			X					
Coulter's goldfields	X	X				X		X

Table 4.3-5. Special-Status Plant Species and Potential to Occur by Community

Species	Vegetation Community							
	California Annual Grassland	*Coastal Perennial Grassland*	*Coastal Sage Scrub*	*Chaparral*	*Riparian Woodland /Creek*	*Southern Oak Woodland*	*Coastal Saltmarsh*	*Saltwater Marsh*
Coulter's saltbush								
Davidson's saltscale	X	X	X					
desert Christmas tree (=pholisma)			X					
Douglas' fiddleneck				X				
elegant wild buckwheat	X	X				X		
estuary seablite	X	X						X
Gambel's water cress							X	
Hoffman's sanicle								
Hoffmann's bitter gooseberry			X	X				
Hubby's phacelia				X	X			
late-flowered mariposa lily	X	X	X	X				
mesa horkelia				X	X	X		
Miles' milk-vetch			X	X		X		
monkey-flower savory			X					
Nuttall's scrub oak				X	X			
Ojai fritillary			X	X				
Ojai navarretia				X	X			
pale-yellow layia	X	X	X	X				
Palmer's spineflower	X	X	X			X		
paniculate tarplant	X	X		X				

Table 4.3-5. Special-Status Plant Species and Potential to Occur by Community

Species	Vegetation Community							
	California Annual Grassland	*Coastal Perennial Grassland*	*Coastal Sage Scrub*	*Chaparral*	*Riparian Woodland /Creek*	*Southern Oak Woodland*	*Coastal Saltmarsh*	*Saltwater Marsh*
Rattan's cryptantha	X	X	X					
red sand-verbena	X	X			X	X		
salt marsh bird's-beak								X
San Gabriel ragwort								
Santa Barbara bedstraw			X	X				
Santa Barbara honeysuckle					X			
Santa Barbara morning-glory			X	X		X	X	
Santa Lucia dwarf rush								
Santa Ynez false lupine				X				
seaside brookweed (=water pimpernel)				X				
slender silver moss			X	X	X			
small-flowered morning-glory						X		
Sonoran maiden fern	X	X	X	X				
south coast branching phacelia					X			X
southern curly-leaved monardella			X	X				
southern tarplant			X	X		X	X	
sturdy bullrush	X	X					X	X

Table 4.3-5. Special-Status Plant Species and Potential to Occur by Community

Species	Vegetation Community							
	California Annual Grassland	*Coastal Perennial Grassland*	*Coastal Sage Scrub*	*Chaparral*	*Riparian Woodland /Creek*	*Southern Oak Woodland*	*Coastal Saltmarsh*	*Saltwater Marsh*
(=big bulrush)								
thimbleberry								
umbrella larkspur					X			
upright burhead				X		X	X	
vernal barley					X			
white-flowered sticky phacelia	X	X	X					
white-veined monardella			X	X				
yellow bleeding heart (=yellow dicentra)				X		X		
yerba mansa				X			X	

Several more general action items from the proposed CWPP would reduce impacts to special-status plant species habitat:

10.4 Continue to reduce invasive species in VMUs in coordination with project biologists

10.5 Work with Parks and Recreation, Creeks Division to develop vegetation management techniques that reduce fire hazard in creek areas and maintain creek values.

The same BMPs would reduce impacts to individual special-status plants, particularly the biological site survey requirement, which would lead to development of measures to avoid and minimize impacts to individual plants and populations. BMPs cited above related to the 25-foot stream bank buffer and protective measures for grazing, use of heavy equipment, and prescribed fire would also result in reduction of these impacts. Also, BMPs for biological treatment methods that would result in avoidance and minimization of impacts to individuals of special-status plant species include:

- Avoid grazing in unstable slope areas or implement measures to minimize impacts to slope stability (e.g., reducing herd size to retain vegetation, avoiding grazing where saturated soil condition exist).
- Minimize the spread of invasive plants and pathogens through the use of quarantine periods; holding areas; clean stock water; and personnel, equipment, and vehicle sanitation.

However, the potential to impact riparian habitat could still occur and as such, **MM-BIO-2 Riparian Protection** includes additional measures to minimize potential impacts to riparian habitat.

Proposed Modifications to the Vegetation Management Methods

As vegetation management methods would remain the same as those described in the 2004 Wildland Fire Plan, implementation of the proposed CWPP would not result in impacts to special-status plant species from proposed modifications to the vegetation management methods.

Direct and indirect impacts to special-status plants associated with implementation of the CWPP would be **less than significant with mitigation.**

Direct and Indirect Impacts to Special-Status Wildlife Species

Impacts could occur to special-status wildlife species habitat and individuals from both proposed modifications to the HFHA and proposed modifications to the vegetation management areas, specifically to the VMUs. While the 27 species discussed below have greatly different habitat preferences and natural history traits, several groups share similar natural history traits, and direct and indirect impacts would affect these species in similar ways. Therefore, the discussion of special-status wildlife species impacts is organized by "guild" as follows:

- **Invertebrate Guild:** Crotch bumblebee, monarch butterfly
- **Fish Guild:** steelhead
- **Semi-aquatic Reptile and Amphibian Guild:** California red-legged frog, California newt, southwestern pond turtle, two-striped gartersnake
- **Terrestrial Reptile Guild:** Northern California legless lizard, Blainville's horned lizard, coast patch-nosed snake
- **Tree-Nesting and Roosting Raptor Guild:** Cooper's hawk, white-tailed kite, merlin
- **Riparian Bird Guild:** yellow warbler, yellow-breasted chat
- **Other Upland Bird Guild:** Southern California rufous-crowned sparrow, grasshopper sparrow, burrowing owl, California horned lark, loggerhead shrike, olive-sided flycatcher
- **Bat Guild:** pallid bat, Townsend's big-eared bat, western red bat
- **Terrestrial Mammal Guild:** mountain lion, ringtail, woodrat

Several species with a very low potential to occur in the CWPP area are not included in the analysis. Species that occur only in habitats that would not be subject to impacts from the proposed CWPP are also excluded. Species are excluded that occur only along beaches or in estuaries or lagoons, including tidewater goby (*Eucyclogobius newberryi*), western snowy plover (*Charadrius nivosus*), California brown pelican (*Pelecanus occidentalis californicus*), and California least tern (*Sternula antillarum browni*). Least bittern (*Ixobrychus exilis*) is excluded because the only areas where it potentially breeds are the Andrée Clark Bird Refuge, which would not be subject to any requirements of the proposed CWPP, and Lauro Reservoir, which is outside any proposed HFHA or VMU.

Proposed Modifications to the High Fire Hazard Area

Habitat for several special-status wildlife species potentially occurs in all of the vegetation communities in the HFHA (Table 4.3-6). The actual location of special-status wildlife species habitat is not completely known.

Creation of defensible space and road clearance in the proposed HFHA could result in direct and indirect impacts to these habitats. Although creation of defensible space in the proposed HFHA would not result in development or grading that would remove special-status species habitat, it could cause habitat degradation and habitat conversion, resulting in an unknown amount of formerly suitable habitats no longer being suitable. Several indirect impacts could also occur. By removing vegetation, creation of defensible space and road clearance could result in soil destabilization, erosion, increased sedimentation, and resulting water quality impacts to special-status wildlife species habitats. Water quality impacts in riparian areas could also result from the accumulation of debris left in place from vegetation clearance activities and subsequently washed into streams. Activities within 50-feet of the top of bank, regardless whether performed by a private property owner or the City, would require a Lake and Streambed Alteration Agreement from CDFW and potentially authorization from the RWQCB and USACE. Species occupying riparian habitats or associated aquatic habitats would be particularly vulnerable to these impacts. Vegetation clearance could also assist in the establishment of invasive, non-native plants, resulting in further degradation of special-status species habitats, including surrounding habitats that remain intact outside defensible space and road clearance areas.

Creation of defensible space and road clearance in the proposed HFHA could also result in direct and indirect impacts to individuals of special-status wildlife species. Removal of vegetation through any means, including clearing brush, limbing trees, and mowing ground cover, during the nesting bird season could result in destruction of bird nests and eggs, including the nests and eggs of special-status bird species. Use of heavy machinery could result in crushing of terrestrial reptiles such as Blainville's horned lizard (*Phrynosoma blainvillii*) or nests of southwestern pond turtles (*Actinemys pallida*). Indirect impacts could also occur to individuals of special-status species. Noise from fuel modification activities, such as from chainsaws or heavy machinery, could disturb nesting special-status bird species, including the fully protected white-tailed kite (*Elanus leucurus*), potentially causing nest abandonment and failure. Reduction of cover for several smaller invertebrate species could expose these species to predation from native predators or pets associated with nearby development. Water quality impacts due to erosion could indirectly affect aquatic and semi-aquatic species occurring in nearby creeks. Any direct or indirect impacts to southern steelhead (*Oncorhynchus mykiss*) or California red-legged frog (*Rana draytonii*) individuals would be considered take under the ESA and could be a significant impact. Substantial reductions or eliminations of local populations of other species could also be considered a significant impact. However, most of the habitats that would be affected by creation of defensible space and road clearance are fragmented by roads, driveways, fences, landscaping, and structures. Some are in largely urban areas. All areas where defensible space would occur are near existing development and therefore would be subject to relatively high levels of disturbances from human presence and likely support presence of pets (especially cats) that may prey on wildlife and suppress populations. All of these factors likely limit the presence of special-status wildlife in these areas, and impacts to these species, which are more likely to be found in less disturbed areas, would likely be limited.

Table 4.3-6. Special-Status Wildlife Species and Potential to Occur by Vegetation Community

Species	Vegetation Community									
	California Annual Grassland	*Coastal Perennial Grassland*	*Coastal Sage Scrub*	*Chaparral*	*Riparian Woodland/ Creek*	*Southern Oak Woodland*	*Orchard*	*Freshwater Marsh*	*Coastal Saltmarsh*	*Eucalyptus Woodland*
Invertebrates										
Crotch bumble bee	X	X	X							
monarch					X					X
Fish										
steelhead - southern					X				X	
Amphibians										
California red-legged frog					X			X		
California newt				X	X	X				
Reptiles										
southwestern pond turtle					X					
Northern California legless lizard			X		X	X				
Blainville's horned lizard	X	X	X	X						
coast patch-nosed snake				X						
two-striped gartersnake					X					
Birds										
Cooper's hawk					X	X				X

Table 4.3-6. Special-Status Wildlife Species and Potential to Occur by Vegetation Community

Species	Vegetation Community									
	California Annual Grassland	*Coastal Perennial Grassland*	*Coastal Sage Scrub*	*Chaparral*	*Riparian Woodland/ Creek*	*Southern Oak Woodland*	*Orchard*	*Freshwater Marsh*	*Coastal Saltmarsh*	*Eucalyptus Woodland*
Southern California rufous-crowned sparrow	X	X	X	X						
grasshopper sparrow	X	X								
burrowing owl	X	X								
olive-sided flycatcher						X				X
white-tailed kite	X	X			X	X				X
California horned lark	X	X								
merlin	X	X				X				X
yellow-breasted chat					X					
loggerhead shrike	X	X								
yellow warbler					X					
Mammals										
mountain lion										
pallid bat					X	X				
ringtail				X	X	X				
Townsend's big-eared bat										
western red bat					X	X	X			X
San Diego desert woodrat			X	X						

Source: CDFW 2020.

Invertebrate Guild. Impacts to invertebrate species habitat could occur from direct and indirect impacts to coastal sage scrub, California annual grassland, and coastal perennial grassland occupied by Crotch bumblebee (*Bombus crotchii*) or impacts to eucalyptus woodland, and other woodlands, occupied by monarch butterfly (*Danaus plexippus*).

Crotch bumble bee relies on substantial flowering plants in open scrub and grassland habitats, as well as micro-habitats suitable for nesting and overwintering, including small mammal burrows, loose- disturbed soil, leaf litter, and other debris (Xerces Society et al. 2018; CDFW 2019). Creation of defensible space and road clearance could reduce the availability of flowering plants, especially if conducted during spring or summer, and could result in removal of debris supporting habitat suitable for nesting and overwintering. In general, however, these activities would create more open habitats that could be suitable for this species. And as this species has not been documented within the proposed CWPP area, the potential for it to occur there is relatively low, the potential for both habitat impacts and impacts to individuals would be low. In addition, the hand methods of vegetation clearing likely to be used by many landowners would have a relatively low potential to result in harm to individuals and nests. Therefore, impacts to Crotch bumble bee from proposed modifications to the HFHA would be less than significant.

Monarch butterflies are considered special-status species at winter roost. When roosting in fall and winter, they rely on eucalyptus and other woodlands supporting suitable conditions related to protection from sun, wind, and rain. The preferred locations of this species within the City are well known (Figure 4.3-3), and the potential for monarch butterfly to occur elsewhere is relatively low. Monarchs are known to roost along Arroyo Burro within area R in the Hidden Valley area and within the Douglas Family Preserve adjacent to residential development in the coastal zone. Activities expected to occur within woodland supporting monarch butterflies within defensible space and along driveways on private property would include limbing the lower branches of trees and removing dead trees. Neither is expected to result in degrading of habitat in a way that would substantially affect its suitability for roosting monarch butterflies. Clearance of ground cover and establishing space between shrubs would result in no impacts. Indirect impacts related to water quality and establishment of non-native plants would not affect the suitability of monarch habitat. Therefore, impacts to monarch butterfly habitat would be less than significant. Also, any impacts to trees supporting roosting monarch butterflies occurring from approximately April through September would have no potential to result in impacts to individuals of this species. Also, as this species is able to fly away from perceived threats, mortality is highly unlikely to occur from activities to remove tree branches or trees within defensible space. Therefore, impacts to monarch butterfly from the proposed modifications to the HFHA would be less than significant.

Fish Guild: Steelhead of the Southern California distinct population segment (DPS) are known to occur in several of the major creeks in the proposed CWPP area, and several proposed HFHA occur along these creeks, including zones F, G, H, and R. No work would occur within aquatic habitats, but creation of defensible space within the proposed HFHA could indirectly affect steelhead by degrading water quality in streams due to erosion and sedimentation. Work near streams is currently conducted by the SBFD under a Section 1600 Streambed Alteration Agreement (SAA) with CDFW (CDFW 2015). Any work that occurs in these areas under the 2004 Wildland Fire Plan would be subject to similar requirements. Among measures in the SAA are those requiring proper storing and staging equipment and erosion control. Also, the proposed CWPP includes the following action item that would result in limiting activities to create defensible space in or near streams:

11.2 Work with Creeks Division and Community Development Department to develop guidelines for private property owners conducting defensible space adjacent to creek areas that balances riparian values and fire hazard and risk on private lands.

SBFD guidelines for defensible space (SBFD 2020a) include a requirement for landowners to avoid creating erosion from vegetation clearance in defensible space, thus avoiding impacts from sedimentation and degradation of water quality, and the SBFD offers advice to property owners on how to implement erosion control. Implementation of best management practices described in Section 3 would reduce impacts to aquatic steelhead habitat and individual steelhead. However, because these measures are general in nature, and because steelhead in the Southern California DPS is listed as endangered under the ESA, any "take" of this species from the proposed modifications to the HFHA, although unlikely, would be a significant impact. Given than implementation of defensible space and roadway clearance within the HFHA is the obligation of private property owner, **MM-BIO-3 Property Owner Educational Material** requires the SBFD to create educational material to inform property owners of legal obligations to protect riparian habitat. As such, impacts to the fish guild species would be less than significant with mitigation.

Semi-aquatic Reptile and Amphibian Guild: California red-legged frog, California newt (*Taricha torosa*), southwestern pond turtle, and two-striped gartersnake (*Thamnophis hammondii*) all may use aquatic habitats along creeks in the proposed CWPP area, but require upland habitats for parts of their life cycles. Creation of defensible space and road clearance from establishment of the proposed HFHA would not result in direct impacts to aquatic habitats supporting these species. But it could result in indirect impacts to these habitats from degradation of water quality. As noted in the discussion for steelhead above, with incorporation of measures established in the SAA (CDFW 2015); action item 11.2 of the proposed CWPP, to develop guidelines for property owners in balancing riparian values and fire hazard and risk; and SBFD guidance to avoid creating erosion from vegetation clearance in defensible space, and the implementation of **MM-BIO-3 Property Owner Educational Material** impacts to semi-aquatic reptile and amphibian guild would be **less than significant with mitigation**.

California red-legged frog has a low potential to occur within the CWPP area. If this species does occur, it would occur along creeks in the far northern part of the City. The proposed HFHA is located away from these areas; therefore, impacts to California red-legged frog habitat would be less than significant. Also, although this species is listed as threatened under the ESA and any "take," including injury or mortality, could be a significant impact, no take of this species is expected in the proposed HFHA. Therefore, impacts to California red-legged frog from the proposed modifications to the HFHA would be less than significant.

California newt has been recorded in the CWPP area near Lauro Reservoir, and potentially occurs at other locations in the far northern part of the CWPP area, away from the proposed HFHA. It may have a small potential to occur in Zone G, adjacent to Mission Creek near the Santa Barbara Museum of Natural History. However, in the unlikely event that it occurs here, a substantial portion in the center of this area would remain unaffected by establishment of defensible space from existing structures, and natural vegetation would remain within the areas affected. Therefore, impacts to California newt habitat from proposed modifications to the HFHA would be less than significant. Because of the limited area where this species could occur in the proposed HFHA, the relatively low potential for it to occur there, and the relatively small potential for direct mortality from hand removal of vegetation, impacts to individuals are expected to be limited. Therefore, impacts to California newt from the proposed modifications to the HFHA would be less than significant.

Southwestern pond turtle is known to have occurred in the proposed CWPP area, including in the coastal zone near the waterfront and near Lauro Reservoir. It may also have some potential to occur within Zone F and G along Mission Creek and zone H along San Roque Creek. Creation of defensible space within the proposed HFHA would alter habitat for this species, but would not entirely remove it, and riparian habitat suitable for nesting and wintering would remain along these creeks. Therefore, impacts to southwestern pond turtle habitat from the proposed modifications to the HFHA would be less than significant. Death and injury of pond turtle adults, which are relatively visible to workers performing hand clearance of vegetation on private property, is relatively unlikely. A very low potential exists for destruction of nests. But these are most likely to occur in riparian areas adjacent to streams, where impacts from creation of defensible space and road clearance will be less severe. Therefore, impacts to southwestern pond turtle from the proposed modifications to the HFHA would be less than significant.

Two-striped gartersnake potentially occurs along creeks in the northernmost portions of the proposed CWPP area, away from any of the proposed HFHA. In addition, as this species tends to remain within riparian habitats adjacent to creeks when not within aquatic habitats, and as impacts to these habitats would be limited to removal of flammable material while balancing riparian habitat values, impacts to habitat and individuals of this species from the proposed modifications to the HFHA would be less than significant.

Terrestrial Reptile Guild: Coast patch-nosed snake (*Salvadora hexalepis virgultea*) occurs in scrub habitats, and Blainville's horned lizard (*Phrynosoma blainvillii*) occurs in open scrub and grassland habitats, with both likely limited to the northernmost parts of the CWPP area. Northern California legless lizard (*Anniella pulchra*), a CDFW species of special concern, occurs in a variety of vegetation communities with suitable loose soils. The latter species may occur more widely, including patches of natural areas in more central and southern parts of the proposed CWPP area. As none of the proposed HFHA is within areas potentially occupied by Blainville's horned lizard or coast patch-nosed snake, and even the northernmost zones (F, G, H, and I) lack the scrub and grassland habitats that could support these species, no impacts are expected to these species from the proposed modifications to the HFHA. However, as Northern California legless lizard is known from the vicinity of zone G, creation of defensible space and road clearance in the HFHA could result in impacts to northern California legless lizard habitat and individuals.

Northern California legless lizards remain within the substrate at nearly all times. Removal of ground cover to create horizontal space in itself may have relatively little impact to Northern California legless lizard habitat, as long as soils remain unchanged. Clearance activities could potentially alter the amount of debris on the ground within the cleared areas, potentially reducing the suitability of some areas. But it would likely result in creation of additional debris from vegetation chipped and left in place at some locations. SBFD guidelines for defensible space (SBFD 2020a) include a requirement for landowners to avoid creating erosion from vegetation clearance in defensible space. Mitigation measure **MM-BIO-3 Property Owner Educational Material** requires the creation of additional educational material to be made available to property owners with regard to biological resources and defensible space management. Within zone G, it is feasible that some Northern California legless lizards could be killed during the use of heavy machinery. However, the use of heavy machinery that could cause such mortality is expected to be limited, and best management practices outlined in Section 3 to avoid erosion should also reduce the likelihood of mortality to this species. With inclusion of these guidelines for landowners and **MM-BIO-3 Property Owner Educational Material**, impacts Northern California legless lizard from the proposed modifications to the HFHA would **be less than significant with mitigation**.

Tree-Nesting and Roosting Raptor Guild: Cooper's hawk (*Accipiter cooperii*), white-tailed kite, and merlin (*Falco columbarius*) all use trees for roosting, and Cooper's hawks and white-tailed kites may nest in trees in the CWPP area. Impacts to woodlands (riparian woodland/creek, southern oak woodland, and eucalyptus woodland) due to proposed modifications in the HFHA could result in impacts to these species. However, within defensible space and the narrow areas affected by road clearance, impacts to trees would largely be limited to limbing lower branches and removing dead trees. Suitable roosting and nesting habitat would remain within the many trees that would remain after implementation of defensible space and road clearance requirements in the proposed HFHA. Indirect impacts from erosion and establishment of native plants would not affect habitat suitability for these species. Therefore, impacts to tree-nesting and roosting raptor habitat from the proposed modifications to the HFHA would be less than significant.

Vegetation clearance could also result in impacts to nesting birds, including but not limited to Cooper's hawks or white-tailed kites. Noise from machinery used in vegetation removal could result in disturbances to nesting individuals, but the temporary nature of these activities would limit the disturbance, and would not likely result in nest abandonment. Removal of lower tree limbs and thinning of vegetation could potentially result in abandonment of nests, or in rare cases result in direct disturbance of nests. Any disturbance resulting in destruction of nests, nestlings, or eggs, or in abandonment of nests and nest failure, would be a significant impact. **MM-BIO-3 Property Owner Educational Material** would include information regarding avoidance of nesting bird season and advise property owners of protections to migratory birds.

Riparian Bird Guild: Yellow warbler (*Setophaga petechia*) and yellow-breasted chat (*Icteria virens*) may breed in riparian areas within the proposed CWPP area, but breeding occurrences for both species are limited, despite extensive data from the proposed CWPP area. However, both species have the potential to breed within proposed HFHA along creeks, including zones F, G, H, I, and R.

Yellow warbler has been recorded breeding within zone I, in a residential area near Cieneguitas Creek. It also has potential to breed in zones F, G, H, and R (SBAS 2020). Removal of understory within riparian habitats could potentially affect the suitability of habitats for this species. However, because it is known to occupy only a very small portion of the CWPP area, and is less reliant on understory for cover and nest placement than many other riparian nesting species, the removal of dead material and relatively limited impacts expected within riparian habitat are unlikely to substantially reduce its occurrence in the CWPP area. Therefore, impacts to yellow warbler habitat due to proposed modifications in the HFHA would be less than significant. Noise from vegetation removal would be temporary in nature and would not likely result in nest disturbance that would lead to abandonment and nest failure. Removal of vegetation supporting nests could potentially result in destruction of nests, eggs, or young of yellow warbler, or could result in nest abandonment and failure. The loss of yellow warbler nests could result in a reduction of the local population and therefore could be a significant impact. Mitigation measure **MM-BIO-3 Property Owner Educational Material** would reduce potential loss of yellow warbler nests.

Yellow-breasted chat is known from breeding season occurrences within the proposed CWPP area, but not from documented breeding. Some of the riparian habitats near the proposed HFHA lack the dense understory required by this species. The most suitable area is likely within Arroyo Burro in area R. But it has a low potential to occur in other parts of the proposed HFHA. Because this species is not known to breed in the proposed HFHA, and because highly suitable habitat is limited, impacts to yellow-breasted chat from proposed modifications in the HFHA would be less than significant.

Other Upland Bird Guild: Birds in this guild are somewhat varied in their habitat preferences. Most of these species prefer some forms of grassland and open scrub habitats, including Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), grasshopper sparrow (*Ammodramus savannarum*), burrowing owl (*Athene cunicularia*), California horned lark (*Eremophila alpestris actia*), and loggerhead shrike (*Lanius ludovicianus*). Olive-sided flycatcher (*Contopus cooperi*) prefers woodland habitat with mature trees. In general, direct habitat impacts to all of these species would be limited by the relatively low potential for all of the species to occur. Also, as most of these species prefer open habitats, impacts from creation of defensible space and road clearance would not be substantial overall. Indirect impacts from erosion may have some potential to affect suitability of habitat for several of these species.

Southern California rufous-crowned sparrow occurs in grasslands and scrub habitats in moderate to steep terrain. Such habitats within the proposed HFHA are highly limited and possibly absent. If any occur within areas subject to defensible space requirements, creation of spacing between shrubs and occasionally maintaining grasses could reduce habitat suitability, but may not eliminate these habitats. Therefore, impacts to Southern California rufous-crowned sparrow from the proposed modifications in the HFHA would be less than significant.

Grasshopper sparrow, burrowing owl, and California horned lark occur in relatively extensive open grassland habitats. Although 59.7 acres of grasslands habitats are mapped in the proposed HFHA, aerial images show many of these grasslands (especially in areas I, L, and M) occur in developed areas. No areas of extensive grassland suitable for these species occurs within the proposed HFHA, and therefore direct and indirect impacts to habitat for these species, and direct and indirect impacts to individuals, from the proposed modifications in the HFHA would be less than significant.

Bats: Several special-status bat species occurring or potentially occurring in the CWPP area roost in trees and could be subject to roosting habitat loss from direct removal of roosting habitat due to the creation of defensible space and road clearance in the proposed HFHA. These include pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western red bat (*Lasiurus blossevillii*). These species divide between cavity roosting bats, which typically roost in caves, rock crevices, or buildings, but also roost in cavities in large trees, and foliage-roosting bats, which may roost in clusters of leaves in trees.

Townsend's big-eared bat and pallid bat are cavity roosting species that may roost in trees but typically roost in other habitats. They are not expected to use trees as maternity roosts, which are the most sensitive habitats for bat species. These species are relatively unlikely to roost in trees in the proposed CWPP area overall, and those that do would roost in trees with large cavities. Such trees are unlikely to be removed in most cases. Dead trees with large cavities suitable for this species may be removed. But the extent of such activities is unlikely to result in significant roosting habitat loss for this species. Because trees are not primary roosting sites for these species, loss of large trees would not result in loss of maternity roosting habitat, and most large trees within affected areas would remain, direct and indirect impacts to roosting Townsend's big-eared bat and pallid bat roosting habitat from the proposed modifications to the HFHA would be less than significant.

Western red bat roosts in tree foliage. This species is likely not common in the CWPP area, but is known to occur in the vicinity, and the number of occurrences likely does not reflect the actual level of abundance. This species may roost in riparian woodland/creek, southern oak woodland, and orchard habitats. Not all wooded habitats are suitable. Removal of dead trees in defensible space would not result in impacts to roosting habitat for this species, as western red bat needs live foliage for roosting. Limbing of trees to create

vertical space would alter habitat, but would not completely remove habitat in affected areas. SBFD defensible space guidelines (SBFD 2020a) allow for the retention of native trees within 100 feet of structures, provided dead wood and limbs below 6 feet are removed, and the trees do not "form a means of rapidly transmitting fire." Therefore, impacts to western red bat roosting habitat from proposed modifications in the HFHA would be less than significant.

The potential for impacts to individuals in maternity roosts would be minimal, because of the low potential for these roosts to occur. Roosting adults could be disturbed in their roosts, but could more easily fly elsewhere for roosting. Therefore, impacts to special-status bats from the proposed modifications to the HFHA would be less than significant.

Terrestrial Mammal Guild: Mountain lion (*Puma concolor*), ringtail (*Bassariscus astutus*), and San Diego desert woodrat (*Neotoma lepida intermedia*) are all likely limited to the northern parts of the proposed CWPP area. Mountain lions, which are highly mobile and may travel many miles between suitable habitat patches, may occasionally venture to the coastal lowlands via creek corridors but the potential to do so is low. Only zone B, which covers only 1.7 acres, is potentially within the normal range of these species. Therefore, impacts to habitat for terrestrial mammals from the proposed modifications in the HFHA would be less than significant. The very small size of the area of potential occurrence and limited presence of development within or adjacent to this area, the likelihood for impacts to individuals of these species to occur is very low. Therefore, impacts to terrestrial mammal guild species from the proposed modifications in the HFHA would be less than significant.

Summary

Vegetation management in privately managed defensible space and roadway clearance with HFHA as well as other activities such as equipment maintenance could potentially impact fish, semi-aquatic reptile and amphibian guild, terrestrial reptile guide, and nesting birds that with the implementation of MM-BIO-1 through MM-BIO-3 impacts would be less than significant. However, even with the incorporation of mitigation measures, impacts to nesting special-status birds would remain **cumulatively significant unavoidable**, and there are no other feasible mitigation measures.

Proposed Modifications to the Vegetation Management Areas

Vegetation management outside of defensible space in proposed City maintained VMUs could result in direct and indirect impacts to special-status wildlife species habitat occurring in the proposed CWPP area, including riparian corridors that could support federally listed species. Direct impacts from vegetation management activities in the proposed VMUs would be similar to those in the proposed HFHA. However, as compared to private property owner defensible space management within more urbanized areas that are fragmented by roads, driveways, fences, landscaping, and structures, VMUs may be larger in size and have more contiguous habitat. Direct impacts could include habitat degradation and habitat conversion. Potential indirect impacts could result from erosion, sedimentation, and degrading of water quality, and from establishment of invasive, exotic species. Also, use of heavy machinery for vegetation management could result in soil compaction that could further deter regrowth of native vegetation, or could contribute to additional soil disturbance. The presence of heavy machinery in or adjacent to sensitive habitats could also result in chemical leaks or spills that could result in habitat degradation.

Direct impacts from vegetation management could include clearing of brush, limbing of trees, and mowing of ground cover during the nesting bird season resulting in destruction of bird nests and eggs, including the nests and eggs of special-status bird species. Use of heavy machinery could result in crushing of terrestrial

reptiles. Indirect impacts could include noise from fuel modification activities that could disturb nesting special-status bird species, including the fully protected white-tailed kite, potentially causing nest abandonment and failure. Reduction of cover for several smaller invertebrate species could expose these species to predation from native predators or pets associated with nearby development. Water quality impacts due to erosion could indirectly affect aquatic and semi-aquatic species occurring in nearby creeks, including the federally endangered southern steelhead and the federally threatened California red-legged frog. Any direct or indirect impacts to southern steelhead or California red-legged frog individuals would be considered take under the ESA and could be a significant impact. Substantial reductions or eliminations of local populations of other species could also be considered a significant impact. Mitigation measure MM-BIO-2 requires implementation of measures to protect riparian habitat

Consistent with practices described in the 2004 Wildland Fire Plan and best management practices included in Section 3, the SBFD would perform a biological evaluation including a reconnaissance site survey prior to performing any work activities. A site specific Work Plan would then be developed to address potential survey requirements and avoidance measures and would reduce the potential for all direct and indirect impacts to special-status wildlife species in the VMUs. Other BMPs would address impacts to different species and are discussed under the analyses by guild below.

Invertebrate Guild: Impacts to invertebrate species habitat could occur from direct and indirect impacts to coastal sage scrub, California annual grassland, and coastal perennial grassland occupied by Crotch bumblebee or impacts to eucalyptus woodland, and other woodlands, occupied by monarch butterfly.

Although vegetation management within the proposed VMUs could result in removal of shrubs and mowing, grazing, or burning of grasses within Crotch bumble bee habitat, removal of live vegetation itself would not modify habitat structure in a way that would make it unsuitable for Crotch bumble bee, which prefers open habitats. However, these activities could result in removal of debris that could be suitable for Crotch bumble bee nesting or overwintering. The Crotch bumble bee is not known to occur in the proposed CWPP area and its potential to do so is relatively low. However, because Crotch bumble bee is a candidate for listing under CESA, if the species does occur, loss of any individuals or nests could be considered "take." lthough bumble bees are highly maneuverable and able to avoid slow-moving machinery used in clearing and mowing vegetation, use of mechanical means to remove brush and maintain grasses in the VMUs could result in crushing debris or loose soils where Crotch bumble bees have established nests. Use of heavy machinery from late fall to midwinter could result in collapsing small mammal burrows potentially occupied by Crotch bumble bee females. Use of prescribed fire could also result in destruction of nests. Hand removal of dead material or other debris also could result in nest destruction, if on very rare occasions. Any loss of queens, nests, or wintering females could severely impact the potential for this species to persist in occupied habitats. As discussed in Section 3, the SBFD would perform a site specific biological evaluation including reconnaissance survey prior to implementation of a Work Plan. Additionally, MM-BIO-1 requires species specific focused surveys and the development of measures to avoid and minimize impacts to sensitive resources identified in the survey, would reduce impacts to Crotch bumble bee individuals. Other BMPs that would also reduce this impact include:

- Ensure that heavy equipment is not placed in sensitive habitat areas.
- Limit the size and quantity of heavy machinery.

Impacts to the Crotch bumble bee would be less than significant with mitigation.

Monarch butterflies have been known to roost at two locations in the proposed VMU 43. Impacts to habitat from limbing of the lower branches of trees to create vertical space between the canopy and ground cover may result in minimal impacts to suitability of habitat, but is not likely to change habitat substantially. If thinning of eucalyptus is required within monarch butterfly roosts, this could result in habitat impacts. Implementation of the biological evaluation including reconnaissance survey would enable the determination of monarch butterfly presence at a particular site and restrict SBFD vegetation management, roadway clearance and equipment maintenance until monarch butterflies are no longer present. Monarch individuals roosting in fall or winter are relatively unlikely to be affected by vegetation management activities in the VMUs, as these activities would take place most often in spring or early summer. Any monarchs that may be roosting at the time of vegetation management would be able to avoid impacts from manual or mechanical methods of removing tree limbs and trees. And the required biological survey would also result in reduction of this impact. Therefore, with inclusion of this BMP, impacts to monarch fall and winter roosting habitat, and to monarch individuals, from the proposed modifications to vegetation management areas would be less than significant.

Fish Guild: Vegetation management within the VMUs would not result in direct impacts to southern steelhead habitat because no work would be conducted in streams, and only hand removal of vegetation within 25 feet of streams would occur. Erosion, sedimentation, and degrading of water quality, however, could result in indirect impacts to steelhead habitat. No direct impacts would occur to steelhead individuals within aquatic habitat, but potential degrading of water quality impacts could also be considered an impact to steelhead individuals. Steelhead critical habitat occurs in VMUs 27, 28, 43, and 45, and rearing habitat occurs in VMUs 27 and 28. The biological evaluation including site survey described in Appendix E of the proposed CWPP and in Section 3 Project Description would identify potential occurrence of steelhead. Avoidance measures noted in Appendix E and Section 3 would be specifically identified in the Work Plan. Section 3 of Appendix E further states that entry into streambeds shall not be authorized, and that treatment within 25 feet of the top of the bank shall be limited to easily accessible dead brush, which may only be conducted if the work will not damage the bank structure. An approved biologist is required to measure the 25-foot buffer and mark it in the field, prior to any vegetation management in the vicinity of the streambed. Additional BMPs will help protect riparian corridors and associated aquatic habitats. Additional BMPs for mechanical vegetation treatment that will result in avoidance and minimization of indirect impacts to southern steelhead habitat and individual steelhead include:

- Ensure that equipment is not placed within sensitive habitat areas.
- Limit the size and quantity of equipment to that which is necessary to meet the identified vegetation management standard.

BMPs for biological treatment methods that would result in avoidance and minimization of impacts to these species include:

- Identify and assess streams and watercourses in potential grazing areas prior to turn-out and install exclusionary fencing where necessary.
- Routinely monitor grazing activities in riparian areas to minimize the potential for stream bank damage, soil compaction, and soil deposition into streams and watercourses.
- Avoid grazing in unstable slope areas or implement measures to minimize impacts to slope stability (e.g., reducing herd size to retain vegetation, avoiding grazing where saturated soil condition exist).

In addition, MM-BIO-1 would ensure that, in the unlikely event that the project activities could potentially result in impacts to steelhead, these impacts would be avoided through coordination with appropriate agencies such as NMFS. Therefore, impacts would be reduced to **less than significant.**.

Semi-aquatic Reptile and Amphibian Guild: Vegetation management within the proposed VMUs would not result in direct impacts to aquatic habitats used by semi-aquatic species, as no work would take place within stream channels or aquatic habitat. However, it could result in indirect impacts to these habits from degradation of water quality due to erosion and sedimentation. BMPs to protect against erosion and resultant water quality impacts, described above for impacts to steelhead, would reduce the potential for water quality impacts. Therefore, less than significant would occur to aquatic habitats used by these species or to individuals of these species when using aquatic habitats. Impacts discussed below apply to those that may occur during use of upland habitats.

California red-legged frog potentially occurs in the most northern VMUs, such as 24, 25, 28, and 29. No recent observations have been recorded within the City. If this species occurs in any of the VMUs, vegetation management activities could alter habitats surrounding streams by removing ground cover and reducing the heights of grasses. Relatively natural habitat would remain during the non-breeding season that California red-legged frog could occupy. However, if vegetation management activities, such as use of machinery to remove brush or mow grasses, or use of prescribed fire treatments, injury or mortality could result to California red-legged frogs. The requirement for a biological evaluation and site survey and development of a site specific Work Plan would reduce these impacts. MM-BIO-1 requires focused surveys and MM-BIO-2 requires riparian habitat projection. With implementation of these measures, impacts to California red-legged frog would be reduced to **less than significant..**

California newt has potential to occur in the northernmost portions of the CWPP area. Vegetation management could alter habitat, including removing debris where this species could seek cover in uplands habitats. But relatively natural habitats would remain in the treated areas near any suitable aquatic breeding habitat, and the species could persist in the area. Use of machinery for removing brush or mowing grasses, or use of prescribed fire treatments, could result in injury or mortality to this species when it occupies upland habitats. The requirement for a biological evaluation and site survey and implementation of a site specific Work Plan would reduce potential impacts. Other BMPs that would reduce impacts to individuals within upland habitats would include:

- Ensure that equipment is not placed within sensitive habitat areas.
- Limit the size and quantity of equipment to that which is necessary to meet the identified vegetation management standard.

With inclusion of these BMPs, impacts to California newt from the proposed modifications to the vegetation management areas would be less than significant.

Southwestern pond turtle potentially occurs in the northern portions of the proposed CWWP area, so it may occur in VMUs in those areas within or near stream habitats. Vegetation management could alter habitat, including removing debris where this species could seek cover or nest in uplands habitats. But relatively natural habitats would remain in the treated areas near any suitable aquatic breeding habitat, and the species could persist in the area. However, direct impacts could occur southwestern pond turtle individuals in upland habitats, including mortality or injury from crushing of southwestern pond turtles or their nests by heavy machinery or collisions with mowing equipment. The same BMPs that apply to reducing California

newt impacts (biological evaluation and survey and implementation of a site specific Work Plan, ensuring heavy equipment remains outside sensitive habitats, and limiting the size and quantity of heavy equipment), would reduce these impacts. Therefore, impacts to southwestern pond turtle from the proposed modifications to the vegetation management areas would be less than significant.

Two-striped gartersnake also may occur in VMUs in the northernmost parts of the proposed CWPP area. Impacts to this species would be the same as those for California newt and southwestern pond turtle. BMPs to reduce these impacts (biological survey and avoidance and minimization measures, ensuring heavy equipment remains outside sensitive habitats, and limiting the size and quantity of heavy equipment) would also be the same. But impacts in general would likely be less because this species generally remains closer to streams, within riparian habitats, when occupying upland areas, and these areas would be subject to limited vegetation management activities. Therefore, impacts to two-striped gartersnake from the proposed modifications to the vegetation management areas would be less than significant.

Terrestrial Reptile Guild: Coast patch-nosed snake occur in scrub habitats, and Blainville's horned lizard occurs in open scrub and grassland habitats, with both likely limited to the northernmost parts of the proposed CWPP area. Northern California legless lizard occurs in a variety of vegetation communities with suitable loose soils. The latter species likely occurs more widely than the other species, and has occurred within VMU 40 and near VMU 26. It may also occur in other VMUs in the southwestern part of the City and in the northernmost areas. Therefore, vegetation management could result in direct habitat impacts, indirect habitat impacts from erosion, and direct impacts to individuals from the use of heavy machinery that could compact the loose soils and crush legless lizards. As described in Section 3, a biological evaluation and site survey and development of a site specific Work Plan would minimize impacts. In addition, best management practices included in Section 3 related to erosion control including measures to: ensure that equipment is not placed within sensitive habitat areas, and limiting the size and quantity of equipment to that which is necessary to meet the identified vegetation management standard would minimize potential impacts With inclusion of these BMPs, direct and indirect impacts to Northern California legless lizards from the proposed modifications to the vegetation management areas would be less than significant.

Blainville's horned lizard and coast patch-nosed snake could also be subject to impacts from habitat alteration and direct impacts to individuals due to crushing under heaving machinery or collision with mowing equipment. Best management practices to perform a biological evaluation including site survey and development of a site specific Work Plan, limiting the size and quantity of equipment to that which is necessary to meet the identified vegetation management standards would further reduce potential impacts. Therefore, direct and indirect impacts to Blainville's horned lizard and coast patch-nosed snake individuals from the proposed modifications to the vegetation management areas would be less than significant.

Tree-Nesting and Roosting Raptor Guild: Cooper's hawk could nest in a variety of wooded habitats in the proposed VMUs, and white-tailed kite has some potential to nest, especially in oak woodlands near Elings Park, where suitable foraging habitat occurs. Merlin, a special-status species for wintering, potentially roosts in trees anywhere in the CWPP area during migration and winter. Loss of trees for merlin roosting would likely not reduce its potential to winter, but loss of trees or alteration of wooded habitats where Cooper's hawk and white-tailed kite nest could affect the availability of nesting habitat for these species. Adults of these species would not be harmed by vegetation management activities, because they are highly mobile and could avoid vegetation management activities. Disturbance from noise and human presence

during vegetation management activities would be temporary in nature and likely would not result in nest abandonment or failure. However, trimming of branches or removal of trees could potentially result in destruction or abandonment of nests. Best management practices to perform a biological evaluation including site survey and development of a site specific Work Plan would minimize impacts. MM-BIO-4 would require avoidance of work during nesting bird season. However, with implementation of these measures, impacts would be reduced to **less than significant..**

Riparian Bird Guild: Yellow warbler could occur in several of the proposed VMUs, including those along creeks in the northern and southwestern parts of the CWPP area. Yellow-breasted chat has a much lower potential to occur, but could occur in most of the same areas as yellow warbler. Removal of vegetation in habitats in VMUs occupied by these species could reduce their potential to subsist in parts of the proposed CWPP area. Indirect impacts to water quality could also potentially result in habitat impacts. Also, while adults of these species could avoid injury and mortality due to vegetation management activities, these activities could result in direct impacts to nests, resulting in nest destruction or nest abandonment and failure. Impacts from noise and human presence during vegetation management activities would be temporary and would not likely result in nest abandonment. Best management practices to perform a biological evaluation including site survey and development of a site specific Work Plan would minimize impacts. In addition, protections for riparian habitat described for steelhead and semi-aquatic reptile and amphibian species would further reduce impacts. MM-BIO-1, MM-BIO-2 and MM-BIO-4 would further reduce potential impacts to these species. With implementation of MM-BIO-4 and the above described BMPs, this impact would be reduced to **less than significant**

Other Upland Bird Guild: Southern California rufous-crowned sparrow, grasshopper sparrow, burrowing owl, California horned lark, and loggerhead shrike all have some potential to occur in open habitats in the CWPP area, including in the VMUs, but habitat for these species is limited, and none of them are known to breed regularly within the proposed CWPP area. In addition, because vegetation management would actually result in more open habitats, it would not result in substantial loss of habitat for these species, and could even make some areas more suitable. Olive-sided flycatcher has occurred in the breeding season in the Botanic Garden area in the proposed CWPP vicinity (Lehman 2020), and it could occur within the proposed CWPP area itself, in areas with large trees. Removal of dead trees could reduce habitat suitability for this species, which often perches in the tops of these trees while singing and foraging for insects. But the potential for impacts to habitat occupied by this species is low. Adults of all of these species could escape injury and mortality from contact with machinery used in vegetation management, or use of prescribed fire. But some potential exists for nesting impacts to all of these species, especially to rufous-crowned sparrow, grasshopper sparrow, and California horned lark, which nest on the ground surface. Burrowing owl has a very small possibility of nesting, but it could potentially be injured by use of heavy machinery that could collapse its burrows. Best management practices to perform a biological evaluation including site survey and development of a site specific Work Plan, and by the nesting bird survey and avoidance requirement in the proposed CWPP. MM-BIO-4 would also require completion of nesting bird surveys. Ensuring heavy equipment remains outside sensitive habitats and limiting the size and quantity of heavy equipment would further reduce the potential for impacts. However, even with the incorporation of mitigation, population impacts to a special-status species could occur causing a **cumulatively significant unavoidable impact**.

Bat Guild: Pallid bat and Townsend's big-eared bat may roost in the CWPP area, but are relatively unlikely to roost in vegetation. If these species do roost in habitats in the proposed VMUs, they would nest in large trees and would be very unlikely to establish maternity roosts there. Because preferred roosting habitat for these species does not occur in trees, impacts to roosting habitats would be less than significant. If

individuals of these species do establish roost in trees, they would be able to escape injury or mortality from vegetation management activities, including tree removal, because they are highly mobile.

Western red bat roosts in foliage in trees, including riparian woodland, southern oak woodland, and sometimes in orchards, where these habitats provide suitable roosting conditions. Removal of dead trees in proposed VMUs would not influence suitability of habitat. Limbing of trees to create vertical space would alter habitat, but would not completely remove habitat in affected areas. Adult bats would be able to escape injury and mortality from vegetation management occurring within wooded habitats. Besides the requirement for a biological site survey, the proposed CWPP includes several BMPs that would reduce any potential direct or indirect impacts to this species. Riparian protections described for riparian habitat described for steelhead and semi-aquatic reptile and amphibian species would reduce the potential for these impacts. BMPs for vegetation management in tree-dominated habitats prohibit the removal of trees 4 inches or greater in diameter and call for the protection of oak saplings and seedlings. As such, direct and indirect impacts to western red bat from the proposed modifications to the vegetation management areas would be less than significant.

Terrestrial Mammal Guild: Mountain lion, ringtail, and San Diego desert woodrat are all generally limited to the northern parts of the proposed CWPP area. Mountain lions, which are highly mobile and may travel many miles between suitable habitat patches, may occasionally venture to the coastal lowlands via creek corridors but the potential to do so is low. Mountain lion and ringtail are secretive species that are relatively unlikely to be resident near existing development, and impacts to habitat occupied by these species would be less than significant. Direct impacts to individuals are also very unlikely to these species, and the implementation of best management practices to perform a biological evaluation including site survey and development of a site specific Work Plan would minimize impacts. San Diego desert woodrats may occur in these areas in the limited amount of chaparral (32.8 acres, mostly in VMU 28) that would be affected in the far northern part of the proposed CWPP area. Extensive suitable habitat areas occur in adjacent areas in the lower slopes of the Santa Ynez Mountains. Alteration of scrub habitats within the CWPP area may reduce available habitat but would not hinder the species' ability to survive in the area. Direct impacts to San Diego desert woodrat individuals and their nests could occur from vegetation management conducted by heavy machinery that could crush nests and the woodrats within them. Removal of the stick nests as flammable debris could expose the woodrats to predation. However, the biological evaluation and site survey would result in identification of potentially affected woodrat nests, which are readily visible and easily detected. MM-BIO-1 requires focused surveys depending on the results of the biological evaluation. In addition, BMPs ensuring heavy equipment remains outside sensitive habitats and limiting the size and quantity of heavy equipment included in Section 3 reduce the potential for impacts. Impacts to terrestrial mammal guild species from the proposed modifications to the vegetation management areas would be less than significant.

Summary

Vegetation management City managed VMUs as well as other activities such as equipment maintenance could potentially impact fish, semi-aquatic reptile and amphibian guild, terrestrial reptile guide, and nesting birds that with the implementation of MM-BIO-1 through MM-BIO-3 impacts would be less than significant. special-status wildlife species. However, even with the incorporation of mitigation measures, impacts to Fish, Semi-aquatic Reptile and Amphibian Guild, nesting special-status birds and Tree-Nesting and Roosting Raptor Guild would remain cumulatively significant unavoidable, and there are no other feasible mitigation

measures. With the implementation of MM-BIO-1 through MM-BIO-4, these impacts would be reduced to **less than significant.** .

Proposed Modifications to the Vegetation Management Methods

As vegetation management methods would remain the same as those described in the 2004 Wildland Fire Plan, implementation of the proposed CWPP would not result in impacts to special-status wildlife species from proposed modifications to the vegetation management methods.

BIO-2 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Table 4.3-7 describes the sensitivity level of general communities according to the Environmental Resources Element (City of Santa Barbara 2011) and which general communities have the potential to support communities recognized in MCV2 and NCL that are sensitive based on their state or global rankings. In addition, under the CEQA threshold described above, any riparian community would likely be considered sensitive. Both the Environmental Resources Element (City of Santa Barbara 2011) and the LCP (City of Santa Barbara 2019) include policies protecting riparian habitats. The LCP includes designated setbacks for riparian habitats and creeks, as well as allowable uses within setbacks of these habitats. Both the Environmental Resources Element (City of Santa Barbara 2011) and the LCP (City of Santa Barbara 2019) also provide protections for oak woodland (including any community mapped as southern oak woodland). Several generally mapped communities occurring in the CWPP area also have the potential to support sensitive communities recognized in MCV2 and NCL, as listed in Table 4.3-7. Although both coastal strand/beach and coastal bluff are considered sensitive in the Environmental Resources Element, neither is shown in Table 4.3-7 because these land covers are not technically vegetation communities (they are largely bare ground), and no impacts are expected from implementation of the proposed CWPP.

Table 4.3-7. Sensitive Vegetation Community Potentially Affected by Proposed CWPP Implementation

Community	General Plan Sensitivity Level	Potential for State and Globally Ranked Sensitive Communities?	Potential Occurrence	
			High Fire Hazard Area	*VMUs*
Herbaceous Communities				
Coastal Perennial Grassland	Very High	Yes	Yes	Yes
Upland Scrub Communities				
Coastal Sage Scrub	Medium	Yes	Yes	Yes
Chaparral	Medium	Yes	Yes	Yes
Woodland and Forest Communities				
Riparian Woodland/Creek	Medium	Yes	Yes	Yes
Southern Oak Woodland	High	Yes	Yes	Yes
Barren Natural Land Covers				
Coastal Bluff	Very High	No	No	No
Coastal Strand/Beach	Very High	No	Yes	No

Table 4.3-7. Sensitive Vegetation Community Potentially Affected by Proposed CWPP Implementation

Community	General Plan Sensitivity Level	Potential for State and Globally Ranked Sensitive Communities?	Potential Occurrence	
			High Fire Hazard Area	*VMUs*
Other Potentially Occurring Natural Communities				
Freshwater Marsh	High	Yes	Yes	Yes
Coastal Saltmarsh	High	Yes	No	No

Source: City of Santa Barbara 2011.

Proposed Modifications to the High Fire Hazard Area

Creation of defensible space and road clearance in the proposed HFHA could result in direct and indirect impacts to sensitive natural communities occurring in the proposed CWPP area, including riparian habitats (riparian woodland/creek). Although creation of defensible space in the proposed HFHA would not result in development or grading that would remove sensitive natural communities, it could cause habitat degradation and habitat conversion. Several indirect impacts could also occur. By removing vegetation, creation of defensible space and road clearance could result in soil destabilization, erosion, increased sedimentation, and resulting water quality impacts. Water quality impacts in riparian areas could also result from the accumulation of debris left in place from vegetation clearance activities and subsequently washed into streams. Vegetation clearance could also assist in the establishment of invasive, non-native plants, resulting in further degradation of sensitive habitats, including surrounding habitats that remain intact outside defensible space and road clearance areas. Details regarding geology and soils and hydrology and water quality are discussed in Sections 4.5 And 4.8, respectively. These impacts are discussed by general vegetation community below.

Given the programmatic nature of this PEIR, acreages of all sensitive communities occurring in the proposed CWPP area are not known, and the exact acreages of areas where impacts will occur within defensible space and road clearances areas are not known. However, Table 4.3-8 shows the acreages for mapped communities in the proposed HFHA that may support sensitive vegetation.

Table 4.3-8. Sensitive Vegetation Communities in Proposed High Fire Hazard Areas

Community	Always Sensitive?	Acres Mapped
Herbaceous Communities		
Coastal Perennial Grassland	Yes	0.0
Upland Scrub Communities		
Coastal Sage Scrub	No	41.5
Chaparral	No	0.0
Woodland and Forest Communities		
Riparian Woodland/Creek	Yes	24.9
Southern Oak Woodland	Yes	104.8
Other Potentially Occurring Natural Communities		
Freshwater Marsh	Yes	0.0

Source: City of Santa Barbara 2011.

Coastal Perennial Grassland. No mapped native grasslands occur in the proposed HFHA, and few exist within the City (Table 4.3-8). Any grasslands occurring adjacent to structures in the proposed HFHA are likely disturbed versions of this community existing in small fragments. HFHA zones B, E, K, L, N, and O support little natural vegetation and are adjacent to existing HFHA, where undisturbed native grasslands are very unlikely to occur. Zones F, G, H, I, and M occur in areas where natural vegetation consists almost solely of riparian or oak woodland communities. Zones R and T support these communities, as well as coastal sage scrub. Because native grasslands are unlikely to occur within defensible space or road clearance areas except in small, isolated patches near existing development, impacts from implementation of the proposed CWPP would be less than significant.

Coastal Sage Scrub. Approximately 41.5 acres of coastal sage scrub communities are mapped in the proposed HFHA, with 37.3 acres occurring in zone T, in the coastal zone (Table 4.3-8). Even within this area, coastal sage scrub occurs in the proposed HFHA in fragmented form, surrounded by development. In addition, the communities recognized in MCV2 and NCL that occur in the area are not typically considered sensitive. However, in the coastal zone, stands of coastal sage scrub may be considered ESHAs if they support special-status species or are within or adjacent to creek, riparian, or wetland ESHA. The fragments of coastal sage scrub occurring in the coastal zone in zone T are unlikely to support special-status wildlife species, and they are relatively unlikely to support remnant special-status plant populations. CNDDB (CDFW 2020) does include an occurrence of Davidson's saltscale (*Atriplex serenana var. davidsonii*) just west of Hendry's Beach, but this occurrence is from 1947. Cliff aster was recorded more recently and in the same area. As a California Rare Plant Rank 4 species, however, its sensitivity is low, and it would not typically be considered the basis for ESHA. The proposed CWPP includes the following action item to address policy consistency in the coastal zone:

1.2 Evaluate opportunities to implement vegetation management and defensible space activities consistent with the policies of the City's Coastal Land Use Plan in the HFHSZ that occurs within the state's Coastal Zone Boundary.

Because of the low likelihood that coastal sage scrub communities occurring in the HFHA would be considered sensitive, impacts to sensitive vegetation within coastal sage scrub from implementation of the proposed CWPP would be less than significant.

Chaparral. This general community has not been mapped in any of the proposed HFHA (Table 4.3-8) and likely does not occur there. Most communities occurring in the region and recognized in MCV2 and NCL are not sensitive, and any coastal sage scrub communities occurring in the HFHA are unlikely be considered sensitive, especially degraded forms likely occurring near development within the City. Therefore, impacts to sensitive chaparral vegetation in the HFHA would be less than significant.

Riparian Woodland/Creek. Sensitive riparian vegetation occurs within or adjacent to several of the proposed HFHA (zones F, G, H, I, R). No riparian woodland/creek has been mapped in the coastal zone. A City habitat restoration site supporting riparian vegetation occurs along Mesa Creek at its confluence with Arroyo Burro. However, this location is more than 100 feet from any existing structures and would not be subject to defensible space requirements. Therefore, no impacts are expected to riparian habitats in the coastal zone, and policies related to riparian ESHA do not apply. In all, 24.8 acres of riparian woodland/creek are mapped in the HFHA (Table 4.3-8), and additional vegetation likely occurs adjacent to these zones. In at least one of these zones (R), the City Creeks Division has established a habitat restoration site within Arroyo Burro. Work within riparian areas is currently conducted under a Section 1600 SAA with

CDFW (CDFW 2015). Any work that occurs in these areas under the 2004 Wildland Fire Plan would be subject to similar requirements. Measures in the SAA include, but are not limited to, timing work to avoid bird nesting season, providing a qualified biologist for site monitoring, properly storing and staging equipment, replacement of damaged and removed native trees at ratios between 5:1 and 15:1, control of exotic species, and erosion control. Also, the proposed CWPP includes the following action item that would result in limiting activities to create defensible space in riparian areas:

11.2 Work with Creeks Division and Community Development Department to develop guidelines for private property owners conducting defensible space adjacent to creek areas that balances riparian values and fire hazard and risk on private lands.

Also, SBFD guidelines for defensible space (SBFD 2020a) include a requirement for landowners to avoid creating erosion from vegetation clearance in defensible space, thus avoiding impacts from sedimentation and degradation of water quality, and the SBFD offers advice to property owners on how to implement erosion control. MM-BIO-3 requires implementation of property owner education. Finally, implementation of defensible space, and implementation of the proposed CWPP in general, would benefit sensitive riparian communities by reducing the likelihood of fire within these habitats. Despite protections under the SAA, the proposed development of guidelines for implementing defensible space that would balance riparian values and fire hazard risk, and requirements to prevent erosion, implementation of defensible space is likely to result in impacts to riparian vegetation in the HFHA, such as area R, along Arroyo Burro. The existing SAA expires in 2024, and proposed CWPP protections for riparian habitats under Action Item 11.2 and written SBFD guidelines (SBFD 2020a) are relatively unspecific. However, any work by private property owners within 50-feet of a creek would be subject to a SAA and potentially by RWQCB and USACE. As such, impacts would be less than significant.

Southern Oak Woodlands. Oak woodlands occur widely in the HFHA, including zones E, F, L, M, N, O, R, and T. The largest areas of oak woodland occur in zone M, where several stands on the Mesa, between the upper West Side and Elings Park, are interspersed among residential development, and T, which includes a large area of oak on the north side of the Douglas Family Preserve that is not adjacent to development and would not be affected by defensible space and road clearance requirements. In addition to the larger area of oak woodland within the Douglas Family Preserve, Figure 4.1-1 of the LCP identifies several smaller areas of oak woodland in zone T, west of Hendry's Beach (also see Figure 4.3-6). The LCP provides protections for oak woodland as ESHA and establishes a minimum habitat buffer of 25 feet around oak woodland ESHA. However, Policy 4.1-6 cites "modification required by the Fire Department to meet the Fire Code Defensible Space Requirements for existing development in High Fire Hazard Areas" as an allowed use within terrestrial ESHA. Policy 4.1-17 designates fuel modification as an allowed use in ESHA buffers. Policy 4.1-21 states that "programs to reduce fire loads . . . shall protect and preserve ESHA" to the extent feasible," and it further states "vegetation management shall be the minimum necessary to meet the City Fire Department requirements and shall be designed to minimize erosion and impacts on habitat values."

A total of 104.9 acres of southern oak woodland occur in the proposed HFHA throughout the proposed CWWP area (Table 4.3-8). Those that would be affected by defensible space and road clearance requirements occur almost exclusively in highly urbanized or residential areas, such as zone M. In addition, the SBFD guidelines for creation of defensible space (SBFD 2020a) allow for the retention of native trees, and they require a permit from the Parks and Recreation Department for removal of any tree within a City setback. Finally, implementation of defensible space, and implementation of the proposed CWPP in general, would benefit oak woodland communities by reducing the likelihood of fire.

In general, impacts to southern oak woodland communities from implementation of defensible space and road clearance requirements are not expected to be significant in most parts of the proposed CWPP area. Also, as adherence to defensible space requirements is an allowable use in terrestrial ESHA in the coastal zone, impacts to oak woodland communities from implementation of the proposed CWPP would be less than significant.

Freshwater Marsh. No freshwater marshes are known from within any of the proposed HFHA (Table 4.3-8). Any freshwater marsh occurring in these areas is likely limited to riparian corridors, where they would receive protections available to riparian habitats, and would fall under requirements of the SAA. Impacts would be less than significant.

Summary

As discussed above, creation of defensible space and road clearance in the proposed HFHA could result in direct and indirect impacts to sensitive natural communities occurring in the proposed CWPP area, including riparian habitats (riparian woodland/creek). **MM-BIO-2** provides guidelines to protect riparian areas. With implementation of this measure, impacts to sensitive riparian habitats and sensitive natural communities in the HFHA would be reduced to **less than significant**.

Proposed Modifications to the Vegetation Management Areas

Vegetation management outside of defensible space in proposed VMUs could result in direct and indirect impacts to sensitive natural communities occurring in the proposed CWPP area, including riparian habitats (riparian woodland/creek). Potential impacts are similar to those that could occur during creation of defensible space, described above. Direct impacts could include habitat degradation and habitat conversion. Potential indirect impacts could result from erosion, sedimentation, and degrading of water quality, and establishment of invasive, exotic species. Also, use of heavy machinery for vegetation management could result in soil compaction that could further deter regrowth of native vegetation, or could contribute to additional soil disturbance. The presence of heavy machinery in or adjacent to sensitive habitats could also result in chemical leaks or spills that could result in habitat degradation. The potential for these impacts to occur are discussed by general vegetation community below. Note that because none of the proposed VMUs are in the coastal zone, LCP policies and requirements are not discussed.

The acreages of all sensitive communities occurring in the proposed CWPP area are not known, and the acreages of areas where impacts will occur within defensible space and road clearances areas are not known. However, Table 4.3-9 shows the acreages for mapped communities in the proposed VMUs that may support sensitive vegetation.

Table 4.3-9. Sensitive Vegetation Communities in Proposed VMUs

Community	Always Sensitive?	Acres Mapped
Herbaceous Communities		
Coastal Perennial Grassland	Yes	0.0
Upland Scrub Communities		
Coastal Sage Scrub	No	231.3
Chaparral	No	32.8

Table 4.3-9. Sensitive Vegetation Communities in Proposed VMUs

Community	Always Sensitive?	Acres Mapped
Woodland and Forest Communities		
Riparian Woodland/Creek	Yes	21.5
Southern Oak Woodland	Yes	133.8
Other Potentially Occurring Natural Communities		
Freshwater Marsh	Yes	0.0

Source: City of Santa Barbara 2020.

Coastal Perennial Grassland. No mapped native grasslands occur in the proposed VMUs, and few exist within the City (Table 4.3-9). If this community occurs, it likely occurs in VMUs in relatively small patches within California annual grassland. Most VMUs support less than 2.0 acres of mapped California annual grassland, if any at all. Those supporting more than this are Units 25 (32.1 acres), 29 (7.8), 36, (4.7), 40 (29.8), and 44 (10.4). All but Unit 36 occur in existing HFHA, where grasslands near development are subject to defensible space requirements. In addition, aerial images suggest Unit 36 consists almost entirely of development and woodland areas, so that it is unlikely to support any native grasses. In addition, if native grasslands do occur, they would be identified due to the provision in Appendix E of the proposed CWPP to conduct a biological survey prior to treatment. These surveys are required to identify sensitive biological resources and measures to avoid or minimize impacts to these resources. The BMPs also require these surveys to identify the presence of invasive plant species. Appendix E also includes BMPs for the use of heavy machinery that include requiring the use of low ground pressure machinery where feasible, ensuring use of appropriate fire safety measures, ensuring that vehicles are free of seeds or other material from invasive plants, using existing roads to the extent feasible, recontouring any areas subject to soil disturbance, servicing equipment outside sensitive habitats, and ensuring that hazardous material spill kits are kept on site during treatment activities. With the inclusion of these BMPs, impacts to native grasslands, if they occur within the VMUs, would be less than significant.

Coastal Sage Scrub. The proposed VMUs support approximately 231.3 acres of coastal sage scrub, one of the most widespread general communities in the proposed CWPP area (Table 4.3-9). As noted in above, under impacts in HFHA, coastal sage scrub communities occurring in the region are not typically considered sensitive. In addition, any sensitive coastal sage scrub communities recognized in MCV2 and NCL that do occur would be identified due to the requirement in Appendix E of the proposed CWPP that a biological survey be conducted prior to treatment. This requirement includes the identification of sensitive biological resources and measures to avoid or minimize impacts to these resources. The BMPs also require these surveys to identify the presence of invasive plant species. Appendix E also includes BMPs for the use of heavy machinery: requiring the use of low ground pressure machinery where feasible, ensuring use of appropriate fire safety measures, ensuring that vehicles are free of seeds or other material from invasive plants, using existing roads to the extent feasible, recontouring any areas subject to soil disturbance, servicing equipment outside sensitive habitats, and ensuring that hazardous material spill kits are kept on site during treatment activities. As such, impacts to sensitive coastal sage scrub communities, if they occur within the VMUs, would be less than significant.

Chaparral. The proposed VMUs support approximately 32.8 acres of chaparral, most of which (26.9 acres) occurs in Unit 28, in the northeastern extreme of the proposed CWPP area (Table 4.3-9). As Unit 28 is within the existing HFHA, significant parts of it are already subject to defensible space requirements. A small

potential exists for this area, or the smaller patches of chaparral within Units 25 (3.7 acres) and 29 (2.3 acres), to support sensitive communities recognized in MCV2 and NCL. In addition, any sensitive chaparral communities recognized in MCV2 and NCL that do occur would be identified due to the requirement in Appendix E of the proposed CWPP that a biological survey be conducted prior to treatment. This requirement includes the identification of sensitive biological resources and measures to avoid or minimize impacts to these resources. The BMPs also require these surveys to identify the presence of invasive plant species. Appendix E also includes BMPs for the use of heavy machinery: requiring the use of low ground pressure machinery where feasible, ensuring use of appropriate fire safety measures, ensuring that vehicles are free of seeds or other material from invasive plants prior entering the treatment area, using existing roads to the extent feasible, recontouring any areas subject to soil disturbance, servicing equipment outside sensitive habitats, and ensuring that hazardous material spill kits are kept on site during treatment activities. Impacts to sensitive chaparral communities, if they occur within the VMUs, would be less than significant.

Riparian Woodland/Creek. Sensitive riparian vegetation is known to occur within five of the proposed VMUs: 26 (3.5 acres along Mission Creek south of Foothill Road), 28 (2.1 acres along Coyote and Westmont Creeks near Montecito), 29 (2.2 acres south of Lauro Reservoir), 43 (9.4 acres along Arroyo Burro adjacent to Las Positas Road), and 45 (4.3 acres along Arroyo Burro in Hidden Valley). In all, the proposed VMUs support 21.5 acres of mapped riparian habitats (Table 4.3-9). Additional, small areas of riparian communities may occur elsewhere, such as along Las Positas Creek in Unit 44, on the east side of Las Positas Road south of Modoc. Both Units 43 and 45 support City support restoration sites along Arroyo Burro, the former within Hidden Valley and the latter just west of Las Positas Road. Work within riparian areas is currently conducted under a Section 1600 SAA with CDFW (CDFW 2015). Any work that occurs in these areas under the proposed CWPP would be subject to similar requirements. Measures in the SAA include, but are not limited to, timing work to avoid bird nesting season, providing a qualified biologist for site monitoring, properly storing and staging equipment, replacement of damaged and removed native trees at ratios between 5:1 and 15:1, control of exotic species, and erosion control. **MM-BIO-5 Jurisdictional Waters and Wetlands** requires the delineation of jurisdictional waters and wetlands. Furthermore, Appendix E of the proposed CWPP includes a requirement that a City qualified biologist conduct a biological evaluation including site survey prior to treatment. The biologist is required to identify any sensitive resources and measures to avoid and minimize impacts. Appendix E also specifies that no entry will be allowed to streambeds that within 25 feet of the banks of streams vegetation management activities will be limited to removal of dead brush that is easily accessible and the removal or exotic or invasive species. The 25-foot setback from the top of bank will be marked in the field by an approved biologist. Appendix E also includes BMPs for the use of heavy machinery: requiring the use of low ground pressure machinery where feasible, ensuring use of appropriate fire safety measures, ensuring that vehicles are free of seeds or other material from invasive plants prior entering the treatment area, using existing roads to the extent feasible, recontouring any areas subject to soil disturbance, servicing equipment outside sensitive habitats, and ensuring that hazardous material spill kits are kept on site during treatment activities. Additionally, MM-BIO-2 would require the protection of riparian habitat. Therefore, direct and indirect impacts to sensitive riparian communities would be less than significant with mitigation.

Southern Oak Woodlands. Oak woodlands occur widely in the proposed VMUs, over a total of 133.8 acres (Table 4.3-9). All but 3 of the 23 proposed VMUs support oak woodland habitats, and additional oak woodlands may occur in areas where they are not mapped. Several relatively large blocks occur, in Units 28 near Coyote Creek (31.6 acres), 44 along east of Las Positas Road and south of Modoc (22.3 acres),

27 just west of Sheffield Reservoir (14.9 acres), and 38 on the north side of the Mesa, northwest of Carrillo Street (13.6 acres). All of these VMUs are within existing HFHA, and therefore are subject to defensible space requirements where near development. In addition, Appendix E of the proposed CWPP includes protections for oak woodlands, including a requirement that a qualified biologist conduct a biological survey prior to treatment. The biologist is required to identify any sensitive resources and measures to avoid and minimize impacts. Appendix E also requires the biologist to identify invasive exotic plants and recommend treatments that would reduce their presence. The BMPs also prohibit the removal of coast live oaks 4 inches or greater in diameter, protect oak saplings and seedlings, prioritize the retention of a healthy native understory that does not create a fire ladder, and require leaving stumps of removed trees intact, to minimize soil erosion. Although it is relatively unlikely that heavy machinery would enter oak woodlands during treatments, Appendix E includes several BMPs for the use of heavy machinery that may result in protections for these communities: requiring the use of low ground pressure machinery where feasible, ensuring use of appropriate fire safety measures, ensuring that vehicles are free of seeds or other material from invasive plants prior entering the treatment area, using existing roads to the extent feasible, servicing equipment outside sensitive habitats, and ensuring that hazardous material spill kits are kept on site during treatment activities. Impacts to sensitive oak woodlands would be less than significant.

Freshwater Marsh. No freshwater marshes are known from within any of the proposed HFHA. Any freshwater marsh occurring in these areas is likely limited to riparian corridors, where they would receive protections available to riparian habitats, and would fall under requirements of the SAA. As such, impacts would be less than significant.

Summary

As discussed above, vegetation management activities within the VMUs could result in direct and indirect impacts to sensitive natural communities occurring in the proposed CWPP area, including riparian habitats (riparian woodland/creek). MM-BIO-2 and MM-BIO 4 provides guidelines to delineation and protect riparian areas in coordination with agency input. With implementation of this measure, impacts to sensitive riparian habitats and sensitive natural communities in the HFHA would be reduced to **less than significant**.

Proposed Modifications to the Vegetation Management Methods

As vegetation management methods would remain the same as those described in the 2004 Wildland Fire Plan, implementation of the proposed CWPP would result in **no impacts** to riparian habitats and other sensitive communities from proposed modifications to the vegetation management methods.

BIO-3 Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impacts to aquatic resources typically include impacts to wetlands and waters of the United States under the jurisdiction of the U.S. Army Corps of Engineers, waters of the state under the jurisdiction of RWQCB pursuant to the Porter-Cologne Act, and streams and associated riparian vegetation under the jurisdiction of CDFW. Wetlands occur primarily within the creeks within the CWPP area. Other wetlands occur along the fringes of Andrée Clark Bird Refuge and in the limited areas of marsh vegetation at the edges of Lauro Reservoir that are within the City.

Proposed Modifications to the High Fire Hazard Area

The precise acreage for wetlands and waters subject to privately managed defensible space and roadway clearance within the proposed HFHA are not known. Known areas of wetland such as those associated with the Andrée Clark Bird Refuge and Lauro Reservoir occur outside the proposed HFHA. Wetlands associated with the Arroyo Burro lagoon and Mesa Creek may occur in the coastal zone and these areas are not located near existing structures and any establishment of new structures would require analysis of impacts from creation of defensible space. Additional wetlands may occur in the HFHA, most likely in association with creek corridors. Impacts to riparian habitats are discussed in detail under BIO-2. Impacts to wetlands from the creation of defensible space and road clearance could include the degradation of wetlands from removal of wetland vegetation, erosion and resulting sedimentation and water quality impacts, accumulation of debris left in place from vegetation clearance activities and subsequently washed into wetlands, and the establishment of invasive, non-native plants. Private property owners are required by law to obtain a SAA when performing work within 50 feet of a creek and may also require approval from the RWQCB and USACE. Mitigation measure MM-BIO-2 Riparian Protection and MM-BIO-3 Property Owner Education would reduce impacts to less than significant with mitigation.

Proposed Modifications to the Vegetation Management Areas

Given the programmatic nature of this PEIR, locations and acreages for wetlands and waters occurring within the proposed CWPP area that would be subject to impacts from vegetation management within the proposed VMUs are not known. Known wetlands such as those associated with the Andrée Clark Bird Refuge and Lauro Reservoir are not in the proposed VMUs. Additional wetlands may occur in VMUs, most likely in association with creek corridors. Impacts to riparian habitats are discussed in detail under BIO-2. Impacts to wetlands from the vegetation management activities within the VMUs could include the degradation of wetlands from removal of wetland vegetation, erosion and resulting sedimentation and water quality impacts, accumulation of debris left in place from vegetation clearance activities and subsequently washed into wetlands, and the establishment of invasive, non-native plants.

The City currently conducts vegetation management under an SAA with CDFW (CDFW 2015), which provides a wide variety of protections for riparian habitats, and therefore for any wetlands occurring in these areas. Furthermore, Appendix E of the proposed CWPP includes a requirement that a City qualified biologist conduct a biological evaluation including site survey prior to treatment. The biologist is required to identify any sensitive resources and measures to avoid and minimize impacts. Appendix E also specifies that no entry will be allowed to streambeds, and that within 25 feet of the banks of streams, vegetation management activities will be limited to removal of dead brush that is easily accessible and the removal or exotic or invasive species. The 2-foot setback from the top of bank will be marked in the field by an City qualified biologist. Appendix E also includes BMPs for the use of heavy machinery: requiring the use of low ground pressure machinery where feasible, ensuring use of appropriate fire safety measures, ensuring that vehicles are free of seeds or other material from invasive plants prior entering the treatment area, using existing roads to the extent feasible, recontouring any areas subject to soil disturbance, servicing equipment outside sensitive habitats, and ensuring that hazardous material spill kits are kept on site during treatment activities.

Implementation of **MM-BIO-1** through **MM-BIO-5**, in addition to BMPs included in the proposed CWPP, would reduce impacts to protected wetlands to **less than significant.**

Proposed Modifications to the Vegetation Management Methods

As vegetation management methods would remain the same as those described in the 2004 Wildland Fire Plan, implementation of the proposed CWPP would result in no impacts to wetlands from proposed modifications to the vegetation management methods.

BIO-4. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Two potential impacts could occur under this threshold; (1) impacts to wildlife corridors and movement and (2) impacts to nesting birds (use of a native wildlife nursery). These impacts are analyzed in separate sections, below.

Impacts to Wildlife Corridors and Movement

Proposed Modifications to the High Fire Hazard Area and to the Vegetation Management Areas

Implementation of the proposed CWPP could potentially disrupt wildlife movement through the degradation of movement corridors and through disturbances during vegetation management activities that could temporarily deter use of these corridors. Impacts to wildlife movement could be inconsistent with the General Plan Environmental Resources Element (City of Santa Barbara 2011) Policy ER12 on Wildlife, Coastal, and Native Plant Protection and Enhancement, specifically with respect to the recommended Implementation Action ER12.4 Native Species Habitat Planning. ER12.4 recommends ensuring "that efforts are made to minimize disturbance to understory vegetation, soils, and any aquatic habitats that are present below trees in order to provide movement of species that utilize habitat."

As described in Section 4.3.1, the City has identified wildlife movement corridors within the proposed CWPP area, principally along major creek corridors: Sycamore Creek, Mission Creek, San Roque Creek, and Arroyo Burro (Figure 4.3-8, Potential Impacts to Wildlife Movement Corridors). Wildlife also may use larger habitat blocks in the Arroyo Burro/Elings Park area and in the northern parts of the City, near more expansive areas of natural habitats in the Santa Ynez Mountains. Several HFHA zones are located away from these corridors and habitat blocks. Several are at the margins of these blocks, in developed areas that provide no movement opportunities for wildlife. Within the habitat block including Arroyo Burro, Elings Park, and the Douglas Family Preserve, implementation of defensible space would have relatively little impact on wildlife movement, as most of the new proposed HFHA are away from the movement corridor along Arroyo Burro and near existing development that likely already limits wildlife movement (Figure 4.3-8). The primary impacts to wildlife movement in this area would be from implementation of several proposed VMUs along Arroyo Burro (Units 40, 43, and 45). With the implementation of an additional HFHA (R), activities in these VMUs could reduce access of larger and medium-sized wildlife species to this habitat block, particularly along the already constrained area in Hidden Valley along Arroyo Burro.

In the northern part of the proposed CWPP area, designation of new HFHA would have little to no effect on wildlife movement within the upland and creek habitats, because no new areas of any substantial size are proposed. All of the proposed VMUs in this area are located along the urban-rural interface (Figure 4.3-8). While reduction of shrub cover and oak woodland understory in these areas would likely provide some deterrence for wildlife movement, they would not impede access from the Santa Ynez Mountains to the major habitat areas in the City at Parma Park in the northeast and the Lauro Reservoir area in the northwest.

Along creeks within the proposed CWPP area, including Arroyo Burro as described above, several new HFHA and VMUs are proposed. Some level of new fuel modification is proposed along all of the City's major creeks, as well as along the brief portion of Cieneguitas Creek in the northwest part of the proposed CWPP area (Figure 4.3-8). Reduction of understory within and adjacent to riparian areas could deter movement of larger and medium-sized wildlife, such as mule deer, coyotes, and bobcats, reducing access to habitat areas nearer the coast. Most movement of such species in these areas likely occurs within the streambeds. Vegetation management and creation of defensible space would not directly impede movement along stream courses, but would potentially expose wildlife to human disturbance by removing visual barriers provided by the ground cover and understory.

As permanent wildlife movement impacts are primarily associated with riparian areas and creeks in the proposed CWPP area, protections for riparian habitats would result in avoidance and minimization of impacts. Vegetation management within 15 feet of stream banks would be limited to removal of easily accessible dead brush and invasive plants in riparian areas. Prior to implementation of vegetation management in any VMU, a qualified biologist would identify measures to avoid and minimize impacts to sensitive biological resources. Also, the SBFD would provide guidelines to property owners for balancing defensible space considerations with biological resources concerns when working near creeks. With inclusion of these BMPs, permanent impacts from implementation of the proposed CWPP to would not interfere substantially with wildlife movement in the proposed CWPP area. In addition, while vegetation management activities may deter wildlife movement within and adjacent to defensible space and VMUs, these impacts would be temporary in nature. In addition, most large- to medium-size mammals are more active at night, and vegetation management and creation of defensible space would occur during daylight hours. Therefore, these impacts also would not substantially interfere with wildlife movement in the proposed CWPP area and impacts would be less than significant.

Proposed Modifications to the Vegetation Management Methods

As vegetation management methods would remain the same as those described in the 2004 Wildland Fire Plan, implementation of the proposed CWPP would result in no impacts to wildlife movement and wildlife corridors from proposed modifications to the vegetation management methods.

Impacts on wildlife movement from proposed CWPP implementation would be **less than significant**. Although impacts to wildlife movement and wildlife corridors would be less than significant, and no additional measures are required, several biological resources mitigation measures would further reduce these impacts. **MM-BIO-1, MM-BIO-2**, **MM-BIO-4**, and **MM-BIO-5** would provide more specific protections for wildlife habitats, and therefore for wildlife movement, through the biological survey, identification of avoidance and minimization measures, and riparian protections included within agency permitting.

City of Santa Barbara / CWPP Area

Wildlife Movement Corridor

High Fire Hazard Area

Existing - Retained

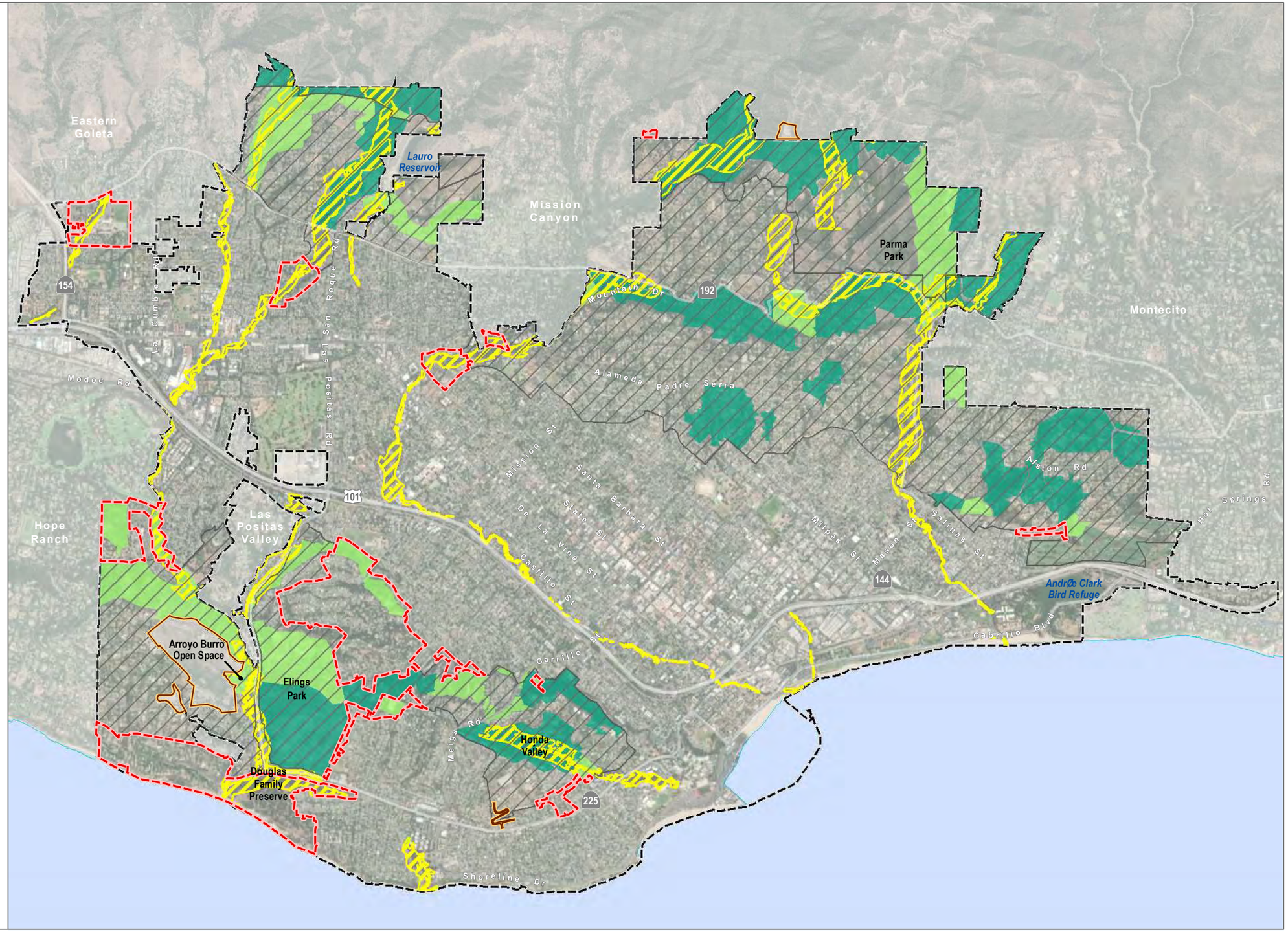
Existing - Removed

Proposed

Vegetation Management Units

Existing

Proposed



0 0.5 1 Mile

SOURCE: ESRI World Imagery, City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

DUDEK

FIGURE 4.3-8

Potential Impacts to Wildlife Movement Corridors

City of Santa Barbara Community Wildfire Protection Plan

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Impacts to Nesting Birds (Use of a Native Wildlife Nursery)

Proposed Modifications to the High Fire Hazard Area and to the Vegetation Management Areas

Vegetation management activities and implementation of defensible space could result in impacts to nesting birds, including raptors, and could potentially result in violation of the federal MBTA and provisions of the California Fish and Game Code. Incidental take of birds, their nests, and their eggs is prohibited under Section 3503 of the California Fish and Game Code. Section 3503.5 applies specifically to incidental take of raptors. As currently applied, the MBTA may not prohibit incidental take of nesting birdsbut future interpretation of this law is uncertain. Any proposed CWPP activities resulting in clearing of brush, limbing of trees, and removal of dead material, including removal of dead trees in which birds may be nesting, could result in a violation of the MBTA or the California Fish and Game Code. Noise and human activity within or adjacent to nesting bird habitat, including noise from chainsaws or other hand tools and noise from heavy machinery, could result in disturbance of nesting birds, causing them to abandon their nests, or to be absent for a sufficient period that nests will fail, resulting in a violation of the MBTA or the Fish and Game Code. The proposed CWPP provides protections for nesting birds during vegetation management activities. BMPs in Appendix E of the proposed CWPP require that vegetation management be conducted outside the nesting bird season, which it describes as February 1 to August 31, or that a qualified biologist conduct a survey prior to treatment to determine whether nesting birds are present. The biologist would identify measures for avoiding impacts to nesting birds, and these measures would be implemented prior to initiation of vegetation management. The proposed CWPP does not address requirements related to nesting birds for property owners in establishment of defensible space or road clearance. Therefore, activities conducted in implementation of the proposed CWPP could result in impacts to nesting birds that could be significant. As discussed above, MM-BIO-4 would minimize potential impacts to nesting birds. However, as previously noted, some potential would remain for impacts to nesting birds within the HFHA and VMU, and there are no other feasible measures for reducing this impact. Therefore, this impact would be cumulatively **significant and unavoidable**.

Proposed Modifications to the Vegetation Management Methods

As vegetation management methods would remain the same as those described in the 2004 Wildland Fire Plan, implementation of the proposed CWPP would result in no impacts to nesting birds from proposed modifications to the vegetation management methods.

BIO-5. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Proposed Modifications to the High Fire Hazard Area and to the Vegetation Management Areas

Vegetation management activities and establishment of defensible space would occur in wooded habitats (southern oak woodland and riparian woodland/creek) throughout the proposed CWPP area. Impacts to oak trees, or other native trees, could potentially conflict with General Plan or LCP policies. In the General Plan Environmental Resources Element (City of Santa Barbara 2011), biological resources policy ER11, Native and Other Trees and Landscaping, calls for the protection of native trees and suggests the implementation action ER11.2 for oak woodlands, including:

a. Avoid removal of specimen oak trees
b. Preserve and protect oak saplings and native understory vegetation

Although the LCP protections of oak trees relates to the protection of oak woodland as ESHA, LCP Policy 4.1-13 does specify mitigation for loss of mature oak trees at a 10:1 ratio.

BMPs for vegetation management in tree-dominated habitats, in Appendix E of the proposed CWPP, prohibit the removal of trees 4 inches or greater in diameter and calls for the protection of oak saplings and seedlings. SBFD defensible space guidelines (SBFD 2020a) allow for the retention of native trees within 100 feet of structures, provided dead wood and limbs below 6 feet are removed, and the trees do not "form a means of rapidly transmitting fire."

Proposed Modifications to the Vegetation Management Methods

As vegetation management methods would remain the same as those described in the 2004 Wildland Fire Plan, implementation of the proposed CWPP would result in no impacts to oaks or other protected native trees from proposed modifications to the vegetation management methods. The proposed CWPP would remain consistent with General Plan and LCP policies, and impacts to oak trees would be **less than significant**. Furthermore, MM-BIO-6 **CWPP Appendix E Update** requires that the CWPP Appendix be updated with the contained in the PEIR. Appendix E shall be updated in the Final CWPP prior to consideration by City County and CAL FIRE.

4.3.5 Mitigation Measures

The following mitigation measures are proposed to reduce all potentially significant impacts to sensitive biological resources to less than significant.

MM-BIO-1 **Special-Status Species Surveys and Mitigation**. For any program-level projects identified in this program environmental impact report (PEIR) that may result in a significant impact to a special-status species, a biological reconnaissance of the project site will be conducted by a City qualified biologist within ten days prior to the start of activities to determine if suitable habitat for special-status species occurs on the project site. If suitable habitat is present on or within the immediate vicinity (100–500 feet) of the project site, additional focused surveys and subsequent mitigation measures will be required as described below. The following species-specific measures will be implemented for projects identified with a potential to contain suitable habitat for special-status species.

Southern Steelhead (Oncorhynchus mykiss). If the biological survey identifies the potential for southern steelhead to occur, coordinate with the National Marine Fisheries Service to confirm whether vegetation management has the potential to result in take of that species. As part of future projects that require work within 50-feet of City creeks with potential steelhead habitat or their riparian areas, all such work shall be conducted between June 15 and October 15 or as approved by a City qualified biologist in coordination as required with USACE, NMFS, and CDFW.

California Red-Legged Frog (Rana draytonii). For program-level projects that occur within suitable California red legged frog habitat, specifically projects within riparian corridors, , surveys shall be conducted by a permitted 10(a)(1)(A) biologist is required (refer to introduction section for information on how to apply for a section 10(a)(1)(A) permit This Guidance recommends a total of up to eight (8) surveys to determine the presence of CRF at or near a project site. Two (2) day surveys and four (4) night surveys are recommended during the breeding season; one (1) day and

one (1) night survey is recommended during the non-breeding season. Each survey must take place at least seven (7) days apart. At least one survey must be conducted prior to August 15th. The survey period must be over a minimum period of 6 weeks (i.e., the time between the first and last survey must be at least 6 weeks). Throughout the species' range, the non-breeding season is defined as between July 1 and September 30. If the species is observed at any time, no additional surveys shall be conducted in the area. If California red legged frog are found and cannot be avoided by the project, additional mitigation will be required to comply with the Endangered Species Act and California Endangered Species Act, such as applying for an Incidental Take Permit prior to project implementation.

MM-BIO-2 **Riparian Protection**. Prior to conducting work in a creek, or within 25 feet of the top of bank, the SBFD shall consult with a City qualified biologist during the preparation of the site-specific Work Plan to identify methods to achieve the vegetation management without significant impacts to riparian resources. Based on this consultation, the SBFD shall develop site-specific measures to avoid or reduce impacts to riparian resources. These measures shall include (among others) the following:

a) To the extent feasible, all work near a creek shall be conducted when surface water is absent.

b) Vegetation shall not be thinned, removed, or pruned, nor shall dead wood be removed, within 25 feet of a creek channel when flowing water is present.

c) The only plants that can be removed from a creek bed (that is, below the line of the ordinary high water mark) are live or dead eucalyptus trees and dead native shrubs/trees that are deemed to be a fire hazard, and invasive exotics (including, but not limited to giant reed).

d) Cut stems, tree trunks or other vegetative debris shall not be dragged across a creek bed that contains riparian vegetation, wetlands, or surface water.

e) No trees shall be felled across a creek while there is flowing water.

f) No eucalyptus chipping or cut stems shall be left on the creek banks or any upper stream terrace, when present.

g) Chipped native vegetation shall not be placed on creek banks, unless a qualified biologist determines that placement of the chipping would provide needed erosion protection without an adverse impact on aquatic habitats and water quality in the creek. Native plant chippings can be spread outside the top of bank.

MM-BIO-3 **Property Owner Educational Material.** Defensible space management by property owners could potentially cause inadvertent impacts to sensitive plant and wildlife species, especially near creeks. The SBFD shall create property owner educational material in consultation with a City qualified biologist that will be available at the SBFD website and in a printable brochure that advises property owners about regulatory obligations with defensible space and specifying measures that owners can take, such as avoiding bird nests, when performing vegetation management.

MM-BIO-4 **Nesting Bird Avoidance.** Construction activities for project-level and program-level projects shall avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potential significant impact to birds that may be nesting within 500 feet of project sites. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and suitable habitat within 500 feet of the site shall be conducted for protected migratory birds and active

nests. The avian nesting survey shall be performed by a qualified biologist meeting the standards in the field within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code, Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and an appropriate buffer established around the nest, which shall be determined by the biologist based on the species' sensitivity to disturbance (up to 300 feet for passerines and up to 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. No project activities may encroach into the buffer until a qualified biologist has determined that the nestlings have fledged, and the nest is no longer active.

MM-BIO-5 **Jurisdictional Waters and Wetlands**. Direct impacts to jurisdictional waters that may occur through program-level activities, shall be addressed during project-level California Environmental Quality Act review of the project prior to implementation through first a biological reconnaissance conducted by a City qualified biologist, and a delineation of waters and wetlands to determine potential regulatory agency jurisdiction. If the reconnaissance and delineation determine potentially jurisdictional waters or wetlands occur and may be impacted by the project, mitigation to reduce impacts will be determined through the regulatory application process to implement Clean Water Act Section 401 and Section 404, the Porter-Cologne Water Quality Act, and California Fish and Game Code Section 1602.

MM-BIO-6 **CWPP Appendix E Update**. The Community Wildfire Protection Plan Appendix E shall be updated with the mitigation measures contained in this Program Environmental Impact Report. Appendix E shall be updated in the Final CWPP prior to consideration by City County and CAL FIRE.

4.3.6 Level of Significance After Mitigation

As described above, with adherence to project components, management standards, and BMPs described in Appendix E of the proposed CWPP, impacts with the incorporation of MM-BIO-1 through MM-BIO-5, the CWPP would result in program-level impacts that are less than significant with mitigation.

4.3.7 Cumulative Impacts MM-BIO-1 through MM-BIO-6

The proposed CWPP would result in increases to the HFHA and VMUs within which defensible space and road clearance would be created and where vegetation management would be conducted. Within these areas, the proposed CWPP would affect vegetation communities and biological habitats (special-status species habitats, wetlands) by thinning native vegetation, pruning oak and other trees, and removing understory plants. At any one location, these actions are not expected to cause a significant impact to any biological resources based on the proposed vegetation management methods and BMPs incorporated in the proposed CWPP, and with the incorporation of **MM-BIO-1** through **MM-BIO-6**. However, these impacts would, over time, contribute to a cumulative impact from past, present, and future projects and actions by public and private parties that result in habitat removal and/or degradation. Most of the City has been developed, and native habitat occurs in fragments on steep slopes, in canyons, in several blocks of habitat in the northern part of the City, and along creek corridors. The 2004 Final PEIR (SBFD and CDD 2004) determined that "any future action that continues to reduce or otherwise degrade native habitat would contribute to a past and ongoing significant impact to the biological resources of the City." Therefore, the proposed CWPP would contribute to a past and ongoing cumulative impact to biological resources that would be **significant and unavoidable.**

4.3.8 References

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4.4 Cultural Resources

This section describes the existing cultural resources conditions of the project area and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. For purposes of this cultural resources section, the proposed Community Wildfire Protection Plan (CWPP or proposed project) encompasses the jurisdictional limits of the City of Santa Barbara, with the exception of the Santa Barbara Airport. For the same purpose, the proposed project areas include those areas identified for modification of and addition to the current High Fire Hazard Area (HFHA) and the Vegetation Management Units (VMUs). These proposed HFHA and VMUs are referred to in this section as proposed project area and encompass acreage shown in Table 4.4-1, High Fire Hazard Area Modification, and Table 4.4-2, Vegetation Management Units.

Table 4.4-1. High Fire Hazard Area Modification

Existing				Proposed	
Classification	*Acreage Existing*	*Proposed Addition*	*Proposed Removal*	*Classification*	*Acreage*
Coastal Interior	702.18	270.74	1.65	High Fire Hazard Severity Zone	1,657.74
Coastal	523.51	264.44	101.48		
Foothill	2,827.18	118.56	0.0	Very High Fire Hazard Severity Zone	3,666.22
Extreme Foothill	723.91	1.68	5.11		

Source: SBFD 2020.

Table 4.4-2. Vegetation Management Units

	HFHSZ VMU (acres)	VHFHSZ VMU (acres)
Existing	292.95	908.73
Proposed	356.32	318.59
Total (Acres)	649.27	1,227.32

Source: SBFD 2020.

A description of the proposed modifications is summarized in 4.5.4, Impacts Analysis, of this section.

4.4.1 Existing Conditions

4.4.1.1 Environmental Setting

The City of Santa Barbara lies on an east-west trending coastal plain approximately 3 miles wide in the western portion of the Transverse Ranges geologic province situated between the Santa Ynez Mountains to the north and the Pacific Ocean to the south. The project area topography ranges from flat to gentle slopes in the center of the City to moderate-steep slopes in the foothills. The relatively flat topographies within the City are generally underlain by unconsolidated alluvial deposits of silt, sand, gravel, cobbles, and boulders, most of which were washed down from the Santa Ynez Mountains over the past 1.8 million years (City of Santa Barbara 2013). The foothills are comprised of the Santa Barbara, Monterey, Rincon, and Sespe formations. The Santa Barbara Formation, that

underlays much of the Alta Mesa neighborhood, is the youngest of these formations and is comprised of sands and silts that were deposited between 1.8 and 5 million years ago. The Monterey Shale Formation can be found exposed in the Mesa neighborhoods' sea cliffs, in portions of the Las Positas Valley as well as portions of the Riviera neighborhood and was formed between 5 and 23 million years ago. Finally, the Rincon Shale Formation, also exposed in the Las Positas Valley area, and the Foothill and Riviera neighborhoods, was formed roughly between 16 and 23 million years ago (City of Santa Barbara 2013). Major tributaries within the City jurisdiction include from east to west, Sycamore Creek, Mission Creek, San Roque Creek, and Arroyo Burro.

There are varied habitats within the City's jurisdiction that support a wide variety of floral and faunal communities including riparian communities, oak woodlands, grasslands, and coastal scrub. Several corridors of natural habitat that connect to more extensive natural habitats in the Santa Ynez Mountains and the Los Padres National Forest, as well as pockets of natural habitats, exist within the City. Some of these natural habitats include, Parma Park in the northeast portion of the City, Andrée Clark Bird Refuge in the southeast and Arroyo Burro Open Space, the Douglas Family Preserve, and portions of Elings Park in the southwest. The natural communities within the proposed project areas prior to European colonization would have consisted of annual and perennial grasslands, riparian and Southern oak woodlands, Coastal sage scrub, Chaparral, freshwater marsh, coastal saltmarsh, and eucalyptus woodland.

4.4.1.2 Prehistoric Setting

The basic regional culture historical patterns (i.e. what life was like at different points in time) have been articulated for many decades, and in spite of the ever increasing intensity of archaeological work in the region, our understanding (or at least our definition) of these general patterns has changed only slightly in part because our understanding of how to distinguish them has been compromised by conflicting data and interpretations; notable exceptions include our understanding of the earliest inhabitants, which keeps getting earlier and better defined (Erlandson et al., 2011, Erlandson et al., 2007b), and our perspectives on the late prehistoric evolution of socio-political complexity, which have matured and expanded rapidly since the late 1980s (e.g. Erlandson and Jones 2002; Arnold 2001; Arnold 2004).

The cultural history of the Santa Barbara Channel has seen many iterations, and much of our understanding of change through time is based on foundational research by Rogers (1929) and Warren (1968), both of whom conducted substantial primary research on the mainland coast. Higher resolution periodization was later established by King (1990) who used a combination of stylistic change in shell beads and absolute ages from radiocarbon dates. This bead-based chronology dovetails well with a more recent chronology based on lower-resolution changes in human behavior and material culture (Arnold 1992a), and this has been further refined with a larger set of absolute age estimates pegged to a background of regional environmental change matched with more accurate radiocarbon calibration (Kennett 2005). Note that the temporal span of each period in the sequence is approximate, and naming conventions for them vary across different authors; the cultural patterns (e.g., subsistence and settlement) and temporal markers (shell bead styles, for example) used to define them, also vary across temporal boundaries by region.

Paleoindian/Paleocoastal Period (The Earliest Inhabitants): 13,000 – 11,000 BP

Though the earliest appearance of people in the New World is a contentious issue with new data generating new ideas every few years about who they were and how they got here, the evidence from the California Bight is relatively straightforward: cultural deposits and human remains from a series of sites on Santa Rosa and San Miguel islands date from 13,000-11,500 years ago and suggest that people at the time were well-adapted to life on the sea but also had connections to people who lived much further east, deep in the American continent (Erlandson et al.,

2011). While this isn't the earliest evidence of human activity in the New World (which, at most is somewhere between 16,000 and 15,000 years old), this early evidence from the West Coast gives credit to the idea that (at least some of) its earliest inhabitants were a marine-adapted people able to move skillfully and quickly between islands and near-shore environments across the southern landmass of the (now submerged) continent of Beringia, down the entire Pacific Coast of North America, and eventually to the southern tip of South America in only a few thousand years (Erlandson et al., 2007a; Fladmark 1979; Dixon 2001). Though these "Paleocoastal" sites from the islands are the earliest we know of, we may never find evidence for the earliest coastal inhabitants as the shorelines they lived on are now submerged under more than 50 m of water (Masters and Aiello 2007). Indeed, sites of this antiquity are unknown on the mainland, though the occasional isolated – and undated – fluted projectile point (for example from Gaviota State Park CA-SBA-1951) may be suggestive (Erlandson et al., 1987).

Early Holocene / Milling Stone Horizon: 11,000 – 5500 BP

Many scholars of North American archaeology separate the Paleoindian / Paleocoastal period from the succeeding Archaic period on the rough (and now debatable) observation that the earlier people were more focused on large game while the later people exploited a broader range of resources and required a different set of tools to do so. On a continent-wide scale, the Archaic therefore sits in the middle of a trajectory of increasing technological and social intensity, somewhere between big-game hunting and fully-fledged farming; in California, this crude trajectory has little value as farming was never part of the pre-Columbian picture, yet use of the term "Archaic" persists (cf. Meighan, 1959). Colloquially, it applies to everything from the Early Holocene to the end of the Middle-Late Period transition (ca. 11,000 – 1000 years ago), distinguished only by the late prehistoric intensification of economy, technology, population, and political complexity (though see Glassow 1992 for a slightly different interpretation). Here, the division between Paleoindian and Early Archaic is somewhat arbitrary, but follows current convention; likewise, we combine the earliest known settlements on the mainland coast in this period with those of the more well-documented Milling Stone Horizon because they exist in many of the same places, show evidence for the intensive use of shellfish, use many of the same tools (albeit in different proportions), and overlap in time.

One of the reasons these sites are so visible, stratified, and well-preserved is they contain the remains of shellfish, leading many to suggest that this early Holocene occupation of the region was heavily oriented towards the intensive and persistent exploitation of marine resources. The material remains (and perhaps adaptations) of these earliest Holocene inhabitants of the mainland occasionally differ however, from their predecessors on the islands, but also from their successors on the mainland. However, some of these early sites also differ from the later coastal (and Coast Range interior) occupants as they do not contain millingstones, which become increasingly common after about 8500 years ago. However, it's important not to overstate the differences, as there are clearly sites dating to the early Holocene where groundstone dominates the formal lithic assemblage, both on the coast (Fitzgerald 2000) and deep into the interior (McGuire 1993). Contemporaneous variability in site types and artifact assemblages may point to variability in mobile foraging strategies or reveal that very different groups exploited an otherwise sparsely inhabited coastal region at slightly different times. These alternatives demand interrogation, as do the relationships between the evidence for human activity on the coast and that of the California interior and the more distant Desert West (Koerper et al., 1991).

While the emergence of an adaptation tuned to marine resources seems beyond question (particularly if the first people to come to coastal California brought this ability with them from somewhere else), the emergence of a processing technology centered on the use of groundstone slabs and handstones (i.e. the hallmarks of the Milling Stone Horizon) has been the focus of investigation for decades (see Warren 1968; Basgall and True 1985). Like shell middens, grinding tools, especially in high frequencies, are highly visible in the archaeological record and at face value can bias (indeed have biased) interpretation of their relative economic importance (see Nelson and

Lippmeier 1993). Recent efforts to understand the highly visible "Milling Stone" sites focus on patterns of groundstone manufacture and use. Following Basgall and True (1985), Hale (2001) analyzed groundstone (millingstones and handstones) and battered stone (scraper planes, cobble tools, etc.) tools from well-known Milling Stone sites across southern California, including CA-SBA-142 (Glen Annie Canyon) on the Santa Barbara mainland, and found that Milling Stone sites were places that people visited repeatedly, over hundreds to thousands of years to conduct similar economic activities, perhaps for only short periods of time. The large numbers of reused or expedient groundstone tools at these sites speak to food processing. Indeed, regular use of milling tools for processing seeds and other plant foods, such as roots and tubers, does not preclude using them to process rodents, reptiles, and other animals (which might be more easily cooked or dried with less costly tools). Costs associated with acquiring and transporting raw materials suitable for milling, and investments in shaping them to accomplish specific tasks may be modest (depending on local geology), but significant enough to suggest they were essential for survival; investing in them would make them available for use in less essential tasks, like pulverizing non-essential foods or pigments, that might otherwise be processed in other ways. Therefore, while millingstones may have been used for many things, their prominence indexes their importance to a specific adaptive strategy, and archaeological research should be geared towards understanding that relationship.

Hale (2001) interprets Milling Stone sites as places of seasonal occupation for intensive processing, but not as sedentary villages as Wallace (1955) and others envision. Large, well-used assemblages in single locations (as is typical of the classic Milling Stone identity) result from recurrent seasonal visits to specific locations for food processing over multiple years. The milling equipment in these kinds of sites are typically made from locally abundant stone (encountered either in its raw form or as previously discarded tools). Therefore, analysis of tool shaping and maintenance as well as use-wear reveal much about the nature and intensity of occupation and activity.

Hale (2001) also laments the rarity of other kinds of sites linked both temporally and socioeconomically to those of the Milling Stone period, as they would help to illustrate the full picture of the Archaic in California, and help us to move beyond simple definitions of it as a period marked by economic drudgery imposed by marginalizing climatic regimes (e.g. the Altithermal - see Antevs 1948). Herein lies an important research avenue: assembling well-dated archaeological site data across broad regions to better understand socioeconomic nuance during the Archaic and abandon the site-specific interpretation of the Milling Stone period that is itself an artifact of early archaeological research.

Generally speaking, adaptations attributed to the Archaic (including the Milling Stone phenomenon) involved small groups of people who moved regularly throughout the year to exploit a broad range of resources using a very flexible tool kit that could be made relatively easily or expediently and applied to a wide range of scenarios (Hale 2001; Fitzgerald and Jones 1999; Lantis 1938; Basgall and True 1985). Here, and elsewhere throughout the California Bight and central coast, the full suite of material attributes aligned with the classic Milling Stone horizon is found in a relatively small number of archaeological sites; together with evidence for somewhat different activities at other kinds of sites, presumably within the spatial catchment of annual, or even generational human activity, the Milling Stone pattern reveals a "highly successful strategy of mobility, flexibility, and emphasis on low-risk, moderate-return resources, such as small game, shellfish, and certain plants … [that] seems downright practical" for the environmental and cultural context of the age (Stevens 2013: 54).

The Early Period: 5500 – 2500 BP

The identity of the California "Early Period" in Santa Barbara (in both definition and timing) differs from that of other parts of California. The problem is really about the naming conventions assigned to trends (i.e. the "Periods") in the production and use of shell beads which vary around the state (Bennyhoff and Hughes 1987; Groza 2002; Groza et al., 2011) rather than local conditions or broader patterns of behavior. Instead, here it helps to imagine the shift

here in quasi-adaptive terms, initially characterized by both Rogers (1929) and Greenwood (1972) as a "Hunting" people or period, marked quite notably by an increase in the abundance of projectile points and a decline in the relative abundance of millingstones. On the central coast, Jones and colleagues (Jones 1992; Jones and Codding 2019; Jones et al., 2007) put the division somewhere between 5500 and 5100 BP, though others (Glassow et al., 2007; Lebow and Moratto 2005) see this transition happening around the northern California Bight at 7500-7000 BP; yet the use of millingstones continues here, and elsewhere in California, into the late Holocene (Erlandson 1997a, 1997b; Sutton et al., 1993).

Beyond the bead-based periodization, temporal distinctions are hazy, as identification of the Early Period as a clear-cut behavioral or cultural shift at a specific point in time is less obvious. In the literature from the mainland of the California Bight, some authors identify change in patterns of settlement, specifically a shift away from a practice of relocating the entire residential settlement multiple times throughout the year (i.e. a "residentially mobile" pattern), to a pattern the entails moving the residential base only a few times a year (i.e. a "logistically mobile" pattern). For example, Glassow (1990, 1996) saw this shift happening at approximately 8500 years ago for the broader region (prior to the dates he uses for the end of the Milling Stone Horizon) while research from the far northern end of the California Bight puts this shift much later, at approximately 3000 years ago (Lebow et al., 2006). Unfortunately, the differences in interpretation make it difficult to identify or define temporal periods for the region on the basis of cultural behavior alone.

Use of milling equipment persists through this period, though the form and variety of the manos and metates change (Gamble and King, 1997), while mortars and pestles were "added to the milling repertoire" around 6000 years ago (Glassow et al., 2007:197). At CA-SBA-53 on the Goleta Slough, millingstones and mortars in roughly the same proportions (and in greater numbers than in most any other excavated sites in the region) come from deposits dating to 5650-5050 BP (Harrison and Harrison 1966; Rick and Glassow 1999). Whether any of these things point to a change in diet is still an open question. Importantly, mortars are costly to make and signal an investment in processing technology much greater than the use of millingstones (Hale 2001, 2010). Such an investment was likely made to increase processing efficiency of pulpy nut meat such as acorns (Hale 2009). Glassow (1997) suggests that they could have been used to process bulrush and other estuarine resources, though millingstones would have offered similar efficiency in processing such things. It is certain, however, that the addition of mortars marks a socioeconomic shift that placed emphasis on intensive resource extraction and/or processing beyond that which could be accomplished using a basined millingstone. Perhaps this is the economic shift that identifies the onset of the Early Period. The extent to which this change in economy reflects change in the density and distribution of subsistence resources as a function of regional environmental change at the end of the Mid-Holocene warm period, or "Altithermal" (Glassow 1997; Rick and Glassow 1999; Glassow et al., 1988), along with a decline in marine productivity associated with warming sea-surface temperatures (Kennett et al., 2007) is an important but unresolved issue.

A broad range of evidence regarding subsistence diversification, increasing sedentism, status differentiation, ritual activity, rock art, and population growth have all been marshalled to suggest that the second half of this interval (after 4000 years ago, or what Lebow and Moratto call the "Late Early Period") contains some of the earliest evidence for the evolution of cultural complexity in the region (Glassow et al., 2007; Erlandson and Rick 2002), though dramatic, fundamental change did not happen until the end of the Middle Period and into the Late Period.

The Middle Period: 2500 – 800 BP

Glassow (1996: 22) suggests that the defining feature of this period is the elevated importance of fish and marine mammals in the subsistence budget. Appearance of the single-piece shell fishhook around 2900 BP, along with increasing importance of notched stone sinkers corroborates this and may have been essential to the

intensification of the marine-based economy on the mainland as well as on the islands (Rick et al., 2002; Erlandson 1997b). Indeed, intertidal resources (namely shellfish) remained important to everyone living within walking distance of the coast. And though it seems clear that people in some places acquired more of their protein from large terrestrial and marine mammals during the Middle Period than did people in earlier periods (Lebow et al., 2007) shellfish was still the dominant source of protein throughout the region (Glassow 1992).

During this time, the old groundstone food processing slabs of the early and middle Holocene are mostly absent throughout the region, while mortars become more common, and with increasing effort invested in their production (Glassow 1996; Hale 2009). Whether or not this shift from millingstones to mortars points to the rising importance of the acorn to the subsistence economy, as it is thought to do elsewhere in California (Hale 2010; Basgall 1987), is a question that demands further attention. Answering is depends, in part, on establishing a solid understanding of the distribution of different kinds of oak trees in different parts of the region. For example, oak trees are rare, or entirely absent from the landscape within about 10 km of the coastline throughout the northern end of the California Bight (see Glassow 1996: 6). Where oak trees were scarce, mortars were either used for processing other things, or acorns were transported from considerable distance – a pattern well documented from other parts of California (Morgan 2007).

Land use patterns observed to the west, in the Vandenberg region (Lebow et al., 2006), suggest that these changes in resource use were accompanied by a shift in settlement patterns: though the shift to a logistical pattern of residence began around 3000 years ago, it was fully in place throughout the Middle Period. If the patterns observed from the compilation of radiocarbon dates, both from Vandenberg (Lebow et al., 2010, 2011) and the surrounding region (Glassow 1996) can be used to evaluate change in human population, then the Middle Period is the first episode of measurable and sustained demographic increase in the history of the region, increasing noticeably approximately 2800-1800 years ago, and then dramatically after that. Thereafter, life across the Channel on the Islands starts to change markedly: the number of settlements starts to increase and people start to live in those settlements for longer periods of time while commanding more rigid territories and controlling the natural resources within them; at the same time, the incidence of inter-personal violence increases while human health and stature start to decline (Kennett 2005; Lambert and Walker 1991; Lambert 1997; Lambert 2002; Walker 1989). Together, these things mark the beginning of a trend that continues into the Late Period where it intensifies dramatically. The extent to which these patterns obtained on the mainland and the adjacent interior, or how people in any given area were affected by the dramatic change on the Islands, are open questions.

The Late Period: 800 BP – European Colonization (ca. AD 1780)

For most of this periodization, the exact starting and ending dates are mostly inconsequential, but the Late Period is different, in part because the bead-based chronology is more precise, the archaeological record is better preserved, change in that record is more pronounced, and because change in the cultural record seems to match dramatic change in well-dated, high-resolution paleo-environmental archives from the Santa Barbara Basin that are also reflected in written records from other parts of the world (Kennett and Kennett 2000; Kennett 2005; Raab and Larson 1997; Jones and Kennett 1999; Arnold et al., 1997). Setting it at 800 B.P. follows King's (1990) bead-based chronology and includes the period of dramatic environmental change (ca. 800-650 BP) along with its purported role in rapid Late Period cultural change. However, one could easily define this cultural period by everything that happens after that environmental change, as Arnold (1992) does, or alternatively by putting it at 1300 BP – the beginning of Lebow and Moratto's (2005) Late Middle Period – by which time many of the material hallmarks of Late Period cultural complexity (the sewn-plank canoe, the bow and arrow, exotic raw materials, intensive fishing, standardized Olivella shell beads, status differentiation, skeletal evidence for interpersonal violence, stable primary villages) were all in place, and the pace of cultural change began to increase (Kennett, 2005).

Hale (2010) argues that the rate-limiting factors on cultural evolution are socioeconomic, rather than techno-environmental. Therefore, the archaeological signatures of culture change (namely, the types and uses of artifacts, including food remains) that appear to be more rapid during the Late Period are more important when viewed in the light of major socioeconomic shifts, rather than seeing them simply as a rapid accumulation of variability. More to the point, a time-limited strategy would actively resist change while an energy-limited strategy would actively pursue it, and would accumulate material representation in the archaeological record accordingly simply through technological improvements to make tools more efficient or specialized, and in specialized subsistence (Bettinger 1999). The causal relationship between the archaeologically visible increase in material diversity over shorter periods of time, and socioeconomic strategy (i.e. time- or energy-limited) on the one hand, or demographic increase on the other (see below), merits further investigation throughout the region (particularly at sites with rich artifact assemblages).

Since the mid-1980s an enormous body of literature has accumulated on the origins of cultural, social, and political complexity in the Santa Barbara Channel. Much of this has been dedicated to the Late Period and most of that has been done on the Islands. The archaeology of this is spectacular, and dovetails dramatically with the written accounts of European explorers, Mission colonists, and 20th century ethnographers. In addition to basic archaeological reconnaissance, there has been focused attention on understanding subsistence (e.g. Bernard 2004; Martin and Popper 2001) the context of shell bead money production (Arnold and Munns 1994), the production of tools (i.e. microlithic drills) used to manufacture that money (Arnold 1987, 2001), the differential access to exotic goods (Arnold and Graesch 2001), the presence of trade centers (Arnold 2001; Gamble 2008), the production and control of sea-worthy watercraft (Gamble 2002; Arnold 1995), and established patterns of exchange (Arnold 1995; Fauvelle 2011).

By 650 BP the full suite of attributes that early European chroniclers noticed of the Chumash were in place on the Islands: sedentary villages of permanent semi-subterranean architecture, high dietary diversity that also included prestige items like pelagic fish, a monetized market economy, specialized craft production, inter-village and island-mainland exchange networks, political control of natural resources, numerous forms of personal adornment, and an unequal distribution of wealth. Presumably, these things also index the social order documented of the Chumash, including elite offices, formal religious systems, hereditary power and prestige (i.e., the "Dynasty of Nobility"), a ranked social order, institutional inequality, and chiefly control (e.g., Blackburn 1976; Gamble 2008; Harrington 1942; Hollimon 2004; Johnson 1988).

4.4.1.3 Historic Setting

The earliest European exploration of California was by sea approximately one generation following the Spanish conquest of the indigenous groups in what is now Mexico. In 1542, ships under the command of former conquistador Juan Rodríguez Cabrillo explored the coast as far north as Monterey. The expedition spent time ashore in the area of contemporary Santa Barbara, including Goleta Lagoon, long enough to record various attributes of Chumash social and political life, as well as the names of three separate villages around the Lagoon(including the villages of Paltuqaq/'Alkash, Kuwa'a/ Helo', Anachuc, and S'axpilil), and Dos Pueblos Creek (including the villages of Mikiw and Kuya'mu), the only sizeable village recorded by the Spanish in the vicinity of the project area was Syuxtun, at the mouth of Mission Creek (Gamble 2008; Harrington 1928; McDevitt 2013). Cabrillo's entourage named the settlement Puerto de las Sardinas and noted that it was the epicenter of a territory overseen by a female chief that spanned from Point Concepcion to downtown Santa Barbara (Johnson 1986). Though the entourage spent several days in the area and reported that the inhabitants were both hospitable and amicable, Cabrillo eventually died on San Miguel Island after a confrontation with the Chumash while returning from Monterey Bay

(Kelsey 1998). Spanish ships engaged in the Manila Galleon trade regularly sailed south along the California coast beginning in 1565. This resulted in a least two known instances of contact with indigenous groups in California. One instance occurred when Pedro de Unamuno entered Morro Bay in 1587 and traveled inland perhaps as far as what is now the city of San Luis Obispo and made claim to the land in the name of the King of Spain. Later, Sebastian Cermeño visited San Luis Obispo Bay in 1595 in a small boat following the loss of his ship further north at Point Reyes (Greenwood 1978). These voyages did little to strengthen the Spanish presence in the remote province of Alta California. In 1602, Sebastián Vizcaíno sailed north through the Santa Barbara channel long enough to grant one of the islands (and therefore the region) the name "Santa Barbara." While in the region, the expedition encountered several Chumash who had come out by canoe to greet and inspect them (Wagner 1929). Vizcaíno's cosmographer, Jerónimo Martín Palacios, may have paid a return visit to the mainland long enough to comment on the size of the settlements and the quality of its natural resources, though this remains uncertain (Brown 1967).

Following the earliest boat-based exploratory visits to the Santa Barbara Channel, and the subsequent, irregular, and largely undocumented contacts through the Manila Galleon trade, the Spanish Period in the California Bight began with the 1769 overland expedition led by Captain Gaspar de Portolá in an effort to establish a system of missions and fortifications in Alta California. The goal of the Portolá expedition was to found a mission in Monterey, the second mission in Alta California following the mission in San Diego, and to reconnoiter the region for colonization.

Diaries from the Portolá expedition (which visited Syuxtun three different times between August 1769 and May 1770) provide the most detailed accounts of the mainland around Santa Barbara, where they made elaborate descriptions of Chumash generosity, ceremony, performance, cuisine, village size, population, and even politics (Bolton 1967; Priestley 1937; Smith and Teggart 1909; Teggart 1909). Notably, the village names recorded by the Portolá expedition did not match those recorded by Cabrillo 227 years earlier, perhaps revealing something about the long term stability and tenure of village locations in the area, possibly associated (at least during the protohistoric era) with shifting socioeconomic interests and political allegiances (Johnson 1982; King 1978). Over the course of their visits, the diarists of the Portolá expedition seemed most impressed by the size of the settlement (estimated variably from between 400 and greater than 700 individuals) and the quantity and quality of the fish that the Chumash provided (Gamble 2008). A few years later, the de Anza expedition passed through Syuxtun in 1776, again commenting on local leaders and the abundance of fish, and in 1782 the Spanish charged with establishing the military Presidio commented on the renown and power of the regional Chumash chief, Yanonali (Johnson 1986).

Following period descriptions are in context of the specific sensitivity zones as outlined in the *City of Santa Barbara Master Environmental Assessment Guidelines for Archaeological Resources and Historic Structures and Sites* (City of Santa Barbara 2002) (City MEA) adopted by the Resolution of the Santa Barbara City Council on February 12, 2002.

Spanish Colonial and Mexican Period (1782–1849)

The Spanish government's establishment of the El Presidio de Santa Barbara in 1782 marked the commencement of European colonization and settlement of the area. The Presidio was completed in 1792 and was one of seven presidios in Alta California intended to protect Spain's investment in the area and the Missions from insurrection of indigenous inhabitants of the area. The founding of Mission Santa Barbara in 1786 marked an end of a way of life understood by indigenous inhabitants of the area for thousands of years. The area surrounding the Presidio began to be developed by soldiers and their families. The adobes and plots of land were haphazardly arranged near the Presidio during this period; remnants of which still exist within the City. Many of these Spanish colonists, such

as De la Guerra, Carrillo, Ortega, Gutierrez and Cota, are memorialized by current street names throughout the City. The original Mission was destroyed in 1812 by a large earthquake and the current Mission church was built and completed by 1820 with the exception of the bell towers that were completed in 1833. Spanish rule ended in 1822 as a result of Mexico's victory in the Mexican War of Independence. Mexican government would eventually replace royal military rule and church control of the area with civilian government and the process of secularization of the Mission system was complete in 1833. Many Chumash became Mexican citizens and assimilated into the Mexican society; unfortunately, in some cases resulting in the loss of thousands of years of oral histories, language, place names and individual family names. However, some would retain their history and culture through oral traditions and would eventually be recorded for posterity by linguist and anthropologist, John Peabody Harrington, and his informants in the early twentieth century. The Mexican Period in Santa Barbara came to an end with the United States conquest of California during the Mexican-American War in 1846.

Mission Complex and Waterworks Circa (1786-1835)

With the establishment of Mission San Luis Obispo (1772), Mission San Buenaventura (1782), the Presidio of Santa Barbara (1782), and later Mission Santa Barbara (1786), Mission La Purísima (1787), and Mission Santa Ynez (1804), life changed profoundly for the indigenous inhabitants of the region. The root cause of change was Spanish religious and political hegemony brought by the Franciscan missionaries and enforcement of their assumed authority by the Spanish military. Religious conversion, adoption of farming and ranching practices, lethal illnesses, and intermarriage with other groups also contributed to the disintegration of tribal culture. The effect of early Spanish Period on the Native population was dramatic. By 1804, the Chumash population had experienced significant absorption into the Mission system. The Santa Barbara Mission occupied both the existing Mission complex, such as the Mission quadrangle, church and cemetery as well as significant portions of the surrounding area now developed primarily by residences. Outlying components of the Mission lands comprised the neophyte village; Mission aqueduct system, including the Lower Reservoir, Grist Mill, Upper Reservoir, Filter House and many segments of the aqueduct system existing within Rattlesnake Canyon, Mission Creek, and various areas within the foothills above the Mission.

Hispanic to American Transition Period (1848-1870)

The secularization of lands and a focus on cattle raising marked the Rancho Period, where large land grants of Mission lands were ceded to wealthy, prominent Spanish families. Native Americans continued to work as laborers on ranchos during this period. The end of the Mexican War of Independence in 1822 marked the end of 300 years of Spanish colonial influence and Santa Barbara became a city of Mexico. The city grew under the leadership of notable men for which Santa Barbara's streets, Carrillo and De La Guerra, are named. However, the Mexican period was short-lived. John C. Fremont led a battalion of American soldiers into Santa Barbara on December 27, 1846 as a campaign of the Mexican-American War and with the 1848 Treaty of Hildago, Santa Barbara's 24 years as a city of Mexico came to an end.

With California statehood in 1850 and the advent of the American Period, farming and more intensive land uses steadily replaced cattle stock raising which was hastened by a prolonged drought in the 1860s. As the city began to grow from a remote Mexican pueblo to an American city, concentrations of influence within the city began to be demarcated between the American-European business district along State Street from Gutierrez to Ortega streets and the Hispanic community from Ortega to Carrillo streets (Williams 1977). Due to the geographical isolation of the City, adobe architecture remained popular until the 1860s. The Santa Barbara City street grid was established in 1851 by Captain Salisbury Haley (Hill 1930) and most of the original adobes were soon demolished or truncated to allow for construction of the new streets. The first mapping of residential structures by Wackenrueder in 1853

documented the location of the Rancho period adobes and illustrates the prominent Mexican influence on the City. However, the influence of the Hispanic population had been significantly marginalized by then and major forces of regional change such as railroads, maritime shipping and the oil industry began.

American Period (1870-1900)

Urbanization and intensive development of the City's extremities between the Mesa and the base of the foothills, now referred to as the Riviera, began in the American Period. At this point, the Haley street grid had been fully implemented and Stearns Wharf had been built and was contributing greatly to Santa Barbara's reputation for both commerce and tourism (Hill 1930). The City began to be promoted as a health resort and vacation destination for the wealthy and influential from around the country, many of which decided to make Santa Barbara their home. In 1887, the railroad was completed from Los Angeles to Santa Barbara and then from Santa Barbara to San Francisco connecting much of the state through ease of travel with Santa Barbara as a central hub (Baker 2003).

Early 20th Century Period (1900-1925)

The advent of automobile use resulted in significantly transforming the downtown area as the City became progressively more urbanized. Discovery of oil at the Summerland Oil Field just prior to the turn of the 20th century was the birth of the oil industry on the Central Coast and attracted all that comes with an industrial boom – advanced technologies, infrastructure and increased population. Santa Barbara continued to mature in size ushering in significant economic and social transitions. Despite its remote location, the City's temperate climate, beauty and wealthy occupants encouraged film, airline and other industries to make the City their home. The 1925 earthquake destroyed much of the downtown area and resulted in the rebuilding of the City into the esthetic of the Spanish Revival style it is known for today.

4.4.1.4 Previous Research

Included in Confidential Appendix E is a Cultural Records Search Results Index Map, which has been divided by a labeled grid. Each panel within the grid is titled with a unique letter-number combination. This letter number combination provides a general location of the information being referenced[1] and corresponds to a page within the Cultural Records Search Results collection (one collection for each: resources and previous studies) that can be used for a more detailed relative location of the referenced data to each proposed project area. Additionally, each proposed project area has been assigned a label – letters for HFHA zones and numbers for VMUs.

CHRIS Records Search

On May 15, 2020, Dudek requested a search of the California Historical Resources Information System (CHRIS) at the Central Coast Information Center (CCIC), located on the campus of University of California, Santa Barbara. The search conducted by CCIC staff analysts included any previously recorded cultural resources and investigations within a 1-mile radius of the project area (as defined previously). The CHRIS search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. Confidential records search results are on file with the City for review by eligible individuals.

[1] Note: some of the references may involve confidential information and may be restricted.

Previously Recorded Cultural Resources

The CCIC records indicate that 11 cultural resources have been previously recorded within the project area. Of these resources, 4 are prehistoric, 1 is a multicomponent resource containing both prehistoric and historic components and 6 are historic built resources. Within a 1-mile radius of each project area exist 890 previously recorded cultural resources. Of these resources, 80 are prehistoric, 36 are historic resource, 25 are multicomponent resources containing both prehistoric and historic components and 749 are historic built resources. The 11 previously recorded archaeological sites existent within the project areas are briefly described below followed by Table 4.4-3 summarizing each site's logistical information. A complete list of all previously recorded cultural resources within 1 mile of the project area and summaries is provided in Confidential Appendix E.

Prehistoric Resource: CA-SBA-32 (P-42-000032)

CA-SBA-32 is a prehistoric site measuring 198 meters north to south and 122 meters east to west (650 by 400 feet) at an elevation of 10 feet above mean sea level (amsl) and is located approximately 805 meters (2,640 feet) south of closest proposed VMU (40) and overlaps proposed HFHA (T). CA-SBA-32 is documented as consisting of a "great many artifacts" and human remains and was originally formally recorded by David Banks Rogers in his book *The Prehistoric Man of Santa Barbara Coast* (1929). The current CHRIS site record does not include any further recordation other than Rogers. Rogers states that he failed to absolutely locate the exact location of the site despite repeated surveying of the area. Rogers site description is as follows "A tradition has long persisted that an Indian village once existed near the mouth of the Arroyo Burro, an apparently ideal location for a settlement, A great many artifacts have been found upon the surface in this vicinity and fragments of two Indian crania were laid at my feet by an ambitious young dog." This site has not been evaluated for listing on CRHR or the NRHP; however, based on the description and limited site record, it may meet the criteria for eligibility on either or both the CRHR and NRHP.

Prehistoric Resource: CA-SBA-575 (P-42-000575)

CA-SBA-575 is a prehistoric site measuring 177 meters northwest to southeast and 76 meters northeast to southwest (580 by 250 feet) at an elevation of 843 feet amsl and is located approximately 90 meters (300 feet) southwest of closest proposed VMU (40) and overlaps proposed HFHA (T). CA-SBA-575 is documented as consisting of marine shell, bone, a bedrock mortar, a buried hearth, a pecked boulder, asphaltum, beads, a pottery shard, and various flaked and ground stone tools and was originally formally recorded in 1968 by Wadhams. A survey operation was conducted in 1969 by Craig Stout to determine exact location of site in relation to county and city land. Another survey operation was conducted in 1978 by Wilcoxon, in order to analyze site disturbances prior to grading the area. Wilcoxon described the site as a shell midden and also noted the presence of projectile points. CA-SBA-575 was again formally recorded in 2002 by A. Munns, who performed a Phase II Archaeological Investigation to evaluate the significance of the site. Munns noted the site contained less artifacts than previously documented and theorized that CA-SBA-575 may have been a seasonal habitation site. This site has not been evaluated for listing on CRHR or the NRHP; however, based on the description and the site record, it meets the City of Santa Barbara MEA criteria as an important site and likely meets the criteria for eligibility on either or both the CRHR and NRHP.

Prehistoric Resource: CA-SBA-1530 (P-42-001530)

CA-SBA-1530 is a prehistoric site measuring 200 square meters (2,152 square feet) at an elevation of 50 feet amsl and is located approximately overlaps proposed VMU (45) and overlaps proposed HFHA (R). CA-SBA-1530 is documented as consisting of marine shell fragments and was formally recorded in 1977 by Costello and Craig, who described the site as low-density shell scatter. This site has not been evaluated for listing on CRHR or the NRHP; however, based on the description and limited site record, it does not likely meet the criteria for eligibility on either or both the CRHR and NRHP.

Prehistoric Resource: CA-SBA-3851 (P-42-003851)

CA-SBA-3851 is a prehistoric site measuring 130 meters north to south (425 feet) at an elevation of 88 feet amsl and is located approximately 120 meters (380 feet) northwest of closest proposed HFHA (N) and overlapping proposed VMU (41). CA-SBA-3851 is documented as consisting of highly weathered marine shell fragments and was originally formally recorded in 2006 by B. Bass, who described the site as marine shell scatter within a secondary depositional environment. This site has not been evaluated for listing on CRHR or the NRHP; however, based on the site record description as a potential secondary deposit, it does not likely meet the criteria for eligibility on either or both the CRHR and NRHP.

Built Resource: CA-SBA-3761 (P-42-003761)

CA-SBA-3761 is a historic structure associated with State Route 192, measuring approximately 7 meters long by 1.7 meters high (23 by 5.5 feet) at an elevation of 628 feet amsl, overlaps proposed VMU (27) and is located 2,090 meters (6,860 feet) southeast of closest proposed HFHA (B). CA-SBA-3761 is documented as a sandstone headwall. The site was formally recorded in 2005 by Larson, Walters, and Rischel during a survey. The structure is described as a "C-shaped dressed sandstone headwall." It is estimated to be constructed from 1909 to 1929. This site was evaluated for listing on CRHR or the NRHP and found that it did not meet the criteria required to be eligible for listing to the CRHR or the NRHP.

Built Resource: CA-SBA-3771 (P-42-003771)

CA-SBA-3771 is a historic site associated with State Route 192 with two structures, the first measuring approximately 7 meters long by 2.7 meters high (24 by 9 feet) and the second measuring 13.4 meters long by 3 meters high (44 by 10 feet) at an elevation of 200 feet amsl, is located approximately 2,400 meters (7,860 feet) northwest of closest proposed HFHA (E) and overlapping proposed VMU (28). CA-SBA-3771 is documented as the inlet and outlet headwalls for a concrete pipe. The site was formally recorded in 2005 by Larson, Walters, and Rischel during a survey. The headwalls are described as made of sandstone blocks and mortar; the larger one has two smaller "granite guard stones" located at the top. Both are estimated to be constructed from 1909 to 1929. This site was evaluated for listing on CRHR or the NRHP and found that it did not meet the criteria required to be eligible for listing to the CRHR or the NRHP.

Built Resource: CA-SBA-3772 (P-42-003772)

CA-SBA-3772 is a historic structure associated with State Route 192, measuring approximately 7.5 meters wide (25 feet) at an elevation of 198 feet amsl is located approximately 2,200 meters (7,240 feet) northwest of closest proposed HFHA (E) and overlapping VMU (28). CA-SBA-3772 is documented as a support structure. The site was formally recorded in 2005 by Larson, Walters, and Rischel during a survey. The feature is described as a partially buried u-shaped structure made of angular stones and mortar and interpreted as support and protection for a tree no longer present. It is approximated to be constructed from 1909 to 1929. This site was evaluated for listing on CRHR or the NRHP and found that it did not meet the criteria required to be eligible for listing to the CRHR or the NRHP.

Built Resource: P-42-040443/P-42-03773

P-42-040443 is a historic bridge located approximately 2,070 meters (6,800 feet) northwest of closest proposed HFHA (E) and overlapping VMU (28) along State Route 192. The bridge was recorded in 1979, by Carroll Pursell as part of a historic resources inventory and was documented on a Historic American Engineering Record (HAER) as Bridge #51-106. The HAER notes that the bridge was constructed in 1921 by the Santa Barbara County during the tenure of O.H. O'Neil as the County Supervisor. Bridge #51-106 is a stone masonry arch bridge measuring approximately 27 feet (6.4 meters) long and rests on masonry abutments and is noted in the record to be in good condition. This site was evaluated for listing on CRHR or the NRHP and was found that it did meet the criteria required to be eligible for listing to the CRHR or the NRHP.

Built Resource: P-42-041018

P-42-041018 is a historic built resource known as the Santa Clara-Ojai-Santa Barbara 66K Transmission Line measures approximately 34 miles between the SCE Santa Clara and Santa Barbara substations and located approximately 1,006 meters (3,300 feet) west of closest proposed HFHA (E) and overlapping VMU (28). The transmission line structure, that was is use at the time of the evaluation, is an example of a utilitarian electrical engineering power conveyance system with tubular steel poles, steel lattice towers, and wooden poles, and was recorded in 2012 by W.L. Tinsley Becker as CEQA/National Environmental Policy Act Section 106 survey. The site record indicates that the set of structures was built at various times beginning in 1932 and continuing until 1956. This site was evaluated for listing on CRHR or the NRHP and found that it did not meet the criteria required to be eligible for listing to the CRHR or the NRHP.

Built Resource: P-42-040242

P-42-040242 is a historic structure known as the El Miradero (Santa Barbara Girl's School) located approximately 1,300 meters (4,220 feet) southwest of closest proposed VMU (26) and overlapping HFHA (F). The structure and associated accessory features were recorded, in 1981, by Chris Nelson as part of a historic resources inventory survey. The El Miradero property is described as a former two-story building with a square corner tower and windmill in a Tudor Revival architectural style and later transformed into Spanish Colonial Revival. According to the site record, the El Miradero was constructed ca. 1885 and served as a sanitarium in the early twentieth century. Between the years of 1920 and 1924, the property was remodeled to include a schoolhouse, assembly hall, cottages, additions and stables. The property had a national reputation for quality operations and for its facilities, however, during the Great Depression, the site was vacated and by the 1940s, during World War II, most of the buildings were torn down. All that remains is one small gabled and red tiled cottage measuring approximately 135 by 389 feet (118.5 by 41.1 meters) and deteriorated tennis courts. This site was evaluated for listing on CRHR or the NRHP and was found that it did meet the criteria required to be eligible for listing to the CRHR or the NRHP.

Multicomponent Resource: CA-SBA-3749/H (P-42-003749)

CA-SBA-3749/H is a multicomponent site measuring 150 meters north to south by 210 meters east to west (492 by 689 feet) at an elevation of 100 feet amsl and is located approximately 260 meters (860 feet) southeast of closest proposed HFHA (R) and overlapping proposed VMU (43). CA-SBA-3749/H is documented as consisting of prehistoric debitage and marine shell fragments, and historic/modern debris including a shell button, aqua glass, "a hand tooled bottle finish," and ceramic fragments and was formally recorded in 2005 by G. Toren and G. Romani. The prehistoric aspect of the site is described as a possible habitation deposit or a temporary campsite. The historic aspect of the site is described as historic materials scattered and intermixed with modern debris. Toren and Romani

did not state whether or not they believed the prehistoric and historic components of the site are considered related. It is noted that the area has been highly disturbed by both modern and historic practices. This site has not been evaluated for listing on CRHR or the NRHP; however, based on the limited site record description, it may meet the criteria for eligibility on either or both the CRHR and NRHP.

Table 4.4-3. Previously Recorded Cultural Resources within Proposed HFHA and VMU Project Areas

Primary #	Trinomial	Period	Resource Description	Recorded By	NRHP/ CRHR Eligibility	Distance From Site (meters)		
						Index Page	*HFHA*	*VMU*
P-42-00032	CA-SBA-000032	P	Possible Village site containing human remains	1929 (Rogers)	ND-P	J3	0	370 SW
P-42-00575	CA-SBA-000575	P	Seasonal prehistoric habitation site that was occupied periodically within the Middle/Late Transition and Late Period	1968 (Wadhams); 2002 (Munns); 2013 (Rosenthal, Mikkelsen)	ND-P	J3	0	90 SW
P-42-01530	CA-SBA-001530	P	Low-density marine shell scatter.	1977 (Costello Craig)	ND-U	G3	0	0
P-42-03851	CA-SBA-003851	P	Highly weathered marine shell scatter, possibly secondary deposit	2006 (Bass)	ND-U	I5	120 NW	0
P-42-03761	CA-SBA-003761H	B	Sandstone headwall	2005 (Larson, Walters, Rischel)	D-N	E7	2,090 SE	0
P-42-03771	CA-SBA-003771H	B	Inlet and outlet headwalls for a concrete pipe	2005 (Larson, Walters, Rischel)	D-N	E8	2,400 NW	0
P-42-03772	CA-SBA-003772H	B	Small U-shaped structure partially dug into the hill side on the northside of State Route 192.	2005 (Larson, Walters, Rischel)	D-N	E8	2,200 NW	0
P-42-03773 P-42-40905 P-42-40443		B	Bridge along State Route 192 where it crosses Sycamore Canyon Creek. Bridge #51-106.	2003 (Ham); 2005 (Larson, Walters, Rischel)	D-E	E8	2,070 NW	0

Table 4.4-3. Previously Recorded Cultural Resources within Proposed HFHA and VMU Project Areas

Primary #	Trinomial	Period	Resource Description	Recorded By	NRHP/ CRHR Eligibility	Distance From Site (meters)		
						Index Page	*HFHA*	*VMU*
P-42-41018		B	Southern California Edison Santa Clara-Ojai-Santa Barbara 66kV Transmission Line	2012 (Becker)	D-N	C9/10 D8/9 D10, E8, F8, G8, H7	1,080 W	0
P-42-40242		B	El Miradero: 1 small cottage and deteriorated tennis courts are remnants of a Tudor Revival/ Spanish Colonial Revival, estimated to have been built in 1895 and remodeled 1920-1924.	1981 (Nelson)	D-E	F5	0	1,300 SW
P-42-03749	CA-SBA-003749/H	M	Multicomponent site consisting of prehistoric debitage and marine shell fragments, as well as historic/modern refuse.	2005 (George, Toren, Romani)	ND-U	H3	260 SE	0

Notes: B = built resource; M = multicomponent resource; O = overlaps project area; P = prehistoric resource; ND-P = NRHP or CRHR eligibility not determined, but based on criteria possibly eligible; ND-U = NRHP or CRHR eligibility not determined, but based on criteria unlikely eligible. D-E = NRHP or CRHR eligibility determined eligible; D-N = NRHP or CRHR eligibility determined ineligible.

Previous Cultural Resources Studies

Results of the CHRIS search indicates that 1,770 previously conducted studies between 1967 and 2018 were identified within the 1-mile records search radius of the project area. Of these studies, 103 overlap the project area and the 103 studies that overlap the project area, 11 identified and/or further documented cultural resources within the project area. All previous cultural resources studies overlapping the project area and considered to be relevant to this study's analysis are summarized in Table 4.4-4. A complete list of all previous cultural resource studies within 1 mile of the project area is provided in Confidential Appendix E.

SR-00039

Cultural Resource Overview for the Santa Barbara Regional Wastewater Reclamation Study (Brown et al. 1980), documents the results of a literature review overlapping a portion of the current proposed project area. The purpose of the preliminary review was to assess the potential significance of cultural resources that could be impacted by alternative wastewater distributions systems. The literature review addressed two prehistoric archaeological sites that overlap the current project area, CA-SBA-32 and CA-SBA-575. It was believed that both prehistoric sites could

be impacted by either a pipeline or irrigation area. No mitigation recommendations were given as a result of the review. The report determined that additional cultural resource environmental impact evaluations should proceed once the proposed project area was selected.

SR-404

Archaeological Survey of Hidden Valley Park, Santa Barbara, California (Costello and Craig 1977), documents the results of an archaeological survey overlapping a portion of the current proposed project area. The purpose of the survey was to evaluate the significance of cultural remains within the project area, though the report does not state what the project entailed. During the survey, Costello and Craig encountered site CA-SBA-1530, which overlaps the current project area, and described the site as a scatter of shell debris within the vicinity of a stream bank. Costello and Craig compared CA-SBA-1530 to the nearby site CA-SBA-1529, which contained human burials, and believed human remains could reasonably be expected to exist within CA-SBA-1530 due to this comparison. Recommended mitigation measures included; the proposed project be redesigned to avoid alteration of CA-SBA-1530, an Archaeological and a Native American Consultant be hired to recover and record any cultural resources that would be uncovered during ground disturbance activities in compliance with CEQA, or that the proposed project be relocated.

SR-457

An Archaeological Field Reconnaissance of the Wilcox Property, Santa Barbara, California (Wilcoxon 1978), documents the results of an archaeological investigation overlapping a portion of the current proposed project area. The investigation included a records search and literature review and an intensive field survey. The purpose of this investigation was to evaluate the impact of a proposed 83-unit residential subdivision project on known and unknown cultural resources. During the intensive field survey 1 archaeological site was discovered, previously recorded CA-SBA-575, as well as 2 chert flakes and approximately 15 pieces of marine shell. Wilcoxon determined CA-SBA-575 to be of significance and recommended, as a form of mitigation, a fence be constructed to protect the site from looting, vandalism, and unsystematic exploration.

SR-1577

Phase I Archaeological Assessment of 3511 Sea Ledge Lane, Santa Barbara, California (Romani and Mandel-Toren 2000), documents the results of a Phase I archaeological investigation overlapping a portion of the current proposed project area. The investigation included a records and literature search and a survey of the subject area. The purpose of the investigation was to determine if any cultural resources existed within the project area and if any cultural resources would be impacted by the proposed residential additions. No cultural resources were discovered as a result of this study.

SR-2377

Negative Phase I Archaeological Survey and Impact Assessment of Approximately 15 Acres for the Las Positas Valley Subdivision, Santa Barbara County, California (Maki 1999), documents the results of a Phase I archaeological investigation overlapping a portion of the current proposed project area. The investigation was based off of a previous Phase I survey which recommended an additional survey following brush clearance. The investigation included a records search and literature review and an intensive field survey. The purpose of this investigation was to evaluate the impact of a proposed Las Positas Valley subdivision project on known and unknown cultural resources. The background investigation of the subject property did not identify any previously

recorded archaeological sites within or adjacent to the proposed project. However, six archaeological sites were recorded within a one-mile radius of the project area, three of which overlap the current project area, CA-SBA-32, -575, and -1530. No archaeological resources were discovered as a result of the survey. Due to the project area being in an area considered of high archaeological sensitivity, the report recommended construction workers associated with ground disturbing activities be given an orientation prior to project construction, all ground disturbance activities be halted in the event archaeological resources were exposed until an archaeologist can evaluate the nature and significance of the find, Native American monitoring by a Chumash representative, and County Coroner notification upon discovery of human remains.

SR-3172

Phase II Archaeological Investigation at CA-SBA-575 for the Arroyo Burro Creek Restoration Project Santa Barbara, California (Munns et al. 2003) documents a Phase II archaeological investigation of an archaeological site, CA-SBA-575, which overlaps the current project area. The investigation included subsurface testing and an analysis of the resulting artifacts collected. The purpose of the investigation was to evaluate the importance of archaeological site CA-SBA-575 and to assess the potential impacts of the Arroyo Burro and Mesa Creeks stream restoration project on the site. CA-SBA-575 was determined as significant in providing data regarding Late Period subsistence activities within the region. As a result of the investigation, the report concluded that the proposed project would not adversely affect site deposits that contribute to the significance of CA-SBA-575 under CEQA guidelines. The report recommended a City-qualified archaeologist and a Native American monitor be present during ground disturbing activities associated with the project.

SR-3343

Extended Phase I Investigation and Geoarchaeological Studies at CA-SBA-575 for the Arroyo Burro Creek Restoration Project, Santa Barbara, California (Gerber and Hodges 2002), documents the results of an Extended Phase I investigation overlapping a portion of the current proposed project area. The investigation included background research and subsurface testing to delineate the boundary of previously recorded archaeological site CA-SBA-575. The purpose of the investigation was to determine if site CA-SBA-575 would be impacted by plans to restore a portion of the Arroyo Burro Creek Bank. The investigation resulted in the expanding of the site boundary for CA-SBA-575 into the project area. Recommended mitigation measures were to abandon or modify the project to avoid any impacts to CA-SBA-575, or to execute further testing of the site in order to evaluate its importance under CEQA and assess the project impacts.

SR-4146

Phase I Archaeological Resource Report Elings Park South BMX Bike Track and Disk Golf Course, Santa Barbara, California (Neal 2007,) documents the results of an archaeological survey overlapping a portion of the current proposed project area. The survey included a records search and literature review and an intensive field survey. The purpose of the survey was to satisfy the requirements of the City of Santa Barbara Master Environmental Assessment for the proposed Elings Park South Phase III BMX bike trails and disk golf park project. The records search identified three previously recorded archaeological sites within the project's 1-mile radius, two of which overlap the current project area, CA-SBA-32 and CA-SBA-575. No cultural resources were identified during the intensive field survey. Due to no prehistoric or historical resources being discovered within the project area, no further archaeological studies or mitigation measures were recommended.

SR-4219

Phase I Archaeological Resources Report, Carrillo Sidewalk Project. Santa Barbara, California (Bass 2008) documents the results of a Phase I archaeological investigation overlapping a portion of the current proposed project area. The investigation included archival review, a field survey, and an Extended Phase I testing program. The purpose of this investigation was to satisfy the requirements of the City of Santa Barbara Master Environmental Assessment for a project to install a new section of sidewalk on Carrillo Street and pedestrian access ramps at three locations on Meigs Road. The archival research identified one previously recorded archaeological site with the project area, CA-SBA-3851, and one previously recorded archaeological site within a 0.25-mile radius, CA-SBA-3580. CA-SBA-3851 was described as a surface shell scatter. An Extended Phase I was conducted to evaluate site CA-SBA-3851 and resulted in the determination that the shell deposit was non-cultural in origin. No mitigation measures were recommended unless previously undiscovered cultural resources were detected during construction.

SR-4493

Phase I Archaeological Resources Report, Carrillo Sidewalk Project. Santa Barbara, California (Bass 2008) – was updated to include complete Appendices.

SR-4547

Historical Resources Evaluation Report: Masonry Features within State Right-of-Way Along State Route 192, Santa Barbara County, California (Wee and Larson 2006), documents an inventory and evaluation of masonry features along State Route 192 and overlaps a portion of the current project area. The investigation included a records search, literature review and a field survey. The purpose of the investigation was to update and expand an earlier inventory and determine if the masonry features were eligible for listing on the National Register of Historic Places, both as a whole and individually, and what effects the proposed project (safety improvements along State Route 192 from PM 2.43 to 3.08) might have on those features if they were to be potentially eligible. Three of the features evaluated overlap the current project area, CA-SBA-3761, -3771, and -3772. The evaluation concluded that none of the features which overlap the current project area are eligible for listing in the National Register of Historic Places, both individually and as a whole, and do not constitute as historic resources for the purposes of CEQA.

Table 4.4-4. Previous Cultural Resources Studies Within 1 Mile of the Project Area

Year	Author	CCIC ID	Report Title	Associated Resources
1980	Brown, S., Grijalva, J., Ringer, D., and Whitney, B.	SR-00039	Cultural Resources Overview for the Santa Barbara Regional Wastewater Reclamation Study.	CA-SBA-32 CA-SBA-575
1982	Craig, S.	SR-00131	Phase I archaeological and historical assessment of Assessor's Parcel 57-02-01, Santa Barbara, California.	none
1980	Wilcoxon, Larry	SR-00230	An Archaeological Field Reconnaissance of the Ray Pollard Property, Santa Barbara, California.	None
1981	Ancient Enterprises, Inc.	SR-00391	Archaeological and Paleontology Assessment of Tentative Tract 21-120-13 (Final #2304) Stanwood Drive and Highway 192.	none
1977	Costello, J. and Craig, S.	SR-00404	Archaeological Survey of Hidden Valley Park, Santa Barbara, California	CA-SBA-1530

Table 4.4-4. Previous Cultural Resources Studies Within 1 Mile of the Project Area

Year	Author	CCIC ID	Report Title	Associated Resources
1983	Craig, S.	SR-00411	Archaeological Survey of the Morgan Annexation to the City of Santa Barbara.	None
1974	Ehmann, M.	SR-00417	Archaeological Reconnaissance of Rancho Del Valle Verde.	None
1977	Meacham, C.	SR-00431	An Archaeological Survey of Proposed Culvert Improvements in Santa Barbara County, California 05-SB-114, 192 0.7/2.0, 5.4/6.6 05201 - 252001.	None
1977	Meacham, C.	SR-00433	An Archaeological Site Survey of a Proposed Traffic Safety Project in Santa Barbara County, California. 05-SB-225 P.M. 0.86 05201 - 254101.	None
1986	Waldron, W.	SR-00450	Archaeological Survey, Highway 192, Santa Barbara County.	None
1976	Wilcoxon, L.	SR-00452	An Archaeological Survey of the Jesuit Property.	None
1978	Wilcoxon, L.	SR-00457	An Archaeological Field Reconnaissance of the Wilcox Property, Santa Barbara, California.	CA-SBA-575
1980	Wilcoxon, L.	SR-00459	An Archaeological Field Reconnaissance of a Portion of Calle Canon, Santa Barbara, California.	None
1981	Wilcoxon, L.	SR-00461	An Archaeological Field Reconnaissance of Assessor's Parcel Nos. 47-091-18 and -19, Santa Barbara, California.	None
1982	Wilcoxon, L.	SR-00463	Archaeological letter report: Phase I archaeological survey, Stonecreek Condominium Development.	None
1983	Wilcoxon, L. and King, G.	SR-00469	A Cultural Resources Sensitivity Assessment for the Mission Canyon Wastewater Disposal Project, Santa Barbara County, CA.	None Associated
1985	Macko, M., Wilcoxon, L., Johnson, J., Gray, R., and Blakley, E.R.	SR-00471	Final Technical Synthesis Report, Cultural Resource Survey Results Proposed Mission Creek and Vicinity Flood Control Study Request No. DACW09-85-Q-0011	None Associated
1988	Snethkamp, P. and Michaels, G.	SR-00680	Letter report: Phase I prehistoric archaeological survey, 305 West Mountain Drive, Santa Barbara, CA.	None
1988	Waldron, W.	SR-00687	Archaeological Survey Report for a Bridge Replacement Project on Highway 192 at Mission Creek in Santa Barbara County, California	None Associated
1989	Wilcoxon, L.	SR-00698	A Phase 1 Archaeological Resource Evaluation Santa Barbara Water Reclamation Project Elements at the Montecito Country Club, Santa Barbara, California	None
1989	Wilcoxon, L., Haley, B., and Harmon, J.	SR-00705	Final Report: A Phase 1 Prehistoric Archaeological Resource Evaluation for the City of Santa Barbara's Water and Sewer Main Replacement Projects Santa Barbara, California	None

Table 4.4-4. Previous Cultural Resources Studies Within 1 Mile of the Project Area

Year	Author	CCIC ID	Report Title	Associated Resources
1988	Waldron, W.	SR-00794	Negative Archaeological Survey Report: Cliff Drive/Las Positas Road Intersection	None
1991	Science Applications International Corporation, Rudolph, J., and Sheets, R.	SR-00858	Phase 1 cultural resource survey; Proposed pump station and water main replacement project, SB, CA	None
1990	MacFarlane Archaeological Consultants	SR-00893	Phase 1 Cultural Resources Report	None
1989	Billman, B. and Snethkamp, P.	SR-00896	Letter report: phase 1 archeological survey, 347 Linda, Santa Barbara, CA	None
1989	Snethkamp, B.E. and B.R. Billman	SR-00905	Letter report: phase 1 archaeological cultural resource study, Arroyo Burro Beach Park, Santa Barbara, CA	None
1989	Wilcoxon, Larry	SR-00908	A Phase I Prehistoric Archaeological Resource Evaluation at 1000 West Mountain Drive, Santa Barbara, California	None
1990	Wilcoxon, L.R. and T.S. Hannahs	SR-00989	A phase I archaeological resource evaluation for proposed additions and residential improvements at 3333 Braemar Drive, Santa Barbara, CA	None
1990	Wilcoxon, L.R. and M.H. Imwalle	SR-00997	A phase 1 historic archaeological resource evaluation for a proposed residential addition at 508 Ontare Road, Santa Barbara, CA	None
1991	Wilcoxon, L.	SR-01030	A phase 1 archaeological resource evaluation for a proposed tennis court and residential improvements at 3317 Cliff Drive	None
1990	Stone, D.	SR-01049	Phase 1 cultural resource study, 3688 Foothill Road, Santa Barbara	None
1990	Snethkamp, P.	SR-01057	Assessment of need for phase 1 prehistoric archaeological survey, 3102 Sea Cliff Drive	None
1991	Treiberg, K. and Wheeler, G.	SR-01141	Draft: Negative Declaration, Buena Vista Creek Flood Control Maintenance	None
1991	Wilcoxon, L. and Imwalle, M.	SR-01176	A Phase I Archaeological Resource Evaluation for a Proposed Access Road and Residential Building Envelope on Kenwood Road, Santa Barbara, California	None
1992	Wilcoxon, L. and Imwalle, M.	SR-01184	A Phase I Archaeological Resource Evaluation for a Proposed Residential Addition at 963 Coyote Road, Santa Barbara, California	None
1992	Wilcoxon, L.	SR-01226	A Phase I Archaeological Resource Evaluation for a Residential Addition at 417 Linda Road, Santa Barbara, California	None
1992	Sheets, R.	SR-01228	Letter Report: Campanil Sewer Main Archaeological Survey	None
1992	Gibson, R.	SR-01294	Results of Phase One Archaeological Surface Survey of the Tasca Parcel (APN # 55-030-33 and 34) City of Santa Barbara, CA	None Associated

Table 4.4-4. Previous Cultural Resources Studies Within 1 Mile of the Project Area

Year	Author	CCIC ID	Report Title	Associated Resources
1992	Strudwick, I., Mead, B., and Miller, J.	SR-01465	Phase I Archaeological Cultural Resources Survey	None
1980	Craig, S.	SR-01527	Archaeological monitoring: Las Positas Park Phase II	None
1991	Science Applications International Coorportation	SR-01545	Second Addendum: Phase I Cultural Resources Survey Santa Barbara Water Reclamation Project (Phase 2)	CA-SBA-575
2000	Romani, J. and Mandel-Toren, N.	SR-01577	Phase I Archaeological Assessment of 3511 Sea Ledge Lane, Santa Barbara, CA	None Associated
1994	Wilcoxon, L.	SR-01662	A Phase I Archaeological Resource Evaluation for the Proposed Cliff Drive Microcellular Telephone Facility Santa Barbara, California	None Associated
1994	Cagle, C.	SR-01682	Phase I Archaeological Investigation for the Westside Storm Drain/Bohnett Park Improvement Project	None
1994	Macfarlane, H.	SR-01688	Letter Report: Phase I Archaeological Survey 2549 Medcliff Road (APN-41-362-15) Santa Barbara, California	None
1967	Chartkoff, J.	SR-01746	Archaeological Resources on Fourteen Stream Channels in coastal Santa Barbara County, California	None
1995	Stellmacher, A.	SR-01779	Archaeological Reconnaissance Report: Jesusita Trail (27W17) Los Padres National Forest, Santa Barbara Ranger District, Santa Barbara County	None
1994	Wilcoxon, L.	SR-01818	Letter Report Phase I Archaeological Survey at 3339 Cliff Drive, Santa Barbara, California	None
1995	Bowser, Brenda	SR-01896	Phase 1 Archaeological Study for a Proposed Residence at 328 West Mountain Drive, City of Santa Barbara	None
1996	Stone, David	SR-01899	Phase 1 Cultural Resources Report Remodel to an Existing Residence 3263 Cliff Drive, Santa Barbara	None
1996	Wilcoxon, Larry R.	SR-02009	Letter Report: Regarding the Proposed Garage and Residential Addition to the Davis Residence at Calle Corte in Santa Barbara, California	None
1994	Cagle, Chantal and David McDowell	SR-02042	Phase 1 Cultural Resources Letter Report, 1425 Las Positas Road, Santa Barbara	None
1998	Carbone, Larry	SR-02238	Phase 1 archaeological investigation for lot split and proposed construction at 2515 Cliff Drive, City of Santa Barbara, CA	None
1998	Fleagle, Dorothy and Three Girls and a Shovel	SR-02271	Letter Report an Archaeological Assessment of an Area of Potential Effect 200 feet in Circumference of a Section of Line 1004 Spanning Arroyo Burro Creek, Santa Barbara County, CA	None
1998	Levulett, Valerie	SR-02305	Negative Archaeological Survey Report: Determination of archaeological resource constraints on 3 parcels: DK 5919-01-01, 02, 03	None

Table 4.4-4. Previous Cultural Resources Studies Within 1 Mile of the Project Area

Year	Author	CCIC ID	Report Title	Associated Resources
1998	Carbone, Larry	SR-02306	Phase 1 Archaeological Investigation for Proposed Garage Construction, 1 Sea Ledge Lane, City of Santa Barbara, California	None
1999	Maki, Mary	SR-02377	Negative Phase I Archaeological Survey and Impact Assessment of Approximately 15 Acres for the Las Positas Valley Subdivision, Santa Barbara County, California	CA-SBA-32 CA-SBA-575 CA-SBA-1530
1999	Stone, David and Kay, Dustin	SR-02404	Phase 1 Archaeological Resources Report Proposed Landslide Repair at 246 Northridge Road Santa Barbara, CA	None
2000	Stone, David	SR-02581	Phase I Archaeological Resources Report, Arroyo Burro Coastal Overlook, Santa Barbara, CA	None
2000	Stone, David	SR-02591	Phase I Archaeological Resources Report, Proposed Development at 2509 Cliff Drive, Santa Barbara, CA	None
2001	Romani, J	SR-02635	Letter Report on the Archaeological Monitoring at Cliff Drive and Alan Road, Santa Barbara	None
2001	Santa Barbara County Flood Control and Water Conservation District	SR-02667	Draft Program Environmental Impact Report: Updated Routine Maintenance Program	None
2001	Woodman, Craig, Victorino, Ken,, and SAIC	SR-02950	Letter Report for Proposed Improvements at the Cater Water Treatment Plant	None
2003	Carbone, L.	SR-03063	Phase 1 Archaeological Assessment for Fence Placement, Tree Planting, and Future Property Imporvements, 3501 Sea Ledge Lane, City of Santa Barbara, CA (APN 047-082-004)	None
2003	Carbone, L.	SR-03067	A Phase 1 Archaeological Resources Report for Proposed Residential Building Addtions at 3349 Cliff Drive, City and County of Santa Barbara, California	None
2003	Brasket, K. Joslin, T	SR-03080	Negative Historic Property Survey Report for State Route 192 Slope Repair in Santa Barbara County, California	None
2003	Carbone, Larry A.	SR-03088	An Archaeological Resource Assessment and 'Letter Report" for Construction of a Residence Addition, 1609 Clearview Road, City of Santa Barbara, CA.	None
2004	Stone, David and Pfeiffer, Laurie	SR-03116	Phase I Archaeological Resources Report, 930 Miramonte Drive, Santa Barbara, California, APN 035-023-003	None
2003	Stone, David and Pfeiffer, Laurie	SR-03143	Phase 1 Archaeological Resources Report: Valle Verde- American Baptist Homes of the West Campus Plan Improvements, 900 Calle de Los Amigos, Santa Barbara, California, A.P.N.49-040-50, -51, -52, -53, -54	None

Table 4.4-4. Previous Cultural Resources Studies Within 1 Mile of the Project Area

Year	Author	CCIC ID	Report Title	Associated Resources
2003	Stone, David and Pfeiffer, Laurie	SR-03146	Phase 1 Archaeological Resources Report: Stevens Park Sewer System Improvements, 258 Canon Street, MST #2003-0487, Santa Barbara, California	None
2003	Cagle, Chantal	SR-03159	Phase 1 Archaeological Resources Report 304 Canon Drive Santa Barbara, California APN 53-142-12	None
2003	Munns, Ann M., Lebow, Clayton G., Hodges, Charles M., McKim, Rebecca L., and Coleman, Dina M.	SR-03172	Phase 2 Archaeological Investigation at CA-SBA-575 for the Arroyo Burro Creek Restoration Project, Santa Barbara, California	CA-SBA-575
2005	Lebow, Clayton G.	SR-03172A	Appendices	None
2004	Stone, David and Pfeiffer, Laurie	SR-03251	Phase I Archaeological Resources Report, 216 Northridge Road, Santa Barbara, California APN 055-120-013	None
2004	Stone, David	SR-03264	Phase I Archaeological Resources Report, 3649 Campanil Drive, Santa Barbara, California APN 047-102-32, APN 047-010-046	None
2003	Stone, David and Pfeiffer, Laurie	SR-03273	Phase I Archaeological Resources Report, 525 Arroyo Avenue, Santa Barbara, California APN 035-220-006	None
2002	Gerber, J. and C. Hodges	SR-03343	Extended Phase I Investigation and Geoarchaeological Studies at CA-SBA-575 for the Arroyo Burro Creek Restoration Project, Santa Barbara, California	CA-SBA-575
2005	Stone, David	SR-03458	Phase 1 Archaeological Resources Report, 2300 Garden Street, Santa Barbara, California, APN 025-140-007	None Associated
2006	Carbone, Larry A.	SR-03527	A Phase 1 Archaeological Resources Assessment Concerning Proposed Facilities Remodel and Golf Course Makeover, Montecito Country Club, City of Santa Barbara, CA.	None
2006	Bass, B.	SR-03555	Phase 1 Archaeological Resources Report, Traffic Congestion Relief Program, Santa Barbara, CA	None
1978	Erlandson/Heinzen	SR-03578	Archaeological Survey of Rocky Nook Park and Vicinity	None Associated
2006	Singer, Clay A.	SR-03604	An Assessment of Need for a Phase 1 Archaeological Report for a Residential Property at 2233 Stanwood Drive in the City of Santa Barbara, Santa Barbara County, California [APN 019-360-017]	None
2006	Carbone, Larry A.	SR-03609	A Phase 1 Archaeological Survey and Resources Evaluation for Proposed Residence Construction, 1480 Lou Dillon Lane, City and County of Santa Barbara, California (Assessor's Parcel Number: 015-202-040)	None

Table 4.4-4. Previous Cultural Resources Studies Within 1 Mile of the Project Area

Year	Author	CCIC ID	Report Title	Associated Resources
2006	Jordan, Stacey C. and Cooley, Theodore G.	SR-03619	Archaeological Survey Report for the Southern California Edison Company Replacement of 18 Deteriorated Poles on the Santa Barbara-San Marcos-Vegas 66kV, Storke 16kV, Fox 4kV, Braemer 4kV, Dorrance 4kV, Carpoil 16kV, Seacliff 16kV, and Copy 16kV Circuits, Private or City of Carpinteria Land in Ventura and Santa Barbara Counties, California (WO# 4605-0081, AI# J.0.2413 and WO# 6049-4800, AI#6-4802)	None
2006	Bass, Byron	SR-03620	Phase 1 Archaeological Resources Report, Carrillo Pedestrian Walkway Project Santa Barbara, CA	None
2007	Stone, David	SR-04089	Phase 1 Archaeological Resources Report, Mission Creek/State Highway 192 Santa Barbara, California APN 023-240-020-010	None
2007	Munns, Ann	SR-04093	Archaeological and Native American Monitoring for the Arroyo Burro Creek Restoration Project, Santa Barbara, California	None
2007	Neal, M.	SR-04146	Phase I Archaeological Resource report. Elings Park South BMX Bike Track and Disk Golf Course, Santa Barbara, California	CA-SBA-32, CA-SBA-575
2008	Bass, B.	SR-04219	Phase I Archaeological Resources Report, Carillo Sidewalk Project. Santa Barbara, California	CA-SBA-3851
2009	James J. Schmidt	SR-04442	Jesusita Fire: Emergency Fire Damaged Pole Replacement Monitoring Program, City of Santa Barbara, Santa Barbara County, California	None
2008	Bass, Byron	SR-04493	Phase 1 Archaeological Resources Report, Carrillo Sidewalk Project Santa Barbara, CA	CA-SBA-3851
2006	Wee, Stephen and Larson, Bryan	SR-04574	Historical Resources Evaluation Report: Masonry Features within State Right-of-Way Along State Route 192, Santa Barbara County, California	CA-SBA-3622 CA-SBA-3761 CA-SBA-3771 CA-SBA-3772
2012	Schmidt, James J.	SR-04846	Archaeological Survey Report for Southern California Edison Company's Replacement of One Deteriorated Power Pole Structure (Pole #674958E) near the City of Santa Barbara in Santa Barbara County, California	None
2009	Stone, David	SR-04933	Final Archaeological Construction Monitoring Report, San Roque School, 2300 Garden Street, Santa Barbara, California, BLD2008-00817 (Portable Classrooms), BLD2008-00549 (SIte Utilities)	none

Table 4.4-4. Previous Cultural Resources Studies Within 1 Mile of the Project Area

Year	Author	CCIC ID	Report Title	Associated Resources
2012	Loftus, Shannon	SR-05040	AT&T Site SBSB98 3139 Cliff Drive, Santa Barbara, Santa Barbara County, California93109 CASPR# 3553314713	None
2014	Haslouer, Leeann G. and Munns, Ann M.	SR-05144	Phase 1 Archaeological Resources Report: Santa Barbara Museum of Natural History Master Plan, Santa Barbara, California	None Associated
2014	none given	SR-05144A	Appendix A: Proposed Plan Sheets	None
2014	Haslouer, Leeann G. and Munns, Ann M.	SR-05144B	Appendices B-D: CCIC Records Search Letter, List of Documents and Repositories Consulted, Native American Consultation	None
2014	Haslouer, L. and Munns, A.	SR-05144C	Update to CA-SBA-3746 site record	None
2015	Stone, David and McDaniel, Heather	SR-05318	Final Archaeological Survey Report Las Positas Road at Cliff drive Roundabout Project, Santa Barbara, Santa Barbara County, California RPSTPL-5007(069)	None
2015	Barbier, Brian various, Sanchez, Katy and McDaniel, Heather	SR-05318A	Appendix A: Cultural Resources Records Search, Appendix B: Archaeological Site Records, Appendix C: Native American Consultation	None
2015	none given	SR-05318B	Appendix D: Project area Photos	None
2000	Allen, Rebecca	SR-05512	Mission Santa Barbara, California - National Historic Landmark Nomination	None Associated

A review of a majority of information sources required by and referenced in the City MEA (2002) have been reviewed for consideration of this document. As a result of state and local stay-at-home mandates due to the COVID-19 pandemic, Santa Barbara City Library was indefinitely closed causing certain resources to be unavailable for review. However, substantial efforts were made to access other forms of background literature and archival resources which provided a sufficient level of understanding for the proper interpretation of cultural context of potential and encountered cultural material. Resources required by the City's MEA that were available and reviewed include: Archaeological Resources Sensitivity Map, Central Coast Information Center database, Archaeological Resources Reports Location Map, Archaeological Resources Reports, Historic Structures/Sites Reports, Designated Historic Resources Lists and Potential Historic Resources Designation List (which include following inventories: National Historic Landmarks, National Register of Historic Places, California Registered Historic Landmarks, California Register of Historical Resources, City of Santa Barbara Landmarks, City of Santa Barbara Structures of Merit, City Historic Landmarks Commission's Potential Historic Resource Designation list. Additionally, natural landscape, consideration of potential cultural landscapes and prior landform modification were considered to determine whether the proposed project areas would result in disturbance to native or previously undisturbed soil that may contain archaeological resources that were unknown at the time this study was conducted.

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal requirements applicable to the proposed project.

State

Public Resources Code Section 5020 et seq. - California Register of Historical Resources

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code Section 5020.1(j)). In 1992, the California legislature established CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code Section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following NRHP criteria (California Public Resources Code Section 5024.1(c)):

1. Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Resources less than 50 years old are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR, Section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing on the NRHP are automatically listed on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The State Historic Preservation Officer maintains the CRHR.

California Public Resources Code Section 5097 et seq. - Native American Historic Cultural Sites

The Native American Historic Resources Protection Act (Public Resources Code Section 5097, et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NRHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act), enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Environmental Quality Act Statues and Guidelines

As described further below, the following CEQA statutes and CEQA Guidelines are relevant to the analysis of archaeological and historic resources:

1. California Public Resources Code Section 21083.2(g): Defines "unique archaeological resource."
2. California Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5(a): Defines historical resources. In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource. It also defines the circumstances when a project would materially impair the significance of a historical resource.
3. California Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.5(e): These statutes sets forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
4. California Public Resources Code Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4: These statutes and regulations provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures; identifies preservation-in-place as the preferred manner of mitigating impacts to significant archaeological sites.

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(b)). An "historical resource" is any site listed or eligible for listing in the CRHR. The CRHR listing criteria are intended to examine whether the resource in question: (a) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (b) is associated with the lives of persons important in our past; (c) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (d) has yielded, or may be likely to yield, information important in pre-history or history.

The term "historical resource" also includes any site described in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code Section 5024.1(q)).

CEQA also applies to "unique archaeological resources". Public Resources Code Section 21083.2(g) defines a "unique archaeological resource" as any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

All historical resources and unique archaeological resources – as defined by statute – are presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)). A site or resource that does not meet the definition of "historical resource" or "unique archaeological resource" is not considered significant under CEQA and need not be analyzed further. (Public Resources Code Section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)).

Under CEQA and significant cultural impact results from a "substantial adverse change in the significance of an historical resource [including a unique archaeological resource]" due to the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); California Public Resources Code Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

CEQA Guidelines Section 15064.5(b)(2)

Pursuant to these Sections, the CEQA first evaluates evaluating whether a project area contains any "historical resources," then assesses whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

When a project significantly affects a unique archaeological resource, CEQA imposes special mitigation requirements [PRC Section 21083.2(b)(1)-(4)]. Specifically, "[i]f it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:"

1. "Planning construction to avoid archaeological sites."
2. "Deeding archaeological sites into permanent conservation easements."
3. "Capping or covering archaeological sites with a layer of soil before building on the sites."
4. "Planning parks, greenspace, or other open space to incorporate archaeological sites."

If these "preservation in place" options are not feasible, mitigation may be accomplished through data recovery (PRC Section 21083.2(d); CEQA Guidelines Section 15126.4(b)(3)(C)). Public Resources Code Section 21083.2(d) states that "[e]xcavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project. Excavation as mitigation shall not be required for a unique archaeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report."

These same requirements are set forth in slightly greater detail in CEQA Guidelines Section 15126.4(b)(3), as follows:

(A). Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

(B). Preservation in place may be accomplished by, but is not limited to, the following:

1. Planning construction to avoid archaeological sites;
2. Incorporation of sites within parks, greenspace, or other open space;
3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site [; and]
4. Deeding the site into a permanent conservation easement.

(C). When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken.

Note that, when conducting data recovery, "[i]f an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation." However, "[d]ata recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historic resource, provided that determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center" (CEQA Guidelines Section 15126.4(b)(3)(D)).

California Health and Safety Code

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC Section 5097.98.

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur

until the County Coroner has examined the remains (Section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the Native American Heritage Commission (NAHC) within 24 hours (Section 7050.5c). The NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Mills Act

The Mills Act, enacted in 1972 by the State of California, enables local jurisdictions "to enter into contracts with property owners of qualified historic properties who actively participate in the restoration and maintenance of their historic properties while receiving property tax relief" (California Office of Historic Preservation 2004).

Local

City of Santa Barbara

All regulations provided in this Section are referenced in the City of Santa Barbara Master Environmental Assessment Guidelines for Archaeological Resources and Historic Structures and Sites (2002) adopted by the Resolution of the Santa Barbara City Council on February 12, 2002.

City Plans and Regulations

City policies for the protection of archaeological resources are found in the City General Plan, and Municipal Code. In addition, the City Historic Landmarks Commission has an ongoing role in evaluation and protection of archaeological resources, as described below.

City General Plan

The City General Plan Conservation Element (August 1979) contains a discussion of archaeological deposits, as well as a goal, a policy, and implementation strategies for the conservation of archaeological deposits.

Goal: Sites of significant archaeological, historic, or architectural resources will be preserved and protected wherever feasible in order that historic and prehistoric resources will be preserved.

Policy and Implementation Strategies:

1.0 Activities and development which could damage or destroy archaeological, historical, or architectural resources are to be avoided.

1.1 In the environmental review process, any proposed project which is in area indicated on the map as "sensitive" will receive further study to determine if archaeological resources are in jeopardy. A preliminary site survey (or similar study as part of an environmental impact report) shall be conducted in any case where archaeological resources could be threatened.

1.2 Potential damage to archaeological resources is to be given consideration along with other planning, environmental, social, and economic considerations when making land-use decisions.

1.3 Publicly owned areas known to contain significant archaeological resources should be preserved by limiting access and/or development which would involve permanent covering or disruption of the subsurface artifacts.

Santa Barbara Municipal Code

Santa Barbara Municipal Code Chapter 22.12 provides regulatory standards for the preservation and protection of known and unknown significant archaeological resources. The overall requirement of Chapter 22.12 is as follows:

All new development in the City of Santa Barbara shall be designated and constructed wherever feasible to avoid destruction of archaeological and paleontological resources consistent with the standards outlined in Section 22.12.020, below.

Chapter 22.12 also includes procedures for protection of known and unknown significant archaeological resources.

Historic Landmarks Commission's Role in Assessment of Archaeological Resources

The Historic Landmarks Commission (HLC) advises staff, the Planning Commission and City Council on issues related to the protection of archaeological resources. The City Charter grants the HLC the authority and duty to recommend to the City Council that sites or areas having archaeological significance be designated as either a City Landmark or a City Structure of Merit.

The HLC acts as an advisory review body for the proposals that may have impacts on archaeological resources by reviewing and commenting on reports prepared by professional archaeological consultants and providing its comments to the City's Environmental Analyst. All Phase 1 and 2 Archaeological Resources Reports and Phase 3 Archaeological Resources Report proposals are reviewed by the HLC which is empowered to accept, accept with conditions, or reject the conclusions of the report or proposal. The HLC's review focuses on the accuracy and consistency with the requirements specified in this Section of the MEA. City Planning Staff are also empowered to offer recommendations to the HLC regarding such reports.

4.4.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines and further informed by the City MEA (2002). According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
c) Disturb any human remains, including those interred outside of dedicated cemeteries.

The CWPP Initial Study (Appendix A) determined that each topic area should be evaluated in detail in the PEIR.

4.4.4 Impacts Analysis

The assessment of potential impacts of the CWPP was determined based on the methodology outlined below. Results are also summarized.

Methodology and Results Summary

This evaluation is based on a records search conducted at the CCIC for the proposed CWPP from June 2020 to July 2020, as well as the archaeological sensitivity zones outlined in the City MEA, information from previous reports, soil maps, and a review of relevant literature. The search conducted by CCIC staff analysts included any previously recorded cultural resources and investigations within a 1-mile radius of the project area defined as all proposed HFHA and VMUs The CCIC records indicate that 103 previously conducted studies have addressed the proposed project area or portions of. Each of the studies were reviewed for their methods, results and recommendations. Of the 103 studies, eleven (11) either identified new cultural resources or reevaluated previously recorded cultural resources. The CCIC records indicate that 11 cultural resources have been previously recorded within the proposed project area; 8 are located within the proposed VMU and 4 within the proposed HFHA. Four of the cultural resources are located within six VMUs (27, 28, 41, 43, 45, 49) and three HFHA zones (F, R, T). Four of the cultural resources are prehistoric (CA-SBA-32, CA-SBA-575, CA-SBA-1530, CA-SBA-3851); one is multicomponent (CA-SBA-3749); and six are built resources (CA-SBA-3761H, CA-SBA-3771H, CA-SBA-3772H, CA-SBA-3749H, P-42-40443, P-42-41018, P-42-40202). It is important to understand that VMUs that occur within riparian environments and adjacent to creeks and within floodplains in both contemporary and ancient contexts were possibly used and occupied by Native Americans prior to colonization and have a potential of containing unknown cultural resources.

As a result of analysis, a determination of "CWPP Cultural Resource Sensitivity Zone" (see confidential Figure 4.4-1) was made for certain locations within the proposed project areas and has been included in a shapefile created for the City's use in consideration of future vegetation management activities or in the conservation and evaluation of these areas following a fire. These resources are confidential not available for public review. For consideration of impact analysis, the following definitions have been established:

- **CWPP Cultural Resource Sensitivity Zone**: Areas within the proposed project area determined to have archaeological sensitivity and are therefore subject to specific treatments and mitigation measures with the concerted intent that impacts to both known and unknown cultural resources remain less than significant. These areas, represented by delineation of the "CWPP Cultural Resource Sensitivity Zone", were developed as a result of background research, proposed ground disturbance, physical and cultural landscapes, City's established archaeological sensitivity zones as outlined in the City's MEA and presence of known cultural resources.
- **HFHA**: areas based on the severity of fire hazard that is expected to prevail there. These areas, or "zones," are based on factors such as fuel (material that can burn), slope and fire weather. The areas addressed by this analysis are the proposed changes to those previously established by the 2004 Wildland Fire Plan.
- **VMU**: Vegetation management is often dependent on the location and proximity to structures and vegetation types (fuels) present in the City and their contribution to fire hazard. Hazardous fuels include live and dead vegetation that exist in a condition that readily ignites; transmits fire to adjacent structures or ground, surface, or overstory vegetation; and/or is capable of supporting extreme fire behavior.
- **Vegetation Management Technique**: Vegetation management techniques have been classified previously in this document as noted below. The level of ground disturbance, which are the primary cause of subsurface cultural resource impacts, is underlined:
    - **Manual** - Hand labor involves pruning, cutting or removal of trees or other vegetation by hand or using hand-held equipment. Other hand labor treatments involve removing dead wood, piling material, and spreading chips/mulch. Hand labor is most effective in small treatment areas or areas with difficult access where the use of heavy equipment is infeasible. Hand labor also allows for selective management or removal of targeted vegetation and is typically used in conjunction with other

techniques. Manual treatment may also include multi-cutting. Multi-cutting involves cutting vegetation (using hand tools, chainsaws, weed whips, and mowers) reducing in size, then left on the ground within the project area. Most private defensible space occurs using manual methods. *Minimal ground disturbance results using this method since the root structure of vegetation is left intact and biomass generated from vegetation treatment is left on site.*

- **Mechanical** - Mechanical practices include all methods that employ motorized heavy equipment to remove or alter vegetation. Mechanical practices rearrange vegetation structures, compact or chip material, and move material to landings, staging areas, or burn piles. Mechanical equipment is usually equipped with either rubber tires or tracks, although skids and cables are also used. In some instances, two or more pieces of heavy equipment will work in concert to achieve a management standard. Mechanical equipment includes, but is not limited to, masticators, tractors, and chippers. Chippers are moved around as work occurs and placement is dependent on the ability to minimize the distance vegetation must be hauled to the chipper. Constraints to mechanical equipment use include steep slopes, dense tree cover that prohibits travel, saturated soils, and dry, high fire hazard weather conditions where equipment use could result in ignition. Therefore, use of mechanical equipment is often done in conjunction with other treatment techniques, particularly hand labor (prior to mechanical treatment) and prescribed fire (following mechanical treatment). *Ground disturbance as a result of this technique is incurred through the use of heavy machinery and depends on the weight of the equipment and the characteristic of the soils.*
- **Biological** - Biological management includes using grazing as a method to treat grasses, shrubs, and small trees. Grazing is an effective management tool for maintaining areas previously treated with hand labor or mechanical practices. Livestock each have different grazing habits and not all livestock are ideally suited for grazing treatments in all areas. Goats are an effective option as they will consume live or dead, tough, woody plant material. *No additional ground disturbance would occur as this a maintenance technique occurring in areas already exposed to ground disturbing practices.*
- **Prescribed fire** - Prescribed fire can be used to burn piles of cut vegetation (pile burns) or over a designated prepared area (broadcast burn). Broadcast and pile burning are often implemented in conjunction with hand labor and mechanical treatment methods as a means of treating residual materials. Prescribed burning also serves to rapidly break down vegetative material and convert it to soil nutrients, reduce brood material for pests and pathogens, control invasive species, and reduce surface fuel buildup and the threat of severe wildfires. *Additional ground disturbance is minimal to none as it is employed subsequent to other ground disturbing practices.*

CUL-1. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

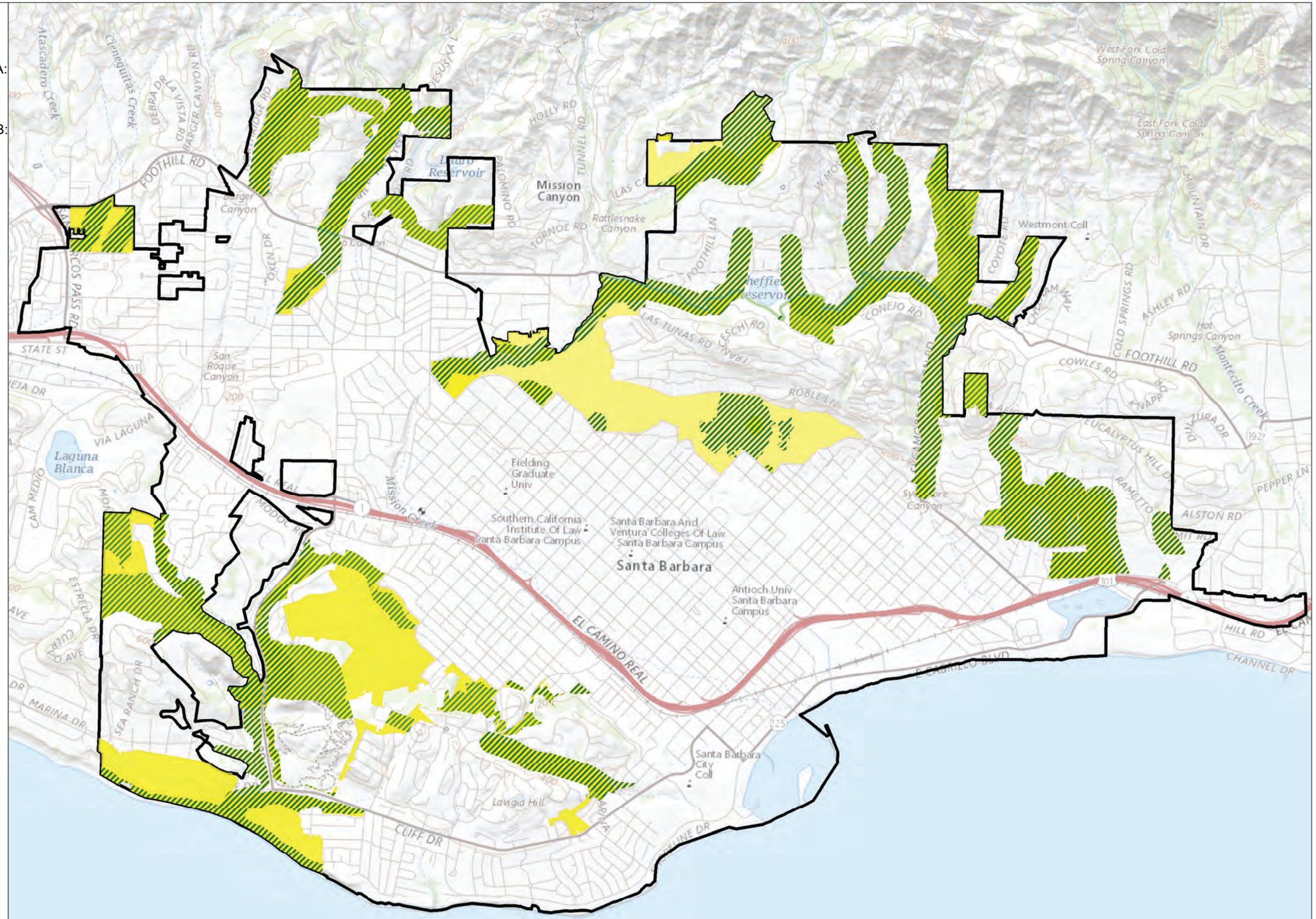
Eleven (11) previously recorded cultural resources intersect the proposed project area; six (6) of these are historical built environment resources. None of the cultural resources have been evaluated for NRHP or CRHR eligibility; however, based on the criteria defining a unique archaeological resource established in Section 106 of the National Historic Preservation Act and Section 21083.2(g) of the California Public Resources Code, none of the historical built environment resources meet the criteria required to be NRHP or CRHR eligible and two (2) of the five (5) archaeological resources meet the required criteria. Of the five (5) archaeological resources, three (3) are located within VMUs and are subject to potential periodic impacts and three (3) are located within HFHA and are subject to defensible space requirements using manual techniques and potential emergency fire protection impacts. Neither of the potentially eligible cultural resources are located within VMUs and are only subject to HFHA fire protection impacts.

Vegetation management techniques have been classified previously in this document as manual (e.g., hand pulling, cutting, planting), mechanical (e.g., mowing, masticating, felling, yarding), biological (e.g., grazing), and prescribed fire (e.g., burn piles, broadcast burning). Minimal to no ground disturbance would occur as a result of the biological and prescribed fire methods and moderate to no ground disturbance would occur as a result of mechanical or manual methods. For employment of the mechanical method of vegetation management, equipment with either rubber tires or tracks would be used to remove or alter vegetation, although skids and cables are also used. Since the use of mechanical equipment is limited to areas undeveloped by structures and with equal or less than moderate slopes, the use of the mechanical method of vegetation management is limited to specific few locations. For employment of the manual method of vegetation management, hand crews would access work sites by foot and reduce vegetation using hand tools. Ground disturbance would not extend deeper than twelve (12) inches below the current ground surface. The prescribed fire method would not incur ground disturbance and therefore not impact cultural resources below the ground surface but may adversely affect artifacts and features present on the surface, although the potential is low. Specifically, **MM-CUL-1 Cultural Resource Treatment Plan** requires the development of a Cultural Resource Treatment Plan that will identify protocols specific to the location of the SBFD's activities. **MM-CUL-2 Workers Environmental Awareness Program (WEAP) Training** would require training for individuals who may be working in culturally sensitive areas. The WEAP training would include a description of the procedures to follow in the event of an unanticipated discovery. **MM-CUL-3 Archaeological Construction Monitoring** requires archaeological monitoring during all ground disturbance activities within CWPP Archaeological Sensitivity Zone B. **MM-CUL-4 Intensive Archaeological Pedestrian Surveys of CWPP Cultural Resource Sensitivity Zone** requires an intensive pedestrian survey prior to ground disturbance activities within CWPP Archaeological Sensitivity Zone B. **MM-CUL-5 Inadvertent Discovery of Archaeological Resources** requires all construction work occurring within 50 feet of an inadvertent discovery to immediately stop until a Secretary of the Interior (SOI)- and City-qualified archaeologist can evaluate the nature and significance of the find. **MM-CUL-6 Inadvertent Discovery of Human Remains** requires that the Santa Barbara County Coroner, City's Environmental Analyst, SOI- and City-qualified archaeologist, and if applicable, the MLD of the applicable Native American Tribe be notified upon the inadvertent discovery of human remains. In the event of a wildfire and emergency firefighting activities may have occurred within a "CWPP Cultural Resource Sensitivity Zone," **MM-CUL-7 Post-Fire Management Assessment** requires that an SOI- and City-qualified archaeologist be retained to assess the effects of the fire and/or fire management on known and unknown cultural resources. Implementation of **Mitigation Measure (MM) CUL-1** through **MM-CUL-7** would reduce impacts to historical resources to **less than significant with mitigation**.

City of Santa Barbara
Community Wildfire Protection Plan

CWPP Cultural Resource Sensitivity Zone A:
Subject to Mitigation Measures 1, 2, 5, 6, 7

CWPP Cultural Resource Sensitivity Zone B:
Subject to Mitigation Measures 1-7



0 0.5 1 Mile

SOURCE: USGS National Map, City of Santa Barbara

COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

DUDEK

FIGURE 4.4-1

CWPP Culltural Resource Sensitivity Zones

City of Santa Barbara Community Wildfire Protection Plan

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CUL-2. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Eleven (11) previously recorded cultural resources intersect the proposed project area; five (5) of these cultural resources are archaeological resources. None of the archaeological resources have been evaluated for NRHP or CRHR eligibility; however, based on the criteria defining a unique archaeological resource, two (2) of the archaeological resources intersecting the proposed project areas meet the criteria required to be NRHP or CRHR eligible. Of the five archaeological resources, three are located within VMUs and are subject to potential periodic impacts and three are located within HFHA and subject to defensible space requirements using manual techniques or are only subject to potential emergency fire protection impacts. Neither of the potentially eligible cultural resources are located within VMUs and are only subject to HFHA emergency fire protection impacts.

Vegetation management techniques have been classified previously in this document as: manual (e.g., hand pulling, cutting, planting), mechanical (e.g., mowing, masticating, felling, yarding), biological (e.g., grazing), and prescribed fire (e.g., burn piles, broadcast burning). Minimal to no ground disturbance would occur as a result of the biological and prescribed fire methods and moderate to no ground disturbance would occur as a result of mechanical of manual methods. For employment of the mechanical method of vegetation management, equipment with either rubber tires or tracks would be used to remove or alter vegetation, although skids and cables are also used. Since the use of mechanical equipment is limited to areas undeveloped by structures and with equal or less than moderate slopes, the use of the mechanical method of vegetation management is limited to specific few locations. For employment of the manual method of vegetation management, hand crews would access work sites by foot and reduce vegetation using hand tools. Ground disturbance would not extend deeper than twelve (12) inches below the current ground surface. The prescribed fire method would not incur ground disturbance and therefore not impact cultural resources below the ground surface but may adversely affect artifacts and features present on the surface, although the potential is low. The likelihood of the proposed project to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 is generally low; However, there are proposed project HFHA and VMUs intersecting archaeological resources where methods requiring minimal to moderate ground disturbance may be employed. Therefore, the proposed project could have potentially significant impacts to archaeological resources. Mitigation measures to address potential CWPP impacts have been included. Specifically, **MM-CUL-1 Cultural Resource Treatment Plan** requires the development of a Cultural Resource Treatment Plan that will identify protocols specific to the location of the SBFD's activities. **MM-CUL-2 Workers Environmental Awareness Program (WEAP) Training** would require training for individuals who may be working in culturally sensitive areas. The WEAP training would include a description of the procedures to follow in the event of an unanticipated discovery. **MM-CUL-3 Archaeological Construction Monitoring** requires archaeological monitoring during all ground disturbance activities within CWPP Cultural Resource Sensitivity Zone B. **MM-CUL-4 Intensive Archaeological Pedestrian Surveys of CWPP Cultural Resource Sensitivity Zone** requires an intensive pedestrian survey prior to ground disturbance activities within CWPP Cultural Resource Sensitivity Zone B. **MM-CUL-5 Inadvertent Discovery of Archaeological Resources** requires all construction work occurring within 50 feet of an inadvertent discovery to immediately stop until an SOI- and City-qualified archaeologist can evaluate the nature and significance of the find. **MM-CUL-6 Inadvertent Discovery of Human Remains** requires that the Santa Barbara County Coroner, City's Environmental Analyst, SOI- and City-qualified archaeologist, and if applicable, the MLD of the applicable Native American Tribe be notified upon the inadvertent discovery of human remains. **MM-CUL-7 Post-Fire Management Assessment** requires that an SOI- and City-qualified

archaeologist be retained to assess the effects of the fire and/or fire management on known and unknown cultural resources. Implementation of **Mitigation Measure (MM) CUL-1** through **MM-CUL-7** would reduce impacts to archaeological resources to **less than significant with mitigation.**

CUL-3. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

No burial areas have been previously identified within the project area; however, human remains were reportedly discovered at archaeological site, CA-SBA-32, located within proposed HFHA T and have been suspected to exist within archaeological site, CA-SBA-1530, located within proposed VMU 45. No ground disturbance is proposed within any proposed HFHA; however, ground disturbance could occur should a fire break out within the area and require an emergency firefighting response. There is a potential for minimal and limited ground disturbance to occur within proposed VMUs where archaeological site CA-SBA-1530 is located. Given the sensitivity of certain areas, **MM-CUL-1 Cultural Resource Treatment Plan** requires the development of a Cultural Resource Treatment Plan that will identify protocols specific to the location of the SBFD's activities, such as in areas with potential human remains. **MM-CUL-2** requires the implementation of a WEAP training to advise individuals working in culturally sensitive areas. Given the sensitivity of areas with potential human remains, **MM-CUL-3 Archaeological Construction Monitoring** requires archaeological monitoring during all ground disturbance activities within CWPP Cultural Resource Sensitivity Zone B. **MM-CUL-4 Intensive Archaeological Pedestrian Surveys of CWPP Cultural Resource Sensitivity Zone** requires an intensive pedestrian survey prior to ground disturbance activities within CWPP Cultural Resource Sensitivity Zone B. **MM-CUL-5** requires immediate work stoppage until an SOI- and City-qualified archaeologist can evaluate the nature and significance of the find. If human remains were uncovered during subsurface excavation activities, as required by California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 and **MM-CUL-5** and **MM-CUL-6**, work would immediately stop and the County Coroner would be notified within 24 hours of the discovery. If the remains are determined to be of Native American origin, the NAHC would be notified by the County Coroner in order to identify the Most Likely Descendant (MLD) and facilitate consulted for appropriate treatment of the remains. Implementation of **MM-CUL-1** through **MM-CUL-6** would reduce impacts to human remains to a **less than significant with mitigation**.

4.4.5 Mitigation Measures

The following mitigation measures have been developed to reduce the proposed project impacts to less than significant within "CWPP Cultural Resource Sensitivity Zones" as well as in the event of an inadvertent discovery anywhere within the proposed project areas.

MM-CUL-1 **Cultural Resource Treatment Plan.** Potential impacts to cultural resources shall be either minimized or eliminated through development of protocols for practical adherence of mitigation measures MM-CUL-2 and MM-CUL-3 prior to and after the occurrence of vegetation management activities within Community Wildfire Protection Plan (CWPP) Cultural Resource Sensitivity Zones. These protocols shall be outlined in a Cultural Resource Treatment Plan (CRTP). The CRTP shall be developed by a City-qualified archaeologist, meeting the Secretary of Interior Standards (SOI), prior to the implementation of any CWPP ground disturbing activities and include wording of each mitigation measure MM-CUL-2 through MM-CUL-4, specific and detailed explanation for implementation of each mitigation measure and contact protocol. The CRTP shall be provided to

all agency personnel, consulting tribes, contractors and archaeological personnel. The existence and necessity for adherence to the CRTP shall be noted on all plans, handbooks, or the like associated with tasks that may incur ground disturbance either intentionally or inadvertently.

MM-CUL-2 **Workers Environmental Awareness Program (WEAP) Training**. All personnel participating in tasks that may incur ground disturbance either intentionally or inadvertently shall be briefed regarding unanticipated discoveries prior to the start of said activities. A basic presentation shall be prepared by a City-qualified archaeologist, meeting the Secretary of the Interior (SOI) Professional Qualification Standards to inform all City-retained personnel working on the project about the archaeological sensitivity of proposed project areas located within Community Wildfire Protection Plan Cultural Resource Sensitivity Zones. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during project activities and explain the importance of and legal basis for the protection of cultural resources. Each personnel shall also be instructed the proper procedures to follow in the event that cultural resources or human remains are encountered. These procedures include work curtailment or redirection, and the immediate contact of the site supervisor, SOI- and City-qualified archaeologist, and if human remains are encountered, the County Coroner.

MM-CUL-3 **Archaeological Construction Monitoring.** Archaeological monitoring shall be conducted during all ground disturbance activities within public space, and when possible private properties, existent within the Community Wildfire Protection Plan Cultural Resource Sensitivity Zone B and during all activities that have the potential to disturb the ground including vegetation removal by hand and mechanical removal when such activity is within or near to a known site. A Secretary of the Interior (SOI)- and City-qualified archaeologist shall be retained to oversee and adjust monitoring efforts as needed (increase, decrease, or discontinue monitoring frequency) based on the observed potential for vegetation management activities to encounter cultural deposits or material. The archaeological monitor shall have the authority to halt all ground-disturbing activities until discovered cultural material can be properly assessed. The archaeological monitor shall be responsible for maintaining daily monitoring logs and immediately contacting the project archaeologist upon discovery of cultural material. If the project archaeologist determines the discovery to be of a nature requiring further evaluation, the project archaeologist shall contact the City as soon as possible and at least within the same working day. Further treatment of cultural material may include redirection or discontinuing ground-disturbing tasks, subsurface testing and/or evaluation and/or data recovery and/or temporary/permanent avoidance. Following the completion of ground disturbing activities, the SOI- and City-qualified archaeologist shall provide an archaeological monitoring report memo to the agency. The project archaeologist shall also submit the same memo to the Central Coastal Information Center for inclusion in the California Historical Research Information System database.

MM-CUL-4 **Intensive Archaeological Pedestrian Surveys of Community Wildfire Protection Plan (CWPP) Cultural Resource Sensitivity Zone.** An intensive Pedestrian survey shall be conducted prior to the initial implementation of all CWPP ground disturbance activities within public space, and when possible private properties, existent within the CWPP Cultural Resource Sensitivity Zone B. Initial implementation of all CWPP ground disturbance activities is defined as the first occurrence of vegetation removal after approval of the CWPP. No additional archaeological pedestrian surveys shall be required once the initial survey of the area has been conducted except any circumstance that is subject to other mitigation measure outlined therein. If necessary and depending on the vegetation condition within the "CWPP Cultural Resource Sensitivity Zone" areas (where ground

surface visibility is limited such that the survey would results would not be reliable), the survey may be conducted concurrently or immediately subsequent to vegetation removal. The City shall retain a Secretary of the Interior (SOI)- and City-qualified archaeologist/s to conduct Phase I archaeological survey studies within the CWPP Cultural Resource Sensitivity Zone B; the result of which will be a Phase I Archaeological Resources Report consistent with the California Environmental Quality Act and City Master Environmental Assessment guidelines. The report will include methodology, background research, survey results, interpretation and recommendations. Background research shall start with a review of the City's archaeological database created as a result of this study, but may, if determined necessary by the SOI- and City-qualified archaeologist, include a California Historical Research Information System (CHRIS) records search. Additional records search should be authorized by the City first. Upon completion, the Phase I Archaeological Resources Report shall be submitted to the Central Coastal Information Center for inclusion in the CHRIS database.

MM-CUL-5 **Inadvertent Discovery of Archaeological Resources.** In the event that archaeological resources (sites, features, or artifacts) are exposed during ground disturbing activities within the proposed project areas (within or outside the Community Wildfire Protection Plan Cultural Resource Sensitivity Zones A and B), all construction work occurring within 50 feet of the discovery shall immediately stop until a Secretary of the Interior (SOI)- and City-qualified archaeologist can evaluate the nature and significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (14 CCR 15064.5(f); California Public Resources Code Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted. If the discovery is Native American in nature, consultation with and/or monitoring by a tribal monitor ancestrally affiliated with the area and, if possible, included in the most current City Barbareño Chumash Archaeological Site Monitors List, may be necessary.

MM-CUL-6 **Inadvertent Discovery of Human Remains.** In the event an inadvertent discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately as well as the City's Environmental Analyst and a Secretary of the Interior (SOI)- and City-qualified archaeologist. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission. (NAHC) who will provide the name and contact information for the Most Likely Descendent (MLD). Treatment of the discovery shall be decided in consultation with the MLD provided by the NAHC. Additionally, an SOI- and City-qualified archaeologist and tribal monitor ancestrally affiliated with the area and, if possible, included in the most current City Barbareño Chumash Archaeological Site Monitors List, shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

MM-CUL-7 **Post-Fire Management Assessment.** In the event that a fire occurs within public space, and when possible private properties, existent within the Community Wildfire Protection Plan Cultural Resource Sensitivity Zones A and B, a Secretary of the Interior (SOI)- and City-qualified archaeologist shall be retained to assess the effects of the fire and/or fire management on known and unknown cultural resources. The retained SOI- and City-qualified archaeologist shall provide to the City, a brief memo outlining the results of the assessment and recommendation for further treatment if necessary. Any exposure of cultural material, change in the nature of a cultural

resource, or new information resulting from the fire or fire management, shall be recorded in a site record update. Based on the recommendations provided in the memo, the City may retain a SOI and City-qualified archaeologist to conduct the recommended study or measures. All reports, memos, and site records resulting from post-fire management assessments shall be submitted to the Central Coastal Information Center for inclusion in the California Historical Research Information System database.

4.4.6 Level of Significance After Mitigation

As described above, incorporation of **MM-CUL-1** through **MM-CUL-7** would reduce the proposed project impacts to **less than significant**.

4.4.7 Cumulative Impacts

Impacts to archaeological resources historical resources or human remains identified within the project site and implementation of mitigation measures **MM-CUL-1** through **MM-CUL-7** would reduce CWPP impacts to a less than significant level on a project-specific basis. The cultural resources record search and subsequent identification of "CWPP Cultural Resource Sensitivity Zones" provide a greater assurance that subsurface resources, if encountered, would be preserved in place and evaluated according to applicable laws and regulations and this PEIR. While it is always possible to encounter subsurface resources, implementation of the proposed CWPP creates a more uniform and consistent approach to managing historical and archaeological resources. Furthermore, conducting an intensive pedestrian survey in culturally sensitive areas in advance of performing work reduces the potential for an unanticipated discovery. Continued compliance with applicable cultural resource regulations and mitigation measures herein would avoid impacts to historical, archaeological and human remains to the maximum extent practicable. As such, cumulative impacts from the proposed CWPP would be **less than significant with mitigation**.

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4.5 Geology and Soils

This section describes the existing geology and soils conditions of the Community Wildfire Protection Plan (CWPP or proposed project) and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the CWPP. The Santa Barbara Fire Department's (SBFD's) current fire management program is performed under the City of Santa Barbara (City') 2004 Wildland Fire Plan (SBFD 2004). and Final Program Environmental Impact Report (PEIR) for the 2004 Wildland Fire Plan (SBFD and CDD 2004). The 2004 Wildland Fire Plan is considered the environmental baseline for purposes of this PEIR, which analyzes potential environmental impacts to geology and soils resulting from changes proposed by the CWPP.

4.5.1 Existing Conditions

Topography

The City of Santa Barbara is characterized by steeply sloping foothills and narrow canyons to the north, low-lying and gently sloping coastal plains, and an uplifted mesa to the south. The foothills and canyons meet the coastal plain to the south and southeast and slope upward to the east–west trending Santa Ynez Mountains. The uplifted Mesa steeply slopes from the coastal plain to form a relatively level and high sheer cliff face near the ocean. Multiple drainages and hillslopes extend upwards from the boundary of the coastal plain and foothills towards the ridgeline of the Santa Ynez Mountains (City of Santa Barbara 2010). Elevations in the City range from sea level to approximately 1,100 feet above mean sea level, north of Skofield Park, along the northern boundary of the City (USGS 2015).

Regional and Local Setting

The project site is located on an east–west trending coastal plain that is about 3 miles wide, extending between the Santa Ynez Mountains to the north and the Pacific Ocean to the south. A regional system of faults and folds, collectively known as the Santa Barbara Fold Belt, has modified the coastal plain and created elevated topographic features in the City, such as Mission Ridge and the Mesa. Movement along the faults and folds of the Santa Barbara Fold Belt generally occurs as a result of transferred strain originating from movement along the San Andreas Fault, located approximately 40 miles to the northeast (City of Santa Barbara 2013a).

Much of the low-lying areas in Santa Barbara are underlain by unconsolidated deposits of silt, sand, gravel, cobbles, and boulders (alluvial material), most of which was washed down from the Santa Ynez Mountains over the past 1.8 million years. Other consolidated sedimentary geological formations found in the City include the Santa Barbara, Monterey, Rincon, and Sespe Formations. The Santa Barbara Formation is the youngest of these formations and is comprised of sands and silts that were deposited between 1.8 and 5 million years ago. The Santa Barbara Formation underlays much of the Alta Mesa neighborhood. The Monterey Shale Formation formed between 5 and 23 million years ago and is predominately exposed in the sea cliffs that form the southern border of the Mesa neighborhoods, parts of the Riviera neighborhood, and the middle portion of the Las Positas Valley area. The Rincon Shale was formed roughly between 16 and 23 million years ago and is a clay-rich formation that is also exposed in the Las Positas Valley area, and in the Foothill and Riviera neighborhoods (City of Santa Barbara 2013a).

Landslide and Slope Instability

A landslide is the downhill movement of masses of earth material under the force of gravity. The stability of a slope, or the potential for slope movement to occur, is dependent on many factors, including the height of the slope, the shear strength of rock and/or soil that comprises the slope, the orientation of bedding planes in underlying geologic formations, and the amount of water contained in the slope material. These and many other factors influence the stability of a slope, but in general, sandy or granular soils and rock units are stronger and less likely to be associated with large-scale landsliding than are soil and rock units composed of fine-grained silt or clay (City of Santa Barbara 2013a).

The down-slope movement of earth material is part of the continuous and natural process of erosion; however, the stability of a slope can be adversely affected by a wide variety of factors, such as adding water to a slope. Other factors that can decrease the stability of a slope include erosion of the toe of the slope, which removes support from the overlying material; placing addition additional weight on the slope; changes to the slope configuration by grading; earthquake-related ground-shaking; and the removal of vegetation from the surface of the slope (City of Santa Barbara 2013b).

The Geologic and Seismic Hazards Safety Element Technical Background Report ("Technical Report") for the City of Santa Barbara (City of Santa Barbara 2013a) has identified landslide hazard risk areas throughout the City and categorizes risk as "Very Low," "Low," "Moderate," and "High." Areas of the City designated as having a "High" landslide hazard risk are naturally unstable and subject to slope failure even without being modified by grading or other development-related processes. These areas include parts of the Mesa, the steep slopes located along the west side of the Las Positas Valley area, most of the Riviera, and the coastal bluffs in the southwestern part of the City. In addition, two recent landslides, commonly referred to as the Conejo Road Landslide and the Canon View Road/Sycamore Canyon Landslide, have occurred within this High Landslide Hazard Risk area, along and near Sycamore Canyon Drive (City of Santa Barbara 2013a).

A summary describing each of the four hazard risk areas are provided below.

Hazard Area 1 – Very Low Landslide Potential

Landslides are very rare to nonexistent in these relatively level areas, and areas with this designation would probably remain relatively stable unless the topography is substantially altered. Parts of the Hazard Area 1 designation include the eastern Downtown area, most of the Waterfront, most of the Westside, and the southern part of the Eastside area (City of Santa Barbara 2013a).

Hazard Area 2 – Low Landslide Potential

Areas with this designation have gentle to moderate slopes underlain by relatively competent earth material that is considered unlikely to become unstable under natural conditions. The stability of slopes in Hazard Area 2 could change in response to terrain modifications. Hazard Area 2 includes the western part of the Downtown area, southern portion of the Mesa, most of the upper State area, areas generally adjacent to Las Positas Road, and the southern portion of the Los Positas Valley area (City of Santa Barbara 2013a).

Hazard Area 3 – Moderate Landslide Potential

Slopes with this designation are at or near their stability limits due to the presence of weaker geologic materials, steeper slopes, or a combination of these factors. Although most slopes within Hazard Area 3 do not currently contain landslide deposits, the materials that underlie the slopes have the potential to fail if modified. Areas

designated as Hazard Area 3 include the northern portion of the Eastside area, the southernmost extent of the Riviera, localized portions of the Riviera, and the northern part of the Las Positas Valley area (City of Santa Barbara 2013a).

Hazard Area 4 – High Landslide Potential

Slopes in Hazard Area 4 are naturally unstable and subject to failure, even without being modified by grading or other development-related processes. These areas are characterized by steep slopes and include most areas previously affected by landslides, as well as areas where there is substantial evidence of downward "creep" of surface materials. Soil "creep" is the slow downward movement of surface soil that typically occurs in clay-rich, expansive soils that expand when wet and contract when dry. Earth flows are the most common type of slope failure in these hazard areas, but slides of intact bedrock are also common. Hazard Area 4 includes parts of the Mesa, the steep slopes located along the west side of the Las Positas Valley area, most of the Riviera, and the coastal bluffs in the southwestern part of the City (City of Santa Barbara 2013a).

The Conejo Road Landslide and the Canon View Road/Sycamore Canyon Landslide occurred in Sycamore Canyon in January 2005, following heavy rains. The slope failures resulted in the closure of a 2-mile segment of State Route 144 (Sycamore Canyon Road), south of State Route 192, the destruction of eight homes, and the structural damage of many other homes, roadways, and driveways (City of Santa Barbara 2013a).

Soil Erosion

Soil erosion occurs when wind, water, or ground disturbances cause soil particles to move and be deposited elsewhere. Numerous conditions influence the susceptibility of soil to the efforts of erosion, although the characteristics of the soil, vegetative cover, and topography are important factors. Soils with high clay content are generally less susceptible to erosion than soils with high sand or silt content. Soils with high organic material content are often less susceptible to erosion because the organic matter helps to bind the soil particles and absorbs water, which reduces runoff. Soils that are compacted promote higher runoff rates, which can increase off-site erosion. Soils covered with vegetation are less susceptible to erosion because the plants add organic material to the soil, shelter the soil from wind, and the plant roots bind the soil together. The removal of vegetation by construction activities or wildfire can result in a substantial increase in erosion rates. Areas with steep topography are more susceptible to erosion because sloping areas generally have higher runoff water velocities, which increase the ability of water to dislodge and carry soil particles (2013a).

Increases in soil erosion rates caused by disturbances of the ground surface, fires, or other causes can result in increased sediment loads in receiving waters such as ponds, reservoirs, streams, and the ocean. Increased sediment loads can have a variety of adverse effects on water quality. In addition to impacts such as decreased water clarity, reduced light penetration, and diminished photosynthesis on aquatic plants, sediment particles can carry pollutants such as nutrients, bacteria, pesticides, metals, and hydrocarbons. These pollutants can impair water quality by promoting algae growth and associated decreases in dissolved oxygen levels and may also be toxic to aquatic organisms (City of Santa Barbara 2013a).

Erosion hazard levels throughout the City are classified on a scale ranging from "Slight" to "Very High." In general, areas with a higher erosion hazard potential are in the hillside or sloping areas of the City, such as the Riviera, and portions of the upper State Street, Mesa, and Los Positas Valley areas. Portions of the City that are level or with only moderate slopes are generally classified as having "Moderate" to "Slight" erosion hazard potential (City of Santa Barbara 2013a).

Subsidence

Subsidence occurs when a large portion of land is vertically displaced, usually due to the withdrawal of groundwater, oil, or natural gas, or as a result of decomposition of natural organic materials. Soils that are particularly subject to subsidence include those with high silt or clay content and/or high organic content.

In 2020, approximately 7.6% of the City's water supply will be derived from the Foothill Groundwater Basin and Storage Unit I of the Santa Barbara Groundwater Basin. The Foothill Basin generally underlies the upper State Street and lower Foothill area, and Storage Unit I of the Santa Barbara Basin generally underlies the lower Riviera area to Highway 101. Storage Unit III of the Santa Barbara Basin, located southwest of Highway 101, is not typically used by the City for groundwater production (City of Santa Barbara 2016, 2020; Santa Barbara County 2020).

As part of a joint 2018 study between the U.S. Geological Survey (USGS) and the City, the sustainable yield, or volume of groundwater that can be pumped from storage without causing water-level drawdowns and associated seawater intrusion, was evaluated based on five optimization scenarios. The scenarios revealed that collectively, the basins could sustain a maximum extraction rate of about 30,000 acre-feet over a 10-year period (USGS 2018). The portion of the perennial yield used by the City from Storage Unit I of the Santa Barbara Basin and the Foothill Basin is approximately 1,300 acre-feet per year (AFY). Assuming a cumulative water demand rate of 1,300 AFY over a 10-year period, the projected groundwater demand from the City would be 13,000 AFY, far below the overdraft value of 30,000 AFY. Moreover, in the event of overdraft, groundwater recharge can be augmented through the release of surface water to Mission Creek and through injection capability at various production wells. As such, the potential for subsidence beneath the City is low.

In addition, based on the USGS "Areas of Land Subsidence" map, the City is not located within an area of documented current or historical subsidence as a result of groundwater pumping, peat loss, or oil extraction (USGS 2020).

4.5.2 Relevant Plans, Policies, and Ordinances

City of Santa Barbara General Plan Safety Element

The Safety Element of the Santa Barbara General Plan, in part, summarizes mitigation goals and specific policies related to seismic hazards, slope instability, and soil instability (City of Santa Barbara 2013b). The following strategies from the General Plan Safety Element apply to the proposed project.

Hazard Risk Reduction

S7. Hazard Reduction Identify, evaluate, and implement risk reduction measures during the development review and permitting process to reduce the effects of hazards to an acceptable level or risk. Project design measures shall be implemented as applicable to avoid or reduce hazards and comply with associated regulations.

S8. Information Resources Maps depicting areas affected by natural and human-caused hazards shall be maintained by the City. These maps may be updated from time to time when new information regarding the location or severity of hazards becomes available.

S9. Risk Evaluation Proposals for new development may be required to provide an evaluation of how natural and human-caused hazards may adversely affect the project, whether the project may create or exacerbate hazards, and to identify feasible measures to reduce hazard-related risk to an acceptable level. Required hazard evaluation reports are to be prepared and signed by a qualified individual acceptable to the City. At its discretion, the City may require peer review or submitted reports.

Factors to be considered in determining whether a risk evaluation is required include but are not limited to:

a. Location of the project in relation to City hazard maps and other hazards information
b. Potential for the project to exacerbate natural or human-caused hazards
c. Potential for the project to be impacted by natural and human-caused hazards
d. Potential severity of hazard-related impacts
e. Intended use of the site or proposed structures
f. Potential consequences of the site or proposed structures
g. Federal/state hazard regulations, building code requirements, and recommendations of the *Geology and Geohazards Master Environmental Assessment, Technical Report and Evaluation Guidelines* and other similar regulations and guidelines.

Geologic and Seismic Hazards

S18. Steep Slopes To minimize the potential for hazards such as severe erosion and landslides, grading on slopes greater than 30% should not be permitted.

S19. Soil Erosion Incorporate long-term and construction-related measures in development as needed to address soil erosion. General management approaches for long-term site development include removal or recompaction of erosive soils; engineered slopes and grades; landscaping, and use of geotextiles. Best Management Practices (BMPs) to control erosion and sedimentation during construction may include use of silt fencing, straw bales, filter fabrics, or gravel.

4.5.3 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to Appendix G, significant geology and soils impacts would occur if the project would do any of the following:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42).
   ii. Strong seismic ground shaking.
   iii. Seismic-related ground failure, including liquefaction.
   iv. Landslides.

b) Result in substantial soil erosion or the loss of topsoil.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The CWPP Initial Study (Appendix A) determined that thresholds a) i, ii, iii; e), and f) of the would have no impact and less than significant impacts with implementation of the proposed project. It should be noted that the geology and soils summary table in the CWPP Initial Study mischaracterized the level of significance for topic area d) regarding expansive soils as potentially significant. However, the analysis determined the impact is less than significant. Therefore, these topic areas are eliminated from further analysis.

4.5.4 Impacts Analysis

GEO-1 Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

a) iv. Landslides?

Factors that trigger landslide movement include erosion, heavy rainfall, poor construction practices, freezing and thawing, earthquake shaking, and volcanic eruptions (Disaster Center 2012). Landslides are typically associated with periods of heavy rainfall or rapid snowmelt and tend to worsen the effects of flooding, such as in the case of the 2018 Thomas Fire and subsequent debris flow. Areas burned by forest and brush fires are particularly susceptible to landslides (Disaster Center 2012). Of the factors within the scope of the CWPP are proposed vegetation management practices that could affect erosion, causing potential landslides. These practices include defensible space management by private property owners, management of City Vegetation Management Units (VMUs), and roadway clearance by both private property owners and the City. Actual vegetation management methods within the defensible space and City VMUs would generally remain the same as the methods discussed in the 2004 Wildland Fire Plan and PEIR.

The proposed CWPP would merge, rename, and expand the existing HFHA. The existing Coastal and Coastal Interior Zones would be renamed High Fire Hazard Severity Zone (HFHSZ), and the existing Foothill and Extreme Foothill Zones would be renamed Very High Fire Hazard Severity Zone (VHFHSZ) within the City's HFHA. See Figure 3-4, Proposed Modifications to High Fire Hazard Area, in Chapter 3, and Table 4.5-1 below.

Table 4.5-1. High Fire Hazard Area Modifications

Existing					Proposed	
Classification	*Acreage Existing*	*Proposed Addition*	*Proposed Removal*	*Total (acres)*	*Classification*	*Acreage*
Coastal Interior	702.18	270.74	1.65	**971.27**	High Fire Hazard Severity Zone	1,657.74
Coastal	523.51	264.44	101.48	**686.47**		
Foothill	2,827.18	118.56	0.0	**2,945.74**	Very High Fire Hazard Severity Zone	3,666.22
Extreme Foothill	723.91	1.68	5.11	**720.48**		

The primary effect of being located within the HFHA is the obligation to maintain City-defined defensible space year-round. Vegetation within defensible space zones, native or otherwise, would be maintained to create an effective fuel break by thinning dense vegetation and removing dry brush, flammable vegetation, and combustible growth. The proposed HFHSZ would require 30 feet to 70 feet from a building or structure, and the proposed VHFHSZ would require 100 feet to 150 feet. Within any HFHSZ, additional defensible space may be required on slopes greater than 30%. A summary of existing and proposed defensible space requirements is provided in Table 4.5-2, Defensible Space Requirements. Based on site-specific circumstances, the fire marshal has the authority to determine the appropriate defensible space based on these standards.

Table 4.5-2. Defensible Space Requirement

Existing		Proposed	
Classification	*Distance (feet)*	*Classification*	*Distance (feet)**
Coastal Interior	30–50	High Fire Hazard Severity Zone	30–70
Coastal	50–70		
Foothill	100	Very High Fire Hazard Severity Zone	100–150
Extreme Foothill	150		

Source: SBFD and CDD 2004.
Note: *Within any HFHSZ/VHFHSZ, additional defensible space up to 300 feet may be required at the discretion of the fire marshal on slopes greater than 30%.

Proposed vegetation management activities that would occur within the defensible space zones and in the City's VMUs would generally involve reducing the amount of flammable vegetation within the treatment area. Vegetation management activities would include the treatment or removal of flammable vegetation; trimming/mowing readily ignitable fuels; selective removal of plant species; thinning, pruning, and limbing of vegetation; and thinning of continuous stands of brush (SBFD 2004). Prescribed fires may also be implemented in conjunction with hand labor and mechanical treatment methods to rapidly break down vegetative material and convert it to soil nutrients, reduce brood material for pests and pathogens, control invasive species, and reduce surface fuel buildup and the threat of severe wildfires. Although the proposed vegetation management activities would typically involve limited disturbance, vegetation can act as a binding, stabilizing otherwise potentially unstable soils. Removal of vegetation in the High Fire Hazard Area (HFHA) could create or exacerbate unstable soils, potentially increasing the potential for slope instability and mudslides, and increasing runoff and soil erosion rates.

As disussed above, the Technical Report (City of Santa Barbara 2013a) has identified landslide hazard risk areas throughout the City and categorizes risk as "Very Low," "Low," "Moderate," and "High." Areas of the City designated as having a "High" landslide hazard risk are naturally unstable and subject to slope failure even without being modified by grading or other development-related processes. These areas include parts of the Mesa, the steep slopes located along the west side of the Las Positas Valley area, most of the Riviera, and the coastal bluffs in the southwestern part of the City. Comparing Figure 3-4, Proposed Modifications to High Fire Hazard Area (Chapter 3), to the City General Plan Slope Failure Hazard Zone map (City of Santa Barbara 2013b), most of the proposed additions to the HFHA are located within High Landslide Risk areas, including the following:

- Zone E, in the Eucalyptus Hill area, west of the Montecito Country Club
- Zone G, in the lower Mission Canyon area
- Zones K, L, M, N, O, located on the Mesa, Alta Mesa area, and hillside areas adjacent to the West Side
- Zone R, east of Hope Ranch
- Zone T, including the Douglas Family Preserve and the coastal area west of Arroyo Burro Beach

Because many of the proposed additions to the HFHA are located within High Landslide Risk areas, this indicates that many residences are located on relatively steep slopes for which large areas of defensible space would be required (i.e., up to 200 to 300 feet).

Implementation of the CWPP would result in a net increase in VMUs, which in turn would result in an increase in activities to reduce fuel loads, reduce the potential for ignitions, and modify fire behavior. The VMUs were identified in areas that would close a gap between existing VMUs, provide additional protection to the community, or where historic fires have burned into the City. Table 4.5-3, Vegetation Management Units, provides the total acreage of existing and proposed VMUs.

Table 4.5-3. Vegetation Management Units

	HFHSZ VMU (acres)	VHFHSZ VMU (acres)
Existing	292.95	908.73
Proposed	356.32	318.59
Total (Acres)	**649.27**	**1,227.32**

Source: SBFD 2020.

Comparing Figure 3-8, Proposed Modifications to City's Vegetation Management Units (in Chapter 3), to the City General Plan Slope Failure Hazard Zone map (City of Santa Barbara 2013b), most of the proposed VMUs are located within High Landslide Risk areas, including:

- VMUs 24 and 29, in the Lauro Canyon Reservoir area
- VMU 25, in the Foothill Road/Northridge Road area
- VMU 26, in the western Mountain Drive area
- VMU 27, in the Stanwood Drive/Mission Ridge Road area
- VMU 28, east of Parma Park
- VMUs 30 and 31, in the southern Eucalyptus Hill area

- VMU 32, an area of documented landslides in the Sycamore Canyon/Eucalyptus Hill area
- VMUs 33, 34, 35, 36, 37, 39, and 41, in the Alta Mesa area
- VMU 40, in the Ehlings Park area
- VMUs 42 and 44, along Las Positas Road and the northern slopes of the Bel Air Hills
- VMU 43, an area of documented landslides in the Los Positas Valley area
- VMU 46, east of Hope Ranch

Similarly, many areas of the Community Fuels Treatment Network are located on steep slopes, and many areas requiring clearance adjacent to roadways would be located on steep slopes.

Vegetation management techniques would include manual, mechanical, and biological treatment of vegetation, as well as the use of prescribed burns when needed. Vegetation management methods would typically involve little to no ground disturbance. In addition, before commencing with any vegetation work, SBFD would develop a work plan that identifies the specific areas to be treated, BMPs to be used based on site-specific circumstances, and any subsequent monitoring that would be needed. Moreover, all vegetation management would be done in accordance with the Vegetation Management Standards and Techniques manual, which is included as Appendix E of the proposed CWPP. For vegetation management that would occur on already over-steepened and potentially unstable slopes, mitigation measure **MM-GEO-1 Erosion Control**, would be implemented to ensure that the SBFD incorporates BMPs on slopes in excess of a 10% gradient, further reducing the potential for unstable slopes.

As such, with incorporation of **MM-GEO-1 Erosion Control,** impacts associated with landslides would be **less than significant with mitigation**.

GEO-2 Would the project result in substantial soil erosion or the loss of topsoil?

As previously discussed, in threshold a) iv., implementation of the proposed CWPP would result in a net increase in the HFHA, which would subsequently result in a cumulative increase in vegetation management activities related to defensible space to reduce fuel loads, reduce the potential for ignitions, and modify fire behavior. In total, the newly amended HFHA would result in a cumulative increase of HFHSZ and VHFHSZ compared to the existing classifications. Vegetation management in these areas would collectively result in a net decrease in canopy coverage, plant density, deadwood and heavy plant litter, and overall plant biomass.

Because many of the proposed additions to the HFHA are located within High Landslide Risk areas, this indicates that many residences are located on relatively steep slopes for which large areas of defensible space would be required (i.e., up to 200 to 300 feet). Although the proposed vegetation management activities would typically involve minimal ground disturbance, vegetation can act as a binding, stabilizing otherwise potentially unstable soils. Removal of vegetation in the HFHA associated with defensible space management could create or exacerbate unstable soils, potentially increasing the potential for soil erosion rates. Entrained sediment from the newly exposed soils could run off into local waterways, potentially affecting water quality and interfering with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species.

Implementation of the CWPP would also result in a net increase in VMUs, which would subsequently result in a cumulative increase in vegetation management activities to reduce fuel loads, reduce the potential for ignitions, and modify fire behavior. Vegetation management activities could increase the potential for

erosion from rainfall and overland flow as a result of the increase in exposure of bare soils, especially on steep slopes. However, the proposed vegetation management activities would typically involve minimal ground disturbance. In addition, vegetation management activities would be completed in accordance with the Vegetation Management Standards and Techniques manual, which is included as Appendix E of the proposed CWPP. Compliance with the manual, in conjunction with **MM-GEO-1 Erosion Control,** would ensure that vegetation management activities incorporate BMPs to reduce soil exposure and soil erosion to the greatest extent feasible.

Therefore, with implementation of **MM-GEO-1 Erosion Control**, impacts resulting from soil erosion or loss of topsoil would be **less than significant with mitigation**.

GEO-3 Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

The CWPP Initial Study (Appendix A) determined that the proposed project would not be affected by or exacerbate impacts related to lateral spreading, liquefaction, and soil collapse; landslides are discussed under GEO-1.

Subsidence

According to the USGS "Areas of Land Subsidence" map, no recorded instances of subsidence have occurred within the City as a result of groundwater pumping, peat loss, or oil extraction. Implementation of the CWPP would require minor amounts of water usage associated with fugitive dust control during vegetation management activities within the HFHA. The City of Santa Barbara, in cooperation with the USGS, has determined a sustainable perennial groundwater yield exists for the City, such that basin overdraft and associated ground subsidence would not occur. If the designated rate of groundwater is exceeded, groundwater recharge would be augmented through the release of water into Mission Creek and through injection wells. Vegetation management methods would generally remain consistent with the techniques discussed in the 2004 Wildland Fire Plan and PEIR. Water use for both defensible space management and VMUs would indirectly lower the demand for water supply as the frequency and intensity of wildfires would be reduced, thus reducing the water needed to suppress fires. As such, impacts associated with subsidence would be **less than significant**.

4.5.5 Mitigation Measures

MM-GEO-1. Erosion Control. The Santa Barbara Fire Department (SBFD) shall implement the following Best Management Practices when conducting vegetation management on slopes greater than 10%:

- To the extent feasible, field crews shall not create footpaths to and from the work areas that remove leaf litter and expose mineral soils to potential future erosion. If crews must use a single path that becomes worn and vulnerable, the path shall be rehabilitated after vegetation management to reduce erosion potential. Rehabilitation would include replacement of leaf litter and chippings on the path, and piling dirt and organic matter at periodic intervals along the path to act as water bars and prevent the concentration of flows.
- Crews shall avoid stripping the leaf litter from slopes or creek banks when dragging vegetation from the cutting location to the chipper. If the removal of vegetation and leaf litter is

unavoidable, the SBFD shall restore the affected areas by spreading leaf litter and chippings back over the stripped areas.

- If the SBFD field supervisor determines that an erosion potential has been created due to vegetation reduction work, and that the spreading of leaf litter and chippings is insufficient protection from future winter rains, the SBFD shall consider temporary biodegradable erosion control blankets and barriers, such as coconut fiber blankets and straw wattles. These materials shall be placed strategically to reduce the amount and velocity of flow over the affected areas, to prevent gullying and soil loss by water erosion, and to facilitate the natural regeneration and colonization by native plants.

4.5.6 Level of Significance After Mitigation

With implementation of **MM-GEO-1** and adherence to the project components, management standards, and BMPs included in Appendix E of the proposed CWPP, potential impacts described in Section 4.5.4 above would be **less than significant**.

4.5.7 Cumulative Impacts

Potential cumulative impacts on geology and soils would result from projects that combine to create geologic hazards, including unstable geologic conditions, or contribute substantially to erosion. Most impacts from geologic hazards, such as landslides, are site-specific and are therefore generally mitigated on a project-by-project basis. Each cumulative project would adhere to required building engineering design, per the most recent version of the California Building Code. Additionally, as needed, projects would incorporate individual mitigation or geotechnical requirements for site-specific geologic hazards on each individual cumulative project site. Furthermore, ground disturbance would be minimal. Therefore, a potential cumulative impact related to site-specific geologic hazards such as landslides would not occur.

Potential erosion-induced siltation of downstream water bodies from each cumulative project site could combine to cause potentially significant cumulative water quality impacts. The geographic context for the analysis of cumulative erosion related impacts would be all of the watersheds within the City. Cumulative development and redevelopment within the City would potentially result in short-term erosion-related impacts during construction and long-term erosion related to denuded soil, improper drainage, and lack of erosion control features at each cumulative project site. However, short-term and long-term erosion control BMPs would be employed at each site, consistent with City stormwater quality regulations; Strategy S19, Soil Erosion, of the Safety Element of the Santa Barbara General Plan; and California Building Code requirements, such that cumulative water quality impacts would not be cumulatively considerable. (See Section 4.8, Hydrology and Water Quality for additional analyses.) **MM-GEO-1,** in combination with erosion control measures at other cumulative project sites, would reduce potential erosion-related impacts such that cumulative impacts would be **less than significant**.

4.5.8 References

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4.6 Greenhouse Gas Emissions

This section describes the existing greenhouse gas (GHG) conditions of the Community Wildfire Protection Plan (CWPP or proposed project) project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

4.6.1 Existing Conditions

The Greenhouse Effect and Greenhouse Gases

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called GHGs. The greenhouse effect traps heat in the troposphere through a threefold process: short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and back toward the Earth. This trapping of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor (H_2O). Some GHGs, such as CO_2, CH_4, and N_2O, can occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil-fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Human-caused GHGs, which are produced by certain industrial products and processes, have a much greater heat-absorption potential than CO_2. They include fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (CAT 2006).

The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Without it, the temperature of the Earth would be about 0 degrees Fahrenheit (°F) (−18 degrees Celsius (°C)) instead of its current 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect.

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP). The GWP varies between GHGs; for example, the GWP of CH_4 is 21, and the GWP of N_2O is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG emissions are typically measured in terms of tons or metric tons (MT) of CO_2 equivalent (CO_2e).[1]

[1] The CO_2e for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of CO_2e = (metric tons of a GHG) × (GWP of the GHG). The California Emissions Estimator Model (CalEEMod) assumes that the GWP for CH_4 is 21, which means that emissions of 1 metric ton of CH_4 are equivalent to emissions of 21 metric tons of CO_2, and the GWP for N_2O is 310, based on the Intergovernmental Panel on Climate Change (IPCC) *Second Assessment Report*. The IPCC has released subsequent Assessment Reports with updated GWPs, and the California Air Resources Board (CARB) reporting and other statewide documents are beginning to transition to the use of the GWPs in the IPCC *Fourth Assessment Report*. Furthermore, the use of the different GWPs will not substantially change the overall project GHG emissions, which are primarily CO_2. As such, it is appropriate to use the hardwired GWP values in CalEEMod from the IPCC *Second Assessment Report*.

Contributions to Greenhouse Gas Emissions

Global Inventory

Anthropogenic GHG emissions worldwide in 2017 (the most recent year for which data is available) totaled approximately 50,860 million metric tons (MMT) of CO_2e, excluding land use change and forestry (Olivier and Peters 2018). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, or approximately 33,290 MMT CO_2e (Olivier and Peters 2018). Table 4.6-1 presents the top GHG-emissions-producing countries and the European Union.

Table 4.6-1. Six Top GHG Producer Countries and the European Union

Emitting Countries	2017 GHG Emissions (MMT CO_2e)[a,b]
China	13,530
United States	6,640
European Union	4,560
India	3,650
Russian Federation	2,220
Japan	1,490
Brazil	1,200
Total	**33,290**

Source: Olivier and Peters 2018.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Column may not add due to rounding.
[b] GHG emissions do not include land use change and forestry-related GHG emissions.

National and State Inventories

Per the 2020 U.S. Environmental Protection Agency (EPA) Inventory of U.S. GHG Emissions and Sinks: 1990–2018, total U.S. GHG emissions were approximately 6,677 MMT CO_2e in 2018 (EPA 2020). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81.3% of total GHG emissions (5,428 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8% of CO_2 emissions in 2018 (5,032 MMT CO_2e). Relative to the 1990 emissions level, gross U.S. GHG emissions in 2018 were 3.7% higher; however, the gross emissions were down from a high of 15.2% above the 1990 level that occurred in 2007. GHG emissions decreased from 2017 to 2018 by 2.9% (188 MMT CO_2e) and, overall, net emissions in 2018 were 10.2% below 2005 levels (EPA 2020).

According to California's 2000 through 2017 GHG emissions inventory (2019 edition), California emitted 424 MMT CO_2e in 2017, including emissions resulting from out-of-state electrical generation (CARB 2019). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2017 are presented in Table 4.6-2.

Table 4.6-2. GHG Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	169.9	40%
Industrial	89.4	21%
Electricity (in state)	38.5	9%
Electricity (imports)	23.9	6%
Agriculture	32.4	8%
Residential	26.0	6%
Commercial	15.1	4%
High global-warming potential substances	20.0	5%
Recycling and waste	8.9	2%
Total	**424.2**	**100%**

Source: CARB 2019.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Column may not add due to rounding.

Between 2000 and 2017, per-capita GHG emissions in California dropped from a peak of 14.1 MT per person in 2001 to 10.7 MT per person in 2017, representing a 24% decrease. In addition, total GHG emissions in 2017 were approximately 5 MMT CO_2e less than 2016 emissions (CARB 2019).

Table 4.6-3, presents the City's 2015 GHG emissions and the percent contribution of each emissions sector from the 2015 Community-wide GHG Emissions Inventory Update (City of Santa Barbara 2017).

Table 4.6-3. City of Santa Barbara Baseline Greenhouse Gas Emissions Inventory (2015)

Emissions Sector	Annual GHG Emissions (MT CO_2e/year)	Percent of Total[a]
Transportation	307,382	57%
Energy	209,077	39%
Waste	18,595	3%
Total[a]	**535,055**	**100%**

Source: City of Santa Barbara 2017.
Notes: MT CO_2e = metric tons of carbon dioxide equivalent per year.
[a] Total may not sum due to rounding.

Potential Effects of Human Activity on Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 Intergovernmental Panel on Climate Change Synthesis Report indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice have, and rising sea levels (IPCC 2014).

In California, climate change impacts have the potential to affect sea level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (CCCC 2006). The primary effect of global climate change has been a 0.2°C rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming could be taking place.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

An increase in annual average temperature is a reasonably foreseeable effect of climate change. Observed changes over the last several decades across the western United States reveal clear signals of climate change. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1°F to 8.6°F, depending on emissions levels. Springtime warming—a critical influence on snowmelt—will be particularly pronounced. Summer temperatures will rise more than winter temperatures, and the increases will be greater in inland California, compared to the coast. Heat waves will be more frequent, hotter, and longer. There will be fewer extremely cold nights (CCCC 2012). A decline of Sierra snowpack, which accounts for approximately half of the surface water storage in California, by 30% to as much as 90% is predicted over the next 100 years (CAT 2006).

Model projections for precipitation over California continue to show the Mediterranean pattern of wet winters and dry summers with seasonal, year-to-year, and decade-to-decade variability. For the first time, however, several of the improved climate models shift toward drier conditions by the mid-to-late 21st century in Central and, most notably, Southern California. By late-century, all projections show drying, and half of them suggest 30-year average precipitation will decline by more than 10% below the historical average (CCCC 2012).

Wildfire risk in California will increase as a result of climate change. Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. However, human activities will continue to be the biggest factor in ignition risk. It is estimated that the long-term increase in fire occurrence associated with a higher emissions scenario is substantial, with increases in the number of large fires statewide ranging from 58% to 128% above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57% to 169%, depending on location (CCCC 2012).

Reduction in the suitability of agricultural lands for traditional crop types may occur. While effects may occur, adaptation could allow farmers and ranchers to minimize potential negative effects on agricultural outcomes through adjusting timing of plantings or harvesting and changing crop types.

Public health-related effects of increased temperatures and prolonged temperature extremes, including heat stroke, heat exhaustion, and exacerbation of existing medical conditions, could be particular problems for the elderly, infants, and those who lack access to air conditioning or cooled spaces (CNRA 2009).

4.6.2 Relevant Plans, Policies, and Ordinances

Federal

Massachusetts v. U.S. Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency*, the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The elevated concentrations of GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The combined emissions of GHGs—CO_2, CH_4, N_2O, and hydrofluorocarbons—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In response to the *Massachusetts v. EPA* ruling, the Bush administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011. In 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200), and NHTSA intends to set standards for model years 2022 through 2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6% to 23% over the 2010 baselines (76 FR 57106–57513).

On September 27, 2019, the EPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (84 FR 51310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission-vehicle (ZEV) mandates in California. On March 31, 2020, the EPA and NHTSA issued the Part Two Rule, which will go into effect 60 days after being published in the Federal Register. The Part Two Rule sets CO_2 emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. This issue is evolving as California and 22 other states, as well as the District of Columbia and four cities, filed suit against the EPA and a petition for reconsideration of the rule on November 26, 2019. The litigation is not expected to be resolved for at least several months.

The Current Administration

On September 19, 2019, the NHTSA and the EPA issued a final action entitled the "One National Program Rule" to enable the federal government to provide nationwide uniform fuel economy and GHG emission standards for automobile and light-duty trucks. This action finalizes critical parts of the Safer, Affordable, Fuel-Efficient Vehicles Rule that was first proposed in August 2018. This action makes clear that federal law preempts state and local tailpipe GHG emissions standards as well as ZEV mandates. California and other states have challenged federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. The timing and consequences of these types of federal decisions and subsequent challenges are speculative at this time.

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes executive orders, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State

State Climate Change Targets

Executive Order S-3-05

EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

Assembly Bill 32 and CARB's Climate Change Scoping Plan

In furtherance of the goals established in EO S-3-05, the legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, the California Air Resources Board (CARB) is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2e). CARB's adoption of this limit is in accordance with California Health and Safety Code, Section 38550.

Further, in 2008, CARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan) in accordance with California Health and Safety Code, Section 38561. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020 (CARB 2008). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
2. Achieving a statewide renewable energy mix of 33%.
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets.
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard.
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In the Scoping Plan, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 29% from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations [referred to as "business-as-usual"]). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the Scoping Plan's Functional Equivalent Document (Final Supplement), CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG-reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 22% (down from 29%) from the business-as-usual conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009 through 2016) and the Renewables Portfolio Standard (RPS) (12% to 20%), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 29%) from the business-as-usual conditions.

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050" (CARB 2014). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050." Those six areas are energy, transportation (e.g., vehicles/equipment, sustainable communities, housing, fuels, infrastructure), agriculture, water, waste management, and natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal (CARB 2014).

Based on CARB's research efforts presented in the First Update, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050." Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies (CARB 2014).

As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the Intergovernmental Panel on Climate Change. Using the recalculated 1990 emissions level (431 MMT CO_2e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 29% or 16%) from the business-as-usual conditions (CARB 2014).

On January 20, 2017, CARB released the 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017). This update proposed CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below), including continuing the cap-and-trade program through 2030. The Second Update incorporated approaches to cutting short-lived climate pollutants (SLCPs) under

the SLCP Reduction Strategy (adopted by CARB in March 2017), and acknowledged the need for reducing emissions in agriculture and highlighted the work underway to ensure that California's natural and working lands increasingly sequester carbon. During development of the Second Update, CARB held a number of public workshops in the natural and working lands, agriculture, energy, and transportation sectors to inform development of the 2030 Scoping Plan Update (CARB 2017). When discussing project-level GHG emissions-reduction actions and thresholds, the Second Update stated, "Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA" (CARB 2017). The Second Update was approved by CARB's Governing Board on December 14, 2017.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050, as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 called for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

SB 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set new statewide GHG reduction targets, made changes to CARB's membership and increased legislative oversight of CARB's climate change–based activities, and expanded dissemination of GHG and other air-quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the senate and three members of the assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the legislature to CARB as nonvoting members; required CARB to make available and update (at least annually through its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and required CARB to identify specific information for GHG emissions-reduction measures when updating the Scoping Plan.

SB 605 and SB 1383

SB 605 (2014) required CARB to complete a comprehensive strategy to reduce emissions of SLCPs in the state; SB 1383 (2016) required CARB to approve and implement the SLCP Reduction Strategy. SB 1383 also established specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for CH_4 and HFCs and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provided direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its SLCP Reduction Strategy in March 2017, which established a framework for the statewide reduction of emissions of black carbon, CH_4, and fluorinated gases.

EO B-55-18

EO B-55-18 (September 2018) established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This Executive Order directed CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Building Energy

Title 24, Part 6 of the California Code of Regulations

Title 24 of the California Code of Regulations was established in 1978, and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402[d]), and cost effectiveness (California Public Resources Code, Sections 25402[b][2] and [b][3]). These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment. The 2019 standards continue to improve upon the 2016 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2019 standards went into effect on January 1, 2020.

Title 24, Part 11 of the California Code of Regulations

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR 11) is commonly referred to as CALGreen, and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, schools, and hospitals. The CALGreen 2019 standards went into effect on January 1, 2020, and continue to improve upon the 2016 CALGreen standards for new construction of, and additions and alterations to, residential and nonresidential buildings.

Title 20 of the California Code of Regulations

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing

fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

AB 1109

Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.

Renewable Energy and Energy Procurement

SB 1078

SB 1078 (2002) established the RPS program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010.

SB 1368

SB 1368 (2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. This effort helps protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low as or lower than new combined-cycle natural gas plants by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

SB X1 2

SB X1 2 (2011) expanded the RPS by establishing that 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350

SB 350 (2015) further expanded the RPS by establishing that 50% of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also required the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. Under SB 100, it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not occur through resource shuffling.

Mobile Sources

EO S-1-07

Issued on January 18, 2007, EO S-1-07 set a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste.

SB 375

SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations were then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, would achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for the Santa Barbara County Association of Governments (SBCAG) are a 7% reduction in emissions per capita by 2020 and a 13% reduction by 2035.

SBCAG completed and adopted its 2040 RTP/SCS in 2013 (SBCAG 2013). In November 2013, CARB, by resolution, accepted SBCAG's GHG emissions quantification analysis and determination that, if implemented, the 2040 RTP/SCS would achieve CARB's 2020 and 2035 GHG emissions-reduction targets for the region.

In October 2017, SBCAG adopted the Fast Forward 2040 RTP/SCS. Like the 2040 RTP/SCS, the Fast Forward 2040 RTP/SCS meets CARB's 2020 and 2035 reduction targets for the region (SBCAG 2017).

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2011). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025, cars will emit 75% less smog-forming pollution than the average new car sold before 2012. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The ZEV program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (EVs) in the 2018 to 2025 model years.

EO B-16-12

EO B-16-12 (2012) directs state entities under the governor's direction and control to support and facilitate development and distribution of ZEVs. This EO also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions-reduction target from the transportation sector equaling 80% less than 1990 levels by 2050. In furtherance of this EO, the governor convened an interagency working group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

AB 1236

AB 1236 (2015) requires local land use jurisdictions to approve applications for the installation of EV charging stations, as defined, through the issuance of specified permits, unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provides for appeal of that decision to the planning commission, as specified. AB 1236 requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, which creates an expedited and streamlined permitting process for EV charging stations, as specified. The City added Section 86.0151, Electric Vehicle Parking Regulations, to its municipal code in August 2015 in response to the AB 1236 requirements.

SB 350

In 2015, SB 350—the Clean Energy and Pollution Reduction Act—was enacted into law. As one of its elements, SB 350 established a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code, Section 740.12).

EO B-48-18

EO B-48-18 (2018) launched an 8-year initiative to accelerate the sale of EVs through a mix of rebate programs and infrastructure improvements. The order also set a new EV target of 5 million EVs in California by 2030. EO B-48-18 included funding for multiple state agencies, including the CEC, to increase EV charging infrastructure and for CARB to provide rebates for the purchase of new EVs and purchase incentives for low-income customers.

Solid Waste

AB 939 and AB 341

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery to develop strategies to achieve the state's policy goal. The California Department of Resources Recycling and Recovery has conducted multiple workshops and published documents that identify priority strategies that it believes would assist the state in reaching the 75% goal by 2020 (CalRecycle 2015).

Water

EO B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Other State Regulations and Goals

SB 97

SB 97 (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The California Natural Resources Agency (CNRA) adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead

agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018).

Local

City of Santa Barbara General Plan Environmental Resources Element

The City's General Plan, Environmental Resources Element contains goals, policies, and implementation strategies that speak to reducing emissions of GHG within the City (City of Santa Barbara 2011). The following GHG policies are found within the Environmental Resources Element. It should be noted that air quality related policies identified in Section 4.3.2 may also have similar reductions in GHG emissions.

ER1. Climate Change. As applicable, private development and public facilities and services may be required to incorporate measures to minimize contributions to climate change and to adapt to climate changes anticipated to occur within the life of each project.

ER2. Emergency Response Strategies and Climate Change. The City shall incorporate into its response strategies for emergency preparations, the potential effects of climate change, including from extreme weather, sea level rise, or epidemics, on humans, and the built and natural environments.

ER3. Decrease City's Global Footprint. In addition to promoting reduced unit size, building footprints and GHG emissions, and energy conservation, promote the use of more sustainable building and landscaping materials and methods.

ER4. Incorporation of Adaptation in Development. New public and private development or substantial redevelopment or reuse projects shall estimate the useful life of proposed structures, and, in conjunction with available information about established hazard potential attributable to climate change, incorporate adaptation measures in the design, siting and location of the structures.

ER5. Energy Efficiency and Conservation. As part of the City's strategy for addressing climate change, minimizing pollution of air and water, depleting nonrenewable resources and insulating from volatility of fossil fuel prices, dependence on energy derived from fossil fuels shall be reduced through increased efficiency, conservation, and conversion to renewable energy sources when practicable and financially warranted.

ER6. Local and Regional Renewable Energy Resources. Provide both within the city, and regionally through working with the County and other local jurisdictions or parties, opportunities to preserve, promote and participate in the development of local renewable energy resources such as solar, wind, geothermal, wave, hydro, methane and waste conversion.

City of Santa Barbara Climate Action Plan

The Santa Barbara Climate Action Plan (CAP) was prepared in response to directives of the City General Plan and State Legislature (AB 32 – Global Warming Solutions Act, SB 375 – Sustainable Communities and Climate Protection Act, SB 97 – California Environmental Quality Act). The CAP identifies an inventory and forecasts of carbon dioxide and other GHG emissions generated by the Santa Barbara community that contribute to accelerated global climate change. Strategies to reduce carbon emissions are identified in the areas of energy, travel, land use, vegetation, waste reduction, and water conservation. The CAP also identifies potential climate changes in Santa Barbara, and strategies to begin planning for adaptation to climate change effects.

Strategies are identified for reducing future carbon dioxide and other GHG emissions through methods such as energy efficiency and "green" building designs and products, use of renewable sources of energy, reduction of vehicle trips and mileage, vegetation to sequester carbon, reduction of solid waste, and more water conservation. The analysis finds that with identified strategies, reduced emissions would meet and surpass state emissions targets for overall emissions level in the year 2020 (1990 emission level), and vehicle-related emissions in 2020 and 2035 (2005 emission level).

4.6.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to greenhouse gases/climate change are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to GHG emissions would occur if the project would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As stated in CEQA Guidelines Section 15064.4(b)(1)-(3):

> a lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment: (1) the extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

CEQA Guidelines Section 15064(h)(3) also states that:

> [a] lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located.

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific quantitative thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009).

The OPR Technical Advisory titled CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act Review (OPR 2008) states that:

> public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established quantitative thresholds for assessing whether the GHG emissions of a project, such as the proposed project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated on a project level under CEQA.

City of Santa Barbara

The City adopted a CAP with the purpose of reducing the rate of carbon emissions generated within the Santa Barbara community and planning for adaptation of Santa Barbara to climate changes (City of Santa Barbara 2012). The City Council adopted both the CAP and an Environmental Impact Report for the CAP on September 19, 2012,

which together meet the requirements of CEQA Guidelines Section 15183.5(b) for use as a GHG streamlining tool. The CAP includes an emissions inventory of the City's government operations and a citywide GHG emissions estimate for the community of Santa Barbara. These GHG emission inventories were conducted for historical years, including 1990, as well as future estimates for 2020 and 2030 to demonstrate compliance with the goal of reducing communitywide GHG emissions to 1990 levels by 2020. Appendix C of the CAP, Initial Guidelines for Individual Project Design and Permitting, provides initial general guidance for including GHG reduction and climate adaptation measures as presented in a chart form.

Santa Barbara County Air Pollution Control District

As mentioned previously, the SBCAPCD provides suggested guidance for criteria air pollutant quantitative thresholds for purposes of conducting air quality assessments. That guidance is contained in the SBCAPCD document "Scope and Content for Air Quality Sections of Environmental Documents," but does not include quantitative thresholds for GHG impacts (SBCAPCD 2017). For many years, the City had a practice of using the SBCAPCD recommended thresholds for criteria air pollutants, and those thresholds are included in the City's CEQA Initial Study Guidelines. In 1979, as part of the City's Master Environmental Assessment, the City adopted the air quality thresholds of the predecessor agency of the SBCAPCD for purposes of air quality analysis and attainment (City Master Environmental Assessment, Appendix O, Policy D). Since that time, the City has utilized the SBCAPCD air quality thresholds when the City has not adopted its own thresholds.

Recently, the SBCAPCD adopted a quantitative CEQA threshold of significance for GHG emissions from stationary source projects (SBCAPCD 2017). The guidance states that a proposed stationary source project would not have a significant GHG impact, if operation of the project would:

- Emit less than the screening significance level of 10,000 MT CO_2e per year;
- Show compliance with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions (sources subject to the AB 32 Cap-and-Trade requirements pursuant to Title 17, Article 5 (California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms) would meet the criteria); or
- Show consistency with the AB 32 Scoping Plan GHG emission reduction goals by reducing project emissions 15.3% below Business As Usual (BAU).

The SBCAPCD defines stationary source projects as "equipment, processes and operations that require an SBCAPCD permit to operate" (SBCAPCD 2017). The project is considered a stationary source as it does require a permit from the SBCAPCD for the emergency generator. Therefore, the City utilized the SBCAPCD 10,000 MT CO_2e per-year threshold in the course of its analysis of GHG emissions.

Threshold of Significance Criteria

The following criteria are used in this analysis to determine the significance of a GHG and/or climate change impact. Potential impacts related to GHGs and global climate change would be significant if the project would:

a) Generate greenhouse gas emissions above the screening significance level of 10,000 MT CO_2e per year; or
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

4.6.4 Impacts Analysis

GHG-1 Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Operational Emissions

As discussed in Section 4.3.4, the project would undertake regular vegetation management as part of the CWPP to reduce fuel loads. The fuels management activity was based on input from the City and was estimated to include up to one prescribed burn per year and mechanical fuels management at 12 locations. Additionally, the GHG emissions from biological and manual vegetation management were estimated.

Prescribed Burning Emissions

To estimate GHG emissions from the prescribed burn, a maximum of 2 acres was considered with up to 20 burn piles per acre, or a total of 40 burn piles. As the burn piles are hand-assembled, the size was assumed to be 10 feet x 10 feet x 10 feet. The U.S. Forest Service Piled Fuels and Emissions Calculator was used to estimate the total pile biomass (USFS 2014). It was assumed that the pile would be a combination of shrubs and hardwood, and the consumption efficiency would be 90%. Emission factors from the U.S. Department of Agriculture's Estimating Volume, Biomass, and Potential Emissions of Hand-Piled Fuels, and EPA AP-42 Section 13.1 were used (USDA 2010; EPA 1996). It was assumed that a fire truck and crew, and the City's vegetation management crew would be on site during the burn event. Detailed emissions calculations are included in Appendix B. Emissions of CO_2 from this source as well as other biogenic sources are part of the carbon cycle, and as such are typically not included in GHG emission inventories. However, to be conservative, GHG emissions are included from this source.

Mechanical Vegetation Removal Emissions

Vegetation emissions by mechanical removal were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. Activity data for each vegetation removal unit was provided by the City and provided in Table 3-8 of Chapter 3. Emission sources include the use of offroad equipment (chainsaws, skip loaders, chippers) and vehicles. The City only performs the vegetation removal once per year at each site. CalEEMod default emission factors, load factors, and horsepower were assumed for each piece of equipment except the chainsaws. For chainsaws, the concrete/industrial saw equipment category was selected with the horsepower amended to reflect actual chainsaws used. No other equipment or dust suppression is anticipated during these activities. For mobile sources, the CalEEMod default fleet mix, trip length, and trip characteristics were assumed. Detailed emissions calculations are included in Appendix B.

Manual Vegetation Removal

Manual vegetation removal consists of hand labor involving pruning, cutting, or removal of trees or other vegetation by hand or using hand-held equipment. Other hand labor treatments involve removing dead wood, piling material, and spreading chips/mulch. Hand labor is most effective in small treatment areas or areas with difficult access where the use of heavy equipment is infeasible. The GHG emissions were estimated using emission factors developed within the Final Program Environmental Impact Report (FPEIR) for the California Vegetation Treatment Program (CalVTP) (Board of Forestry and Fire Protection 2019). The emissions factors from the CalVTP are provided in Appendix AQ-1 of the FPEIR and are presented in Table 4.8-4, below.

Biological Treatment

Biological management includes using grazing as a method to treat grasses, shrubs, and small trees. Grazing is an effective management tool for maintaining areas previously treated with hand labor or mechanical practices. Livestock each have different grazing habits and not all livestock are ideally suited for grazing treatments in all areas. Goats are an effective option as they will consume live or dead, tough, woody plant material. Similar to manual vegetation removal, the GHG emission factors for biological treatment were taken from the CalVTP FPEIR and are presented in Table 4.6-4.

Table 4.6-4. GHG Emission Factors for Manual and Biological Vegetation Treatment

Fuel Type	Treatment Activity GHG Emission Rate (MT CO2e / acre)	
	Manual Treatment	*Biological Treatment*
Tree	0.7	0.1
Shrub	0.4	0.5
Grass	0.0	0.5

Note: MT CO_2e = metric tons of carbon dioxide equivalent.

The CWPP is divided into Vegetation Management Units (VMUs), which are prioritized on the level of hazard. As the exact vegetative mix is not fully known per VMU, it was conservatively assumed that for manual treatment, all vegetation would be trees, and for biological treatment, all vegetation would be shrubs or grass, to estimate maximum annual GHGs. The total new VMU acreage as identified within the CWPP is 674.91 acres. As shown in Table 2-4 of the 2004 Program Environmental Impact Report, due to geographic, biological, cultural, or other constraints, only 26% of the total VMU acreage is anticipated to be treated (175.5 acres). In accordance with the City's estimated treatment activity shown in Table 3-8 of Chapter 3, 50% of the acreage treated is using manual techniques (87.7 acres) and 8% is treated using biological treatment (14.1 acres) annually. The operational emissions shown in Table 4.6-5 present the GHG emissions of the project during operation.

Table 4.6-5. Estimated Annual Operation Greenhouse Gas Emissions - Unmitigated

Vegetation Treatment Type	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Prescribed burning	57.02	0.10	0.01	63.75
Manual	—	—	—	61.39
Biological	—	—	—	7.05
Mechanical	11.90	0.00	0.00	11.95
			Total	**144.14**
			SBCAPCD Threshold	*10,000*
			Threshold Exceeded?	No

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SBCAPCD = Santa Barbara County Air Pollution Control District.
See Appendix B for complete results.

As shown in Table 4.6-5, the estimated total GHG emissions during operation of the project would be approximately 144 MT CO_2e per year. The project would not exceed the SBCAPCD threshold of 10,000 MT

CO_2e per year. Projects below this significance criterion have a minimal contribution to global emissions and are considered to have less than significant impacts. Therefore, operational impacts associated with directly or indirectly generating a significant quantity of GHG emissions would be **less than significant**.

GHG-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Regulations, plans, and policies aimed at reducing GHG emissions from the natural lands in the treatable landscape of the CWPP include the City's CAP, 2017 Scoping Plan, Draft California 2030 Natural and Working Lands Climate Change Implementation Plan, and the California Forest Carbon Plan.

As discussed in Section 4.6.3, Thresholds of Significance, although the City has not adopted a quantitative CEQA significance threshold for GHG emissions, the City adopted a CAP that is intended to address the issue of climate change for the City of Santa Barbara in accordance with AB 32, which calls for a reduction in GHG emissions to 1990 levels by 2020 (City of Santa Barbara 2012). The City Council adopted both the CAP and an Environmental Impact Report for the CAP on September 19, 2012, which, together, meet the requirements of CEQA Guidelines Section 15183.5(b) for use as a GHG streamlining tool.

As part of the City's CAP, a GHG emissions inventory was conducted to determine what the citywide level of GHG emissions was in 1990 and to estimate what the citywide GHG emissions would be in 2020 with implementation of the CAP and other statewide measures. The City's CAP states that the citywide GHG emission levels in 1990 were an estimated 724,389 MT CO_2e per year and that the estimated citywide GHG emissions in 2020 and 2030 with implementation of the CAP and other statewide measures would be an estimated 543,185 MT CO_2e and 428,167 MT CO_2e per year, respectively. As the project's first year of operation is 2021, the emissions for the buildout year were interpolated using the emissions forecasted for 2020 and 2030, resulting in an estimated 531,683 MT CO_2e. With the addition of the project's estimated annual GHG emissions (144 MT CO_2e per year), the estimated citywide GHG emissions in 2021 (with implementation of the CAP and other statewide measures) would be approximately 531,827 MT CO_2e per year. According to the City's CAP, the AB 32 emissions goal for the City would be 724,389 MT CO_2e per year for 2020. The 2030 emissions reduction goal was based on the Senate Bill (SB) 32 goal to reduce GHG emissions to 40% below 1990 levels by 2030. The interim emissions goal for the project's buildout year of 2021 was estimated to be 695,413 MT CO_2e. Annual citywide emissions of 531,827 MT CO_2e per year would still be substantially less than the goal of SB 32 at 695,413 MT CO_2e for 2021. The City's CAP had a per-capita vehicle emissions target of 4.413 MT CO_{2e} per person for 2030 consistent with SB 375 state targets. The project is estimated to generate 17.46 MT CO_2e per year from employees' vehicles. The service population of the project is estimated to be 7 persons. Therefore, the project would result in 2.49 MT CO_2e per person during operation. As such, the project would not conflict with the City's CAP.

Accordingly, the project would not conflict with the target GHG emission levels in the CAP that are required to meet the goal of AB 32 and SB 32. In addition, when compared against the SBCAPCD 10,000 MT CO_2e per year screening threshold for industrial stationary sources, the GHG emissions anticipated from the project are below the threshold. Based on these considerations, impacts associated with the potential for the project to conflict with a plan, policy, or regulation adopted for the purpose of reducing GHGs would be less than significant.

In addition to the quantitative emissions inventory in the City's CAP, the CAP provides initial general guidance for including GHG reduction and climate adaptation measures. The list, included as Appendix C of the CAP (Initial Guidelines for Individual Project Design and Permitting), includes measures for carbon reduction and climate adaptation meant for a variety of development projects that are either required or encouraged. The project would comply with all required and applicable CAP measures, specifically supporting those wildfire measures. As such, the project would not conflict with the City's CAP, and impacts would be **less than significant**.

The 2017 Scoping Plan lays out the framework for achieving compliance with statewide GHG targets mandated by SB 32 of 2016 (i.e., 40% below 1990 levels by 2030). To help meet the statewide target for 2030, the 2017 Scoping Plan prescribed a 15–20 MMT CO_2e reduction from business-as-usual emissions from the natural and working lands sector and determined that this reduction should be achieved through increased carbon sequestration and the reduction of wildfire emissions. The treatment activities implemented under the CalVTP would be consistent with the types of treatments called for in the 2017 Scoping Plan, acknowledging the important role of fuel reduction treatments and prescribed burns in managing natural and working lands to reduce GHG emissions.

The Draft California 2030 Natural and Working Lands Climate Change Implementation Plan has set a goal for, at a minimum, doubling the rate of state-funded forest management and restoration efforts, which include prescribed burns, mechanical treatments, and understory treatments. Implementation goals are 23,800–73,300 acres of prescribed burns per year, 59,000–73,000 acres of thinning per year, and 23,500–25,300 acres of understory treatment per year. The plan identifies the California Department of Forestry and Fire Protection (CAL FIRE) as one of the implementing agencies of these treatments. Based on historical treatment activities from 2008 through 2020, the relative distribution of treatment activities is reasonably expected to be 59% manual treatments, 29% mechanical treatments, 8% prescribed burning, and 4% biological, which meets and exceeds the targets set forth in the Draft California 2030 Natural and Working Lands Climate Change Implementation Plan. Similarly, the CWPP would meet the acreage targets for forest restoration and treatment activity levels for nonfederal forest lands set forth in the California Forest Carbon Plan.

While the California Natural and Working Lands Carbon and Greenhouse Gas (CALAND) model is informed by a growing body of literature on the effects of fuels treatment activities on carbon sequestration, the technical documentation supporting the CALAND model acknowledges uncertainty in net carbon effects of vegetation treatments in various landscapes. The CALAND model's technical documentation suggests that more detailed research about wildfire and regeneration of vegetation in tree-, shrub-, and grass-dominated lands is needed to adequately characterize the conditions for reforestation and non-regeneration in the model (Di Vittorio and Simmonds 2018:24).

Given that the CalVTP is aligned with the specific goals and strategies called out in the California Forest Carbon Plan, the 2017 Scoping Plan, and Draft California 2030 Natural and Working Lands Climate Change Implementation Plan, as discussed above, the CWPP would be consistent with applicable plans and policies for carbon management in natural and working landscapes. This impact would be **less than significant**.

4.6.5 Mitigation Measures

While not required to reduce the impacts of GHG emissions, implementation of mitigation measure **MM-AQ-1** would also reduce GHG emissions.

4.6.6 Level of Significance After Mitigation

As discussed above, implementation of the project would be less than significant. As such, for disclosure purposes, GHG emissions from the project after incorporation of MM-AQ-1 are shown in Table 4.6-6.

Table 4.6-6. Estimated Annual Operation Greenhouse Gas Emissions - Mitigated

Vegetation Treatment Type	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Prescribed burning	7.39	0.01	0.00	7.86
Manual	—	—	—	61.39
Biological	—	—	—	7.05
Mechanical	4.68	0.00	0.00	4.71
			Total	**81.01**
			SBCAPCD Threshold	*10,000*
			Threshold Exceeded?	**No**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SBCAPCD = Santa Barbara County Air Pollution Control District.
See Appendix B for complete results.

As shown in Table 4.6-6, with implementation of **MM-AQ-1**, operational GHG emissions of the project would be 81 MT CO_2e per year. Impacts would remain **less than significant**.

4.6.7 Cumulative Impacts

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Therefore, the cumulative impacts analysis is shown in Section 4.6.4.

4.6.8 References

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4.7 Hazards and Hazardous Materials

This section describes the existing hazardous materials conditions of the Community Wildfire Protection Plan (CWPP or proposed project) project area and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. Information utilized for this section includes publicly available database searches and documents that are cited within the text below.

Hazardous Materials

Hazardous materials are commonly encountered during construction activities. Hazardous materials typically require special handling, reuse, and disposal because of their potential to harm human health and the environment. The California Health and Safety Code Section 25501 defines a hazardous material as:

> A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

4.7.1 Existing Conditions

The proposed CWPP would encompass the jurisdictional limits of the City of Santa Barbara (City), with the exception of the Santa Barbara Airport. The proposed CWPP would merge, rename, and expand the existing High Fire Hazard Area (HFHA). The existing Coastal and Coastal Interior Zones would be renamed High Fire Hazard Severity Zone (HFHSZ), and the existing Foothill and Extreme Foothill Zones would be renamed Very High Fire Hazard Severity Zone (VHFHSZ) within the City's HFHA. In total, the newly amended HFHA would result in a cumulative increase of 1,657.74 acres of HFHSZ and 3,666.22 acres of VHFHSZ compared to the existing classifications. The primary effect of being located within the HFHA is the obligation to maintain City-defined defensible space year-round. Vegetation within defensible space zones, native or otherwise, would be maintained to create an effective fuel break by thinning dense vegetation and removing dry brush, flammable vegetation, and combustible growth. Implementation of the CWPP would also result in a net increase in Vegetation Management Units (VMUs). In total, the proposed VMUs would result in a cumulative increase of 649.27 acres within the HFHSZ and 1,227.32 acres within the VHFHSZ. City-maintained VMUs would result in activities to reduce fuel loads, reduce the potential for ignitions, and modify fire behavior. Vegetation management techniques would include manual, mechanical, and biological treatment of vegetation, as well as the use of prescribed burns when needed. Vegetation management methods would typically involve little to no ground disturbance.

Hazardous materials within the City are regulated by a number of federal, state and local entities, further described in Section 4.7.2, Relevant Plans, Policies, and Ordinances. Activities proposed by the CWPP are evaluated in relationship to hazardous materials, schools, airports, emergency response and evacuation plans, and wildland fire, and potential to cause a hazard or an unanticipated release of a hazardous material, as further described below.

4.7.1.1 Hazardous Material Sites

High fire hazard areas are determined by topography, weather, and vegetation, and an assessment of risk factors, including roof type, proximity of structures to other structures, road systems, water supply, fire response times, and historic fire starts. The following discussion regarding sites with known hazardous material impacts within proposed HFHA or VMUs.

Cortese List

California Government Code Section 65962.5 requires that information regarding environmental impacts of hazardous substances and wastes be maintained and provided at least annually to the Secretary for Environmental Protection. Commonly referred to as the Cortese List, this information must include the following: sites impacted by hazardous wastes, public drinking water wells that contain detectable levels of contamination, underground storage tanks with unauthorized releases, solid waste disposal facilities from which there is migration of hazardous wastes, and all cease and desist and cleanup and abatement orders (CalEPA 2020). While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements:

1) List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) Envirostor database (DTSC 2020b; Health and Safety Codes 25220, 25242, 25356, and 116395)
2) List of Leaking Underground Storage Tank (LUST) Sites from the State Water Resources Control Board (SWRCB) GeoTracker database (Health and Safety Code 25295)
3) List of solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273 subdivision (e) and California Code of Regulations Title 14 Section 18051))
4) List of "active" Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) from the SWRCB (Water Code Sections 13301 and 13304)
5) List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC

Dudek conducted a search of the Cortese List databases that provide information on sites within the project area. Multiple Cortese List sites were identified within the City of Santa Barbara. Three LUST sites are located within the existing HFHA. These sites have been remediated and received closure from the overseeing regulatory agency. No other Cortese List sites were identified within the HFHA.

In addition to the Cortese List databases, Dudek consulted available online databases that provide environmental information on facilities and sites in the State of California. These databases include the DTSC EnviroStor database, SWRCB GeoTracker database, Solid Waste Information System (SWIS), and California Geologic Energy Management Division (CalGEM) online well finder. Details of these databases and the search results are discussed below.

EnviroStor

This database is the DTSC data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination or sites with reasons for further investigation (DTSC 2020). Multiple sites were identified within the City of Santa Barbara (see Figure 4.7-1, DTSC EnviroStor Sites and Proposed High Fire Hazard Area, and Figure 4.7-2, DTSC EnviroStor Sites and Proposed Vegetation Management Units); none are located within the proposed HFHA or VMUs.

GeoTracker

This database includes hazardous materials sites that have the potential to affect groundwater quality. This database includes LUSTs, cleanup program sites, land disposal sites, and military sites.

Proposed HFHA: One cleanup site was identified within the proposed HFHA.

- Cleanup Site: A private residence is located within HFHA zone T (see Figure 4.7-3, GeoTracker Sites and Proposed High Fire Hazard Area). Contaminants are primarily associated with pesticide and herbicide use. The cleanup status is noted as "Open – Remediation as of 2/6/2013) (SWRCB 2020).

Proposed VMU: One cleanup site and one land disposal site were identified within the proposed VMUs.

- Cleanup Site: Brooks Institute of Photography, 2190 Alston Road is located within VMU 27 and has documented soil contamination above Santa Barbara County cleanup levels. It is estimated that these elevated levels of lead, chromium, silver, and polyaromatic hydrocarbons are present in approximately 50 cubic yards of soil beneath the building of the photography studio. A deed restriction that documents this contamination has been placed on the property, but does not prevent sale or future use of the property (County of Santa Barbara 2009).
- Land Disposal Site: Elings Park Closed Landfill (also known as the Las Positas Landfill), is located at 1298 Las Positas and within VMU 40. This site is a closed landfill with ongoing monitoring, managed by the Central Coast Regional Water Quality Control Board (CCRWQCB) and the California Department of Resources Recycling and Recovery (CalRecycle). The former landfill has been redeveloped as Elings Park, a public park. Ongoing monitoring and operations include groundwater monitoring, site inspections, landfill gas monitoring, methane monitoring, and operation of a landfill gas mitigation system (Rincon 2019). The monitoring and reporting program is enforced by CCRWQCB under Enforcement Order R3-2004-0006 (CCRWQCB 2012). See Figure 4.7-3, SWRCB Geotracker Sites and High Fire Hazard Area, and Figure 4.7-4, SWRCB Geotracker Sites and Proposed Vegetation Management Units.

Solid Waste Information System

The Solid Waste Information System (SWIS) database contains information on solid waste facilities, operations, and disposal sites throughout the State of California, including landfills, transfer stations, and closed disposal sites. There are no active landfills listed within the project area (CalRecycle 2020). There are two wood waste recycling/processing facilities, one transfer facility, and two closed pre-regulation landfills located within the project area. One of the closed pre-regulation landfills, Las Positas Landfill, is located within VMU 40, and is discussed in the GeoTracker section above.

Oil and Gas Wells

The CalGEM online mapping system presents California's oil and gas industry information in a map format, and includes information on oil and gas wells and oil fields (CalGEM 2020). Multiple plugged oil and gas wells are located in the abandoned Mesa oil field, which generally was bounded by Arroyo Burro County Beach Park to the west, Santa Barbara City College to the east, south of Elings Park and Honda Valley Park, and north of the coastline. There are also multiple plugged dry holes are located sparsely throughout the project area, south of U.S. Route 101, outside the Mesa oil field (see Figures 4.7-3 and 4.7-4).

4.7.1.2 Airports

The Santa Barbara Municipal Airport, 500 James Fowler Road, is located approximately 4 miles west of the City of Santa Barbara. As discussed previously, the Santa Barbara Municipal Airport is not included in the CWPP, therefore it is not considered within the proposed CWPP area. The noise contours and safety zones, as defined by the airport's Land Use Compatibility Plan (SBCAG 2019), do not extend into the proposed CWPP area.

4.7.1.3 Schools

Multiple K-12 schools are located within the proposed CWPP area as shown on Figures 4.7-1 through 4.7-4. The following schools are located within existing HFHA: Garden Street Academy (2300 Garden Street), Roosevelt Elementary School (1900 Laguna Street), Marymount School (2130 Mission Ridge Road), and Cleveland Elementary School (123 Alameda Padre Serra). La Colina Junior High School (4025 Foothill Road) is located within the proposed HFHA. Cleveland Elementary School is located within an existing VMU. There are no schools within proposed VMUs. There are no proposed schools within the project area (CDE 2020).

4.7.1.4 Emergency Response and Evacuation Plans

The City of Santa Barbara General Plan, Safety Element (City of Santa Barbara 2013) includes plans and policies with regard to emergency preparedness, including the 2007 Emergency Operations Plan, which outlines response procedures that would be implemented after a natural disaster, technological incident, or security incident. The 2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan establishes a framework for coordination between cities within Santa Barbara County (County of Santa Barbara 2017). Fire evacuation plans within the City are developed by the Santa Barbara Fire Department in consultation with other emergency management stakeholders and implemented by law enforcement entities in an emergency (see Section 4.16, Wildfire).

4.7.1.5 Fire Hazards

The City has current fire hazard areas designated as part of Safety Element of the General Plan. The proposed project would update the fire hazard areas and provide a comprehensive, coordinated plan to mitigate the impact of wildland fire to the City. Existing and proposed fire hazard areas are defined and discussed in Section 3, Project Description. Additional information regarding wildland fires is discussed in Section 4.16, Wildfire.

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act (RCRA). These laws provide for the "cradle to grave" regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. DTSC is responsible for implementing the RCRA program and California's hazardous waste laws, which are collectively known as the Hazardous Waste Control Law.

City of Santa Barbara Community Wildfire Protection Plan (CWPP) Area

School (K-12 Public and Private)

High Fire Hazard Area

Existing - Retained

Existing - Removed

Proposed

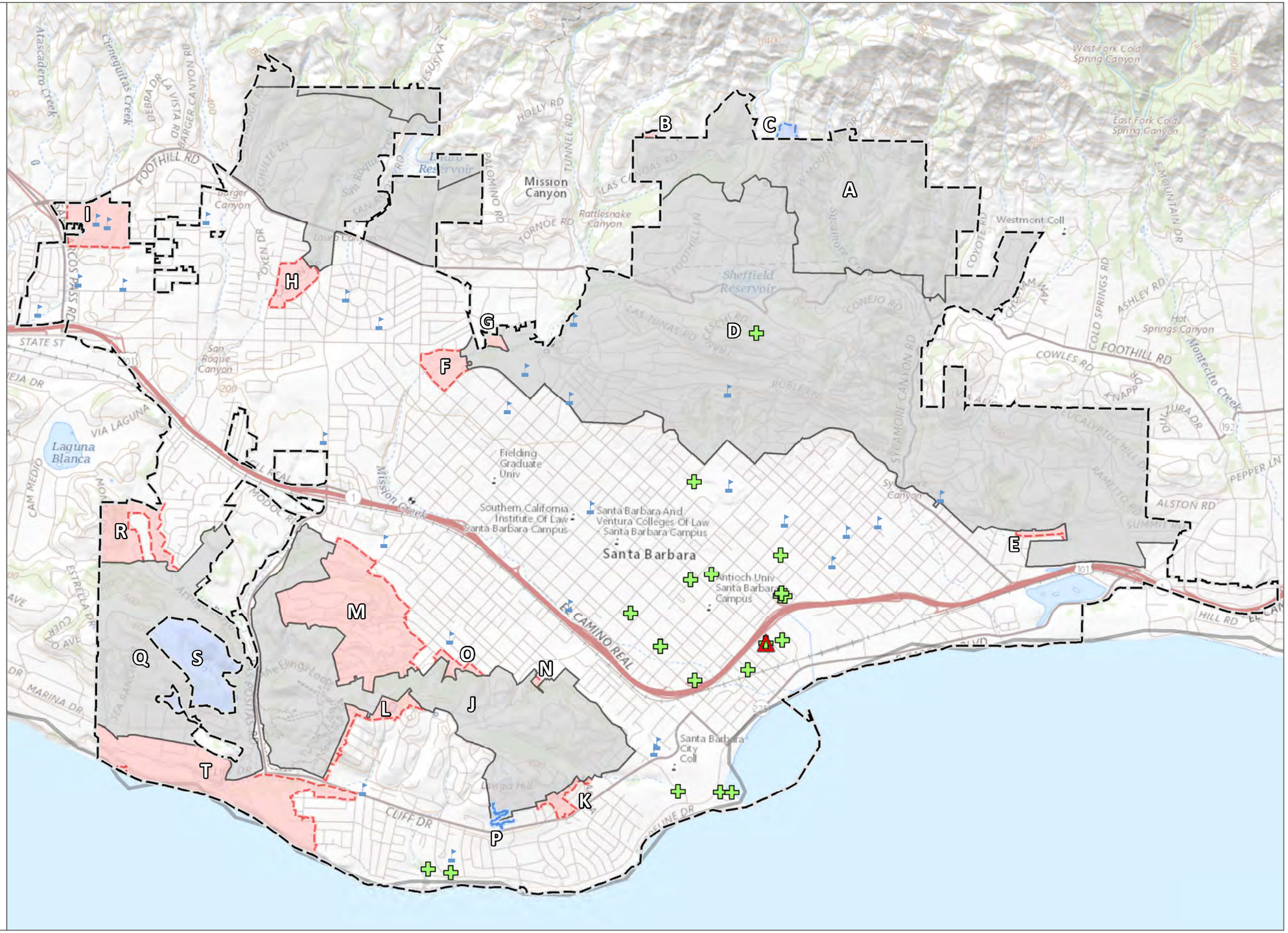
EnviroStor Hazardous Waste Facilities

Safety-Kleen Corp (7-177-01)

Enviro Stor Cleanup Sites

0 0.5 1 Mile

SOURCE: USGS National Map, Department of Toxic Substances Control



COMMUNITY WILDFIRE PROTECTION PLAN — CITY OF SANTA BARBARA

DUDEK

FIGURE 4.7-1

DTSC EnviroStor Sites and Proposed High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara Community Wildfire Protection Plan (CWPP) Area

School (K-12 Public and Private)

Vegetation Management Units

Existing

Proposed

EnviroStor Hazardous Waste Facilities

Safety-Kleen Corp (7-177-01)

Enviro Stor Cleanup Sites

0 0.5 1 Mile

SOURCE: USGS National Map, Department of Toxic Substances Control

COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

DUDEK

FIGURE 4.7-2

DTSC EnviroStor Sites and Proposed Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara Community Wildfire Protection Plan (CWPP) Area

School (K-12 Public and Private)

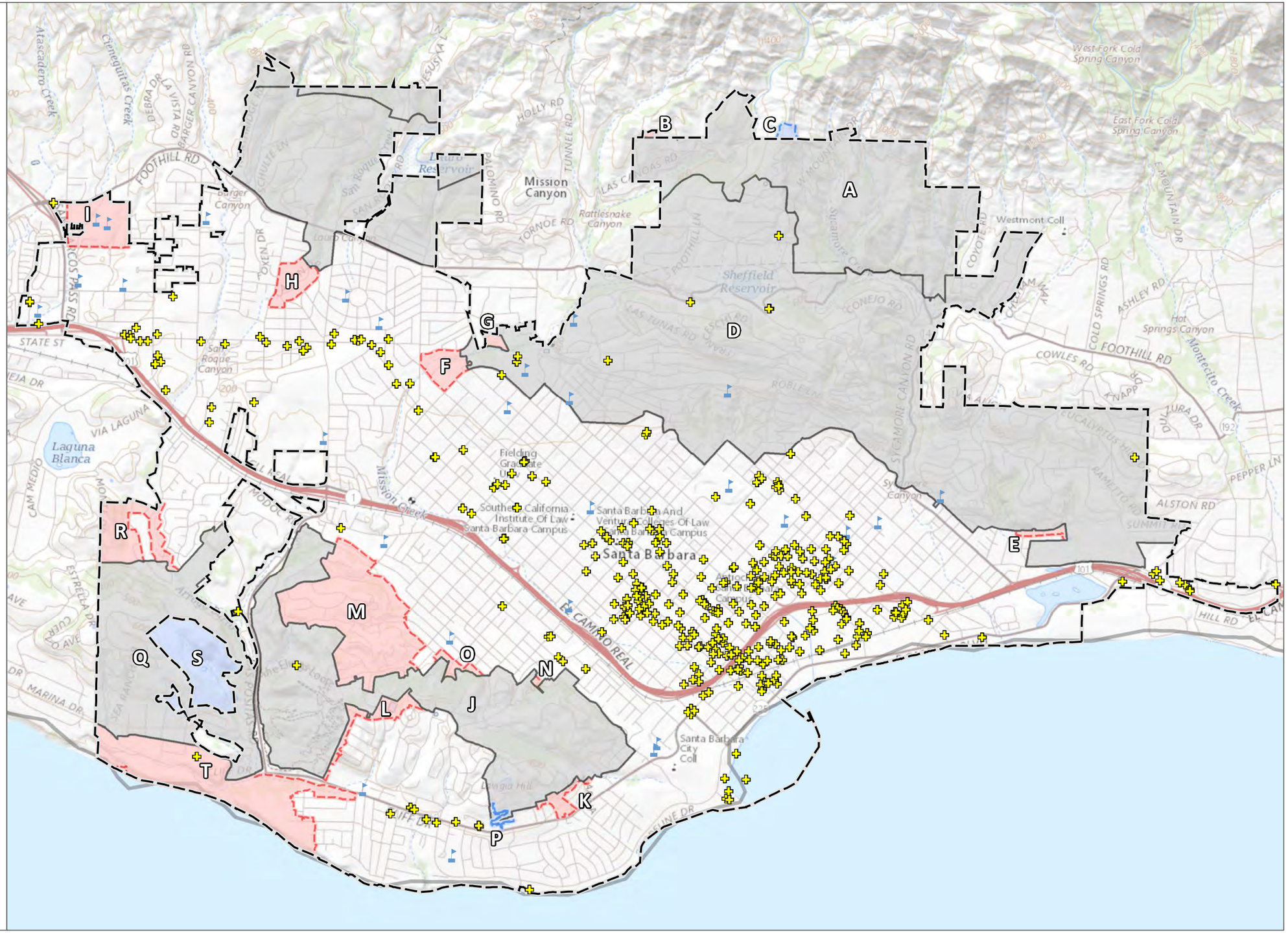
High Fire Hazard Area

Existing - Retained

Existing - Removed

Proposed

GeoTracker Site



SOURCE: USGS National Map, State Water Resources Control Board

COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

DUDEK

FIGURE 4.7-3

SWRCB GeoTracker Sites and High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara Community Wildfire Protection Plan (CWPP) Area

School (K-12 Public and Private)

Vegetation Management Units

Existing

Proposed

GeoTracker Site

0 0.5 1 Mile

SOURCE: USGS National Map, State Water Resources Control Board

COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

DUDEK

FIGURE 4.7-4

SWRCB GeoTracker Sites and Proposed Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites; required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; provided new enforcement authorities and settlement tools; increased state involvement in every phase of the Superfund program; increased the focus on human health problems posed by hazardous waste sites; encouraged greater citizen participation in making decisions on how sites should be cleaned up; and increased the size of the trust fund to $8.5 billion.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act, also known as SARA Title III, was enacted in October 1986. This law requires any infrastructure at the state and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. Sections 301 through 312 of the Act are administered by the U.S. Environmental Protection Agency's (EPA's) Office of Emergency Management. EPA's Office of Information Analysis and Access implements the SARA Title III Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Program (CalARP). As the Certified Unified Program Agency (CUPA) for the majority of the County, the Santa Barbara County Public Health Department, Environmental Health Services implements the CalARP program.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations, the Hazardous Materials Transportation Act. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and Caltrans. These agencies also govern permitting for hazardous materials transportation. The Hazardous Materials Transportation Act reflects laws passed by Congress as of January 2, 2006.

EPA Regional Screening Levels

The federal EPA provides regional screening levels (RSLs) for chemical contaminants to provide comparison values for residential and commercial/industrial exposures to soil, air, and tap water (drinking water). RSLs are available on the EPA's website and provide a screening level calculation tool to assist risk assessors, remediation project managers, and others involved with risk assessment and decision-making. RSLs are also used when a site is initially investigated to determine if potentially significant levels of contamination are present to warrant further investigation. In California, the DTSC Human and Ecological Risk Office (HERO) incorporated the EPA RSLs into the HERO human health risk assessment. HERO created Human Health Risk Assessment (HHRA) Note 3, which incorporates HERO recommendations and DTSC-modified screening levels (DTSC-SLs) based on review of the EPA RSLs. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, as Amended, and Related Authorities

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288), as amended (42 USC 5121–5206), and implementing regulations (44 CCR 206.31–206.48) provide the statutory framework for a presidential declaration of an emergency or a declaration of a major disaster. Such declarations open the way for a wide range of federal resources to be made available to assist in dealing with an emergency or major disaster. The Stafford Act structure for the declaration process reflects the fact that federal resources under this act supplement state and local resources for disaster relief and recovery. Except in the case of an emergency involving a subject area that is exclusively or preeminently in the federal purview, the governor of an affected state, or acting governor if the governor is not available, must request such a declaration by the president.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that: (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Stafford Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code (IBC) use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

National Fire Protection Association

The National Fire Protection Association prescribes minimum requirements necessary to establish a reasonable level of fire safety and property protection from the hazards created by fire and explosion. The standards apply to the manufacture, testing, and maintenance of equipment.

State

Government Code Section 65962.5(a), Cortese List

The Hazardous Waste and Substance Sites Cortese List is a planning document used by the state, local agencies, and developers to comply with California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

California Unified Program for Management of Hazardous Waste and Materials

California Health and Safety Code, Division 20, Chapter 6.11, Sections 25404–25404.9, Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Under CalEPA, the DTSC and Enforcement and Emergency Response Program administer the technical implementation of California's Unified Program, which consolidates the administration, permit, inspection, and enforcement activities of several environmental and emergency management programs at the local level (DTSC 2019). CUPAs implement the hazardous waste and materials standards. This program was established under the amendments to the California Health and Safety Code made by Senate Bill 1082 in 1994. The CUPA for the project area is the Santa Barbara County Public Health Department, Environmental Health Services (County of Santa Barbara 2020).

Hazardous Waste Control Law

DTSC regulates the generation, transportation, treatment, storage and disposal of hazardous waste under RCRA and the California Hazardous Waste Control Law (22 CCR, Chapter 6.5). Both laws impose "cradle to grave" regulatory systems for handling hazardous waste in a manner that protects human health and the environment. CalEPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other CUPAs.

Aboveground and Underground Petroleum Storage Tanks

Title 22 California Health and Safety Code, Division 20, Chapter 6.67, Sections 25270–25270.13, Aboveground Petroleum Storage Act

This law applies if a facility is subject to Spill Prevention, Control, and Countermeasure regulations under Title 40 USC Part 112, or if the facility has 10,000 gallons or more of petroleum in any or combination of aboveground storage tanks and connecting pipes. If a facility exceeds these criteria, it must prepare a Spill Prevention, Control, and Countermeasure plan.

Low-Threat Underground Storage Tank Case Closure Policy

This policy applies to petroleum underground storage tank (UST) sites subject to Chapter 6.7 of the Health and Safety Code. This policy establishes both general and media-specific criteria. If both the general and applicable media-specific criteria are satisfied, then the leaking UST case is generally considered to present a low threat to human health, safety, and the environment. This policy recognizes, however, that even if all of the specified criteria in the policy are met, there may be unique attributes of the case or site-specific conditions that increase the risk associated with the residual petroleum constituents. In these cases, the regulatory agency overseeing corrective action at the site must identify the conditions that make case closure under the policy inappropriate.

RWQCBs and local agencies have been directed to review all cases in the petroleum UST Cleanup Program using the framework provided in this policy. These case reviews shall, at a minimum, include the following for each UST case:

1. Determination of whether or not each UST case meets the criteria in this policy or is otherwise appropriate for closure based on a site-specific analysis.

2. If the case does not satisfy the criteria in this policy or does not present a low risk based upon a site-specific analysis, impediments to closure shall be identified.
3. Each case review shall be made publicly available on the SWRCB's GeoTracker web site in a format acceptable to the Executive Director.

Title 27 of the California Code of Regulations, Solid Waste

Title 27 of the California Code of Regulations, Division 2, contains a waste classification system that applies to solid wastes that cannot be discharged directly or indirectly to waters of the state and which therefore must be discharged to waste management sites for treatment, storage, or disposal.

Human Health Risk Assessment Note 3 – DTSC-Modified Screening Levels

HHRA Note Number 3 presents recommended SLs (derived from the EPA RSLs using DTSC-modified exposure and toxicity factors) for constituents in soil, tap water, and ambient air. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

Environmental Cleanup Levels

Environmental Screening Levels (ESLs) provide conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. They are intended to help expedite the identification and evaluation of potential environmental concerns at contaminated sites. The ESLs were developed by staff at the San Francisco Bay RWQCB; however, they are used throughout the state. While ESLs are not intended to establish policy or regulation, they can be used as a conservative screening level for sites with contamination. Other agencies in California currently use the ESLs (as opposed to RSLs). In general, the ESLs could be used at any site in the State of California, provided all stakeholders agree (SFBRWQCB 2019). In recent experience, regulatory agencies in various regions use ESLs as regulatory cleanup levels. The ESLs are not generally used at sites where the contamination is solely related to a LUST; those sites are instead subject to the Low-Threat Underground Storage Tank Closure Policy.

Senate Bill 1889, Accidental Release Prevention Law/CalARP Program

Senate Bill 1889 required California to implement a new federally mandated program governing the accidental airborne release of chemicals promulgated under Section 112 of the Clean Air Act. Effective January 1, 1997, CalARP replaced the previous California Risk Management and Prevention Program and incorporated the mandatory federal requirements. CalARP addresses facilities that contain specified hazardous materials, known as "regulated substances" that, if involved in an accidental release, could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

Emergency Response to Hazardous Materials Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government, and private agencies. The plan is administered by Governor's Office of Emergency Services and includes response to hazardous materials incidents. The Governor's Office of Emergency Services coordinates the response of other agencies, including CalEPA, California Highway Patrol, California Department of Fish and Wildlife, and RWQCB.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of Title 24 of the California Code of Regulations. It is created by the California Building Standards Commission and it is based on the IFC created by the International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-made or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or the resources of the state. This Act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The act is activated after the following occurs: (1) a local declaration of emergency; or (2) the California Emergency Management Agency gives concurrence with the local declaration, or the Governor issues a Proclamation of a State Emergency. Once the Natural Disaster Assistance Act is activated, local government is eligible for certain types of assistance, depending upon the specific declaration or proclamation issued.

Title 14, Division 1.5 of the California Code of Regulations

California Code of Regulations, Title 14, Division 1.5 establishes the regulations for the California Department of Forestry and Fire Protection (CAL FIRE) and is applicable in all State Responsibility Areas (SRAs)—areas where CAL FIRE is responsible for wildfire protection. Any development in SRAs must comply with these regulations. Among other things, Title 14 establishes minimum standards for emergency access, fuel modification, setbacks to property line, signage, and water supply.

California Public Resources Code Sections 4201–4204

These sections of the California Public Resources Code require the CAL FIRE to classify all SRAs into Fire Hazard Severity Zones. The purpose of this code is to provide classification of lands within SRAs in accordance with the severity of fire hazard present for the purpose of identifying measures to retard the rate of spreading and to reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property.

Local

City of Santa Barbara General Plan, Safety Element

The City's Safety Element (City of Santa Barbara 2013) addresses physical hazards related to earthquakes, fire, flooding, hazardous material use and transportation, public safety risk from aircraft operation, natural gas pipelines, electrical transmission lines, and also describes public services provided by the City related to these hazards. The City's Safety Element also references and takes into consideration other hazard reduction programs adopted and implemented by the City, including the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan, Geology and Geohazards Master Environmental Assessment, Wildland Fire Plan, Local Coastal Program, Airport Land Use Plan, Harbor Master Plan, Airport Master Plan, City Climate Action Plan, City Codes and Ordinances, City Building Code, Seismic Safety Ordinance, Flood Plain Management Code, and City Fire Code.

Fire Plan

The Wildland Fire Plan (SBFD 2004; 2004 Wildland Fire Plan) was developed by the City of Santa Barbara Fire Department (SBFD) to protect lives, property, and natural resources threatened by wildland fires. The SBFD completed a wildland fire hazard and risk assessment of the City and surrounding jurisdictions to determine appropriate policies and actions of the 2004 Wildland Fire Plan. The 2004 Wildland Fire Plan developed vegetation management units, high fire hazard zones, evacuation planning, codes and standards, and public education.

The proposed project would update the 2004 Wildland Fire Plan with the CWPP, which would include updated high fire hazard zones and vegetation management areas, and would improve the already provided services, including evacuation planning, codes, and standards.

Fire Code and Building Code

The SBFD conducts Fire and Life Safety inspections on buildings to receive occupancy permits, such as hotels, apartment complexes, restaurants, and education facilities. The SBFD acts as the enforcing agency under the California Fire Code. The City of Santa Barbara Fire Code includes amendments to the IFC and State Fire Code to better meet the needs of the Santa Barbara region (climate, topography, vegetation). Buildings constructed within the City of Santa Barbara must meet the fire and building codes prior to a permit of occupancy is issued.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous material would occur if the project would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The CWPP Initial Study (Appendix A) determined that threshold d) above would have a less than significant impact, and threshold e) above would have no impact with implementation of the proposed project. Therefore, these are eliminated from further analysis.

4.7.4 Impacts Analysis

HAZ-1 Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Hazardous materials, if present in soils, can be disturbed and dispersed by vegetation treatment activities, particularly those using heavy equipment. Soil contamination generally occurs in areas that are or have been previously developed, especially with industrial-type uses. Soil contamination can also occur in areas where pesticides have been historically applied, as well as in areas that have historically been mined or used for defense activities (e.g., an air force base). Contamination can also be associated with utilities (e.g., leaking petroleum or gas pipelines, or leaking transformers on utility poles), or accidental spills (CBFFP 2019). Pesticides and herbicides can also cause potential risks to human health and the environment. These types of substances are considered household hazardous materials and can adversely impact human health or the environment if released in large quantities. Equipment and vehicles are likely to be fueled, lubricated, and serviced as needed on site during multi-day treatments or at the City's maintenance yards. Fuels would also be used during prescribed burns for fire ignition. The use of these substances could result in an accidental release of these hazardous substances into the environment should any leaks or spills occur (CBFFP 2019).

The HFHA is determined by topography, weather, and vegetation, and an assessment of risk factors, including roof type, proximity of structures to other structures, road systems, water supply, fire response times, and historic fire starts. Vegetation management associated with property owner defensible space and road clearance within HFHA and City-maintained VMUs would include a variety of methods, which may include mechanical methods using heavy equipment. Relatively small amounts of hazardous materials, such as diesel, gasoline, and lubricating oils, would be used to operate the heavy equipment. These materials are not considered extremely hazardous and are used routinely for operation of heavy machinery in both urban and rural settings. Further, these materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. Mechanical equipment would not be used in high risk areas, such as exceedingly steep slopes, during dry climate, or in areas where other vegetation measures would be better utilized. As described in Appendix E of the proposed CWPP, certain best management practices (BMPs) related to worker awareness and safety, which are also

described in Section 3.6, Table 3-11 of this Program Environmental Impact Report (PEIR), would be implemented at all times during vegetation management activities. Herbicide use is not proposed in the CWPP as a vegetation management method. Use of these materials for their intended purpose would not pose a significant risk to the public or environment. Impacts would be **less than significant**.

HAZ-2. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Figures 4.7-1 through 4.7-4 depict areas of potential hazardous sites, most of which have been remediated. Disturbance of contaminated sites could result in the exposure of the public and environment to health hazards from existing hazardous materials. Vegetation management activities may require workers to enter these sites.

As noted above, there is one cleanup site within the proposed HFHA. The cleanup site within the HFHA is private property, and therefore vegetation management would be performed by the property owner according to proposed defensible space requirements.

There are two hazardous materials sites within proposed VMUs. The cleanup site located within VMU 27 (Brooks Institute of Photography, 2190 Alston Road) is privately owned and subject to defensible space requirements, although area off of private property would be maintained by the City. VMU 40 (Elings Park Landfill, 1298 Las Positas Road) is owned by the City of Santa Barbara and leased by the Elings Park Foundation. The Brooks Institute of Photography has contaminated soil on site, but it is beneath the existing building, and therefore would not create a significant hazard to the public or environment by implementation of the proposed vegetation management. Elings Park is the closed and currently being monitored under Enforcement Order R3-2004-0006. Any potential interference with the ongoing monitoring and reporting activities could result in a hazard to the public or environment and would be a violation of enforcement order R3-2004-0006. This interference could result in an upset or accident conditions resulting in a release of landfill-related hazardous materials to the environment. To avoid interference with ongoing monitoring activities, mitigation measure **MM-HAZ-1 Non-interference** requires non-interference with ongoing monitoring and enforcement activities. With implementation of **MM-HAZ-1**, proposed vegetation management would not interfere with ongoing monitoring activities enforced on the closed Las Positas Landfill, and would eliminate the potential for upset or accident conditions associated with potential landfill-related hazardous materials.

Soil disturbance by mechanical treatments and prescribed burning have the potential to expose workers, the public, and the environment to risks associated with existing hazardous materials if present within treatment areas. Treatment activities would typically occur in undeveloped areas, which are unlikely to contain hazardous materials; however, there is a risk that contamination could exist. Implementation of prescribed burning, manual treatments, and mechanical treatments associated with the proposed CWPP would require the transportation, use, and storage of common household hazardous materials such as fuels, oils, and lubricants. Prescribed biological management methods would use livestock and thus would not use hazardous materials, except in transport. Vegetation treatment activities under the proposed CWPP would utilize mechanical equipment and vehicles, such as chainsaws, large tractors, and large trucks, which need fuels, oils, and lubricants to operate. These types of substances are considered household hazardous materials and can adversely impact human health or the environment if released in large quantities. Equipment and vehicles are likely to be fueled, lubricated, and serviced as needed on site during multi-day treatments. Fuels would also be used during prescribed burns for fire ignition. The use of these substances could result in an accidental release of these hazardous substances into the environment should any leaks or spills occur.

BMPs included in the CWPP would be implemented, which requires that all equipment be properly maintained per manufacturer's specifications. Furthermore, as noted above, several federal, state, and local laws regulate the use, transport, storage, and disposal of hazardous materials to minimize potential health risks. All project proponents implementing qualifying treatments under the proposed CWPP would be required to comply with these regulatory requirements. In addition, these types of household hazardous materials proposed for use under the proposed CWPP are currently in use under existing conditions within the treatable landscape. With implementation of **MM-HAZ-1** and adherence to relevant regulations, no new or more severe significant hazards would be created from the use of common household hazardous materials under the proposed CWPP. Impacts would be **less than significant with mitigation incorporated**.

HAZ-3. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Multiple K-12 schools are located within the boundaries of the proposed CWPP area as shown on Figures 4-7.1 through 4.7-4. Only one school is within a proposed HFHA or VMU. Other schools within existing HFHA and VMUs are considered part of the baseline environmental setting set forth in the 2004 Wildland Fire Plan (SBFD 2004) and 2004 PEIR (SBFD and CDD 2004), and activities proposed under the CWPP would be consistent with ongoing activities under the 2004 Wildland Fire Plan and 2004 PEIR. La Colina Junior High is located within HFHA zone I. As viewed from Google Earth aerial imagery, the school campus is largely covered with structures, paving for sport courts, and ornamental grasses for sports fields. Once beyond the perimeter fenceline to the west of the campus, vegetation associated with Cieneguitas Creek is dense and comprised of a canopy including sycamores, oaks, and other shrubs. Section 4.3, Biological Resources, describes the associated biological resources within the proposed CWPP. Vegetation management within the creek corridor would be performed in compliance with BMPs described in Chapter 3, Project Description, of this PEIR, and Appendix E of the proposed CWPP to minimize potential impacts to riparian habitat. These BMPs also establish additional measures to minimize potential spills and unanticipated release of hazardous materials such as oils and lubricants. Impacts related to the emission of hazardous materials would be **less than significant**.

HAZ-4. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Implementation of the proposed CWPP would not conflict with or impair SBFD's emergency response capabilities or evacuation planning efforts, but would rather enhance such efforts through implementation of Action Items related to policies within the CWPP. Implementation of the proposed CWPP would be beneficial and would enhance emergency response and evacuation planning in the City. As such, **no impact** would occur.

HAZ-5. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The proposed CWPP includes policies and action items to reduce wildland fire hazard and risk throughout the City. Implementation of the CWPP would be beneficial, and no impact would occur. As discussed in Section 4.13, Wildfire, vegetation management would involve the use of tools and equipment (e.g., chainsaws) capable of generating heat and/or sparks and igniting vegetation. The CWPP would establish procedures for equipment operators and personnel so that they are properly trained in equipment use, and would ensure that appropriate fire safety measures are implemented. Consistent with current practices,

vegetation management activities would be conducted outside of high fire hazard periods (Red Flag Warnings, High Risk Days); management crews would require spark arrestors on mechanical equipment; and fire suppression equipment (shovels, water supply) would be on site during operations. These actions would reduce the likelihood of ignitions and result in a higher probability of fire control and extinguishment in its incipient stages. Current practices would further protect against wildland fire during vegetation management activities. Impacts would be **less than significant**.

4.7.5 Mitigation Measures

The following mitigation measures would be implemented to reduce all impacts described in Section 4.7.4 to levels below significant.

MM-HAZ-1 **Non-interference**. Vegetation management activities at Elings Park will be coordinated so that they do not interfere with enforced monitoring and reporting activities on the former Las Positas Landfill as described in Enforcement Order R3-2004-0006.

4.7.6 Level of Significance After Mitigation

Coordination with the County of Santa Barbara would avoid interference with the monitoring and reporting enforcement order (**MM-HAZ-1**), thereby reducing the potential for upset or accident conditions involving a release of hazardous materials associated with the closed landfill to a less than significant level.

4.7.7 Cumulative Impacts

As described above, the proposed project would have potential impacts associated with use of hazardous materials, potential release of hazardous materials, and exposure to wildfires. Most potential impacts related to hazardous materials and public health and safety risks would be minimized due to compliance with federal, state, and local regulatory requirements. These legal requirements and regulations, as detailed in Section 4.7.2, minimize potential for health and safety risks. Potential impacts to wildfire risks would be reduced by the use of applicable high fire hazard area BMPs and fire prevention techniques.

Cumulative projects would also be subject to federal, state, and local regulations related to hazardous materials. In a manner similar to the proposed project, adherence to these regulatory requirements would reduce incremental impacts associated with public exposure to health and safety hazards in each of the affected project sites. Additionally, most hazardous material and safety-related risks are localized, generally affecting a specific site and immediate surrounding area, thus minimizing the potential for an impact to combine with another project to create a cumulative scenario. Wildfire safety practices in cumulative projects would likely be similar, as cumulative projects of a similar nature would likely be implemented by respective lead agencies, who would implement similar BMPs within their jurisdiction.

Because cumulative projects would be fully regulated, and best management practices for fire safety would be implemented, thus reducing potential for public safety risks, cumulative impacts associated with exposure to hazards and hazardous materials would be less than significant. Through mitigation and compliance with regulatory requirements, the construction or operation of the proposed project itself would not create significant human or environmental health or safety risks that could combine with other project impacts to create a significant and cumulatively considerable impact. For these reasons, the proposed project would not result in cumulatively considerable impacts related to hazards and hazardous materials.

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4.8 Hydrology and Water Quality

This section describes the general surface water hydrology and water quality conditions of the Community Wildfire Protection Plan (CWPP or proposed project) area and potential impacts that could result from implementation of the proposed project. Project components related to hydrology and water quality are identified, and relevant regulatory requirements from applicable plans, policies, and ordinances are outlined. The Santa Barbara Fire Department's (SBFD's) current fire management program is performed under the City of Santa Barbara (City) 2004 Wildland Fire Plan (SBFD 2004) and Final Program Environmental Impact Report (PEIR) for the 2004 Wildland Fire Plan (SBFD and CDD 2004). The 2004 Wildland Fire Plan is considered the environmental baseline for purposes of this PEIR, which analyzes potential environmental impacts to hydrology and water quality resulting from changes proposed by the CWPP.

4.8.1 Existing Conditions

Regional Hydrology

The South Coast of Santa Barbara County is classified as a Mediterranean climate characterized by hot dry summers and cool wet winters. The average annual rainfall within the City is 18.39 inches, 44% of which falls in the months of January and February (SBCFCD 2020). The City is within the tectonically active Transverse Range Geologic Province of California, between the east–west trending Santa Ynez Mountains and the Pacific Ocean. Creeks within the region generally flow from higher elevations in the mountains, south or southeast to the Pacific Ocean. The primary watersheds and major water courses flowing within the City include Mission, Sycamore, Arroyo Burro, and Laguna Creek watersheds (Figure 4.8-1, Watershed and Creeks). Smaller watersheds include Andree Clark, Honda Valley, and Lighthouse Creek. The northwest portion of the City is within the upper Goleta Slough watershed. Many of the regional creeks are intermittent and ephemeral, with significant flow occurring mainly during the wet winter months and all or part of the creeks becoming dry in summer. Santa Barbara County South Coast creeks are often described as "flashy," with brief periods at or above flood stage during intense rain and dry or with low flow conditions in between.

The City is located within the jurisdiction of the Central Coast Regional Water Quality Control Board (RWQCB), which administers the Water Quality Control Plan for the Central Coast Basin (Region 3) (Basin Plan) and other water quality programs within the region. The Central Coast region covers approximately 11,495 square miles and includes all or portions of the following counties: Ventura, Santa Barbara, Kern, San Luis Obispo, Monterey, San Benito, Santa Cruz, Santa Clara, and San Mateo (Central Coast RWQCB 2019). The City is located primarily within the Santa Barbara Hydrologic Sub-Area of the South Coast Hydrologic Unit (HU), within the Central Coast region (Central Coast RWQCB 2019). However, the northwest portion of the City is located within the Goleta Hydrologic Sub-Area. See Table 4.8-1.

Table 4.8-1. Regional Watershed Setting

Regulatory Agency	Basin No.	Analysis Scale	Name
Central Coast Regional Water Quality Control Board (Region 3)	3	RWQCB Region	Central Coast
	315	Hydrologic Unit	South Coast
	315.31	Hydrologic Sub Area	Goleta
	315.32	Hydrologic Sub Area	Santa Barbara

Sources: Central Coast RWQCB 2019; EPA 2004.

Stormwater Drainage and Flooding

Stormwater within the City is generated when precipitation occurs at such a rate that it runs off paved areas or exceeds the infiltration capacity of the natural watershed. Stormwater generated within the City and from watersheds to the north generally collects in rivulets or sheet-flows toward natural or engineered creeks and conveyance channels. In urban areas, precipitation may be retained or infiltrated on site or be conveyed through the City storm drain system to the Pacific Ocean. Runoff quantities that exceed the drainage capacity of the natural creeks and City infrastructure may result in urban or natural area flooding, and parts of the City are within Federal Emergency Management Agency (FEMA) 100- or 500-year Flood Hazard Areas (FEMA 2020).

Often, flood waters are laden with channel debris, especially after fire has denuded chaparral vegetation in the foothills, or where stream channels have not been recently swept clean of accumulated debris by creek runoff. Narrow, crooked stream channels with steep gradients, such as are present in the Santa Barbara area, are especially prone to rapid runoff. Brush, trees, and other debris are often washed downstream and caught, obstructing the flood flow. As the flow increases, these barriers too are swept loose, creating a wall of water and debris that can be highly destructive downstream. Debris that collects around bridges and culverts can create a damming effect that can wash out structures if the structural capability of those structures is exceeded (City of Santa Barbara 2019).

Water Quality

Runoff from natural or urban areas in the City may contain pollutants that are controlled in accordance with federal, state, and local regulations (Section 4.8.2). Section 303(d) of the federal Clean Water Act (CWA) requires states to identify waters that do not meet applicable water quality standards or do not fully support their designated uses. States are required to submit a prioritized list of impaired waters, known as the 303(d) List, to the U.S. Environmental Protection Agency (EPA) for review and approval. The CWA also requires that a Total Maximum Daily Load be developed for each pollutant of an impaired water body. A Total Maximum Daily Load is a quantifiable assessment of potential water quality issues, contributing sources, and load reductions or control actions needed to restore or protect bodies of water. Table 4.8-2 lists impaired waters within City watersheds, as defined by Section 303(d) of the CWA.

Table 4-8.2. 2016 303(d) Impaired Waterways

Water Body Name	Pollutant	Pollutant Category
Arroyo Burro Creek	Escherichia coli (E. coli)	Fecal Indicator Bacteria
Arroyo Burro Creek	Oxygen, Dissolved	Nutrients
Arroyo Burro Creek	Fecal Coliform	Fecal Indicator Bacteria
Atascadero Creek (Santa Barbara County)	Enterococcus	Fecal Indicator Bacteria
Atascadero Creek (Santa Barbara County)	Nitrate	Nutrients
Atascadero Creek (Santa Barbara County)	pH	Miscellaneous
Atascadero Creek (Santa Barbara County)	Escherichia coli (E. coli)	Fecal Indicator Bacteria
Atascadero Creek (Santa Barbara County)	Fecal Coliform	Fecal Indicator Bacteria
Atascadero Creek (Santa Barbara County)	Temperature, water	Miscellaneous
Atascadero Creek (Santa Barbara County)	Chloride	Salinity
Atascadero Creek (Santa Barbara County)	Sodium	Salinity
Atascadero Creek (Santa Barbara County)	Oxygen, Dissolved	Nutrients
Atascadero Creek (Santa Barbara County)	Toxicity	Toxicity

Table 4-8.2. 2016 303(d) Impaired Waterways

Water Body Name	Pollutant	Pollutant Category
Atascadero Creek (Santa Barbara County)	Benthic Community Effects	Miscellaneous
Cieneguitas Creek	Temperature, water	Miscellaneous
Cieneguitas Creek	Oxygen, Dissolved	Nutrients
Cieneguitas Creek	Escherichia coli (E. coli)	Fecal Indicator Bacteria
Cieneguitas Creek	Enterococcus	Fecal Indicator Bacteria
Mission Creek (Santa Barbara County)	Fecal Coliform	Fecal Indicator Bacteria
Mission Creek (Santa Barbara County)	Toxicity	Toxicity
Mission Creek (Santa Barbara County)	Oxygen, Dissolved	Nutrients
Mission Creek (Santa Barbara County)	Escherichia coli (E. coli)	Fecal Indicator Bacteria
Pacific Ocean at East Beach (mouth of Mission Creek, Santa Barbara County)	Total Coliform	Fecal Indicator Bacteria
Pacific Ocean at East Beach (mouth of Mission Creek, Santa Barbara County)	Fecal Coliform	Fecal Indicator Bacteria
Pacific Ocean at East Beach (mouth of Mission Creek, Santa Barbara County)	Enterococcus	Fecal Indicator Bacteria
Santa Barbara Harbor	Arsenic	Metals/Metalloids
Santa Barbara Harbor	Dieldrin	Pesticides
Santa Barbara Harbor	Copper	Metals/Metalloids
Santa Barbara Harbor	Oxygen, Dissolved	Nutrients
Sycamore Creek	pH	Miscellaneous
Sycamore Creek	Oxygen, Dissolved	Nutrients
Sycamore Creek	Fecal Coliform	Fecal Indicator Bacteria
Sycamore Creek	Chloride	Salinity
Sycamore Creek	Sodium	Salinity
Sycamore Creek	Turbidity	Sediment

Source: SWRCB 2019.

4.8.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

The CWA (33 USC 1251 et seq.) was enacted in 1948 and significantly expanded in 1972. The objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA establishes the means for regulation of discharges to the waters of the United States and gives the EPA authority to implement pollution control programs, including the National Pollutant Discharge Elimination System (NPDES) Program (CWA Section 402). Under the NPDES Program, the EPA authorizes states to regulate point source discharges to waters. In California, the program is administered by the State Water Resources Control Board (SWRCB) and the nine RWQCBs, which issue individual and general permits for stormwater runoff quality and non-stormwater runoff. The City operates under a Phase II Municipal Separate Storm Sewer System (MS4) Permit, which requires all relevant projects to comply with the RWQCB Permit.

Water Quality Certification (CWA, Section 401)

Section 401 of the CWA requires that an applicant for any federal permit (e.g., a U.S. Army Corps of Engineers Section 404 permit) obtain certification from the state that the discharge would comply with other provisions of the CWA and with state water quality standards. For example, an applicant for a permit under Section 404 of the CWA must also obtain water quality certification per Section 401 of the CWA. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers prior to discharging dredged or fill material into waters of the United States, unless such a discharge is exempt from CWA Section 404.[1] For the project area, the Central Coast RWQCB must provide the water quality certification required under Section 401 of the CWA. Water quality certification under Section 401 of the CWA, and the associated requirements and terms, is required in order to minimize or eliminate the potential water quality impacts associated with the action(s) requiring a federal permit.

NPDES Program (CWA, Section 402)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES program. In November 1990, the EPA published final regulations that also establish stormwater permit application requirements for discharges of stormwater to waters of the United States from construction projects that encompass 5 acres or more of soil disturbance. Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES program to address stormwater discharges from construction sites that disturb land equal to or greater than 1 acre and less than 5 acres (small construction activity). The regulations also require that stormwater discharges from small MS4s be regulated by an NPDES permit. The primary NPDES permits applicable to similar types of projects in the region are described below.

Federal Antidegradation Policy

The EPA requires that each state maintain an antidegradation policy (40 CFR Section 131(d), 131.12). The California SWRCB Resolution 68-16 (Antidegradation Policy) establishes policies that protect against the degradation of surface and groundwater quality. If water quality in some areas of the state are higher than that established by the adopted policies, such higher quality shall be maintained to the maximum extent possible.

National Flood Insurance Program

The National Flood Insurance Program of 1968 was implemented in order to provide flood insurance for structures in communities that adopt and enforce floodplain management standards. This program requires identification of floodplain areas and flood-risk zones within the United States. FEMA is the agency responsible for administering the programs and coordinating with communities to establish floodplain management.

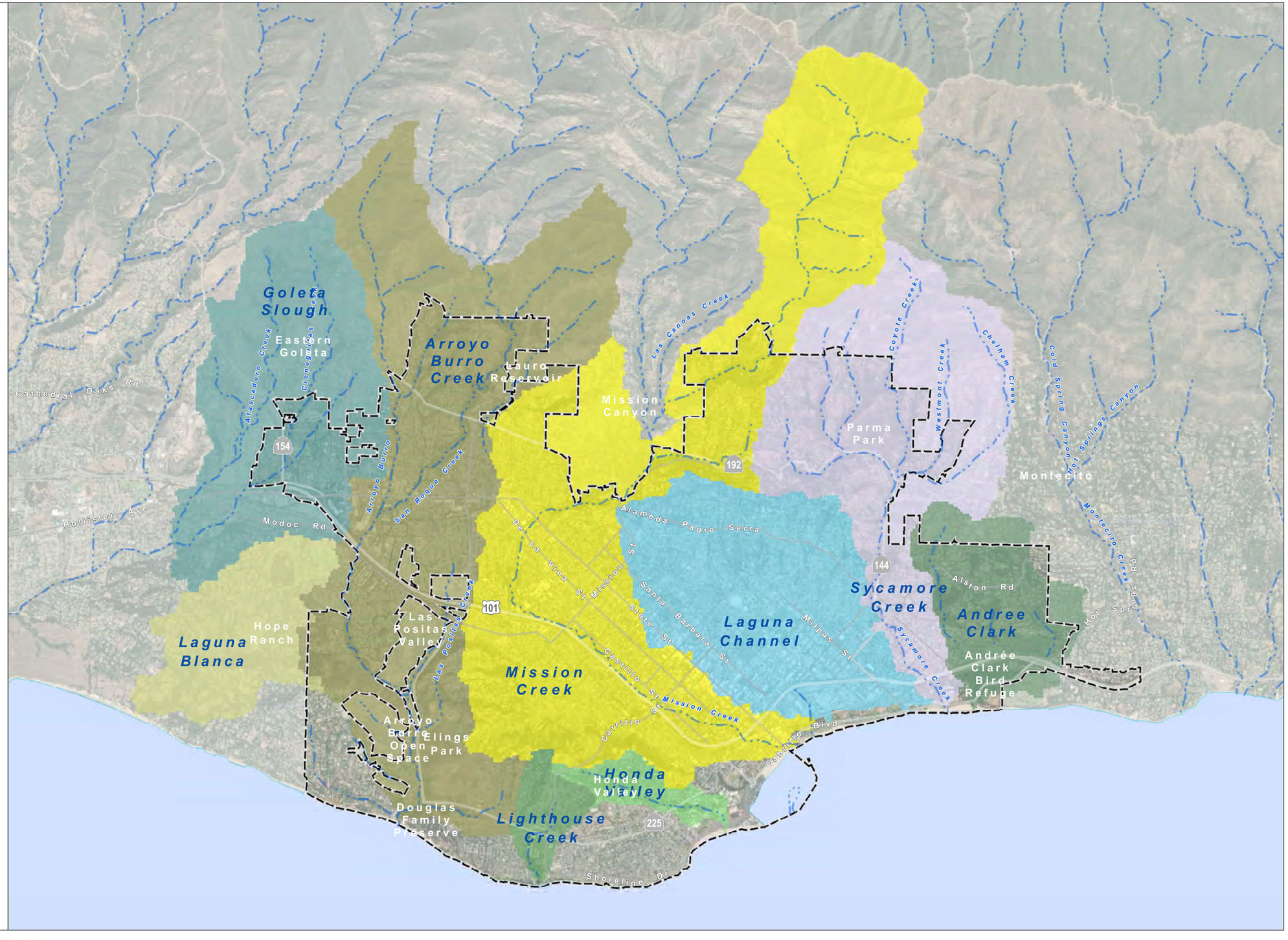
[1] The term "waters of the United States," as defined in the Code of Federal Regulations (40 CFR 230.3(s)), includes all navigable waters and their tributaries.

City of Santa Barbara / CWPP Area

Creeks (USGS NHD)

Watersheds

- Andree Clark
- Arroyo Burro Creek
- Goleta Slough
- Honda Valley
- Laguna Blanca
- Laguna Channel
- Lighthouse Creek
- Mission Creek
- Sycamore Creek



0 0.5 1 Mile

SOURCE: ESRI World Imagery, County of Santa Barbara, USGS

COMMUNITYWILDFIRE PROTECTION PLAN CITY OF SANTA BARBARA

DUDEK

FIGURE 4.8-1

Watersheds and Creeks

City of Santa Barbara Community Wildfire Protection Plan

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State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (codified in the California Water Code, Section 13000 et seq.), which is implemented by the SWRCB and the nine RWQCBs, is the overarching water quality control law for California. The SWRCB establishes statewide policy for water quality control and provides oversight of the RWQCBs operations. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state[2] could cause pollution or nuisance, including impacts to public health and the environment. Evident from the preceding regulatory discussion, the Porter-Cologne Act and the CWA overlap in many respects, as the entities established by the Porter-Cologne Act are in many cases enforcing and implementing federal laws and policies. However, there are some regulatory tools that are unique to the Porter–Cologne Act.

- **Dredge/Fill Activities and Waste Discharge Requirements (WDRs).** Actions that involve, or are expected to involve, discharge of waste are subject to water quality certification under Section 401 of the CWA (e.g., if a federal permit is being sought or granted) and/or WDRs under the Porter-Cologne Act. Chapter 4, Article 4 of the Porter-Cologne Act (California Water Code, Sections 13260–13274) states that persons discharging or proposing to discharge waste that could affect the quality of waters of the state (other than into a community sewer system) shall file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (i.e., waters of the United States), an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as isolated wetlands), WDRs are required and are issued exclusively under state law. WDRs typically require many of the same Best Management Practices (BMPs) and pollution-control technologies as required by NPDES-derived permits. Further, the WDRs application process is generally the same as for CWA Section 401 water quality certification, though in this case, it does not matter whether the particular project is subject to federal regulation.

  The Statewide General Waste Discharge Requirements for Discharge to Land, for example, applies to projects that discharge to land where the discharge has a low threat to water quality. These are typically low-volume discharges with minimal pollutant concentrations, such as well water discharges, small temporary dewatering projects, and hydrostatic testing discharges of clear water. The primary difference between this permit and the permits under the NPDES programs described previously is the destination of the water. This permit regulates discharges to land while the previous sections discuss discharges to storm drains or receiving waters.

National Pollution Discharge Elimination System Permits

In California, the SWRCB and its RWQCBs administer the NPDES permit program. As previously discussed, the NPDES permit system was established in the CWA to regulate both point source discharges and nonpoint source discharges to surface waters of the United States. The NPDES program consists of characterizing receiving water quality, identifying harmful constituents, targeting potential sources of pollutants, and implementing a comprehensive stormwater management program. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB.

[2] "Waters of the state" are defined in the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050(e)).

Local

City of Santa Barbara General Plan

The City has adopted a General Plan as required by California Government Code Section 65300. The General Plan is comprised of the seven elements mandated by law and an additional Historic Resources element. The elements contain goals and policies related to various aspects of growth and development within the City. The elements that are relevant to the hydrology and water quality impacts of the CWPP are the Safety Element (City of Santa Barbara 2013), Environmental Resources Element (City of Santa Barbara 2011), and Conservation Element (included in the Environmental Resources Element).

Safety Element

Flooding Hazards

Three types of flooding hazards are addressed within the Flooding Hazards section of the Safety Element: stream flooding, coastal flooding, and dam failure (City of Santa Barbara 2013). The section describes flooding related to denudation of watersheds by wildfire, vegetative clogging of creeks, development with impermeable surfaces, and hydraulic jumps related to the transition between lined and unlined channels. The technical appendices to the plan include critical facilities located within the FEMA-designated 100-year storm inundation maps.

Fire Hazard

Fire Hazard reduction strategies presented within the Safety Element include: S39, requiring the maintenance of defensible space around development; S40, addressing vegetation management programs to reduce fire risk; and S41, a strategy to integrate fire prevention with creek restoration. Flood hazard reduction strategies include S47, to reduce new development contribution to flood hazard areas by reducing drainage contribution and requiring that vegetation removal projects not contribute to drainage impacts by substantially increasing runoff.

Environmental Resources Element

The Environmental Resources Element includes goals, policies, and implementation actions related to hydrology, water quality, and flooding (City of Santa Barbara 2011). ER19 addresses creek resources and water quality with possible implementation actions including preparation of creek action plans (ER19.1) and a master drainage plan (ER19.2). ER20 addresses storm water management policies and includes implementation actions for stormwater guidelines, such as BMPs for surface water retention and filtration (ER20.1) (see the discussion of the City's Stormwater Management Program, below). ER21 addresses creek setbacks, protection, and restoration. Implementation Strategy 3.0 addresses implementation of hazard reduction programs for which buffer zones are to be established along creeks, in which brush clearing, grading, and other activities that may exacerbate bank erosion are excluded.

City of Santa Barbara Storm Water Management Program

As a small municipality that operates a storm drain system, the City is required by the SWRCB to regulate stormwater discharges in accordance with the CWA's NPDES Permit (SWRCB Water Quality Order No. 2003-0005-DQW). The City's Stormwater Management Program, including the City of Santa Barbara Storm Water Best Management Practices (BMP) Guidance Manual, establishes requirements for source control and water quality requirements for new projects and from those resulting from municipal operations (City of Santa Barbara 2013). Compliance with

the Stormwater Management Program is included in Chapter 22.87 of the Santa Barbara Municipal Code. The Stormwater Management Program requires reduction of discharge pollutants to the "maximum extent practicable" and retaining and treating of the 1-inch, 24-hour storm event. The discharge requirements are for peak runoff not to exceed the 25-year storm, and for the difference between the pre-project and post-project runoff volume to be retained on site for the larger of the 1-inch storm or the 25-year, 24-hour storm. However, such retention requirements would not be applicable to vegetation management.

4.8.3 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to CEQA Guidelines Appendix G, a significant impact related to hydrology and water quality would occur if the project would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    i. result in substantial erosion or siltation on or off site;
    ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
    iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    iv. Impede or redirect flood flows.
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The CWPP Initial Study (Appendix A) determined that b) and e) of the above would have less than significant impact with implementation of the proposed project. Therefore, these topics are eliminated from further analysis.

4.8.4 Impacts Analysis

HYDRO- 1. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Primary causes of water quality impacts are related to soil erosion, hazardous substance spills, and biological contaminants from grazing, all of which could occur as a part of vegetation management activities included in the CWPP. Vegetation management activities could increase the potential for erosion from rainfall and overland flow as a result of the increase in exposure of bare soils, especially on steep slopes. Incidental leaks or spills from equipment could result in water quality degradation if runoff containing the contaminants entered receiving waters in enough quantities to exceed water quality objectives. In addition,

pathogens from sheep could potentially migrate into drainages and creeks, resulting in adverse water quality. Actual vegetation management methods within the defensible space and City VMUs would generally remain the same as the methods discussed in the 2004 Wildland Fire Plan and PEIR.

The proposed CWPP would merge, rename, and expand the existing High Fire Hazard Area (HFHA). The existing Coastal and Coastal Interior Zones would be renamed High Fire Hazard Severity Zone (HFHSZ), and the existing Foothill and Extreme Foothill Zones would be renamed Very High Fire Hazard Severity Zone (VHFHSZ) within the City's HFHA. In total, the newly amended HFHA would result in a cumulative increase of 1,657.74 acres of HFHSZ and 3,666.22 acres of VHFHSZ compared to the existing classifications (see Figure 3-4, Proposed Modifications to High Fire Hazard Area, in Chapter 3). The primary effect of being located within an HFHA is the obligation to maintain City-defined defensible space year-round. Vegetation management in these areas would collectively result in a net decrease in canopy coverage, plant density, deadwood and heavy plant litter, and overall plant biomass.

Soil Erosion

As discussed in Section 4.5, Geology and Soils, because many of the proposed additions to the HFHA are located within High Landslide Risk areas, this indicates that many residences are located on relatively steep slopes for which large areas of defensible space would be required (i.e., up to 200 to 300 feet). Although the proposed vegetation management activities would typically involve little to no ground disturbance, vegetation can act as a binding, stabilizing otherwise potentially unstable soils. Removal of vegetation in the HFHA could create or exacerbate unstable soils, potentially increasing the potential for soil erosion rates. Entrained sediment from the newly exposed soils could runoff into local waterways, potentially affecting water quality and interfering with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species.

However, vegetation management activities would be completed in accordance with the Vegetation Management Standards and Techniques manual, which is included as Appendix E of the proposed CWPP, and as described in Chapter 3, Project Description. This manual includes BMPs to reduce the exposure of soils and preserve slopes to the greatest extent feasible.

BMPs include the retention of grasses to a height of 4 inches, leaving the root zones from trees and shrubs intact, and the placement of mulch and thinned vegetation in place. These practices would serve to maintain the natural rainfall storage at ground surface and within the shallow soil horizon, preventing increases in rainfall runoff from the treated areas. The proposed project includes measures to stabilize areas that are particularly susceptible to soil instability and erosion, and prescribed fire methods are managed and limited to small areas. For vegetation management that would occur on already over-steepened and potentially erosion-prone slopes, **MM-GEO-1, Erosion Control** (see Section 4.5, Geology and Soils), would be implemented to ensure that the SBFD incorporates BMPs on slopes in excess of a 10% gradient, further reducing the potential for soil erosion. In addition, for vegetation management that would occur on slopes greater than 10%, within 25 feet of the top of a creek, or within a creek, **MM-HYDRO-1, Sedimentation Control**, would be implemented to ensure that an erosion control plan is completed prior to work in proximity to creeks. The SBFD would prepare an erosion control plan that evaluates the potential for causing erosion from vegetation management actions and identifies BMPs to avoid significant erosion impacts through modifying vegetation removal methods, utilizing alternative access methods, and/or rehabilitating affected areas after the work. Incorporation of **MM-GEO-1** and **MM-HYDRO-1** would reduce erosion-related impacts.

Hazardous Substances Spills

Incidental spills or leaks from heavy equipment and machinery, staging areas, or work sites could also enter stormwater runoff. Typical pollutants could include petroleum products and heavy metals from equipment, and products such as paints, solvents, and cleaning agents, which could contain hazardous constituents. Herbicide would not be used as a vegetation management technique; therefore, herbicides would not be a potential source of water quality degradation. Incidental leaks or spills from equipment could result in water quality degradation if runoff containing the contaminants entered receiving waters in enough quantities to exceed water quality objectives.

However, in accordance with the Vegetation Management Standards and Techniques manual, vehicles would be cleaned prior to arrival at treatment area. Tools would be fueled and serviced only in areas that would prevent contaminants from entering water bodies or retained vegetation. Heavy equipment would be stored, serviced, and fueled at least 50 feet from streams and riparian areas. Refuse, litter, and non-vegetative debris would be removed from treatment areas and properly disposed of. Hazardous materials spill kits would be kept on all heavy equipment. The same ground stabilization measures described above for soil erosion would also serve to reduce the transport of project-related organic matter, hazardous materials, and litter into the downstream waters. In addition, stormwater water infiltration through the unsaturated zones of the soil profile results in the removal of soil particles and the reduction or removal of contaminants.

Grazing

Grazing would be locally utilized as a vegetation management tool. Pathogens from sheep could potentially migrate into drainages and creeks, resulting in adverse water quality. However, biological vegetation management protocol is included in the Vegetation Management Standards and Techniques manual. In accordance with this manual, a site-specific grazing management plan would be prepared to reduce impacts to treatment areas. Such plans would specify the optimal number of animals and duration of treatment to achieve the vegetation management standards. Fencing would be installed where needed to reduce impacts to streams and watercourses. The potential for the spread of pathogens would be minimized by using quarantine periods, holding areas, clean stock water, and personnel, equipment, and vehicle sanitation. These measures would minimize organic matter and coliform loading associated with the biological vegetation management program.

Implementation in conjunction with **MM-GEO-1 and MM-HYDRO-1** would ensure that vegetation management activities incorporate BMPs to reduce soil exposure and prevent migration of hazardous substances spills and sheep pathogens to waterways, to the greatest extent feasible. Therefore, with implementation of **MM-GEO-1** and **MM-HYDRO-1**, proposed vegetation management methods impacts would be **less than significant**.

HYDRO-2. Would the proposed project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in substantial erosion or siltation on or off site?

As previously discussed, removal of vegetation in the HFHA could create or exacerbate unstable soils, potentially increasing the potential for soil erosion rates. Establishment of new VMUs would result in a cumulative increase in vegetation management activities to reduce fuel loads, reduce the potential for ignitions, and modify fire behavior. Vegetation management activities could increase the potential for erosion from rainfall and overland flow as a result of the increase in exposure of bare soils, especially on steep slopes. Vegetation management methods would generally remain the same as those discussed in the 2004 Wildland Fire Plan and PEIR. In general, vegetation management techniques would include manual, mechanical, and biological treatment of vegetation, as well as the use of prescribed burns when needed.. Entrained sediment from the newly exposed soils could run off into local waterways, potentially affecting water quality and interfering with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species. However, vegetation management activities would be completed in accordance with the Vegetation Management Standards and Techniques manual, which is included as Appendix E of the proposed CWPP, and as described in Chapter 3, Project Description. With incorporation of **MM-GEO-1 and MM-HYDRO-1**, erosion-related impacts associated with the proposed modifications to the HFHA would be **less than significant**.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Vegetation slows rainfall intensity near the ground surface by dispersing and partially inhibiting rainfall from reaching the ground surface. In an absence of vegetation, stormwater runoff rates and amount can substantially increase in comparison to vegetated areas, potentially resulting in on- or off-site flooding. Vegetation removal on steep slopes can exacerbate the potential for increased runoff. Although vegetation would be substantially reduced in the proposed HFHA, vegetation management activities would be completed in accordance with the Vegetation Management Standards and Techniques manual, which is included as Appendix E of the proposed CWPP, and as described in Chapter 3, Project Description. BMPs include the retention of grasses to a height of 4 inches, leaving the root zones from trees and shrubs intact, and the placement of mulch and thinned vegetation in place. These practices would serve to maintain the natural rainfall storage at the ground surface and within the shallow soil horizon, preventing increases in stormwater runoff from the treated areas.

For vegetation management that would occur on slopes or within 25 feet of creeks, **MM-GEO-1, Erosion Control,** and **MM-HYDRO-1, Sedimentation Control**, would be implemented to ensure that the SBFD incorporates BMPs on slopes in excess of a 10% gradient or in proximity to creeks. These mitigation measures include replacement of leaf litter and chippings on pathways, and piling dirt and organic matter at periodic intervals along pathways to act as water bars and prevent the concentration of flows. If the SBFD field supervisor determines that an erosion potential has been created due to vegetation reduction work, and that the spreading of leaf litter and chippings is insufficient protection from future winter rains, the SBFD would consider temporary biodegradable erosion control blankets and barriers, such as coconut fiber blankets and straw wattles. These materials would be placed strategically to reduce the amount and velocity of flow over the affected areas.

As previously discussed, implementation of the CWPP would result in a net increase in VMUs, which would subsequently result in a cumulative increase in vegetation management activities to reduce fuel loads, reduce the potential for ignitions, and modify fire behavior. Although vegetation would be substantially reduced in proposed VMUs, vegetation management activities would be completed in accordance with the Vegetation Management Standards and Techniques manual, as described above for the HFHA. In addition, for vegetation management that would occur on slopes or in proximity to creeks, **MM-GEO-1, Erosion Control,** and **MM-HYDRO-1, Sedimentation Control,** would be implemented to ensure that the SBFD incorporates BMPs on slopes in excess of a 10% gradient and within 25 feet of creek banks, thus minimizing stormwater runoff. Before commencing any vegetation work, SBFD would develop a work plan that identifies the specific areas to be treated, BMPs to be used based on site-specific circumstances, and any subsequent monitoring. Compliance with the manual, in conjunction with **MM-GEO-1** and **MM-HYDRO-1**, would ensure that vegetation management activities incorporate BMPs to reduce stormwater runoff to the greatest extent feasible. Therefore, with implementation of **MM-GEO-1** and **MM-HYDRO-1**, impacts related to proposed vegetation management methods would be **less than significant**.

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

As previously discussed, vegetation management methods within VMUs would generally remain the same as those discussed in the 2004 Wildland Fire Plan and PEIR.As described for the HFHA, the proposed project would neither substantially increase runoff quantities or pollutants from the proposed project area. As previously discussed for HYDRO-2-ii, project BMPs would serve to maintain the natural rainfall storage at the ground surface and within the shallow soil horizon, preventing increases in stormwater runoff from the treated areas. For vegetation management that would occur on slopes or in proximity to creeks, **MM-GEO-1, Erosion Control,** and **MM-HYDRO-2, Sedimentation Control,** would be implemented to ensure that the SBFD incorporates BMPs on slopes in excess of a 10% gradient and within 25 feet of creeks. As a result, the project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. In addition, as previously discussed for **MM-HYDRO-1**, compliance with the Vegetation Management Standards and Techniques manual, in conjunction with **MM-GEO-1** and **MM-HYDRO-1**, would ensure that vegetation management activities incorporate BMPs to reduce soil exposure and associated increased runoff; and prevent migration of hazardous substances spills and sheep pathogens to waterways, to the greatest extent feasible. Therefore, with implementation of **MM-GEO-1** and **MM-HYDRO-1**, impacts related to proposed modifications to VMUs would be **less than significant**.

iv. Impede or redirect flood flows?

Flood hazard zones, including creek- and tsunami-related flood areas, and proposed modifications to the HFHA zones in the City are depicted on Figure 4.8-2, Flood Hazard Areas and Proposed High Fire Hazard Area. As illustrated, the following proposed HFHA zones are traversed in part by flood hazard areas:

- Foothill Areas F and G, along Mission Creek, between State Street and Mission Canyon
- Foothill Area I, along Cieneguitas Creek, in the northwest portion of the City, near the intersection of Cathedral Oaks Road and Highway 154
- Coastal Area R, along Arroyo Burro Creek, east of Hope Ranch
- Coastal Area T, along lower Arroyo Burro Creek, near Hendry's Beach

Flood areas along creeks within the HFHA are generally confined to creek channels and immediate overbank areas; however, the tsunami runup area along lower Arroyo Burro Creek extends across the base of the canyon. Most flood events are associated with short duration, high intensity storms, and not necessarily with an above-average rain season. The proposed project would consist only of vegetation management. No structures would be built that could potentially impede or redirect flood flows. Proper vegetation maintenance of urban creeks protects people, property, wildlife, and the environment, primarily by removing dead vegetation that contributes to obstruction of flood flows by creating dams or barriers, such as at bridge crossings. As the flow increases, these barriers can be swept loose, creating a wall of water and debris that can be highly destructive downstream.

Flood hazard zones, including creek- and tsunami-related flood areas, and proposed modifications to the VMUs in the City are depicted on Figure 4.8-3, Flood Hazard Areas and Proposed Vegetation Management Units. As illustrated, the following proposed VMUs are traversed in part by flood hazard areas:

- VMU 25, along upper Arroyo Burro Creek
- VMU 26, along Mission Creek, downslope from Mountain Drive
- VMU 28, along Coyote Creek, upstream from Sycamore Creek
- VMU 43, along lower Arroyo Burro Creek

Like that described for the HFHA, the proposed project would consist only of vegetation management. No structures would be built that could potentially impede or redirect flood flows. Proper vegetation maintenance of urban creeks protects people, property, wildlife, and the environment, primarily by removing dead vegetation that contribute to obstruction of flood flows by creating dams or barriers, such as at bridge crossings. As the flow increases, these barriers can be swept loose, creating a wall of water and debris that can be highly destructive downstream.

As previously discussed, vegetation management methods within VMUs would generally remain the same as those discussed in the 2004 Wildland Fire Plan and PEIR. Like that described for the HFHA, the proposed project would consist only of vegetation management. No structures would be built that could potentially impede or redirect flood flows. Vegetation management decreases the potential for flood-related impacts. Therefore, vegetation management methods in proposed VMUs would result in **beneficial impacts**.

City of Santa Barbara / CWPP Area

Proposed High Fire Hazard Area

FEMA Flood Hazard

100-Year Flood Hazard Area - Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood.

The 1% annual chance flood (100-year flood), also know as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard Area include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A: No Base Flood Elevations determined.

ZONE AE: Base Flood Elevations

ZONE AH: Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE VE: Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

Floodway Areas in Zone AE

ZONE X: 500-year Flood Hazard Area - Areas of 0.2% annual chance flood; areas of 1% annual chance flood with depths of less than 1 foot or with drainage areas less than 1 square mile

ZONE X: Areas of Minimal Flood Hazard; Areas determined to be outside the 0.2% floodplan.

ZONE D: Undetermined but possible flood hazards

Tsunami Runup Limits

0 0.5 1 Mile

SOURCE: ESRI World Imagery, County of Santa Barbara, FEMA

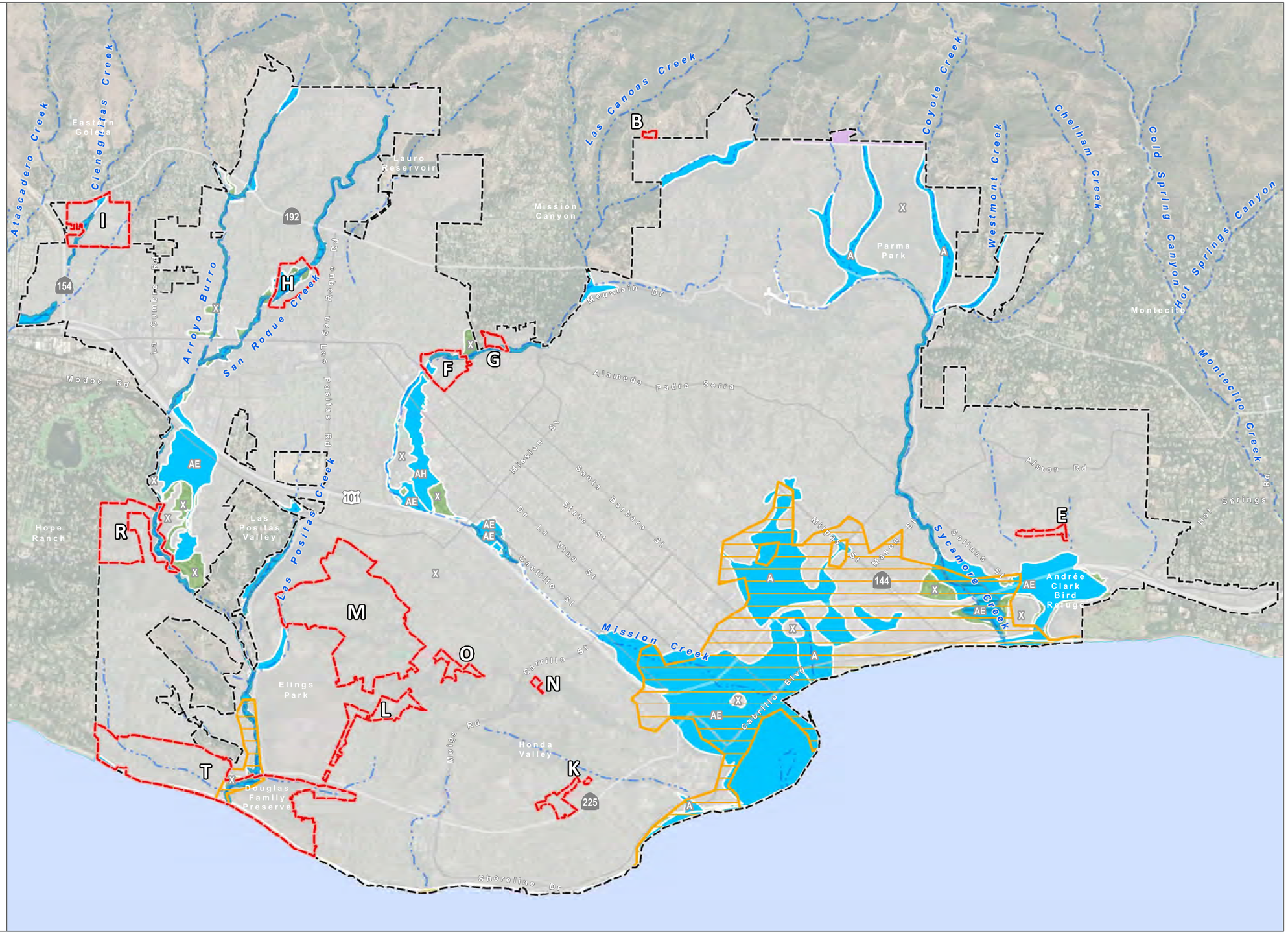

FIGURE 4.8-2

Flood Hazard Areas and Proposed High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara / CWPP Area

Proposed Vegetation Management Units

FEMA Flood Hazard

100-Year Flood Hazard Area - Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood.

The 1% annual chance flood (100-year flood), also know as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard Area include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A: No Base Flood Elevations determined.

ZONE AE: Base Flood Elevations

ZONE AH: Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE VE: Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

Floodway Areas in Zone AE

ZONE X: 500-year Flood Hazard Area - Areas of 0.2% annual chance flood; areas of 1% annual chance flood with depths of less than 1 foot or with drainage areas less than 1 square mile

ZONE X: Areas of Minimal Flood Hazard; Areas determined to be outside the 0.2% floodplan.

ZONE D: Undetermined but possible flood hazards

Tsunami Runup Limits

0 0.5 1 Mile

SOURCE: ESRI World Imagery, County of Santa Barbara, FEMA

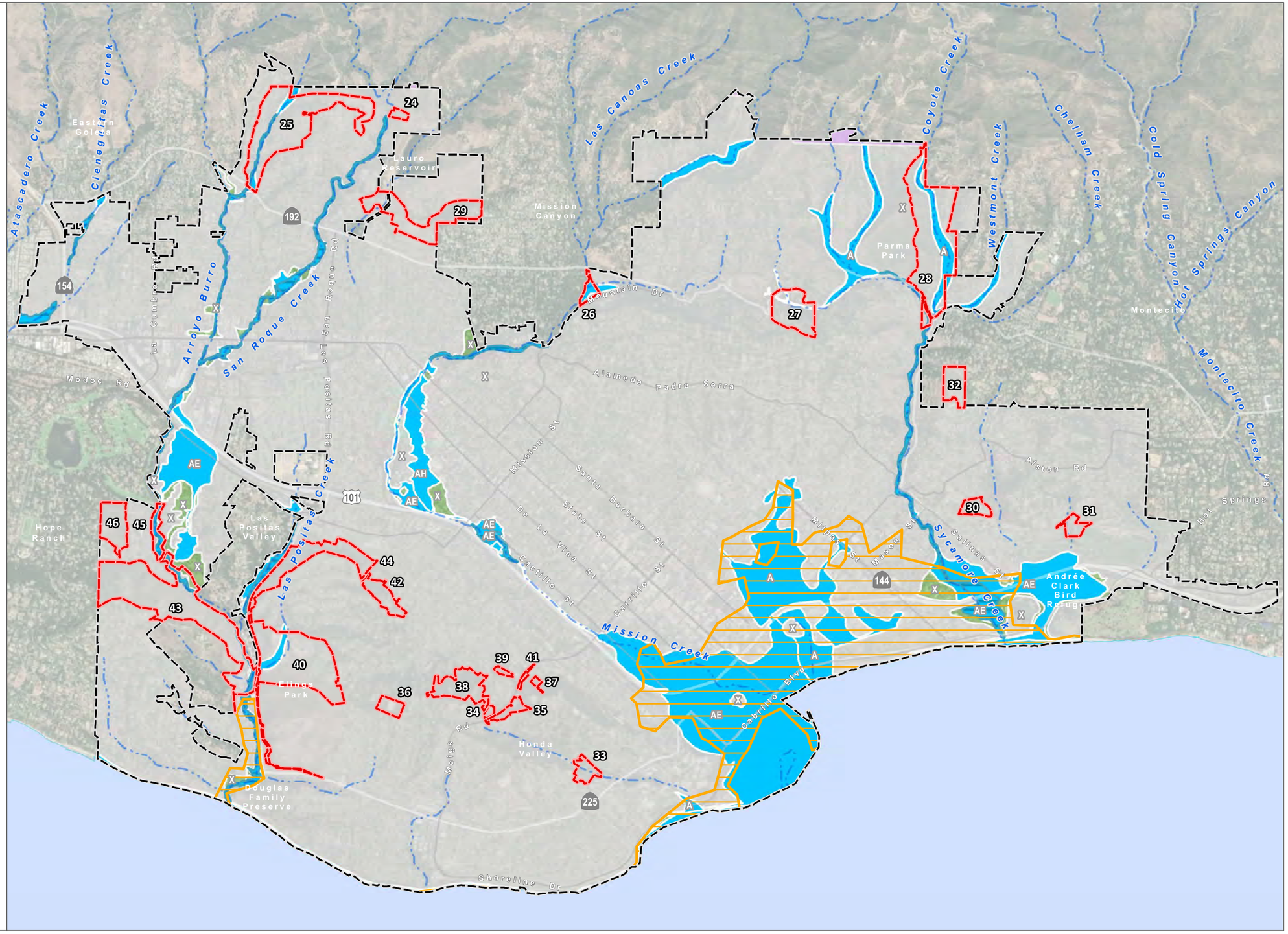

FIGURE 4.8-3

Flood Hazard Areas and Proposed Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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HYDRO 3. In flood hazard, tsunami, or seiche zones, would the proposed project risk release of pollutants due to project inundation.

As previously discussed, vegetation management methods within VMUs would generally remain the same as those discussed in the 2004 Wildland Fire Plan and PEIR. As discussed for **Impact HYDRO-2-iv**, flood hazard zones and proposed modifications to the HFHA in the City are depicted on Figure 4.8-2. Flood flows along creeks are generally confined to creek channels and immediate overbank areas; however, the tsunami runup area along lower Arroyo Burro Creek extends across the base of the canyon. Although small quantities of petroleum products and hazardous materials would be used for operation and maintenance of vehicles and equipment during vegetation management, no such materials would be stored within project areas, thus eliminating the potential for risk of release during a flooding event.

Flood hazard zones and proposed modifications to the VMUs in the City are depicted on Figure 4.8-3. Although small quantities of petroleum products and hazardous materials would be used for operation and maintenance of vehicles and equipment during vegetation management, no such materials would be stored within project areas, thus eliminating the potential for risk of release during a flooding event. As a result, impacts would be **less than significant**.

4.8.5 Mitigation Measures

MM-HYDRO-1 **Sedimentation Control**. The Santa Barbara Fire Department (SBFD) shall implement the following when conducting vegetation management on slopes greater than 10%, within 25 feet of the top of a creek, or within a creek:

The SBFD shall prepare an erosion control plan that evaluates the potential for erosion from vegetation management actions and identifies Best Management Practices to avoid significant erosion impacts through modifying vegetation removal methods, utilizing alternative access methods, and/or rehabilitating affected areas after the work. If the SBFD field supervisor determines that an erosion potential has been created due to vegetation reduction work, and that the spreading of leaf litter and chippings is insufficient protection from future winter rains, the SBFD shall consider temporary biodegradable erosion control blankets and barriers, such as coconut fiber blankets and logs. These materials shall be placed strategically to reduce the amount and velocity of flow over the affected areas, to prevent gullying and soil loss by water erosion, and to facilitate natural regeneration and colonization by native plants.

4.8.6 Level of Significance After Mitigation

With implementation of **MM-GEO-1 and MM-HYDRO-1,** and adherence to the project components, management standards, and BMPs included in Appendix E of the proposed CWPP, potential impacts related to hydrology and water quality would be **less than significant**.

4.8.7 Cumulative Impacts

The geographic context for the analysis of cumulative impacts associated with water quality is all the watersheds within the City, as depicted on Figure 4.8-1. The primary pollutants of concern for the project include sediment, organic matter, bacteria, petroleum hydrocarbons, and trash. With most of the receiving waters in Santa Barbara listed as impaired (State 303(d) list) for fecal coliform (see Table 4.8-1), bacteria are the main pollutant of concern, which could cumulatively aggravate impaired conditions in the receiving waters. The proposed project grazing

management plan applies spatial and temporal limits to the proposed biological vegetation management program. These measures preclude grazing within the riparian corridor and in the channels and would limit herd size and deployment time to prevent overgrazing, which would maintain ground cover as well as prevent an excessive accumulation of animal waste, thus minimizing project contributions to cumulative water quality impacts.

Cumulative development and redevelopment within the City would potentially result in short-term erosion-related impacts during construction and long-term erosion related to denuded soil, improper drainage, and lack of erosion control features at each cumulative project site. However, short-term and long-term erosion control BMPs would be employed at each site, consistent with City stormwater quality regulations; Strategy S19, Soil Erosion, of the Safety Element of the Santa Barbara General Plan; and California Building Code requirements, such that cumulative water quality impacts would not be cumulatively considerable. **MM-GEO-1** and **MM-HYDRO-1,** in combination with erosion control measures at other cumulative project sites, would reduce potential erosion related impacts such that cumulative impacts would be **less than significant**.

4.8.8 References

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4.9 Land Use and Planning

This section describes the existing land use and planning conditions of the Community Wildfire Protection Plan (CWPP or proposed project) project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

4.9.1 Existing Conditions

The CWPP would encompass the jurisdictional limits of the City of Santa Barbara with the exception of the Santa Barbara Airport property. The character of the existing land use was determined by field survey, review of aerial photography, and review of existing documentation and site descriptions contained in the Santa Barbara County Association of Government (SBCAG) Forecast 2050, 2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan and City of Santa Barbara General Plan and Coastal Land Use Plan.

Geography

Santa Barbara County is bordered on the north by San Luis Obispo County, to the east by Ventura County, and to the south and west by 107 miles of Pacific coastline. Much of the county is mountainous. The Santa Ynez, San Rafael and Sierra Madre mountains extend in a predominately east–west direction. Within the county, there are numerous fertile agricultural areas, including the Santa Maria, Cuyama, Lompoc, and Santa Ynez valleys, and the southeast coastal plain. These areas, which include most of the developed land, also accommodate the majority of the population within cities. Los Padres National Forest, in the eastern part of the county, covers approximately 44% of the total county area. Vandenberg Air Force Base is in the Lompoc region, and the University of California – Santa Barbara is on the South Coast (SBCAG 2019).

Existing Land Uses

The City of Santa Barbara's history extends back 8,000 years to its first human settlements (City of Santa Barbara 2011). The desirable Mediterranean climate provides comfortable temperatures most of the year suitable for agriculture and residential and commercial development. Santa Barbara's development pattern centers around the grid-based layout of the downtown corridor and spreads outward into distinct commercial districts and residential neighborhoods. Santa Barbara is largely built-out given the 150 years of growth since the initial layout of the grid system (City of Santa Barbara 2011). Height limitations, architectural design standards, and regulation of nonresidential growth also influence the growth rate of the City.

The City is currently comprised of 32 different neighborhoods, as shown in Exhibit 4.19-1, Santa Barbara Neighborhoods.

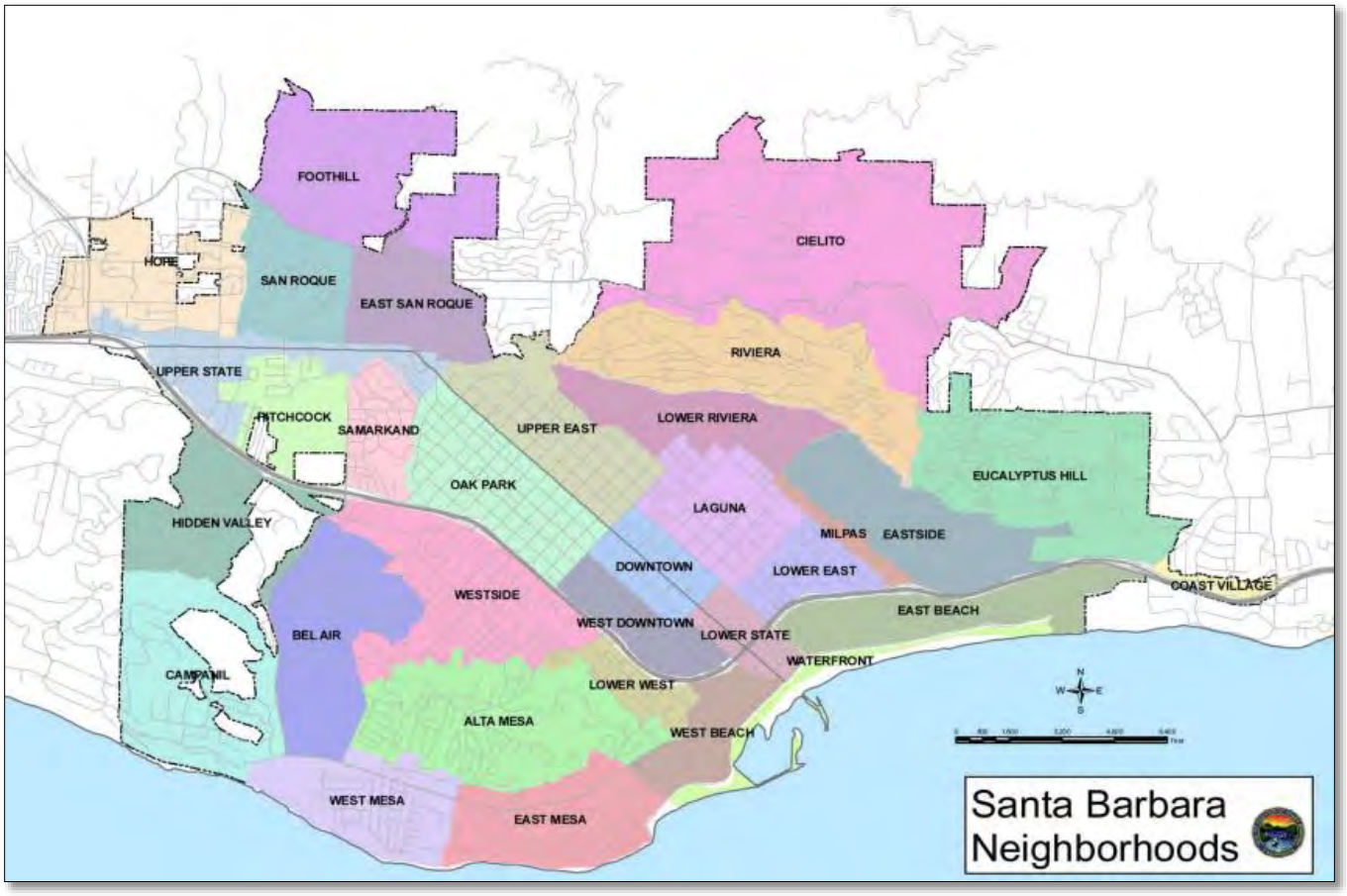


Exhibit 4.9-1. Santa Barbara Neighborhoods

City General Plan land uses are shown in Table 4.9-1.

Table 4.9-1: City General Plan Land Use Breakdown

Land Use Category	Percent of Land in City
Single Unit Residential	51
Multiple Unit Residential	16
Parks and Open Space	11
Commercial and Office	9
Institutional, including public schools	9
Goleta Slough Natural Reserve and Shoreline	4
Industrial	1

Source: City of Santa Barbara 2011 (Land Use Element).

Residential Land Uses

Residential uses are primarily located in hillside areas of the City with a density of one dwelling unit per acre (du/ac) to 3 du/ac specified by the General Plan (City of Santa Barbara 2011). Suburban areas that transition from hillside to the denser downtown core range from 3 du/ac to 12 du/ac. General urban areas of the City include multifamily, commercial, and industrial designations, and increase in density to 12 to 18 du/ac where residential is allowed.

Densities of up to 28 to 36 du/ac may be permitted when close to urban centers and under the Priority Housing Overlay Program up to 49 to 63 du/ac with a restriction for rental, employer-sponsored, or cooperative housing.

Affordability concerns and lack of jobs/housing balance has encouraged programs such as the Average Unit-Size Density Incentive Program and Accessory Dwelling Unit (ADU) Program to increase housing stock within the City, as further described below.

Average Unit Size Density Incentive Program

The purpose of an Average Unit-Size Density Incentive Program is to encourage smaller, more affordable units through established unit sizes, while allowing flexibility for larger units, which help subsidize the cost of the smaller units. Under this program, there are two multifamily land use designations: Medium-High Residential and High Residential and an additional Priority Housing Overlay. When combined with other uses, such as commercial or office, these residential uses are characterized as mixed-use. This program primarily affects land outside of the existing and proposed High Fire Hazard Area (HFHA).

Accessory Dwelling Unit Program

The state legislature has identified production of ADUs as an important strategy to increase housing statewide. Effective January 1, 2020, state laws for ADUs (including Junior ADUs [JADUs])[1] were significantly amended to expand the types and numbers of ADUs allowed per parcel. As a result, much of the City's existing ADU and JADU regulations were voided until a local ADU ordinance is adopted in compliance with state law. In response, City Council adopted an Interim Urgency Ordinance to, among other things, temporarily prohibit ADU/JADU development in the Foothill and Extreme Foothill VHFHSZ until December 2020 to allow City staff time to analyze the issues before returning with an amended ordinance for adoption. There were concerns that ADUs and JADUs allowed by right under state law could result in significant adverse impacts, specifically regarding (1) traffic congestion and on-street parking demand, (2) adverse changes or destruction of significant historic resources, and (3) public safety threats in the HFHA (City of Santa Barbara 2020).

Commercial/Hotel/Office/Industrial Land Uses

The City's land use designations for commercial, hotel, office, and industrial uses generally also allow residential uses unless within certain areas dedicated to visitor service hotel/motel uses or ocean-related uses. Office uses are scattered throughout the City and concentrated in areas near Cottage Hospital, the Mesa, Upper State Street, and downtown. Commercial areas include residential, office, service shops, grocery stores, restaurants, banks, dry cleaners, childcare centers, pet shops, repair shops, and various other neighborhood/commercial-serving businesses. These neighborhood and commercial service centers provide easy access to goods and services and help improve the livability and sustainability in areas with a high concentration of residential uses. General commercial areas are centered near La Cumbre Plaza/Five Points Shopping Center. The Commercial Industrial designation area is bound by Ortega, Haley, Anacapa, and Quarantina Streets. This designation allows a wide variety of uses including manufacturing, automotive repair, office, retail, and residential. Industrial designation includes the area generally bound by Haley, Cacique, Milpas and Garden Streets. These industrial areas encompass approximately 120 acres and permit all land uses with the exception of residential, which is specifically prohibited.

[1] ADUs are self-contained residential units, typically used as a rental, and either incorporated within, detached from, or attached to the primary residential unit(s) on the same property. A JADU is a unit up to 500 square feet in size contained within an existing or proposed home with a separate exterior entry and an efficiency kitchen.

The area historically included a variety of manufacturing and industrial uses including a garbage, waste management, and recycling facility; a concrete business; open yard uses; and others (City of Santa Barbara 2011).

Institutional and Related

The Institutional and Related designation provides for public facilities and private and/or nonprofit uses that offer public services to the community. Uses include, but are not limited to, schools, libraries, hospitals, government offices, water treatment plants, reservoirs, the harbor, and the municipal airport.

Open Space

The open spaces in the city from the foothills to the ocean have important physical, social, aesthetic, and economic benefits for the enjoyment of the community and visitors. The Open Space land use designation includes four areas: the Shoreline, Parks, Creeks, and the Goleta Slough Natural Reserve. Currently, there are more than 1,800 acres of natural open space, parkland, and other recreational facilities (City of Santa Barbara 2011).

Relationship of Land Uses and Zoning to High Fire Hazard Area

After the 1979 Sycamore Canyon Fire, the Santa Barbara Fire Department (SBFD) identified areas within City limits vulnerable to wildland fire. These areas were identified based on slope and vegetation and were designated as High Fire Hazard Area (HFHA). Municipal codes and ordinances to impose fire and safety requirements in the HFHA were adopted (City Municipal Ordinance 5100). In 1992, after the Oakland Hills Fire, California State Assembly Bill No. 337 (Bates Bill) was approved by the governor. This bill required state fire agencies to ensure that local fire agencies identify areas vulnerable to wildfire, designate these areas as Very High Fire Hazard Severity Zones, and allow local agencies to impose fire and safety requirements as authorized by law. The General Plan Land Use Element also encourages limiting new residential development in the HFHA by offering incentives and/or an option for property owners to transfer development rights from the HFHA to the High Density residential land use designations (Policy LG6.5 High Fire Hazard Area).

As shown on Figure 4.9-1, General Plan and Coastal Plan Land Use Designations and Proposed High Fire Hazard Area, the majority of the proposed HFHA is designated as Low-Density Residential. As shown on Figure 4.9-2, General Plan and Coastal Plan Land Use Designations and Proposed Vegetation Management Units, the majority of the proposed VMUs are designated Low Density Residential or Parks/Open Space. Figure 4.9-3, Zoning and Proposed High Fire Hazard Area, and Figure 4.9-4, Zoning and Proposed Vegetation Management Units, reflect the proposed HFHA and Vegetation Management Units (VMUs) related to the City's zoning. The majority of the VMUs are zoned residential or P-R Park and Recreation zone.

City of Santa Barbara / CWPP Area

Coastal Zone Boundary

High Fire Hazard Area

Existing - Retained

Existing - Removed

Proposed

City of Santa Barbara
General Plan and Coastal Plan
Land Use Designations

Open Space

Creeks

Shoreline

Parks/Open Space

Goleta Slough Natural Reserve

Hillside

1 Low Density Residential (Max 1 du/acre)

2 Low Density Residential (Max 2 du/acre)

3 Low Density Residential (Max 3 du/acre)

Suburban

3 Low Density Residential (Max 3 du/acre)

Low Density Residential (Max 5 du/acre)

Medium Density Residential (12 du/acre)

Office Low Impact Research & Development

General Urban

Medium High Density Residential (15-27 du/acre)

High Density Residential (28-36 du/acre)

Office/Medium Density Residential (12 du/acre)

Office/Medium High Residential (15-27 du/acre)

Office/High Residential (28-36 du/acre)

Commercial/Medium High Residential (15-27 du/acre)

Commercial/High Residential (28-36 du/acre)

Commercial Industrial/Medium High Residential (15-27 du/acre)

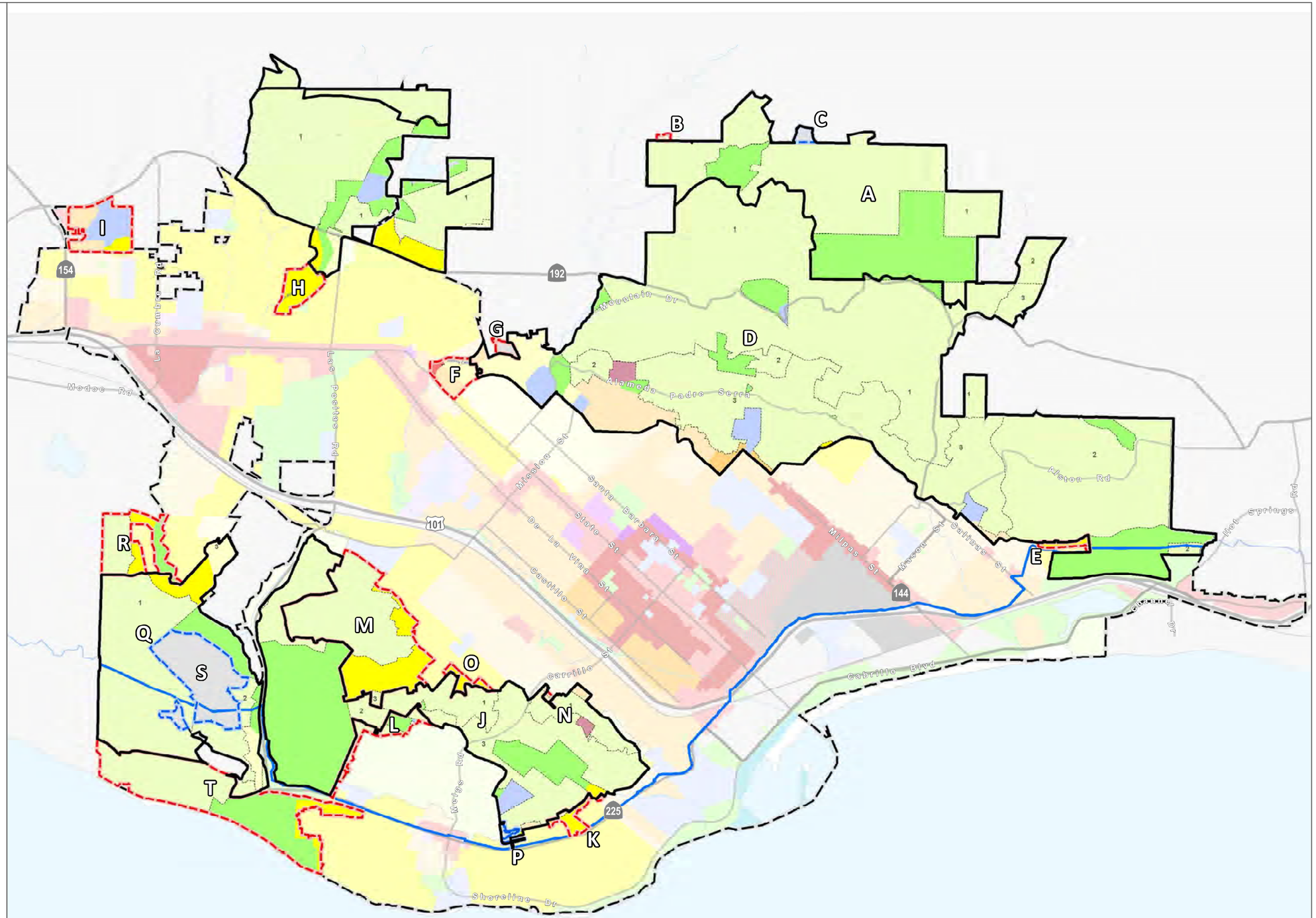
Industrial

Institutional & Related

Institutional

Harbor-Stearns Wharf

Airport



SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

DUDEK

FIGURE 4.9-1

General Plan and Coastal Plan Land Use Designations and Proposed High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara / CWPP

Coastal Zone Boundary

Vegetation Management Units

Existing

Proposed

City of Santa Barbara General Plan and Coastal Plan Land Use Designations

Open Space

Creeks

Shoreline

Parks/Open Space

Goleta Slough Natural Reserve

Hillside

1 Low Density Residential (Max 1 du/acre)

2 Low Density Residential (Max 2 du/acre)

3 Low Density Residential (Max 3 du/acre)

Suburban

3 Low Density Residential (Max 3 du/acre)

Low Density Residential (Max 5 du/acre)

Medium Density Residential (12 du/acre)

Office Low Impact Research & Development

General Urban

Medium High Density Residential (15-27 du/acre)

High Density Residential (28-36 du/acre)

Office/Medium Density Residential (12 du/acre)

Office/Medium High Residential (15-27 du/acre)

Office/High Residential (28-36 du/acre)

Commercial/Medium High Residential (15-27 du/acre)

Commercial/High Residential (28-36 du/acre)

Commercial Industrial/Medium High Residential (15-27 du/acre)

Industrial

Institutional & Related

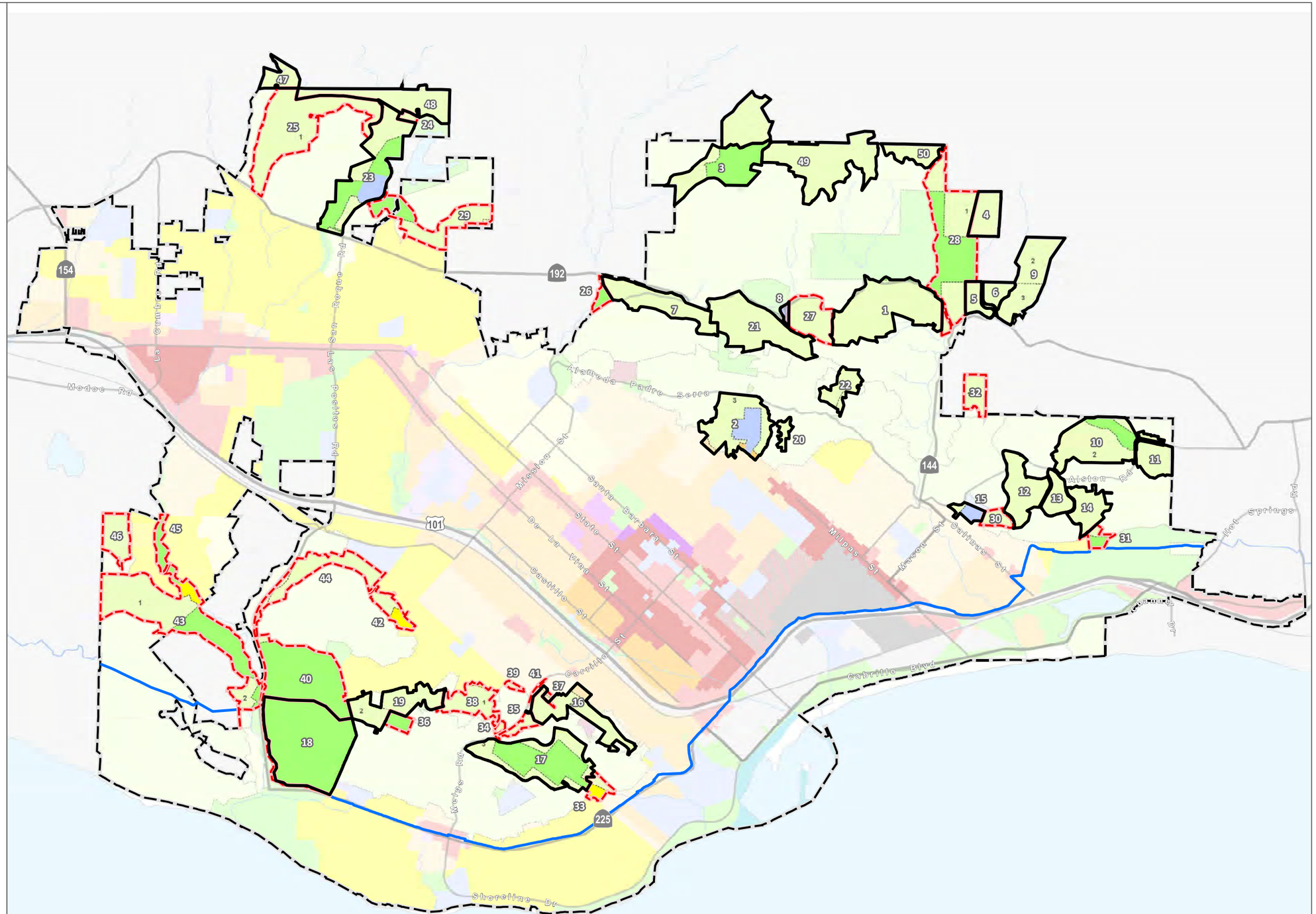
Institutional

Harbor-Stearns Wharf

Airport

0 1,000 2,000 Feet

SOURCE: City of Santa Barbara



COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN DUDEK

FIGURE 4.9-2

General Plan and Coastal Plan Land Use Designations and Proposed Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara / CWPP Area

Coastal Zone Boundary

High Fire Hazard Area

Existing - Retained

Existing - Removed

Proposed

City of Santa Barbara Zoning

Residential Zones - Inland/Title 30 (Coastal Zone/Title 28)

- RS-1A (A-1) - Res. Single Unit, 1 acre minimum lot size
- RS-25 (A-2) - Res. Unit, 25,000 square foot min lot size
- RS-15 (E-1) - Res. Single Unit, 15,000 square foot min lot size
- RS-10 (E-2) - Res. Single Unit, 10,000 square foot min lot size
- RS-7.5 (E-3) - Res. Single Unit, 7,500 square foot min lot size
- RS-6 (R-1) - Res. Single Unit, 6,000 square foot min lot size
- R-2 (R-2) - Two-Unit Residential
- R-M (R-3) - Residential Multi-Unit
- R-MH (R-4) - Residential Multi-Unit and Hotel

Commercial and Office Zones - Inland/Title 30 (Coastal Zone/Title 28)

- O-R (R-O) - Office Restricted
- O-M - Office Medical
- C-R (C-1,C-P) - Commercial Restricted (Limited Commercial)
- C-G (C-2) - Commercial General

Manufacturing Zones - Inland/Title 30 (Coastal Zone/Title 28)

- M-C - Manufacturing Commercial
- M-I (M-1) - Light Manufacturing

Coastal-Oriented Related Zones - Coastal Zone/Title 28 Only

- HRC-1 - Hotel and Related Commerce I
- HRC-2 - Hotel and Related Commerce II
- OC - Ocean Related Commerce
- OM-1 - Ocean Oriented Light Manufacturing
- HC - Harbor Commercial

Park and Recreation Zone - Inland/Title 30 (Coastal Zone/Title 28)

- P-R (P-R) - Park and Recreation Zone

Overlay Zones - Inland/Title 30 (Coastal Zone/Title 28)

- ACS - Auto, Commercial, and Services
- PUD (PUD) - Planned Unit Development
- RD - Research and Development
- (S-D-3) - Coastal Overlay Zone
- HWMF - Hazardous Waste Mgmt Facility
- RH - Resort Hotel
- SH (S-H) - Senior Housing Zone
- SRP - San Roque Park
- USS - Upper State Street Area

Specific Plan

- (SP-1) - Park Plaza
- (SP-2) - Cabrillo Plaza
- SP4-RA - Rancho Arroyo
- SP5-WC - Westmont College
- SP7-RC - Riviera Campus
- SP8-H - Hospital
- SP9-VM (SP-9) - Veronica Meadows
- SP10-LP - Las Portales

0 1,000 2,000 Feet

SOURCE: City of Santa Barbara

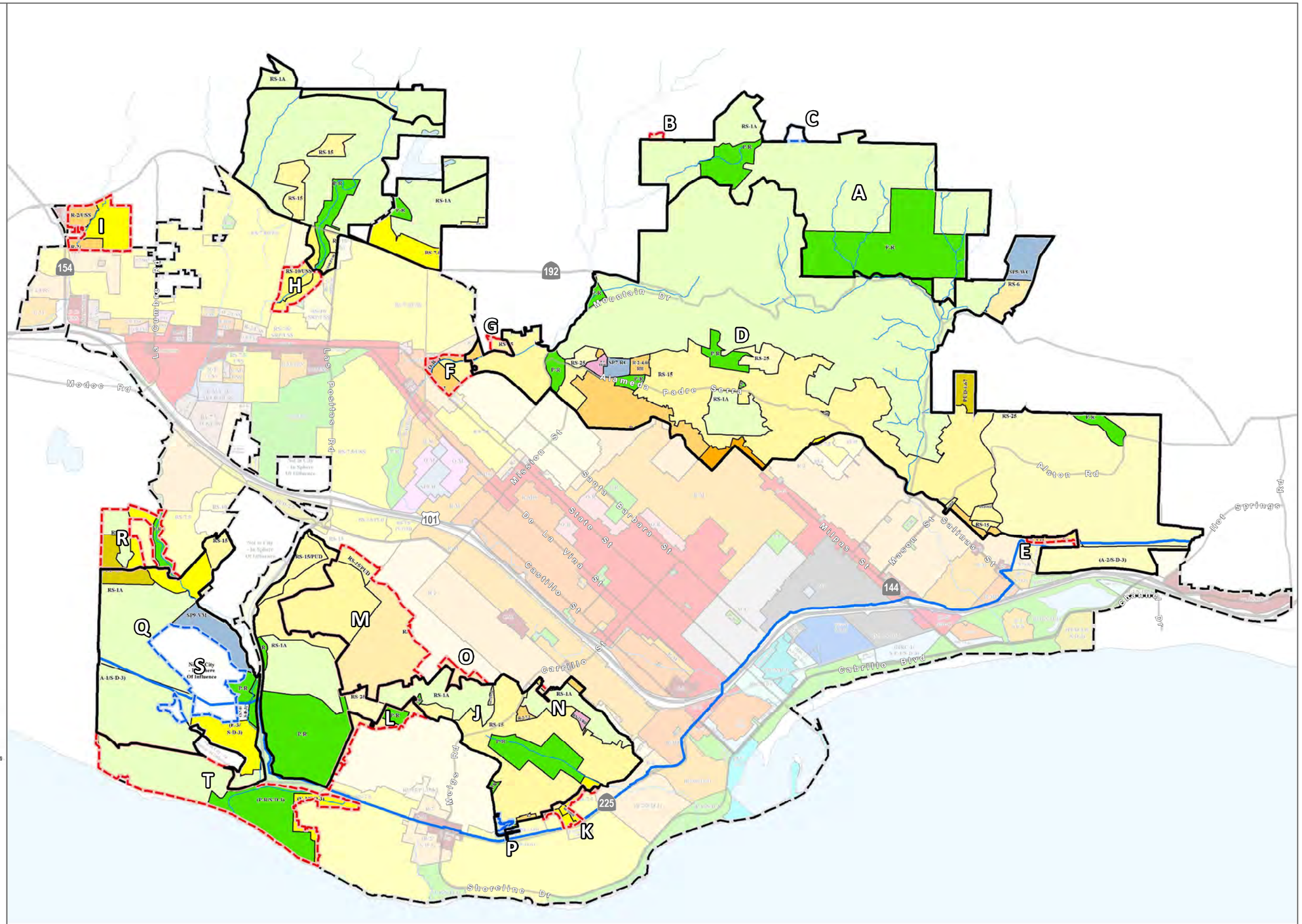

FIGURE 4.9-3

Zoning and Proposed High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara / CWPP

Coastal Zone Boundary

Vegetation Management Units

Existing

Proposed

City of Santa Barbara Zoning

Residential Zones - Inland/Title 30 (Coastal Zone/Title 28)

- RS-1A (A-1) - Res. Single Unit, 1 acre minimum lot size
- RS-25 (A-2) - Res. Unit, 25,000 square foot min lot size
- RS-15 (E-1) - Res. Single Unit, 15,000 square foot min lot size
- RS-10 (E-2) - Res. Single Unit, 10,000 square foot min lot size
- RS-7.5 (E-3) - Res. Single Unit, 7,500 square foot min lot size
- RS-6 (R-1) - Res. Single Unit, 6,000 square foot min lot size
- R-2 (R-2) - Two-Unit Residential
- R-M (R-3) - Residential Multi-Unit
- R-MH (R-4) - Residential Multi-Unit and Hotel

Commercial and Office Zones - Inland/Title 30 (Coastal Zone/Title 28)

- O-R (R-O) - Office Restricted
- O-M - Office Medical
- C-R (C-1,C-P) - Commercial Restricted (Limited Commercial)
- C-G (C-2) - Commercial General

Manufacturing Zones - Inland/Title 30 (Coastal Zone/Title 28)

- M-C - Manufacturing Commercial
- M-I (M-1) - Light Manufacturing

Coastal-Oriented Related Zones - Coastal Zone/Title 28 Only

- HRC-1 - Hotel and Related Commerce I
- HRC-2 - Hotel and Related Commerce II
- OC - Ocean Related Commerce
- OM-1 - Ocean Oriented Light Manufacturing
- HC - Harbor Commercial

Park and Recreation Zone - Inland/Title 30 (Coastal Zone/Title 28)

- P-R (P-R) - Park and Recreation Zone

Overlay Zones - Inland/Title 30 (Coastal Zone/Title 28)

- ACS - Auto, Commercial, and Services
- PUD (PUD) - Planned Unit Development
- RD - Research and Development
- (S-D-3) - Coastal Overlay Zone
- HWMF - Hazardous Waste Mgmt Facility
- RH - Resort Hotel
- SH (S-H) - Senior Housing Zone
- SRP - San Roque Park
- USS - Upper State Street Area

Specific Plan

- (SP-1) - Park Plaza
- (SP-2) - Cabrillo Plaza
- SP4-RA - Rancho Arroyo
- SP5-WC - Westmont College
- SP7-RC - Riviera Campus
- SP8-H - Hospital
- SP9-VM (SP-9) - Veronica Meadows
- SP10-LP - Las Portales

0 1,000 2,000 Feet

SOURCE: City of Santa Barbara

FIGURE 4.9-4

Zoning and Proposed Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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4.9.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans, policies, or ordinances applicable to the land use considerations of the proposed project.

State

California Coastal Act of 1976

The California Coastal Act of 1976 (Coastal Act) establishes goals and provisions for a designated Coastal Zone along the entire California coastline. Within the City of Santa Barbara, the Coastal Zone generally extends inland 0.5 miles from the ocean and includes about 6 miles of the City's shoreline. Approximately 70% of the City's Coastal Zone is held in public ownership, including numerous beaches and parks, an extensive public waterfront, and a full working harbor. In August 2019, the California Coastal Commission certified the latest update of the City's Coastal Land Use Program, further discussed below.

Senate Bill 375

The adoption of California's Sustainable Communities and Climate Protection Act, Senate Bill (SB) 375 (Steinberg, Chapter 728, Statutes of 2008) on September 30, 2008, aligns with the goals of regional transportation planning efforts, regional greenhouse gas (GHG) reduction targets, and land use and housing allocations. SB 375 requires Metropolitan Planning Organizations such as the SBCAG to adopt a Sustainable Communities Strategy (SCS) within their regional transportation plan to demonstrate achievement of GHG reduction targets. In compliance with SB 375, SBCAG has adopted an SCS that covers all of the City of Santa Barbara, as well as other cities and counties.

Regional

Regional Transportation Plan/Sustainable Communities Strategy

SBCAG is the designated Metropolitan Planning Organization for Santa Barbara County and all eight incorporated cities within the county, including the City of Santa Barbara. SBCAG is federally mandated to develop plans for transportation, growth management, hazardous waste management, and air quality. The Regional Transportation Plan (RTP), also known as Fast Forward 2040, was adopted in August 2013 and finalized August 2017, and is a long-range planning document that defines how the region plans to invest in the transportation system over 20 years based on regional goals, multi-modal transportation needs for people and goods, and estimates of available funding (SBCAG 2017). The RTP includes an SCS as required by SB 375. The SCS is a component of the RTP that sets forth a forecasted development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, will reduce GHG emissions from passenger vehicles and light trucks to achieve the GHG reduction targets set by the California Air Resources Board. The future land use and transportation scenario presented in the SCS must accommodate forecast population, employment, and housing sufficient to meet the needs of all economic segment of population, including the state-mandated Regional Housing Needs Assessment, while considering state housing goals (SBCAG 2017).

Forecast 2050

SBCAG prepares a 30-year forecast to provide a consistent set of population, housing, employment, and land use forecasts for Santa Barbara County jurisdictions. The forecast is adopted by the SBCAG board and used in a variety of applications such as local General Plans, public service district forecasts, business development, transportation forecasts, and air quality planning. The forecast is based on the land use capacity of local general plans and takes input from all jurisdictions, the public, and the SBCAG board. The forecast is updated periodically as new demographic data, land use policies, and changes in growth assumptions warrant.

2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan

Santa Barbara County's Office of Emergency Management (OEM) developed the 2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan to mitigate risk through proactive planning efforts and stakeholder engagement. The emphasis of the plan is on the assessment of identified risks, identifying measures to reduce risk and ensuring critical infrastructure are capable of surviving a disaster.

Local

City of Santa Barbara General Plan

California State Government Code Section 65300, requires that every city adopt a General Plan, sometimes referred to as a City's blueprint for growth and development. Santa Barbara's General Plan, originally adopted in 1964, is comprised of eight elements, seven of which are mandated by state law. The Land Use Element contains goals, policies, and implementation actions related to the four topics of Land Use, Growth Management, Community Design, and Neighborhoods.

The following elements of the City's General Plan include goals, policies, and implementation measures that address the impacts of wildland fires.

- **Land Use Element:** Contains goals, policies, and implementation actions related to land use, growth management, community design, and neighborhoods (City of Santa Barbara 2011).
- **Environmental Resources Element:** Establishes goals and policies that specifically address hillside protection and conservation of open space, discourage development in high fire areas, and limit development on steep slopes (City of Santa Barbara 2011).
- **Safety Element:** Contains goals and policies to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from large-scale hazards (City of Santa Barbara 2013).

City of Santa Barbara Local Coastal Program: Coastal Land Use Plan

As discussed above, the Coastal Act requires proposed development to be consistent with the Local Coastal Program. The City's Local Coastal Plan has two parts: (1) a Coastal Land Use Plan (LUP), which includes the kind, location, density and intensity of land uses within the Coastal Zone and coastal access and coastal resource protection policies and development standards; and 2) an Implementation Plan, which includes development standards and other ordinances relating to coastal access and coastal resource protection, and maps that delineate zoning districts within the Coastal Zone (City of Santa Barbara 2019).

Included in the City's LCP are policies recommended to address fire hazards within the coastal zone. Development in high fire hazard areas requires provisions for appropriate site layout, building design and materials, access, water supply, and vegetation management practices to reduce the potential for wildfire-related damage. The SBFD reviews projects to determine if building materials, defensible space, and water storage capacity are adequate for fire protection purposes.

City of Santa Barbara Climate Action Plan

Adopted in September 2012, the City's Climate Action Plan (CAP) identifies objectives, forecasted targets, and strategies to reduce carbon emissions and adaptation planning. Specifically, the City's CAP addresses climate change issues for the City of Santa Barbara community in the planning period to the year 2030, in accordance with the directives outlined in the City's General Plan and the California Global Warming Solutions Act (Assembly Bill 32; Pavley, Chapter 200, Statutes of 2002). Identified in the plan are strategies for the City to adopt adaptation planning in response to climate change effects anticipated to occur in the Santa Barbara area over the coming decades, such as greater wildfire risk.

As discussed in the CAP, the Santa Barbara urban interface with the foothills of the Santa Ynez Mountains and Los Padres National Forest is likely to experience gradually increasing wildfire risks in coming decades due to projected climate changes. Warmer temperatures, drier conditions with lower rainfall averages and more drought periods, periodic high rainfall events causing vegetation growth, and more frequent Sun-downer wind conditions (down-slope winds typically associated with high temperature and low humidity) all factor into increased wildfire risk (City of Santa Barbara 2012a). Adaptation approaches recommended in the plan include emergency preparedness, vegetation management, and development policies. Specific policies applicable to wildland fires is discussed below.

City of Santa Barbara 2004 Wildland Fire Plan

The 2004 Wildland Fire Plan outlines a comprehensive, coordinated City Wildland Fire Plan to protect lives, property, and natural resources threatened by wildland fire. The 2004 Wildland Plan identifies high fire hazard areas and develops policies and actions focused on reducing the impact of wildfire (SBFD 2004).

City of Santa Barbara Zoning Ordinance

The City's Zoning Ordinance establishes the zone classifications and districts and regulates therein the use of property within the City. The Zoning Ordinance defines the development regulations for existing and future growth in the different zone classifications while serving the public health, safety, comfort, convenience, and general welfare of the community. It includes standards for allowed uses, range of densities, setbacks, open space, parking, and landscaping requirements. The City's Zoning Ordinance includes provisions and wildfire-specific regulations, including but not limited Title 8, Fire Protection, which includes the adoption of the California Fire Code, development standards related to fire hazards, processes for fire permits, and development standards for vegetation and weed abatement.

4.9.3 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to Appendix G, a significant land use and planning impact would occur if the project would do any of the following:

a) Physically divide an established community.
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The CWPP Initial Study (Appendix A) determined that threshold a) above would have less than significant impact. Therefore, this was eliminated from further analysis.

4.9.4 Impacts Analysis

LU-1 Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The CWPP proposes a series of fire risk reduction methods to address existing development within the City, and especially within the HFHA. The City's General Plan seeks to balance reasonable growth while maintaining the natural environment. Table 4.9-2 outlines the applicable policies identified in the General Plan (City of Santa Barbara 2011, 2012b, 2013, 2015) and assesses the CWPP's consistency with the policies.

Table 4.9-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Land Use Element	
LG6.5 High Fire Areas: Limit new residential development in High Fire Areas by offering incentives and/or an option for property owners to transfer development rights from the High Fire Area to the High Density residential land use designations.	**Consistent.** The proposed project would rename the existing HFHA to be consistent with the California Department of Forestry and Fire Protection (CAL FIRE) terminology and in certain areas, expand the HFHA. The addition of new HFHA could provide owner opportunities to transfer development rights to higher density residential land use designations. Therefore, the CWPP would be consistent with this policy.
Housing Element	
H15. Secondary Dwelling Units. Further encouraging second units (granny units) in single family zones shall be pursued with neighborhood input to gauge level of support, but prohibited in the High Fire Hazard Zones to the extent allowed by the State laws applicable to second units. Second units may be most appropriate within a short walking distance from a main transit corridor and bus stop.	**Consistent.** Within the CWPP is discussion specific to the development of ADU/JADUs. The CWPP would facilitate further review of secondary dwelling unit development as well as designate specific restrictions within zones of wildfire risk. Therefore, the CWPP would be consistent with this policy.

Table 4.9-2. General Plan Consistency Analysis

Goal/Policy	Analysis
H20. Property Improvements. The City shall encourage residential property owners to improve the conditions of their property(ies) to a level that exceeds the minimum standards of the California Building Code and the Uniform Housing Code.	**Consistent.** As shown in Table 12 of the CWPP, Action Number 2.2 "[e]ncourage[s] structural hardening retrofits for existing structures in the High Fire Hazard Area, consistent with the standards in the most current version of Chapter 7A of the California Building Code or other resources." In addition, the CWPP requires additions or remodels of existing residential properties in the HFHA to comply with the SBFD "High Fire Hazard Landscape Guidelines and Defensible Space Requirements," as shown in Action Number 3.1. As such, the CWPP encourages property improvements to residential uses that exceed minimum standards. Therefore, the CWPP would be consistent with this policy.
Historic Resources Element	
Protection and Enhancement of Historical Resources: Continue to identify, designate, protect, preserve and enhance the City's historical, architectural, and archaeological resources. Ensure Santa Barbara's "sense of place" by preserving and protecting evidence of its historic past, which includes but is not limited to historic buildings, structures, and cultural landscapes such as sites, features, streetscapes, neighborhoods, and landscapes.	**Consistent.** The CWPP identified Designated City Landmarks, Landmark Historic Structures of Merit, and Landmark Designated Structures of Merit within the City that are located within the City's HFHA, shown in Table 11 of the CWPP. The identification of these cultural resources and their relationship with the implementation of the CWPP is further discussed in Section 4.5, Cultural Resources, of this Program Environmental Impact Report (PEIR). As such, implementation of the CWPP is designed to mitigate wildfire risk to the City, including its cultural and historical resources. Therefore, the CWPP would be consistent with this goal.
Neighborhood Historic Preservation: Protect the significant contribution made by Santa Barbara's neighborhood historic resources to the City's charm and sense of historical context.	**Consistent.** The CWPP identifies Designated City Landmarks, Landmark Historic Structures of Merit, and Landmark Designated Structures of Merit within the City that are located within the City's HFHA, shown in Table 11 of the CWPP. The identification of these cultural resources and their relationship with the implementation of the CWPP is further discussed in Section 4.5, Cultural Resources, of this PEIR. Implementation of the CWPP is designed to reduce wildfire risk to the City, including its cultural and historical resources. Therefore, the CWPP would be consistent with this goal.
HR1. Protect Historic and Archaeological Resources. Protect the heritage of the City by preserving, protecting and enhancing historic resources and archaeological resources. Apply available government resources, devices and approaches, such as the measures enumerated in the Land Use Element of this Plan, to facilitate their preservation and protection.	**Consistent.** The CWPP identifies Designated City Landmarks, Landmark Historic Structures of Merit, and Landmark Designated Structures of Merit and as a part of this PEIR also considers archaeological and tribal cultural resources within the City that are located within the CWPP. Measures within the CWPP would reduce or eliminate potential impacts to the resources. The identification of these cultural resources and their relationship with the implementation of the CWPP is further discussed in Section 4.5, Cultural Resources, of this PEIR. The CWPP would be consistent with this policy.

Table 4.9-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Environmental Resources Element	
Climate Change Adaptation: If applicable, incorporate adaptation to climate change in proposals for new development, redevelopment and public infrastructure.	**Consistent.** The CWPP acknowledges the climate change effects related to extending fire seasons with drier vegetation and landscapes as a result of altering temperatures and other conditions exacerbating wildfire risk. Further discussion is outlined below in Table 4.9-3, Climate Action Plan Consistency Analysis. As such, the CWPP plans to achieve climate change adaptation with wildland fire mitigation efforts. Therefore, the CWPP is consistent with this goal.
ER1. Climate Change. As applicable, private development and public facilities and services may be required to incorporate measures to minimize contributions to climate change and to adapt to climate changes anticipated to occur within the life of each project.	**Consistent.** The CWPP consists of policies and actions related to climate change adaptation. Action Number 3.1, for example, requires additions or remodels of existing residential properties in the HFHA to comply with the SBFD "High Fire Hazard Landscape Guidelines and Defensible Space Requirements." As such, through the implementation of the CWPP, the City would require measures to minimize contributions to climate change. Therefore, the proposed CWPP would be consistent with this policy.
ER2. Emergency Response Strategies and Climate Change. The City shall incorporate into its response strategies for emergency preparations, the potential effects of climate change, including from extreme weather, sea level rise, or epidemics, on humans, and the built and natural environments.	**Consistent.** The CWPP acknowledges the climate change effects related to wildfire risk and subsequent emergency response strategies. For example, the CWPP includes the evacuation planning with High and Very High Fire Hazard Severity Zones with interagency coordination. As such, the CWPP plans to achieve climate change adaptation with wildland fire mitigation efforts. Therefore, the CWPP is consistent with this policy.
ER11.1. Tree Protection Ordinance. Update ordinance provisions to protect native oaks and other native or exotic trees. New development shall be sited and designed to preserve existing mature healthy native and non-native trees to the maximum extent feasible.	**Consistent.** The CWPP consists of policies and actions including VMUs. VMUs encompass land outside defensible space on both City-owned and private property where the City would conduct vegetation management in cooperation with the affected landowners. Vegetation management practices require an assessment of biological resources prior to conducting any vegetation management activity. Restoration activities upon completion of vegetation management would also require restoration with native plant species. Further discussion specific on the potential impacts to biological resources, including policies such as Tree Protection Ordinance, can be found in Section 4.4, Biological Resources, of this PEIR. As such, through the implementation of the CWPP, the City would protect trees under the Tree Protection Ordinance. Therefore, the proposed CWPP would be consistent with this policy.

Table 4.9-2. General Plan Consistency Analysis

Goal/Policy	Analysis
ER12. Wildlife, Coastal and Native Plant Habitat Protection and Enhancement. Protect, maintain, and to the extent reasonably possible, expand the City's remaining diverse native plant and wildlife habitats, including ocean, wetland, coastal, creek, foothill, and urban-adapted habitats.	**Consistent.** SBFD personnel would perform a site-specific assessment to determine protection measures that would minimize potential impacts to native plants and habitat. Therefore, the proposed CWPP would be consistent with this policy.
ER12.4. Native Species Habitat Planning. Protect and restore habitat areas for native flora and fauna, and wildlife corridors within the City, including for chaparral, oak woodland, and riparian areas. In particular, provide land use/design guidelines to: a. Require buildings and other elements of the built environment, and landscaping to be designed to enhance the wildlife corridor network as habitat. b. Ensure that the City and new development preserve existing trees within identified wildlife corridors, and promote planting new trees, and installing and maintaining appropriate native landscaping in new developments within or adjacent to important upland wildlife corridors and all stream. Ensure that efforts are made to minimize disturbance to understory vegetation, soils, and any aquatic habitats that are present below the trees in order to provide movement of species that utilize that habitat. c. Ensure that new development and redevelopment projects will not result in a net reduction or loss in size and value of native riparian habitats. d. Increase riparian habitat within the City and/or its sphere of influence by 20 acres or more, and 1 linear mile or more, over the 20 year life of Plan Santa Barbara. Priorities for restoration include perennial reaches of the major streams, reaches of creek on publicly-owned land, and degraded areas of the City's three major creeks.	**Consistent.** The CWPP consists of policies and actions including VMUs, vegetation management techniques, and vegetation management Best Management Practices to mitigate wildfire risk to the City. Further discussion specific on the potential impacts to biological resources can be found in Section 4.4, Biological Resources, of this PEIR. As such, through the implementation of the CWPP, the City would comply with existing policy related to native species habitat. Therefore, the proposed CWPP would be consistent with this policy.
ER21. Creek Setbacks, Protection, and Restoration. Protection and restoration of creeks and their riparian corridors is a priority for improving biological values, water quality, open space and flood control in conjunction with adaptation planning for climate change.	**Consistent.** The CWPP includes specific setbacks for work areas and vegetation maintenance to maintain riparian corridors. Further discussion can be found within Section 4.4, Biological Resources, of this PEIR. As such, the CWPP would not interfere with the protection and restoration of creeks. Therefore, the CWPP would be consistent with this policy.

Table 4.9-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Circulation Element	
C8. Emergency Routes. It shall be high priority to keep all emergency evacuation, response and truck routes free of physical restrictions that may reduce evacuation/response times.	**Consistent.** The CWPP consists of policies and actions such as Action Number 7.3, for example, which ensures that vegetation road clearance is implemented along primary response routes in the HFHA. Further analysis on the CWPP's potential impacts to transportation can be found in Section 4.13, Transportation, of this PEIR. As such, implementation of the CWPP would be consistent with this policy by providing a safe transportation network. Therefore, the CWPP would be consistent with this goal.
Safety Element	
Public Safety: Protect life, property and public well-being from natural and human-caused hazards.	**Consistent.** The CWPP proposes a comprehensive plan that incorporates procedures and programs to mitigate wildfire risks to the City. As such, the CWPP would not interfere with the City's goal of public safety. Therefore, the CWPP is consistent with this goal.
Community Resilience: Promote community resilience through risk reduction, public education and emergency response planning and programs.	**Consistent.** The CWPP includes policies and actions to reduce wildfire risk within the City. These include project objectives to engage with stakeholders and inform and educate about wildfire risk. As such, the CWPP would not interfere with the City's goal of community resilience. Therefore, the CWPP is consistent with this goal.
Hazard Risk Reduction: Use the development review process to minimize public and private risk and minimize exposure of people and property to risks of damage or injury caused by natural and man-made hazards.	**Consistent.** The CWPP proposes a comprehensive plan that incorporates procedures and programs to mitigate wildfire risks to the City. As such, the CWPP would not interfere with the City's goal of hazard risk reduction. Therefore, the CWPP is consistent with this goal.
S1. Emergency Response Plans. Work cooperatively with federal, state, county, and other local jurisdictions to promote a high level of readiness to respond to emergencies, to update emergency response plans as needed, and to avoid and reduce the effects of disasters and emergencies on the City and its residents.	**Consistent.** The CWPP includes discussion of interagency coordination between police- and fire-protection service agencies such as the Santa Barbara County Sheriff's Department, the Santa Barbara Police Department, the County Office of Emergency Services, and the SBFD. Through supportive measures, the interagency Task Force formed would develop an evacuation preplan that outlines the SBFD response routes, probable public evacuation routes, traffic control points, and staging areas, as shown in Figure 8, Wildfire Evacuation Preplanning Blocks, of the CWPP. Furthermore, the CWPP recommends various policies related to evacuation outlined in Table 15 of the CWPP. As such, the CWPP would be consistent with the City's policy related to emergency response plans.
S5. Public Education. Promote public education on emergency and disaster preparedness to enhance individual and overall community resilience.	**Consistent.** The CWPP includes policies and actions to reduce wildfire risk within the City. These include project objectives to engage with stakeholders and inform and educate about wildfire risk. As such, the CWPP would be consistent with the City's policy of public education.

Table 4.9-2. General Plan Consistency Analysis

Goal/Policy	Analysis
S33. Fire Hazard Programs. The City shall continue to implement programs that reduce the risk of wildland structure fires, and that minimize the short- and long-term effects of fires. a. Wildfire Risk Reduction. Continue to implement risk reduction measures identified by the Wildland Fire Plan, such as vegetation fuels management and vegetation chipping. b. Limit Residential Development in High Fire Hazard Areas. Land use map designation limit residential density in High Fire Hazard Areas. c. Wildland Fire Suppression Assessment District. Continue to implement wildfire risk reduction program facilitated by the Wildland Fire Suppression Assessment District, such as vegetation management and homeowner education and assistance programs. d. Coordination. Continue to coordinate fire risk prevention, management, response, recovery, and public education programs with the County of Santa Barbara, Montecito Fire Protection District, U.S. Forest Service, California Emergency Management Agency, CAL FIRE, Federal Emergency Management Agency and other agencies.	**Consistent.** The proposed CWPP identifies a series of goals and recommended action items to be implemented by the City that serve to minimize wildfire impacts. Furthermore, the CWPP proposes modifications to existing VMUs to reduce wildfire risk, recommend adoption of amendments to existing codes and standards relating to residential development, discuss implementation and funding strategies through Wildland Fire Suppression Assessment Districts, and foster coordination between police- and fire-protection services. As such, the CWPP continues to implement programs designed to reduce the risk of wildland fires. Therefore, the CWPP is consistent with this policy.
S34. Evacuation Routes. Development projects located in the Extreme Foothill and Foothill High Fire Hazard Zones shall be evaluated to determine if the project would have the potential to substantially affect emergency evacuation. A project would result in a substantial effect on evacuation if it would result in either the following conditions: a. Physically interfere with evacuation capabilities. A project could physically interfere with evacuation capabilities if it would reduce evacuation capacity by substantially decreasing g the width of road or other access way, or result in the closure of a road or access way. b. Add substantial additional evacuees to routes with limited capacity. A project could substantially reduce evacuation capacity if it would add a considerable amount of traffic to probable evacuation routes that do not meet current Fire Department roadway or access standards; or add a considerable amount of traffic to probably evacuation routes in relation to roadway capacity and evacuation traffic volumes reasonably expected to be generated by existing development in the project area.	**Consistent.** The CWPP proposes policies related to evacuation routes. The proposed CWPP would not affect emergency evacuation and in practice, would enhance evacuation policies to facilitate emergency access planning. As such, the CWPP is consistent with this policy.

Table 4.9-2. General Plan Consistency Analysis

Goal/Policy	Analysis
S37. Fire Hazard Reduction Design Requirements. Project designs shall adequately address fire hazard, providing for appropriate site layout; building design and materials; fire detection and suppression equipment; landscaping and maintenance; road access and fire vehicle turnaround; road capacity for evacuation; and water supply.	**Consistent.** The proposed CWPP identifies a series of goals and recommended action items to be implemented by the City that serve to minimize wildfire impacts. CWPP Appendix A, Wildland Fire Evacuation Procedure Analysis Recommendations, and Appendix B, Access and Hydrant Standards, address fire hazard reduction design requirements for the City. As such, the CWPP would be consistent with the City's policy.
S39. Defensive Space. Require that defensible space be provided around existing and proposed development projects located in high fire hazard areas in accordance with the Wildland Fire Plan, or as recommended by the Fire Department.	**Consistent.** The CWPP recommends development standards, such as defensible space. Defensible space is an area around a building or structure in which vegetation, debris, and other types of combustible fuels have been treated, cleared, or reduced to slow the spread of fire to and from the building. As such, the CWPP applies directly with the City's policy of reducing wildland fire risk through mitigation efforts like defensible space. Therefore, the CWPP is consistent with this policy.
S42. Post Fire Recovery. Rebuilding that occurs in designated fire hazard areas shall incorporate all applicable design measures that reduce the risk of future fire-related impacts. Expedited project review and permitting shall occur as determined by the Community Development Director.	**Consistent.** The CWPP, as described in Table 14 of the CWPP, identified Policy 6 for post-fire rehabilitation guidelines. The subsequent policies include the development of appropriate guidelines for property owners related to flooding and soil erosion; the development of a public education strategy; and the assurance for the guidelines to be in collaboration with appropriate local, state, and federal agencies. As such, the CWPP applies directly to this policy, and, therefore, is consistent.
S43. Building Code Updates. Periodically adopt amendments or updated provisions of the California Building Code to implement new building design measures that reduce fire risks.	**Consistent.** As shown in Table 12 of the CWPP, Action Number 2.2 "[e]ncourage[s] structural hardening retrofits for existing structures in the High Fire Hazard Area, consistent with the standards in the most current version of Chapter 7A of the California Building Code or other resources." As such, the CWPP encourages building code updates that exceed minimum standards to reduce fire risk. Therefore, the CWPP would be consistent with this policy.
S44. Public Water System Improvements for Fire Fighting. Continue to periodically evaluate the potential for additional water system improvements to assist in emergency preparedness and incorporate feasible measures into the City Capital Improvements Plan.	**Consistent.** Action Number 5.7 of the CWPP states, "[a]s appropriate, evaluate the opportunity to incorporate projects and actions identified in this CWPP into the City's Hazard Mitigation Plan and Capital Improvement Program." As such, the CWPP facilitates potential future improvements for the City, such as capital improvements to the public water system. Therefore, the CWPP is consistent with this policy.
S45. Private Water Supplies for Fire Fighting. Encourage and assist homeowners in High Fire Hazard Areas to install their own emergency water supplies to support fire-fighting operations.	**Consistent.** As described in Chapter 3, Project Description, of this PEIR, a portion of the Extreme Foothill Zone/proposed VHFHSZ is not connected to the City water system. This area has additional requirements included in the City's Municipal Ordinance (No. 5920). Existing regulation is supported by the CWPP to further recommend improvements to residential uses within the HFHA. Therefore, the CWPP would be consistent with this policy.

As described above, the CWPP is consistent with applicable goals and policies outlined in the General Plan.

Santa Barbara Climate Action Plan

Table 4.9-3 outlines the applicable policies identified in the CAP (City of Santa Barbara 2012a) and the proposed CWPP's consistency with each of these policies. As shown below, the CWPP would be consistent with applicable goals and policies of the CAP. For those CAP goals and policies that do not specifically pertain to the CWPP, the CWPP would not impede the City's ability to meet those goals and policies.

Table 4.9-3. Climate Action Plan Consistency Analysis

Goal/Policy	Analysis
Future Planning for Adaptation	
Wildlife, flooding, and water quality measures	
76. Limit residential development in high fire hazard areas (GP policy LG6.5; 2015). Land use map designations limit residential density in High Fire Hazard Areas. Further limit new residential development in the High Fire Hazard Areas by offering incentives and/or an option for property owners to transfer development rights from the High Fire Hazard Area to the High Density residential land use designations.	**Consistent.** The proposed project would rename the existing HFHA to be consistent with the CAL FIRE terminology and in certain areas, expand the HFHA. As discussed above, the addition of new HFHA could provide owner opportunities to transfer development rights to higher density residential land use designations. Therefore, the CWPP would be consistent with this policy.
77. Fire prevention and creek restoration (GP policy PS13; target 2015). Coordinate fire prevention and creek protection planning through the development of a set of best practices within and adjacent to creek corridors or other habitat.	**Consistent.** The CWPP consists of policies and actions including VMUs, vegetation management techniques (via manual, mechanical, biological, and prescribed fire methods), and vegetation management Best Management Practices to further reduce wildfire risk with the City. Implementation of the CWPP would involve various City geographic features, including creeks. Further discussion specific on the potential impacts to biological resources can be found in Section 4.4, Biological Resources, of this PEIR. As such, the CWPP's policies direct corresponds to fire prevention and creek protection. Therefore, the proposed CWPP would be consistent with this policy.

Implementation of the CWPP, as shown to be consistent with the goals and policies of the CAP, would reduce potential environmental impacts associated with a conflict with any land use plan, policy, or regulation adopted. Based on Table 4.9-3 and the reasons described above, the proposed CWPP would be consistent with the CAP for the purposes of avoiding or mitigating environmental effect.

City of Santa Barbara Local Coastal Program

Coastal Land Use Plan

Table 4.9-4 outlines the applicable policies identified in the Coastal LUP (City of Santa Barbara 2019) and the proposed CWPP's consistency with each of these policies. As shown below, the CWPP would be consistent with applicable goals and policies of the Coastal LUP. For those Coastal LUP goals and policies that do not specifically pertain to the CWPP, the CWPP would not impede the City's ability to meet those goals and policies.

Table 4.9-4. City of Santa Barbara Local Coastal Program/Coastal Land Use Plan Consistency Analysis

Goal/Policy	Analysis
Coastal Hazards Policies	
City Planning Efforts and Programs	
Policy 5.1-4 Fire Hazard Risk Reduction Programs. Continue to implement programs that reduce the risk of wildland and structure fires, and that minimize the short- and long-term effects of fires consistent with the policies of this Coastal LUP. a. Wildfire Risk Reduction. Continue to implement risk reduction measures such as vegetation fuels management and vegetation chipping through City operations, inter-agency programs, and programs for private property. b. Limit Residential Development in High Fire Hazard Areas. Continue land use map designations that limit residential density in High Fire Hazard Areas. c. Wildland Fire Suppression Assessment District. Continue to implement wildfire risk reduction programs facilitated by the Wildland Fire Suppression Assessment District, such as vegetation management, and homeowner education and assistance programs. d. Coordination. Continue to coordinate fire risk prevention, management, response, recovery, and public education programs with the County of Santa Barbara, Montecito Fire Protection District, U.S. Forest Service, California Emergency Management Agency, CAL FIRE, Federal Emergency Management Agency, and other agencies	**Consistent.** The proposed CWPP identifies a series of goals and recommended action items to be implemented by the City that serve to minimize wildfire impacts. Furthermore, the CWPP proposes modifications to existing VMUs to reduce wildfire risk, recommend adoption of amendments to existing codes and standards relating to residential development, discuss implementation and funding strategies through Wildland Fire Suppression Assessment Districts, and foster coordination between police- and fire-protection services. As such, the CWPP continues to implement programs designed to reduce the risk of wildland fires. Therefore, the CWPP is consistent with this policy.
Policy 5.1-5 Evacuation Route Evaluation. Periodically evaluate the effectiveness of existing and proposed fire emergency evacuation routes, and develop standards or conditions that can be applied to projects to assure that adequate evacuation routes are provided and maintained, where feasible.	**Consistent.** The CWPP outlines interagency coordination between police- and fire-protection service agencies. Through the development of the CWPP, the SBFD developed an evacuation preplan, which outlines the response routes, probable public evacuation routes, traffic control points, and staging areas, as shown in Figure 8, Wildfire Evacuation Preplanning Blocks, of the CWPP. Potential future impacts associated with the CWPP are analyzed in Section 4.7, Hazards and Hazardous Materials, of this PEIR. The CWPP would not interfere with this policy. As such, the CWPP would be consistent with the City's policy related to emergency response plans.

Table 4.9-4. City of Santa Barbara Local Coastal Program/Coastal Land Use Plan Consistency Analysis

Goal/Policy	Analysis
Coastal Hazards Policies	
City Planning Efforts and Programs	
Policy 5.1-6 Public Water System Improvements for Fire Fighting. Continue to periodically evaluate the potential for additional water system improvements to assist in emergency preparedness and incorporate feasible measures that are consistent with the policies of this Coastal LUP into the City Capital Improvement Plan and development standards and conditions.	**Consistent.** Action Number 5.7 of the CWPP describes "[a]s appropriate, evaluate the opportunity to incorporate projects and actions identified in this CWPP into the City's Hazard Mitigation Plan and Capital Improvement Program." As such, the CWPP facilitates potential future improvements for the City, such as capital improvements to the public water system. Therefore, the CWPP is consistent with this policy.
Policy 5.1-7 Private Water Supplies for Fire Fighting. Encourage and assist homeowners in High Fire Hazard Areas to install their own emergency water supplies to support firefighting operations provided that procurement of such supplies and related development is consistent with the policies of this Coastal LUP.	**Consistent.** As described in Chapter 3, Project Description, of this PEIR, a portion of the Extreme Foothill Zone/proposed VHFHSZ is not connected to the City water system. This area has additional requirements included in the City's Municipal Ordinance (No. 5920). Existing regulation is supported by the CWPP to further recommend improvements to residential uses within the HFHA. Therefore, the CWPP would be consistent with this policy.
Policy 5.1-26 Avoid or Minimize the Effects of High Fire Hazard. New development and substantial redevelopment shall provide appropriate site layout, structure design and materials, fire detection and suppression equipment, landscaping and maintenance including defensible space requirement, road access and fire vehicle turnaround, road capacity for evacuation (if new roads are proposed), and water supply to avoid or minimize risks to life and property. Any requirements for fire protection shall be considered as part of any Coastal Development Permit application review to ensure that adverse impacts to coastal resources are avoided or minimized consistent with the policies of this Coastal LUP.	**Consistent.** The proposed CWPP identifies a series of goals and recommended action items to be implemented by the City that serve to minimize wildfire impacts. CWPP Appendix A, Wildland Fire Evacuation Procedure Analysis Recommendations, and Appendix B, Access and Hydrant Standards, address fire hazard reduction design requirements for the City to implement. As such, the CWPP would be consistent with the City's policy.
Policy 5.1-27 Defensible Space Requirements. Existing structures, new development, and substantial redevelopment in high fire hazard areas shall provide defensible space as required by the Fire Department. Within defensible space vegetation (native or otherwise) must be maintained to create an effective fuel break by thinning dense vegetation and removing dry brush, flammable vegetation, and combustible growth. Fuel modification and brush clearance techniques shall minimize impacts to native vegetation, protect ESHAs consistent with the policies of Chapter 4.1 Biological Resources, and minimize erosion, runoff, and sedimentation, to the maximum feasible extent.	**Consistent.** The CWPP recommends development standards, such as defensible space. Defensible space is an area around a building or structure in which vegetation, debris, and other types of combustible fuels have been treated, cleared, or reduced to slow the spread of fire to and from the building. Further discussion specific on the potential impacts to biological resources can be found in Section 4.4, Biological Resources, of this PEIR. As such, the CWPP applies directly with the City's policy of reducing wildland fire risk through mitigation efforts like defensible space. Therefore, the CWPP is consistent with this policy.

Implementation of the CWPP, as shown to be consistent with the goals and policies of the Coastal LUP and would reduce potential environmental impacts associated with a conflict with any land use plan, policy, or regulation adopted. Based on Table 4.9-4 and the reasons described above, the proposed CWPP would be consistent with the Coastal LUP for the purposes of avoiding or mitigating environmental effect.

City of Santa Barbara Zoning Ordinance

The proposed CWPP does not involve the change of zoning for any parcel within the City.

As shown above, the proposed CWPP would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project site adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant. No mitigation is required.

4.9.5 Mitigation Measures

The proposed project would not result in significant impacts; therefore, no mitigation is required.

4.9.6 Level of Significance After Mitigation

Land use and planning impacts were found to be less than significant. Consequently, mitigation measures are neither required nor recommended

4.9.7 Cumulative Impacts

Cumulative land use impacts would occur if any of the activities conducted under the CWPP results in incompatible land uses or results in land uses that are inconsistent with adopted land use plans when combined with other land use plans. Given the proposed CWPP does not result in changes to land use designations or zoning, implementation of the CWPP would not introduce incompatible land uses. Furthermore, as shown above, the CWPP is consistent with applicable goals and policies. The CWPP would result in reduction of wildfire risk within the City through modifications to the HFHA, VMUs, and vegetation management methods. As such, cumulative impacts would be less than significant.

4.9.8 References

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4.10 Noise

This section provides definitions for acoustic terminology used in the assessment of noise, describes the existing noise conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Community Wildfire Protection Plan (CWPP or proposed project).

4.10.1 Acoustic Terminology and Existing Conditions

Characteristics of Noise

Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Frequency, or pitch, is a physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 20,000 Hz. The human ear is more sensitive to middle and high frequencies, especially when the noise levels are quieter. To accommodate for this phenomenon, a weighting system to evaluate how loud a noise level is to a human was developed, g called "A" weighting is typically used for quieter noise levels which de-emphasizes the low frequency components of the sound in a manner similar to the response of a human ear. This A-weighted sound level is called the "noise level" and is referenced in units of dBA. Table 4.10-1, Typical A-Weighted Sound Levels from Outdoor and Indoor Sources, shows typical outdoor and indoor noise sources and their associated noise levels in A-weighted decibels.

Table 4.10-1. Typical A-Weighted Sound Levels from Outdoor and Indoor Sources

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: EPA 1971.

Since sound is measured on a logarithmic scale, a doubling of sound energy results in a 3 dBA increase in the noise level. Changes in a community noise level of less than 3 dBA are not typically noticed by the human ear. Changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA increase is readily noticeable (EPA 1971). The human ear perceives a 10 dBA increase in sound level as a doubling of the sound level (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear).

An individual's noise exposure occurs over a period of time; however, noise level is a measure of noise at a given instant in time. Community noise sources vary continuously, being the product of many noise sources at various distances, all of which constitute a relatively stable background or ambient noise environment. The background, or ambient, noise level gradually changes throughout a typical day, corresponding to distant noise sources, such as traffic volume, as well as changes in atmospheric conditions.

Noise levels are generally higher during the daytime and early evening when traffic (including airplanes), commercial, and industrial activity is the greatest. However, noise sources experienced during nighttime hours when background levels are generally lower can be potentially more conspicuous and irritating to the receiver. In order to evaluate noise in a way that considers periodic fluctuations experienced throughout the day and night, a concept termed "community noise equivalent level" (CNEL) was developed, wherein noise measurements are weighted, added, and averaged over a 24-hour period to reflect magnitude, duration, frequency, and time of occurrence. For the CNEL weighted average, 5 dB is added to the hourly average noise levels occurring between 7:00 p.m. and 10:00 p.m., while 10 dB is added to each of the hourly average noise levels occurring between 10:00 p.m. and 7:00 a.m. A complete definition of CNEL and other terminology used to describe noise is provided in Table 4.10-2.

Exterior Noise Distance Attenuation

Noise sources are classified in two forms: (1) point sources, such as stationary equipment or a group of construction vehicles and equipment working within a spatially limited area at a given time, and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites and at a rate of 7.5 dBA for each doubling of distance from source to receptor at acoustically "soft" sites. Sound generated by a line source (i.e., a roadway) typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling distance, for hard and soft sites, respectively (Caltrans 2013). For the purpose of sound attenuation discussion, a "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete ground surfaces, as well as very hard-packed soils. An acoustically "soft" or absorptive site is characteristic of unpaved loose soil or vegetated ground. Sound levels can also be attenuated by man-made or natural barriers.

Table 4.10-2. Definitions of Acoustical Terminology

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of two like quantities
Sound Pressure Level (SPL)	10 times the logarithm to the base 10 of the ratio between the square of the sound to the square of the reference sound pressure of 20 µPascals. Sound pressure level is the quantity that is directly measured by a sound level meter and expressed in dB.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz.

Table 4.10-2. Definitions of Acoustical Terminology

Term	Definition
A-Weighted Sound Level (dBA)	SPL in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de- emphasizes low and high frequency components of frequency components of sound in a manner similar to the frequency response of the human ear and correlates well with subjective response to sound. All sound levels in this report are A-weighted.
Noise	Unwanted sound.
Equivalent Sound Level (L_{eq})	The sound level corresponding to a steady state sound level and containing the same total energy as a time varying signal over a given sample period. L_{eq} is designed to average all of the loud and quiet sound levels occurring over a specific time period. Also known as the "Average Sound Level." For this CEQA evaluation, L_{eq} refers to a one-hour period unless otherwise stated.
L_{max}, L_{min}	The maximum and minimum A-weighted sound level during the measurement period.
L01, L10, L50, L90	The A-weighted sound levels that are exceeded l%, l0%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to the hourly Leq levels measured during the night between 10 pm and 7 am.
Community Noise Equivalent Level (CNEL)	The average A-weighted sound level during a 24-hour day, obtained after addition of 5 decibels to the hourly Leq levels in the evening from 7 p.m. to 10 p.m. and after addition of 10 decibels to the hourly Leq levels during the night between 10 p.m. and 7 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Impulsive Noise	Noise loud enough to disrupt normal activities and usually lasting less than one second.

Noise-Sensitive Land Uses

Noise-sensitive land uses include areas where an excessive amount of noise would interfere with normal activities. Primary noise-sensitive land uses include residential uses, public and private educational facilities, hospitals, convalescent homes, hotels/motels, daycare facilities, and passive recreational parks. Sleep disturbance is often a critical concern for noise-sensitive land uses.

Fundamentals of Vibration

Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. The response of humans to vibration is very complex. However, it is generally accepted that human response is best approximated by the vibration velocity level associated with the vibration occurrence.

Heavy equipment operation, including stationary equipment that produces substantial oscillation or construction equipment that causes percussive action against the ground surface, may be perceived by building occupants as perceptible vibration. It is also common for ground-borne vibration to cause windows, pictures on walls, or items on shelves to rattle. Although the perceived vibration from such equipment operation can be intrusive to building occupants, the vibration is seldom of sufficient magnitude to cause even minor cosmetic damage to buildings.

When evaluating human response, ground-borne vibration is usually expressed in terms of root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. As for sound, it is common to express vibration amplitudes in terms of decibels defined as:

$$L_v = 20 \log \left(\frac{v_{rms}}{v_{ref}} \right)$$

where vrms is the RMS vibration velocity amplitude in inches/second and vref is the decibel reference of $1x10^{-6}$ inches/second.

To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. The vibration threshold of perception for most people is around 65 VdB (which is equivalent to 0.0018 in/sec RMS). Vibration levels in the 70 to 75 VdB range are often noticeable but generally deemed acceptable, and levels in excess of 80 VdB are often considered unacceptable (FTA 2018).

Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass, expressed as inches/second or in/sec). Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving and soil compacting, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used. A conservative maximum vibration level standard is 0.2 in/sec PPV for the prevention of structural damage to fragile buildings (i.e., historic structures), and 0.5 in/sec PPV for prevention of damage to conventional contemporary buildings (FTA 2018).

Vibration-Sensitive Land Uses

Vibration can disrupt sensitive land uses by causing movement of buildings, rattling of windows and items inside buildings, rumbling sounds, and even property damage in extreme instances. Vibration-sensitive land uses include buildings where vibration can interfere with operations within the building, such as vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations. The degree of sensitivity to vibration depends on the specific equipment that would be affected by the vibration. Residential uses are also sensitive to excessive levels of vibration of either a regular or an intermittent nature.

Vibration Sources

In the City, the primary sources of vibration are associated with major construction projects, as well as with rail and truck traffic. Vibration from heavy equipment use during construction or earthmoving activities generally dissipates over a fairly short distance, with groundborne vibration levels typically becoming imperceptible within 200 feet of the construction equipment. Vibration caused by rail may be perceptible in areas adjacent to railroad lines with passage of each train. Heavy trucks hitting discontinuities in the pavement can also cause perceptible vibration. However, under normal conditions with well-maintained asphalt, vibration levels are usually not perceptible beyond the road right-of-way.

Existing Noise and Vibration Levels

The primary source of ambient noise in the City of Santa Barbara is vehicle traffic noise along Highway 101 and on major local streets. Figure 12.1 Existing Noise Contours from the 2010 Santa Barbara General Plan Environmental

Impact Report (EIR) indicates that noise levels up to 75 dBA CNEL are associated with the Highway 101/Union Pacific corridor; noise levels up to 70 dBA CNEL envelop Upper State, Los Positas Road, Foothill Road (west of Mission Canyon), and Cabrillo Boulevard; and, major streets in the downtown area have an associated narrow band of noise up to 65 dBA CNEL (City of Santa Barbara 2010). Portions of the City outside these roadway corridors have noise levels that fall below 65 dBA CNEL, likely reduced to the 45–50 dBA CNEL range for open spaces and areas with low density development. Based on vibration levels documented for mixed rail (carrying passenger and freight trains) vibration levels along the Union Pacific corridor may reach up to 90 VdB within 50 feet of the rail, and vibration levels up to 70 VdB may exist within 50 feet of the Highway 101 corridor (FTA 2018).

4.10.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Transit Administration Standards

Although the FTA standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) are routinely used for projects proposed by local jurisdictions. Particularly with respect to the construction of major projects, the FTA has published guidelines for assessing the impacts of ground-borne vibration associated with rail project construction, which have been applied by other authorities to additional types of construction projects. The FTA uses a damage threshold of 0.2 inch/second peak particle velocity (PPV) for sensitive structures (i.e., historic structures), and 0.5 inch/second PPV for contemporary conventional construction.

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency has indicated that outdoor residential noise exposure of 55 to 65 dBA is acceptable when analyzing land use compatibility (EPA 1971); however, these guidelines are not regulatory. With regard to noise exposure and workers, the federal Occupational Safety and Health Administration (OSHA) establishes regulations to safeguard the hearing of workers exposed to occupational noise (29 CFR 1910.95). OSHA specifies that sustained noise over 85 dBA (8-hour time-weighted average) can be a threat to workers' hearing, and if worker exposure exceeds this amount, the employer shall develop and implement a monitoring plan (29 CFR 1910.95(d)(1)).

State

California Noise Control Act

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also reports a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise.

Local

City of Santa Barbara General Plan - Environmental Resources Management Element

Guidance for appropriate long-term community noise exposure levels for various land uses are established in the General Plan Noise Element Land Use Compatibility Guidelines. According to the Noise Element, the normally acceptable limit for exterior noise exposure in residential zones (including single-family, duplex, and mobile home) is 60 dBA CNEL (City of Santa Barbara 2013). For commercial facilities, which are considered more tolerant of high noise levels, the normally acceptable exterior noise exposure limit is 70 dBA CNEL. This guidance applies to community noise levels that are permanent in nature, rather than to temporary noise sources or activities (such as construction or landscape maintenance/vegetation management).

Santa Barbara Municipal Code (Chapter 9.16) - Noise Ordinance

The Noise Ordinance is intended to control unnecessary, excessive, and annoying noise. This ordinance defines terms, provides noise level limits for stationary noise sources, and establishes schedule restrictions for noise-generating activities such as construction.

Construction Work at Night Prohibited

Santa Barbara Municipal Code Section 9.16.040 stipulates it is unlawful for any person, between the hours of 8:00 p.m. of any day and 7:00 a.m. of the following day to erect, construct, demolish, excavate for, alter or repair any building or structure unless a special permit has been applied for and granted by the Chief Building Official. In granting such special permit, the Chief Building Official shall consider if construction noise in the vicinity of the proposed work site would be less objectionable at night than during daytime because of different population levels or different neighboring activities; if obstruction and interference with traffic, particularly on streets of major importance, would be less objectionable at night than during daytime; if the kind of work to be performed emits noises at such a low level as to not cause significant disturbance in the vicinity of the work site; if the neighborhood of the proposed work site is primarily residential in character wherein sleep could be disturbed; if great economic hardship would occur if the work were spread over a longer time; if the work will abate or prevent hazard to life or property; or if the proposed night work is in the general public interest. The Chief Building Official shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise emissions, as they deem to be required in the public interest. This section shall not be applicable to activities of public or private utilities when restoring utility service following a public calamity or when doing work required to protect persons or property from an imminent exposure to danger.

Noise Affecting Parcels Zoned or Used for Residential Purposes

Section 9.16.070 of the Santa Barbara Municipal Code specifies that mechanical equipment other than vehicles and equipment that are operated by electricity obtained from an electricity utility company shall not be used outside before 8:00 a.m. or after 7:00 p.m. on Saturday, Sunday or holidays, or before 7:00 a.m. or after 7:00 p.m. Monday through Friday.

Vibration

The Santa Barbara Municipal Code does not regulate vibration levels in the community. For this California Environmental Quality Act (CEQA) environmental review, the adopted significance thresholds of the FTA are applied.

4.10.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to population and housing are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to noise would occur if the project:

a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
b) Result in generation of excessive groundborne vibration or groundborne noise levels.
c) Siting of a land use in an area with noise levels exceeding City General Plan noise policies and land use compatibility guidelines?
d) For a project located within the vicinity of a private airstrip or the SBCAG Airport Land Use Plan/Airport Influence Area, would the project expose people residing or working in the project area to excessive noise levels?

The CWPP Initial Study (Appendix A) determined implementation of the proposed project would result in less than significant impacts with regard to thresholds c) and d) above. Therefore, these topics have been eliminated from further analysis.

4.10.4 Impacts Analysis

NOI-1 Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Permanent Increases in Ambient Noise

Permanent increases in ambient noise levels, typically described using the CNEL metric, are generally associated with the introduction of new urban development such as residences, commercial or institutional buildings, or new or expanded roadways. Noise from such development may be generated by stationary mechanical equipment, by on-site activities or operations, and by off-site traffic noise increases. The proposed project does not include, nor would it directly induce, new urban development. Therefore, permanent increases in ambient noise levels would not result from project implementation.

Temporary Increases in Ambient Noise

Seasonal activities associated with vegetation (fuels) management would generate noise that could potentially impact existing noise-sensitive land uses (i.e., residences).

The CWPP proposes to include the following Best Management Practice to minimize potential noise effects from vegetation maintenance.

- Work would include weekdays between the hours of 8:00 a.m. to 5:00 p.m. No work will be completed on weekends or designated holidays unless fire conditions (e.g., red flag warning) dictate immediate action.

The noise-generating characteristics of each of the major components of the project are discussed below.

The City proposes to consolidate and re-name the High Fire Hazard Area (HFHA) following the California Department of Forestry and Fire Protection's (CAL FIRE's) Very High Fire Hazard Severity Zone (VHFHSZ) update; in addition to the re-naming, certain changes to the boundaries of these HFHA zones are proposed. The proposed re-naming would merge the Foothill and Extreme Foothill Zones and rename this as the Very High Fire Hazard Severity Zone (VHFHSZ), while also incorporating additional area of approximately 520.22 acres comprising the Vegetation Management Units (VMUs) within the VHFHSZ. The existing Coastal and Coastal Interior Zones would be merged and renamed as the High Fire Hazard Severity Zone (HFHSZ), while also incorporating an additional area of approximately 356.32 acres comprising the vegetation management units within the HFHSZ. In so far as vegetation management requirements within these zones is mandatory, the increases in the area would potentially result in noise from vegetation management activities that could impact existing residences. More detailed discussion of vegetation management noise impacts is presented below. While expansion of the HFHA and VMUs would increase the annual amount of time vegetation management activities are conducted, and therefore increase the frequency of temporary noise generation episodes, neither the intensity nor the character of the temporary noise impacts would be altered with the expansions.

The City proposes to modify the requirements and protocols governing vegetation management. The following sections summarize the potential changes to vegetation management that could have related noise effects.

Defensible Space

The CWPP proposes modifications to the defensible space distances from buildings and structures. The actual vegetation management methods within the defensible space would generally remain the same as discussed in the 2004 Wildland Fire Plan and Program EIR (PEIR). Under existing requirements, the width of defensible space around buildings ranges from 30 feet to 150 feet, while the new requirements could impose a width between 30 and 300 feet; the added width of defensible space areas would increase the duration of time on an annual basis for vegetation management, as well as potentially introducing maintenance activities closer to existing residences. Additional maintenance activities would tend to be located at distances greater than 30 feet from existing homes (the minimum clearance width now required), but use of powered equipment for the maintenance activities could result in temporary noise level increases at existing homes within or adjacent to the fire hazard zones. Noise exposure levels from vegetation maintenance activities are discussed in greater detail under the vegetation management methods section (below), but vegetation maintenance activities within expanded defensible space areas would result in a **less than significant noise impact**.

Road Clearance

The Santa Barbara Municipal Code requires property owners to clear flammable vegetation and combustible growth horizontally and vertically (i.e., overhanging vegetation) on the portions of their property that abut highways and private streets ordinarily used for vehicle traffic. There are no proposed changes to the required vegetation road clearance widths. Road clearance activities would therefore generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR, and **no new noise effects would occur**.

Community Fuels Treatment Network

The CWPP proposes to maintain the 2004 Wildland Fire Plan Community Fuels Treatment Network (CFTN) located along the northern portion of the existing Extreme Foothill Zone/proposed VHFHSZ, with no alterations to the existing boundaries. The CFTN encompasses 242 acres and provides a break between continuous stands of chaparral fuel outside the City boundary and the City area. Fuels management treatments in this area are focused outside of 150-foot defensible space areas for structures. Proposed vegetation management activities within the CFTN would generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR. Since no changes to the CFTN boundaries are proposed, and because the maintenance methods would remain the same as those considered in the 2004 EIR, **no new noise effects would occur.**

Neighboring Jurisdiction Vegetation Management Areas

Both the Montecito Fire Protection District (MFPD) and the Santa Barbara County Fire Department (SBCFD) have fuel mitigation strategies independent of the Santa Barbara Fire Department (SBFD), to reduce the potential or slow the progress of wildfires. The SBFD coordinates vegetation management efforts with MFPD and SBCFD in areas adjacent to the City, where feasible; the CWPP proposes no alterations to boundaries or activities involved with interjurisdictional vegetation management activities. Proposed vegetation management activities performed by the SBFD would therefore generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR; **no new noise effects would occur**.

The proposed project would include recurring maintenance and fuels management activities. The vegetation management techniques can be classified into four categories: manual (hand pulling, cutting, planting), mechanical (mowing, masticating, felling, yarding), biological (grazing), and prescribed fire (burn piles, broadcast burn).

The SBFD has consistently implemented the vegetation management strategies identified in the 2004 Wildland Fire Plan. Vegetation management work will occur during the period August 1 through April 1. Prescribed burning would only occur outside the designated fire season, which varies from year to year, but is typically June through October. Hence, prescribed burns would typically occur in the period November through May. Table 4.10-3 provides a summary of available data related to typical noise-generating maintenance equipment with corresponding noise levels, anticipated to complete vegetation management activities.

Table 4.10-3. Noise Generating Equipment Used for Vegetation Management

Equipment	Noise Level (dB) At 50 feet
Manual (Hand Tools) Vegetation Management Techniques	
Line trimmers	70
Chainsaws	85
Weed whips	70
Mowers	87
Pickup truck	75
Small dump truck	77
Mechanical Vegetation Management Techniques	
Masticators	87
Tractors	84
Chippers	75

Table 4.10-3. Noise Generating Equipment Used for Vegetation Management

Equipment	Noise Level (dB) At 50 feet
Skip loader	79
Biological Vegetation Management Techniques	
Grazing livestock	34
Prescribed Burn Vegetation Management Techniques	
Fire engine	79
Tractors	84

Under the proposed CWPP, homeowners would continue to have responsibility for vegetation management activities within the required defensible space area around their homes. It is anticipated these activities would involve the use of hand tools and small equipment, with noise generation similar to, or the same as, routine landscape maintenance (i.e., lawn mowing, leaf blowing, hedge trimming, tree trimming). Such activities are normal for residential properties, and increasing the width of required defensible space would likely result only in a once annual effort of several days where more intensive use of powered equipment could occur to achieve the defensible space objectives. Maintenance of a wider defensible space by homeowners would therefore result in **less than significant temporary noise impacts.**

As indicated in Table 4.10-3, the sound level at 50 feet for various anticipated equipment or activity ranges from 34 to 87 dBA. With windows closed, typical residences achieve an outdoor to indoor sound attenuation (reduction) of 25 dB (Caltrans 2013). Consequently, the loudest construction noise level experienced indoors at an existing residence during vegetation management activities at 50 feet outside the defensible space areas would be approximately 62 dBA. This noise level would be approximately equivalent to normal speech, and while it could be distracting, would not interfere with typical daytime activities being carried out in a residential environment. In addition, activities would not be anticipated to occur within 50 feet of a given residence for more than 2 to 3 days per year. Consequently, vegetation management activities under the proposed project would result in a **less than significant temporary noise impact**.

NOI-2 Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Permanent Generation of Groundborne Vibration

Permanent sources of groundborne vibration are generally associated with the introduction of new commercial or institutional buildings that include very heavy equipment with rotating components (such as industrial compressors), or new or expanded railways or roadways. The proposed project does not include, nor would it directly induce, new urban development or the creation of new major roadways or a rail line. Therefore, permanent new vibration sources levels would not result from project implementation.

Temporary Generation of Groundborne Vibration

Seasonal activities associated with vegetation (fuels) management could generate vibration that could potentially impact existing vibration-sensitive land uses (i.e., residences). The vibration generation characteristics of each of the major components of the project are discussed below.

Proposed Modifications to the High Fire Hazard Area/Vegetation Management Units

The CWPP proposes to merge the Foothill and Extreme Foothill Zones and rename this as the VHFHSZ, while also incorporating additional area of approximately 520.22 acres comprising the vegetation management units within the VHFHSZ. The existing Coastal and Coastal Interior Zones would be merged and renamed as the HFHSZ, while also incorporating an additional area of approximately 356.32 acres comprising the vegetation management units within the HFHSZ. In so far as vegetation management requirements within these zones is mandatory, the increases in the area bounded by the hazard zones could potentially result in more frequent use of heavy equipment including bulldozers and loaded trucks, which are capable of generating groundborne vibration. More detailed discussion of vegetation management vibration impacts is presented below. However, because vibration levels from any heavy equipment anticipated for use in vegetation management would dissipate to levels below the structural damage threshold within 25 feet of the equipment, expansion of hazard areas and VMUs is not anticipated to result in vibration impacts upon existing residences.

The City proposes to modify the requirements and protocols governing vegetation management. The following sections summarize the potential changes to vegetation management that could have related vibration effects.

Defensible Space

Under existing requirements, the width of defensible space around buildings ranges from 30 feet to 150 feet, while the new requirements would impose a width between 30 and 300 feet; the added width of defensible space areas would increase the duration of time on an annual basis for vegetation management. Additional maintenance activities would tend to be located at distances greater than 30 feet from existing homes (the minimum clearance width now required), and it is not anticipated that homeowner clearing would involve the use of a bulldozer or heavy truck. Vibration generation from vegetation maintenance activities are discussed in greater detail under the vegetation management methods section (below), but since the use of heavy equipment to maintain defensible space is not anticipated to occur any closer than 25 feet from an existing residence, vegetation maintenance activities within expanded areas would result in a **less than significant vibration impact**.

Road Clearance

There are no proposed changes to the required vegetation road clearance widths. Road clearance activities would therefore generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR, and **no new vibration effects would occur**.

Community Fuels Treatment Network

The CWPP proposes to maintain the 2004 Wildland Fire Plan CFTN located along the northern portion of the existing Extreme Foothill Zone/proposed VHFHSZ, with no alterations to the existing boundaries. Fuels management treatments in this area are focused outside of 150-foot defensible space areas for structures, well beyond the distance that vibration from heavy equipment would be felt at such residences. Since no changes to the CFTN boundaries are proposed, and the maintenance methods would remain the same as those considered in the 2004 PEIR, **no new vibration effects would occur.**

Neighboring Jurisdiction Vegetation Management Areas

The SBFD coordinates vegetation management efforts with MFPD and SBCFD in areas adjacent to the City, where feasible; the CWPP proposes no alterations to boundaries or activities involved with interjurisdictional vegetation management activities. Proposed vegetation management activities performed by the SBFD would therefore generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR; **no new vibration effects would occur**.

The proposed project would include recurring maintenance and fuels management activities. The vegetation management techniques can be classified into four categories: manual (hand pulling, cutting, planting), mechanical (mowing, masticating, felling, yarding), biological (grazing), and prescribed fire (burn piles, broadcast burn). As indicated in Table 4.10-3, most of the equipment used for vegetation management consists of small powered tools, with few pieces of equipment capable of generating groundborne vibration. Heavy equipment operation would be limited to the SBFD itself or their contractor, in areas outside of the defensible spaces maintained by homeowners.

The most important commonly used earth-moving equipment relative to generation of vibration, and the vibration levels produced by such equipment, is identified in Table 4.10-4. Heavy and light bulldozers would likely only be used in an emergency situation to construct immediate firebreaks and would not be used for routine vegetation management.

Table 4.10-4. Vibration Velocities for Typical Earth-moving Equipment

Equipment	PPV at 25 Feet (Inches Per Second)	Approximate Ground Vibration Level 25 feet (VdB)
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Small Bulldozer	0.003	58

Source: FTA 2018.

As shown in Table 4.10-4, use of heavy equipment (e.g., a large bulldozer) would be expected to generate reference vibration velocity levels of 0.089 inches/second PPV at a distance of 25 feet. This is well below the FTA damage threshold of 0.2 inches/second PPV for sensitive structures (i.e., historic structures), and 0.5 inch/second PPV for contemporary conventional construction. Vibration levels from loaded trucks and small bulldozers would be even less, as would vibration from the small equipment referenced in Table 4.10-3. Heavy equipment is also not anticipated to operate closer than 30 feet from existing residences, given the proposed defensible space requirements (and homeowners would not be expected to employ heavy equipment for vegetation clearance within the defensible space). Consequently, temporary vibration generation impacts of the proposed project would be **less than significant**.

4.10.5 Mitigation Measures

Noise and vibration impacts of the proposed project were found to be less than significant based on the SBFD's existing practices. Since these practices incorporate certain mitigation measures from the 2004 Wildland Fire Plan PEIR, these mitigation measures have been carried forward and applied to the proposed project.

MM-NOI-1 **Equipment Maintenance.** All construction equipment, including trucks, shall be professionally maintained and fitted with standard manufacturers' muffler and silencing devices.

MM-NOI-2 **Hearing Protection**. All workers using or within close proximity to operating chain saws, chippers, and other noisy equipment shall utilize noise protection (ear plugs) consistent with Cal OSHA and Federal OSHA requirements and other legal workplace requirements.

4.10.6 Level of Significance After Mitigation

Noise and vibration impacts were found to be less than significant, based upon adherence to certain mitigation measures from the 2004 PEIR; continued imposition of the 2004 PEIR noise mitigation measures presented above would avoid significant noise impacts. Consequently, while no new mitigation measures are required, impacts would be reduced to a less than significant level with the continued imposition of the 2004 PEIR mitigation measures.

4.10.7 Cumulative Impacts

The proposed project does not have the potential for long-term or permanent impacts for either noise or vibration, and would therefore not contribute to long-term cumulative impacts. Temporary noise and vibration impacts of the project would be less than significant and would be limited spatially and temporally. Use of heavy earth-moving equipment produces noise greater than typical background levels within 1,500 feet or less of the activity, and vibration levels substantial enough to threaten structures is limited to within approximately 25 feet of operating equipment. The HFHA includes relatively vast areas, and it is unlikely that multiple sites where vegetation management activities are occurring simultaneously would be located closer together than the distances described above. Therefore, it is not anticipated the proposed project would result in cumulatively significant noise or vibration impacts.

4.10.8 References

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4.11 Population and Housing

This section describes the existing population and housing conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. The significance criteria used to evaluate the project impacts to population and housing are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines and are related to inducing substantial population growth, either directly or indirectly, and displacing existing people or housing necessitating construction of replacement housing. Impacts associated with population and housing were determined to be less than significant in the Community Wildfire Protection Plan (CWPP) Initial Study (Appendix A). However, based on public comments received during the scoping period, which ran from July 3, 2020, to August 3, 2020, and at the Scoping Hearing held on July 16, 2020, this topic area has been included in this Draft Program Environmental Impact Report (PEIR).

4.11.1 Existing Conditions

The following subsections provide an overview of existing conditions related to population and housing in Santa Barbara County (County) and the City of Santa Barbara (City) based on data contained in the Santa Barbara County Association of Governments (SBCAG)'s Forecast 2050 Santa Barbara County (SBCAG 2019) supplemented by 2020 data from the University of California Santa Barbara's Economic Forecast Project (UCSB EFP 2020a, 2020b, 2020c).

Employment/Jobs

Historically, job growth in Santa Barbara County has generally tracked state and national growth. The County is home to a major University of California campus (UC Santa Barbara) that attracts high-wage job growth associated with campus activity. There are three larger sectors where the Santa Barbara County share of total jobs is substantially different from the California share: Farm, Government, and Leisure and Hospitality, due to the importance of agriculture, the UC Santa Barbara campus, Vandenberg Air Force Base, and tourism in the County. SBCAG assumed that the County would see a modest increase in high-wage Internet-related and professional service jobs as it is an attractive place to live and work (SBCAG 2018). COVID-19 has prompted a trend toward teleworking, enabling workers to have greater flexibility about their home location in relationship to their jobs (Boland et al. 2020). The majority of the region's jobs are located in the South Coast, with approximately 60% of the total, and 40% in the North County (SBCAG 2018). The seasonally adjusted estimated unemployment rate in Santa Barbara County in June 2020 was 11.13% (UCSB EFP 2020b)

Population

The County's share of the state population has historically been declining, ranging between 1.25% to 1.10% and is forecasted to continue to trend lower with the County share of state population at 1.05% by 2050 (SBCAG 2019). The countywide annual average population growth rate has ranged from over 2% between 1980–1990 to between 0.5% and 1% between 1991 and 2020. The annual average is forecast to drop to less than the historical average to 0.5% from 2026 onward (SBCAG 2018). The City of Santa Maria currently has the largest population of all jurisdictions within Santa Barbara County and is forecast over the 2017–2050 period to have the highest population increase in the County with 34,600 persons, or 32%, growing its share from 24% to 27% of the total population by 2050 (SBCAG 2018).

UCSB ECF provides information related to age distribution within Santa Barbara County, shown in Table 4.11-1. The age cohort mix of Santa Barbara County residents has remained largely unchanged over the past 5 years (UCSB EFP 2020a).

Table 4.11-1. Santa Barbara County Age Distribution

Age Cohorts (thousands of people)	2015	2016	2017	2018	2019	2020
Population Under 5 Years	28.3	28.8	28.7	29.1	29.1	28.5
Population 5 to 9 Years	27.7	8.4	28.5	28.5	28.6	28.1
Population 10 to 14 Years	26.7	27.3	27.4	27.3	27.5	27.4
Population 15 to 17 Years	18.3	18.2	18.2	18.1	18.2	18.2
Population 18 to 20 Years	26.7	27.1	27.1	26.9	27.0	27.0
Population 21 to 24 Years	37.4	38.9	39.3	39.3	38.8	38.3
Population 25 to 34 Years	60.6	30.9	61.7	61.8	62.9	63.6
Population 35 to 44 Years	51.3	52.0	52.5	52.2	51.9	51.7
Population 45 to 54 Years	52.4	51.4	51.1	50.2	49.3	48.1
Population 55 to 64 Years	49.8	50.4	51.1	50.7	50.5	49.8
Population 65 to 74 Years	32.8	34.4	35.9	37.1	38.8	39.0
Population 75 to 84 Years	18.4	19.0	19.5	19.8	20.2	20.6
Population over 85 Years	10.0	10.2	10.4	10.5	10.7	10.6
Total Population	**440.4**	**447.0**	**451.7**	**451.7**	**453.0**	**450.9**

Source: UCSB EFP 2020a.

Real Estate

UCSB EFP also tracks housing and rental markets in Santa Barbara County. The most recent available data from UCSB EFP are March 2020. Table 4.11-2 provides a summary of the housing market in the County.

Table 4.11-2. Santa Barbara Housing Market Summary

Area	Median Home Value	Annual Percent Change	Median Monthly Rent
California	$578,267	4.4	$2,657
Santa Barbara County	$658,017	2.5	$2,877
Carpinteria	$903,246	1.1	$3,853
Goleta	$856,454	3.0	$3,604
Lompoc	$368,496	3.1	$1,989
Montecito	$3,276,825	0.7	$10,114
Santa Barbara City	**$1,134,649**	**2.0**	**$4,185**
Santa Maria	$412,599	4.0	$2,117
Solvang	$813,113	0.2	$3,257

Source: UCSB EFP 2020c

Current Housing

The City is home to approximately 90,000 residents within approximately 44.3 square miles. As of 2010, the City was reported to have approximately 37,820 housing units within the City (City of Santa Barbara 2011). Data on the number of housing units within the existing High Fire Hazard Area (HFHA) is not currently available; however, data on the number of structures within the existing HFHA is available. While this data includes both habitable and

inhabitable structures, this data can serve as a proxy for the number of dwelling units within the HFHA. The HFHA is divided into four fire hazard zones: the Extreme Foothill Zone, the Foothill Zone, the Coastal Zone, and the Coastal Interior Zone. Each zone is described below (SBFD 2004) and shown in Figure 3-3 in Chapter 3. Table 4.11-3 summarizes the number of structures within the City's limits and HFHA.

Table 4.11-3. Quantity of Structures within High Fire Hazard Zones

Area	Quantity of Structures
High Fire Hazard Zones	
Extreme Foothill	175
Foothill	4,347
Coastal Interior	755
Coastal	363
Total	**5,640**

Extreme Foothill Zone

Building density in this zone is low and includes 175 structures within 724 acres. Roads are steep and winding, and many properties have long driveways. Resources or developments in this zone include, but are not limited to, Parma Park, Skofield Park, the Skofield Pump Station, and St. Mary's Seminary. This zone is strategically important to the Santa Barbara Fire Department (SBFD) since it is the last line of defense for fire protection resources to suppress a wildfire before it enters more highly populated areas of the City (SBFD 2004).

Foothill Zone

Building density in this zone is typically low to moderate and includes 4,347 structures within 2,827 acres. A few areas of higher structure density (structures close to other structures) are present in the Foothill Road/Laurel Canyon Road area and in the southern portion of the Riviera. Roads in the zone are variable, with some portions in the south including wider, more heavily traveled roadways (e.g., Alameda Padre Serra, Sycamore Canyons Road, and Foothill Road) and other portions including steep, narrow, and winding roadways (e.g., Las Alturas Road, Mission Canyon Road, and Conejo Road). Resources or developments in this zone include, but are not limited to, the Mission, Hale Park, Franceschi Park, Montecito Country Club, Stevens Park, Riviera Business Park, El Encanto Hotel, Santa Barbara Bowl, Cater Water Treatment Plant, Sheffield Treatment Plant, City Public Works buildings, and City Fire Station No. 7.

Coastal Zone

Building density in this zone is typically low and includes 363 structures within 524 acres. Moderate and high building density occurs in the southern portion of the zone, in the Alan Road/Vista del Mar area. Roads in the zone are variable in width, and the zone includes numerous long, dead-end driveways. Resources or developments in this zone include, but are not limited to, the Arroyo Burro Open Space, Arroyo Burro Creek, and Las Positas Road.

Coastal Interior Zone

Building density in this zone is typically moderate and includes 755 structures within 702 acres. A few areas of low structure density are present in the Elings and Honda Valley Park areas. Roads in the zone are variable, with some portions in the south including wider, more heavily-traveled roadways (e.g., West Carrillo Street) and other portions including more steep and winding roadways (e.g., Miramonte Drive). Resources or developments in this zone include, but are not limited to, Vic Trace Reservoir, Hilda McIntyre Ray Park, Elings Park, and Honda Valley Park.

4.11.2 Relevant Plans, Policies, and Ordinances

State

California Public Resources Code Sections 4201–4204: High Fire Hazard Severity Zones

Fire Hazard Severity Zones (FHSZs) are "geographical areas designated pursuant to California Public Resources Code, Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Responsibility Area Very High Fire Hazard Severity Zones (VHFHSZ) designated pursuant to California Government Code, Sections 51175 through 51189" (California Building Standards Commission 2016).

California Public Resources Code Sections 4201–4204 and Government Code Sections 51175–51189 direct the California Department of Forestry and Fire Protection (CAL FIRE) to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. The resulting FHSZs define the application of various mitigation strategies to reduce the risk associated with wildland fires (CAL FIRE 2020a). The model used to determine the extent of FHSZs is based on an analysis of potential fire behavior, fire probability predicated on the frequency of fire weather, ignition patterns, expected rate of spread, ember (brand) production, and past fire history (CAL FIRE 2020a). Structures built in FHSZs are subject to more stringent fire hardening requirements than those that are not.

Santa Barbara City's VHFHSZ is a Local Agency VHFHSZ, as defined, and the City is considered a Local Responsibility Area. SBFD is the responsible agency for fire protection within the VHFHSZ. The City abuts lands where the responsibility for fire protection lies with the State of California (State Responsibility Area).

California Insurance Code Sections 1880-10108.1: Fire and Marine Insurance

The California Insurance Code contains all the laws relating to insurance in California. The Fire Insurance Code is contained in Division 2, Part 1, Chapter 2 through Chapter 8 of the Insurance Code. Enforcement of the Insurance Code is performed by the California Department of Insurance (CDI). CDI was created in 1868 as part of a national system of state-based insurance regulation with consumer protection as a core value of CDI's mission. Consumers, insurance companies, and licensees rely on CDI to ensure that insurance products and services are available to consumers timely, and that they deliver fair and equal benefits. CDI ensures that insurers are solvent, consumer complaints are addressed in a reasonable manner, and insurers and licensees play fairly in the marketplace (CDI 2020a). Housing units within the City covered under a homeowner's insurance plan, including fire insurance, would be subject to their respective insurance company's policy in compliance with the California Insurance Code and subject to enforcement by CDI.

Senate Bill 330

Senate Bill (SB) 330, titled The Housing Crisis Act of 2019, was signed into law by Governor Newsom on October 9, 2019, and became effective January 1, 2020. The bill establishes a statewide housing emergency to be in effect until January 1, 2025. Affected public agencies, including the City, are also prohibited from imposing a moratorium or similar restriction on a housing development, including mixed-use developments, except to specifically protect against imminent threats to public health and safety. Additionally, affected public agencies cannot enforce a moratorium or other similar restriction on a housing development until the ordinance has been approved by the California Department of Housing and Community Development.

Senate Bill 13

SB 13 was signed into law by Governor Newsom on October 9, 2019, and became effective January 1, 2020. SB 13 restricts the payment of developer impact fees, eliminates the need for replacement parking, eliminates certain owner occupancy requirements, shortens the agency review period to 60 days, and creates an amnesty program that would ease the process of permitting pre-existing unpermitted units.

Assembly Bill 68

Assembly Bill (AB) 68 was signed into law by Governor Newsom on October 9, 2019, and became effective January 1, 2020. AB 68 eases restrictions on Accessory Dwelling Units (ADUs) by prohibiting local ordinances from placing certain requirements on minimum lot size, lot coverage, parking, and other factors. It also speeds ADU permit processing from 120 to 60 days.

Assembly Bill 881

AB 881 was signed into law by Governor Newsom on October 9, 2019, and became effective January 1, 2020. This bill requires a local agency to designate areas for ADUs based on the adequacy of water and sewer services and the impact of ADUs on traffic flow and public safety. The bill also prohibits a local agency from issuing a certificate of occupancy for an ADU before issuing a certificate of occupancy for the primary residence. The bill no longer requires standards on lot coverage and prohibits an ordinance from imposing requirements on minimum lot size. The bill revises the requirements for an ADU by providing that the ADU may be attached to, or located within, an attached garage, storage area, or an accessory structure, as defined.

Local

City of Santa Barbara General Plan

The City's General Plan contains many policies related to community and housing. Economic and fiscal health is a key policy driver of the General Plan. The lack of affordable housing within the City has historically contributed to the jobs/housing imbalance and long-distance commuting. The City has prioritized creating more housing opportunities for City residents. The City's Housing Element sets forth policy that is consistent with the state Housing and Community Development Department to encourage residential development in proximity to transit, job centers, and public and community services. Housing should be smaller units with increased densities in the downtown area and multifamily areas.

Municipal Code

The City's Municipal Code sets forth the requirements for housing development standards within the City. The Municipal Code contains the Zoning Ordinance which establishes classifications and districts or zones and regulating therein the use of property within the City, defining terms used in said ordinance, adopting a zoning map, providing for the adjustment, enforcement, and amendment thereof, and prescribing penalties for its violation.

Accessory Dwelling Units

The state legislature has identified production of ADUs as an important strategy to increase housing statewide. Effective January 1, 2020, state laws for ADUs (including Junior ADUs [JADUs])[1] were significantly amended to expand the types and numbers of ADUs allowed per parcel (see above discussion with regard to state requirements). As a result, much of the City's existing ADU and JADU regulations were voided until a local ADU ordinance is adopted in compliance with state law. In response, City Council adopted an Interim Urgency Ordinance to, among other things, temporarily prohibit ADU/JADU development in the Foothill and Extreme Foothill VHFHSZ (Appendix A; SBFD 2004). The hazard assessments include similar approaches employed by CAL FIRE in defining HFHSZs and VHFHSZs for Local Responsibility Areas, and further described in the CWPP. California Public Resources Code Sections 4201–4204 and Government Code Sections 51175–51189 direct CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. The resulting FHSZs define the application of various mitigation strategies to reduce the risk associated with wildland fires (CAL FIRE 2020a). The model used to determine the extent of FHSZs within the City is based on an analysis of potential fire behavior, fire probability predicated on the frequency of fire weather, ignition patterns, expected rate of spread, ember (brand) production, and past fire history (CAL FIRE 2020a). CAL FIRE is in the process of updating the statewide maps, which are expected to be released in 2021.

4.11.3 Thresholds of Significance

Appendix G of the CEQA Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to Appendix G, a significant impact related to population and housing would occur if the project would:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

As previously noted, impacts associated with population and housing were determined to be less than significant in the CWPP Initial Study (Appendix A). However, based on public comments received during the scoping period, which ran from July 3, 2020, to August 3, 2020, and at the Scoping Hearing held on July 16, 2020, this topic area has been included in this Draft PEIR.

4.11.4 Impacts Analysis

POP-1 Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The CWPP proposes a series of fire risk reduction methods to address existing development within the City, and especially within the City's HFHA. The CWPP does not propose any policies or measures related to creation of new housing or businesses or creation of roads or infrastructure. As such, the CWPP would not induce substantial unplanned population growth directly or indirectly.

[1] ADUs are self-contained residential units, typically used as a rental, and either incorporated within, detached from, or attached to the primary residential unit(s) on the same property. A JADU is a unit up to 500 square feet in size contained within an existing or proposed home with a separate exterior entry and an efficiency kitchen.

The CWPP proposes consolidation and re-naming of the existing HFHA. Specifically, the Coastal and Coastal Interior Zones would become the City's High Fire Hazard Severity Zone (HFHSZ), and the Foothill and Extreme Foothill Zones would become the City's VHFHSZs. The CWPP also recommends adding portions of the City into the HFHSZs and VHFHSZs. These recommended changes are based on the hazard assessment conducted during CWPP development, which involved modeling of potential fire behavior. The City's High Fire Hazard Area (including current and proposed areas) is defined based on assessments of fire hazard (Appendix A; SBFD 2004). The hazard assessments include similar approaches employed by CAL FIRE in defining HFHSZs and VHFHSZs for Local Responsibility Areas, and further described in the CWPP. California Public Resources Code Sections 4201–4204 and Government Code Sections 51175–51189 direct CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. The resulting FHSZs define the application of various mitigation strategies to reduce the risk associated with wildland fires. The model used to determine the extent of FHSZs within the City is based on an analysis of potential fire behavior, fire probability predicated on the frequency of fire weather, ignition patterns, expected rate of spread, ember (brand) production, and past fire history. CAL FIRE is in the process of updating the statewide maps, which are expected to be released in 2021.

The physical effects of inclusion within a HFHSZ or VHFHSZ are related to vegetation management activities, such as defensible space, and home fire hardening requirements (such as installing and maintaining fire- and ember-resistant construction materials). It should be noted that inclusion of an area within a HFHSZ or VHFHSZ would not compel the owners of existing structures within that zone to retrofit existing structures to conform to high fire construction standards. Only new structures, or remodels sufficient in size, within the HFHSZ or VHFHSZ would be required to conform to these more stringent fire prevention requirements. SBFD may conduct vegetation management activities if an area is located within an existing or proposed vegetation management unit or located within the Community Fuels Treatment Network (note that no new private parcels are proposed to be added to the Community Fuels Treatment Network).

At the public Scoping Hearing on July 16, 2020, the City Planning Commission and a member of the public expressed concern about the expansion of the FHSZs and the potential effect that the designation may have on homeowner insurance rates and the potential limitation on new housing in conflict with state law and the Department of Housing and Community Development. These issue areas are discussed below.

Insurance Rates: Public Resources Code Section 21080(e)(2) notes that "evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment" are not considered substantial evidence in determination of an environmental impact. Section 15064(e) of the CEQA Guidelines also provides that economic changes resulting from a project are not treated as significant effects on the environment, but may be used to determine if a physical change is significant. Courts have also held that CEQA properly considers physical environmental impacts. As decided in *City of Hayward v. Board of Trustees of the California State University* (2012), the First Appellate District held that CEQA consider physical impacts to the environment; economic impacts are not a CEQA consideration. Potential effects on property values need not be analyzed under CEQA, no matter how potentially severe (*Porterville Citizens for Responsible Hillside Development v. City of Porterville* (2007) 157 Cal. App. 4th 885, 903). There is no evidence that the any change in insurance rates resulting from the proposed action will affect any physical change to the environment.

Public disclosure is a primary purpose of CEQA and although insurance rates are outside the scope of this analysis, the California Department of Insurance (CDI) was contacted to provide information regarding insurance rates. Based on personal communication with the CDI on July 27, 2020, insurance rates are established by individual insurance companies subject to compliance with the California Insurance Code

and oversight by the CDI (CDI 2020b). In the event that a consumer would like to file a complaint because of unfair insurance practices, the CDI can be reached at 800.927.4357. The CDI notes on their website that "there has been an increase in nonrenewals and that residential insurance is getting harder to find in any area that insurers identify as having a higher than average risk of wildfire. While the Department of Insurance doesn't have the legal authority to tell insurers what level of risk they must write or where they must write insurance, we can monitor that they are consistent in their decisions and that their decisions are based on considerations of risk, not other biases" (CDI 2020c).

Limitation on New Housing: As shown in Table 4.11-1, the City's median monthly rental price is about $1,300 higher than the Santa Barbara County median rental price and $1,500 higher than the state median rental price. Given this disparity, the City has consistently expressed the goal to provide additional housing units to help alleviate affordability issues within the City. New residential structures would be subject to review and approval by the City in accordance with the Municipal Code and would require home hardening measures to reduce fire risk, including maintenance of defensible space if located within a FHSZ.

At present, the City's Urgency Ordinance restricts development of ADUs within the Foothill and Extreme Foothill areas (proposed VHFHSZ). For consistency with state law, the City's amended ADU Ordinance is required to allow several specific types of ADUs[2] described in Government Code Sections 65852.2 (e) (1) and 65862.22 (JADUs) in all areas of the City, including FHSZs. The staff report of July 30, 2020, recommends a prohibition of the larger detached ADUs in the Foothill and Extreme Foothill areas (proposed VHFHSZ) in order to balance the provisions of state law with the prior ADU ordinance and General Plan policies that recommend prohibiting ADUs and limiting new development. It is unknown at this time if City Council will adopt staff's initial recommendation or will allow larger detached ADUs within the FHSZs.

The proposed expanded VHFHSZ could potentially limit the construction of larger detached ADUs within areas that are not currently mapped in the Foothill and Extreme Foothill Zones, but would become part of the VHFHSZ, should City Council adopt such a provision. These zones are shown on Figure 3-4 (Zones E, F, G, H, and I) and total approximately 118.56 acres.

In summary, the proposed project involves a series of fire risk reduction methods to address development within the City, and especially within existing and proposed FHSZs. Measures within the CWPP would not induce substantial unplanned population growth directly or indirectly. As such, impacts would be **less than significant**.

POP-2 Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project would be limited to fire hazard management activities and would not displace any numbers of existing people or housing necessitating the need to construct replacement housing elsewhere. Methods contained within the proposed project are intended to promote sound fire management practices to protect buildings and structures, including housing, within the HFHA. No impact would result from the proposed project.

[2] The ADUs allowed in this section are a maximum of 800 square feet, 16 feet high for a detached unit.

4.11.5 Mitigation Measures

The proposed project would not result in significant impacts; therefore, no mitigation is required.

4.11.6 Level of Significance After Mitigation

Population and housing impacts were found to be less than significant. Consequently, mitigation measures are neither required nor recommended.

4.11.7 Cumulative Impacts

The proposed project would not introduce new development directly through construction of homes or businesses or indirectly through the construction of roads or expansion of infrastructure. The proposed project would expand certain areas of the HFHSZ (currently the Coastal and Coastal Interior Zones) and VHFHSZ (currently the Foothill and Extreme Foothill Zones). Accordingly, the proposed project would not induce substantial unplanned population growth in an area, either directly, or indirectly. Additionally, the proposed project would be limited to fire hazard management activities and would not displace any numbers of existing people or housing necessitating the need to construct replacement housing elsewhere. Because the proposed project would not result in new unplanned population growth or result in the displacement of existing people or housing, the proposed project would not combine with other cumulative projects to result in cumulative adverse effects to population and housing. Therefore, cumulative impacts would be **less than significant**.

4.11.8 References

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4.12 Recreation

This section describes the existing recreation conditions of the City of Santa Barbara (City) Community Wildfire Protection Plan (CWPP or proposed project) and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed CWPP. As described herein, proposed CWPP could result in impacts to recreation primarily related to the designation of new High Fire Hazard Area (HFHA) and Vegetation Management Units (VMUs), and associated vegetation management activities.

4.12.1 Existing Conditions

Parks and Recreation in the City

Parks and recreational services in the City are provided by the Parks and Recreation Department (PRD). The PRD aims to provide residents with diverse open space, parks, beaches, community forest resources, creek restoration and water quality enhancements, and a broad array of recreation and community services (City of Santa Barbara 2018). The PRD is made up of divisions that are responsible for various recreational opportunities and amenities in the City, including aquatics, recreation, parks, golf courses and creeks. Activities of PRD are guided by input of the Parks and Recreation Commission, established in 2009 through the merger of the Board of Parks Commissioners (originally established in 1902) and Recreation Commission (originally established in 1929) (City of Santa Barbara 2020a).

The City's park system is extremely diverse and includes undeveloped parkland, hiking and riding trails, small neighborhood parks, and the broad expanses of open beach and parkland along the City's waterfront. The General Plan identifies eight classifications of park and recreation facilities: neighborhood parks, community parks, regional parks, special use facilities, golf courses, riding and hiking trails, beaches, and bikeways (City of Santa Barbara 2011). According to the PRD Resources Inventory, the City contains 60 parks and sports facilities, 1,808 acres of park land, 23,600 street trees, 9,300 trees in parks, and 30,000 trees in open space, in addition to a variety of recreational opportunities such as playgrounds, swimming pools, and beaches (City of Santa Barbara 2017).

The City has a number of parks that contribute to the community's horticultural heritage, including Alameda Park, Alice Keck Park Memorial Gardens, upper and lower Orpet Park, Franceschi Park, and the Mission Rose Gardens. The majority of park acreage is contained within natural open space parks such as Parma Park, Gould Park (Cold Springs Canyon), and Rattlesnake Canyon Park. Major (greater than 1 acre) open space areas, community parks, neighborhood parks, passive parks, and regional parks that provide recreational opportunities for residents of the City are listed in Table 4.12-1. In addition to the parks and open space areas below, the City contains numerous smaller parks and other recreational amenities, such as neighborhood parks, sports facilities, community gardens, three beach parks and 6.2 miles of beach, small passive parks, and 16 community buildings that offer recreational opportunities (City of Santa Barbara 2017). As such, this does not represent an exhaustive list of parks and recreational opportunities in the City, but rather includes larger parks and open space in areas where heavy vegetation and fire hazards may be present.

Table 4.12-1. Major Parks/Open Space in the City

Open Space Parks	Acreage
Arroyo Burro Open Space*	22.3
Barger Canyon Preserve	14.2

Table 4.12-1. Major Parks/Open Space in the City

Open Space Parks	Acreage
Douglas Family Preserve*	70
Equestrian Circle	5.5
Gould Park	368
Hale Park*	14
Hidden Valley Park* (portion of)	18
Honda Valley Park*	48
Laurel Canyon Park	6.2
Loma Media Park	1
Parma Park*	200
Rattlesnake Canyon*	451
Sheffield Reservoir Open Space*	23
Regional Parks	*Acreage*
Elings Park	94
Santa Barbara Zoological Gardens	16
Community Parks	*Acreage*
Alameda Park	9.3
Chase Palm Park	25
Oak Park	17
Ortega Park	9.5
Plaza de Mar	4.5
Shoreline Park	15
Skofield Park*	35
Neighborhood Parks	*Acreage*
Bohnett Park	3.5
Eastside Neighborhood Park	2
Escondido Park	2
Hidden Valley Park (portion of)	15
Hilda McIntyre Ray Park	1.5
La Mesa Park	8.9
Los Robles Park	1
Plaza Vera Cruz	2
Stevens Park*	25
Willowglen Park	3
Neighborhood Parks	*Acreage*
Alice Keck Memorial Park	4.5
Andree Clark Bird Refuge	42.4
Franceschi Park*	15.2
Mission Historical Park and Rose Garden	10.3
Orpet Park	4.2
San Roque Park	1
Sylvan Park	1

Source: City of Santa Barbara 2017.
Note: *Parks containing trails.

Riding and Hiking Trails

Located within the front range of the Santa Ynez Mountains, the Santa Barbara Front Country Trails include Jesusita, Tunnel, Rattlesnake, West Fork Cold Springs, East Fork Cold Springs, San Ysidro, and Romero Canyon. These trails provide more than 35 miles for day hiking, mountain biking, and horseback riding.

Beaches

The City's beaches are highlights of the City's recreational assets. The City contains three beach parks and 6.2 miles of beaches. In addition, the City's harbor and waterfront offer a variety of recreational opportunities such as boating, fishing, surfing, kayaking, and other water-based activities.

Bikeways (Recreation and Transportation)

The General Plan identifies two basic purposes in bicycle riding, recreation and transportation (City of Santa Barbara 2011). Recreational bikeways, as identified, should be primarily oriented in relations to areas of scenic recreational interests. Two prime "areas of interest" in Santa Barbara are (1) the complex of the Old Mission, Museum of Natural History, and Rocky Nook Park; and (2) the shoreline, harbor, and beach area, where a bikeway has been developed. Transportation bikeways can be found a part of the circulation network, providing travel paths from one activity area in the community to another.

4.16.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal requirements related to recreation pertaining to the proposed project.

State

Quimby Act – AB No. 1191

California Government Code Section 66477, referred to as the Quimby Act, permits local jurisdictions to require developers to dedicate land and/or pay in-lieu fees towards the conservation of parkland. The Quimby Act was legislated to encourage the pre-emptive mitigation of developments' impact to parks and open space with the overarching goal of achieving a jurisdictional standard of 3.5 acres of parkland per 1,000 residents. The land dedication and/or fees differ by project and are based upon the residential density, parkland cost, and other factors. Land dedication and fees collected pursuant to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities or the development of public school grounds.

Local

City of Santa Barbara General Plan

The General Plan Open Space, Parks, and Recreation Element identifies areas of significant open space, and deals with providing parks and recreation facilities to the community, and conserving, providing and improving land and water spaces significant to the City's landscape. The Open Space, Parks, and Recreation element sets forth several goals, policies and implementation actions to preserve and enhance parks, open space and recreational opportunities in the City, the following of which may be applicable to the project (City of Santa Barbara 2011).

Goal: Open Space Opportunities. Protect and enhance the City's livability, accessibility and character, and the community's health, through generous provision of a variety of accessible public open space opportunities.

Open Space, Parks and Recreation Policies and Possible Implementation Actions

OP1 Variety and Abundance. Provide ample open space through a variety of types, including nature reserve, parks, beaches, sports fields, trails, urban walkways, plazas, paseos, pocket parks, play areas, gardens and view points, consistent with standards established for this City.

OP2.7 Private Open Space. Coordinate with private landowners on the management and restoration of private hillside lands so that such lands are managed to preserve open space values of significant stands of native vegetation and mature trees. Explore costs and benefits of transfer of such lands to public ownership with willing property owners.

City of Santa Barbara Urban Forest Management Plan

The Urban Forest Management Plan was initiated in 2012 (adopted in 2014) by the City of Santa Barbara Parks and Recreation Division. The purpose of the plan is to provide long-term guidance to preserve and enhance the urban forest present in Santa Barbara (City of Santa Barbara 2014). As noted, the urban forest is owned and managed by a diverse mix of City, County, and federal agencies and the private sector. Some long-term management objectives are canopy cover, infrastructure constraints, environmental benefits, land use, aesthetics, native habitats, and community vitality.

Front Country Trails Program

Located within the front range of the Santa Ynez Mountains, the Santa Barbara Front Country Trails include Jesusita, Tunnel, Rattlesnake, West Fork Cold Springs, East Fork Cold Springs, San Ysidro, and Romero Canyon. Managed jointly by the U.S. Forest Service, Los Padres National Forest, County of Santa Barbara, and City of Santa Barbara through the Front Country Trails Program, these trails provide more than 35 miles for day hiking, mountain biking, and horseback riding.

4.16.3 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to Appendix G of the CEQA Guidelines, a significant impact related to recreation would occur if the project would:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
c) Result in substantial loss or interference with existing park space or other public recreational facilities (such as hiking, cycling or horse trails)?

The CWPP Initial Study (Appendix A) determined that threshold a) above would have a less than significant impact with implementation of the proposed project. Therefore, this topic has been eliminated from further analysis.

4.16.4 Impacts Analysis

The 2004 Final PEIR for the Wildland Fire Plan (SBFD and CDD 2004) analyzed recreation impacts from the 2004 Wildland Fire Plan, and determined that it would have a less than significant impact, as proposed vegetation management in public areas, including parks, could temporarily disturb recreation activities in the areas where vegetation management is being conducted. The impact would be temporary, lasting only as long as the vegetation removal and disposal is being conducted. Nonetheless, the 2004 PEIR included the following mitigation measure to reduce any potential impacts to recreation.

MM-REC-1 The Fire Department shall consult with Parks and Recreation staff to ensure that recreational opportunities are not precluded simultaneously in several parks in the same portion of the City.

The proposed CWPP includes changes to the 2004 Wildland Fire Plan, which could potentially result in new impacts to recreation. The Santa Barbara Fire Department's (SBFD) current fire management program is performed under the City's 2004 Wildland Fire Plan and Final PEIR for the 2004 Wildland Fire Plan. The 2004 Wildland Fire Plan is considered the environmental baseline for purposes of this PEIR, which analyzes potential environmental impacts to recreation resulting from changes proposed by the CWPP. Such changes include the designation of new HFHA, new VMUs, and proposed vegetation management activities.

REC-1. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

The proposed CWPP does not include recreational facilities that could have an adverse environmental impact. Further, the need for new or expanded recreational facilities is typically associated with an increase in population. As discussed in Section 4.11, Population and Housing, the CWPP does not propose policies or measures related to creation of new housing or businesses or creation of roads or infrastructure that would induce population growth. Thus, the CWPP would not induce unplanned population growth in the City or region, creating a need for new or expanded recreational facilities. However, as shown in Tables 4.12-2 and 4.12-3, many of the proposed HFHA zones and VMUs are located within, adjacent to, and in the immediate vicinity of a number of parks and recreational areas, such as open space, creeks, and hiking trails. Figure 4.12-1 and Figure 4.12-2 provide a visual presentation of locations where proposed High Fire Hazard Areas and VMUs overlap with parks and recreational areas.

The addition of the proposed HFHA and VMUs is based on hazard assessments which identified areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors, as well fire behavior modeling. Since recreational areas in the City consist of a variety of parks, open space areas, hiking trails, creeks, and other natural areas, the presence of flammable vegetation in such areas is not unexpected. The physical effects of the designation of additional HFHA and VMUs that could impact parks and recreational areas are related to vegetation management, such as defensible space, road clearance, and vegetation thinning and removal. The establishment of defensible space on private property would not impact access to recreational areas. Rather, vegetation management in public spaces, such as proposed by the VMUs, would have the greatest potential to impact access to parks and recreation. Potential impacts associated with these vegetation management activities are further discussed below.

Table 4.12-2. High Fire Hazard Area Zones and City Parks and Recreational Areas

Area ID	Acreage	On Site or Adjacent Parks/Recreational Areas
B	1.68	None
E	6.25	None
F	25.26	Mission Creek
G	5.31	Mission Creek, Santa Barbara Museum of Natural History
H	26.84	Stevens Park, San Roque Park, San Roque Creek
I	54.90	Los Robles Park, Cieneguitas Creek
K	12.45	Honda Valley Park, Honda Valley Creek
L	24.62	Escondido Park, Elings Park
M	223.37	Escondido Park, Elings Park, Hilda McIntyre Ray Park
N	1.41	Honda Valley, Honda Valley Creek
O	8.89	Hilda McIntyre Ray Park
R	202.17	Palermo Open Space, Hidden Valley Park, Arroyo Burro Creek
S	62.27	Arroyo Burro Open Space

Table 4.12-3. Vegetation Management Units and City Parks and Recreational Areas

Area ID	Acres	On Site or Adjacent Parks/Recreational Areas
24	2.92	Arroyo Burro Trailhead, San Roque Creek, Jesusita Trail
25	97.30	Arroyo Burro Trail
26	5.38	Mission Creek, Rocky Nook Park
27	30.86	Sheffield Creek, Sheffield Reservoir Open Space
28	105.83	Parma Park, Coyote Creek
29	45.49	Laurel Creek, Laurel Canyon Park
30	8.29	None
31	7.22	None (Montecito Club is adjacent, but is not a City resource)
32	15.48	None
33	8.90	Honda Valley Creek, Honda Valley Park
34	1.75	None
35	6.66	None
36	7.28	Escondido Park
37	1.41	None
38	25.92	Hilda McIntyre Ray Park
39	1.79	None
40	91.94	Elings Park
41	1.38	None
42	14.04	None
43	124.71	Palermo Open Space, Arroyo Burro Open Space, Arroyo Burro Creek
44	38.75	None
45	9.34	Hidden Valley Park, Arroyo Burro Creek
46	22.44	None

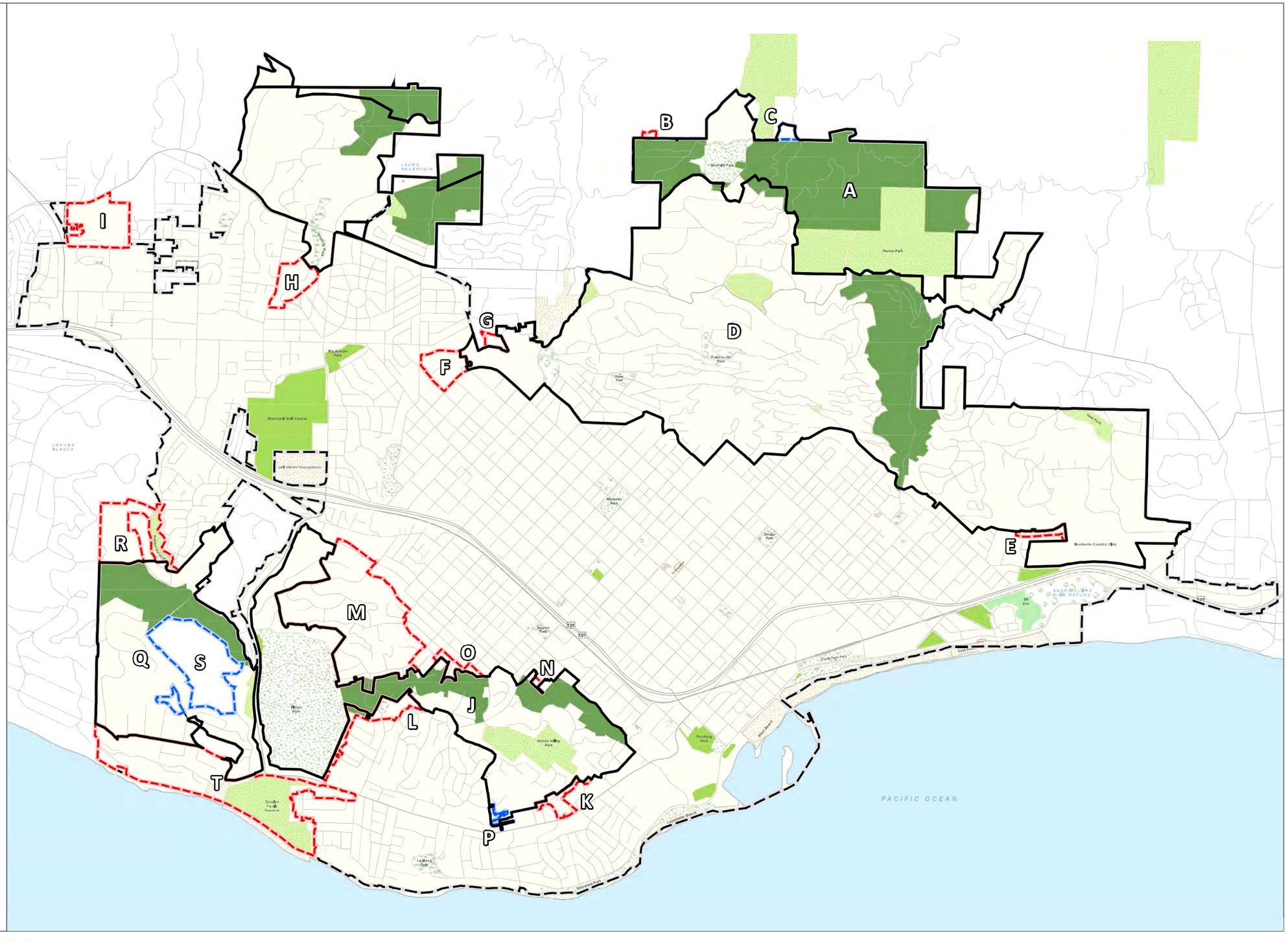
City of Santa Barbara / CWPP Area

High Fire Hazard Area

- Existing - Retained
- Existing - Removed
- Proposed

Parks

- Beaches
- Community Buildings
- Community Gardens
- Community Parks
- County Parks
- Neighborhood Parks
- Open Space Parks
- Passive Parks
- Regional Parks
- Sports Facilities
- State Park
- Major Hillside



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SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

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FIGURE 4.12-1

City Parks and Recreation and High Fire Hazard Area

City of Santa Barbara Community Wildfire Protection Plan

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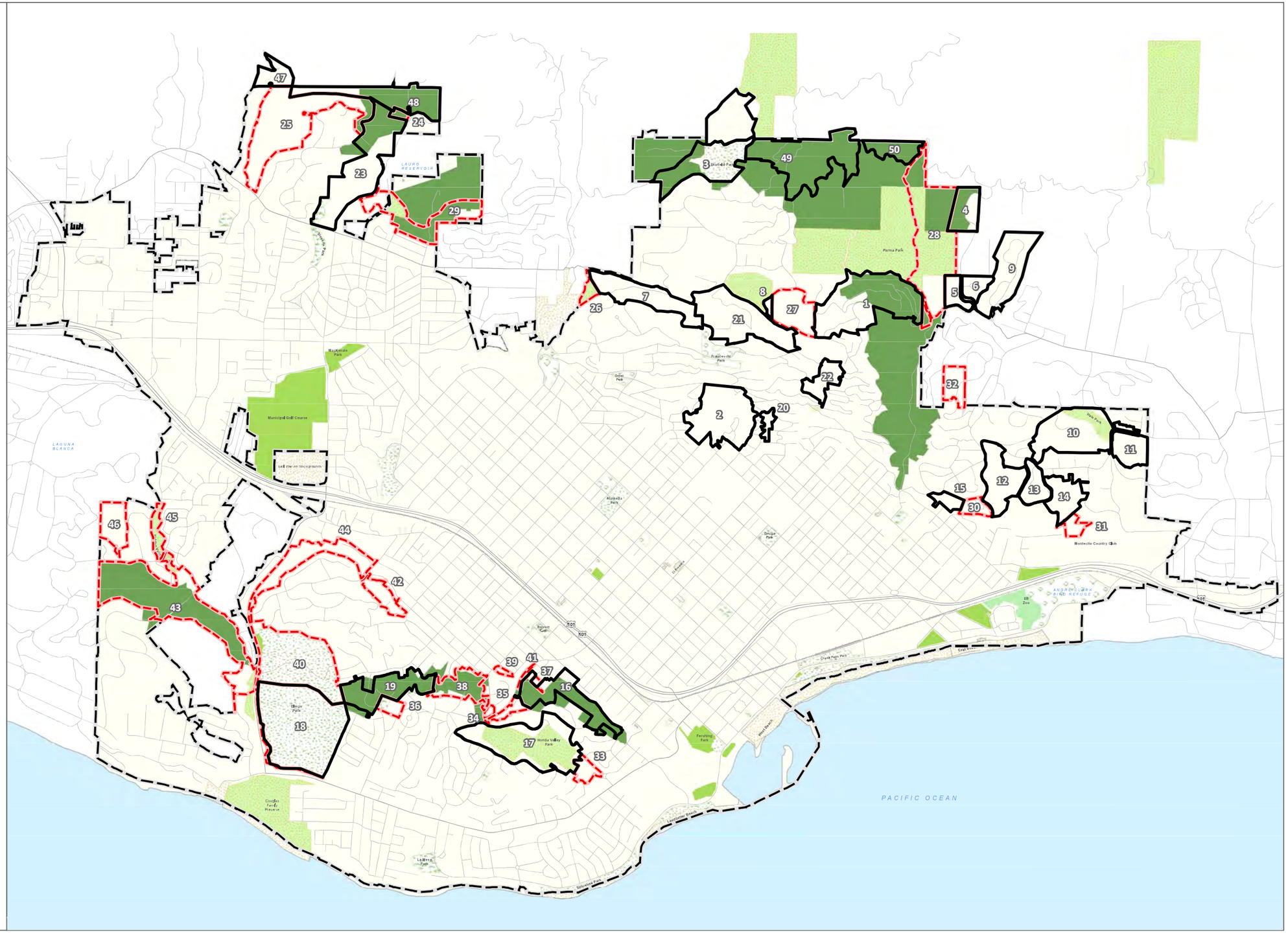
City of Santa Barbara / CWPP

Vegetation Management Units

- Existing
- Proposed

Parks

- Beaches
- Community Buildings
- Community Gardens
- Community Parks
- County Parks
- Neighborhood Parks
- Open Space Parks
- Passive Parks
- Regional Parks
- Sports Facilities
- State Park
- Major Hillside



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SOURCE: City of Santa Barbara

COMMUNITYWILDFIRE CITY OF SANTA BARBARA PROTECTION PLAN

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FIGURE 4.12-2

City Parks and Recreation and Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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Vegetation management methods associated with the CWPP would include manual (hand removal), mechanical (use of heavy equipment such as masticators, tractors, and chippers), biological (grazing conducted in late spring under site-specific grazing plans), and prescribed burns (broadcast burns over designated and prepared areas or pile burning of cut vegetation, typically applies to areas of less than 1 acre). While the proposed CWPP would not result in increased demand for park space or recreational opportunities, the CWPP proposes vegetation management in public areas including parks and recreational space designated as being at risk for wildfire. However, vegetation management activities would be temporary, and would be repeated periodically when determined necessary by the SBFD. During ongoing vegetation management activities, the availability of recreational opportunities would be temporarily reduced and recreation activities would be disturbed in the areas where vegetation management is being conducted. In addition, management activities would involve a temporary influx of workers, vehicles, and equipment into the identified recreation areas, which could result in the temporary physical deterioration of recreational areas such as parks and public trail facilities. However, since vegetation management activities would be temporary, lasting only as long as the vegetation management activities are being conducted, the CWPP would not result in a permanent impact on the availability of parks and recreational areas. Although vegetation management activities would be implemented in some parks and open space areas, it is anticipated that vegetation management would improve park quality and create safer recreational spaces by reducing the risk of wildfire. The occurrence of wildfire in these areas would be detrimental to the availability of park and recreation space.

Since implementation of vegetation management would temporarily reduce the availability of park space and recreational opportunities, such as open space, hiking and riding trails, the proposed mitigation from the 2004 PEIR has been carried forward to the proposed CWPP as **MM-REC-1**, requiring SBFD to consult with the PRD prior to starting vegetation management activities, in order to limit simultaneous vegetation management activities in nearby parks. Implementation of **MM-REC-1** would ensure that some park and recreational opportunities would remain available to residents and visitors while vegetation management activities are ongoing. Upon completion of vegetation management activities, access to parks and recreational areas would be restored. Further, it is anticipated that vegetation management would remove accumulated flammable material that may currently impeded access to some parks and trails. Thus, impacts would be **less than significant**.

REC-2 Would the project result in substantial loss or interference with existing park space or other public recreational facilities (such as hiking, cycling or horse trails)?

The proposed CWPP would not result in substantial loss of existing park space or other public recreational facilities, as no land use changes are proposed. However, the CWPP would include the establishment of new HFHA and VMUs in and within the immediate vicinity of parks or other public recreational facilities, such as hiking and riding trails, some of which are located within city parks, such as Arroyo Burro Open Space, Douglas Family Preserve, Hale Park, Parma Park, Stevens Park and others. The City participates in the Front Country Trails Program as a partner with the Los Padres National Forest, and County of Santa Barbara. Located within the front range of the Santa Ynez Mountains, the Santa Barbara Front Country Trails include Jesusita, Tunnel, Rattlesnake, West Fork Cold Springs, East Fork Cold Springs, San Ysidro, and Romero Canyon (City of Santa Barbara 2020b).

As discussed above and in response to threshold b), potential impacts associated with vegetation management would be temporary. Impacts would primarily be related to short-term noise from mechanized equipment or temporary blockage or closure of an area for safety purposes while CWPP activities are performed. However, it is anticipated that vegetation management would result in safer, more accessible recreation opportunities, as accumulated flammable material may impede access to some trails and open

space areas under existing conditions. With implementation of **MM-REC-1**, vegetation management would not be conducted simultaneously in nearby parks and trails, to ensure that at least some recreational opportunities would remain available throughout management activities. As such, the proposed CWPP would not result in substantial loss or interference with existing park space or other public recreational facilities, such as trails, and impacts would be **less than significant with mitigation**.

4.16.5 Mitigation Measures

The following mitigation measure has been carried forward from the 2004 PEIR to the proposed CWPP.

MM-REC-1 The Santa Barbara Fire Department shall consult with the Parks and Recreation Department prior to the commencement of vegetation management in parks, open space areas, and public recreational spaces to ensure that recreational opportunities are not precluded simultaneously in several parks in the same portion of the City.

4.16.6 Level of Significance After Mitigation

With implementation of **MM-REC-1**, potential impacts to recreation would be reduced to a less than significant level by limiting simultaneous vegetation management activities in parks and recreational facilities in the same portion of the City.

4.16.7 Cumulative Impact

The proposed project would not result in the construction of new residences or facilitate the development of residences and, therefore, would not result in increased population or the associated increased demand for neighborhood or regional parks or other recreational facilities. However, the implementation of some projects, potentially in other areas of the City, Los Padres National Forest, or County, would likely be concurrent with the proposed project, which could result in cumulative impacts to recreational facilities, such as trails, in the area by causing higher usage of City parks and trails. Although implementation the CWPP activities could temporarily limit access or result in air emissions, noise, dust, visual, and traffic impacts; recreational users may choose to visit other parks, trails or recreation facilities in the area that would remain accessible during implementation of activities contemplated in the CWPP. It is anticipated that visitors would disperse throughout the City and that there would not be a substantial increase in use of any one park or facility. Therefore, as impacts to recreational uses as a result of the project would be temporary, and surrounding recreational opportunities would remain accessible, impacts would be less than cumulatively considerable.

4.16.8 References

City of Santa Barbara. 2014. Urban Forest Management Plan. April 8, 2014. https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?blobid=42332.

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City of Santa Barbara. 2017. Parks and Recreation Department, Resources Inventory. https://www.santabarbaraca.gov/gov/depts/parksrec/parks/mapandlists/parks_resource_inventory.asp

City of Santa Barbara. 2020a. Parks and Recreation Commission. Accessed August 25, 2020: https://www.santabarbaraca.gov/gov/brdcomm/nz/prc/default.asp

City of Santa Barbara. 2020b. Front Country Trails Program. Accessed August 25, 2020: https://www.santabarbaraca.gov/gov/depts/parksrec/keyinitiatives/fctp.asp

SBFD and CDD (Santa Barbara Fire Department and Community Development Department). 2004. Final Program Environmental Impact Report, Wildland Fire Plan. SCH No. 2003041053. City of Santa Barbara Community Development Department and Fire Department. February 2004. Accessed on March 19, 2020. https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=14532.

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4.13 Transportation

This section describes the existing transportation conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Community Wildfire Protection Plan (CWPP or proposed project).

4.13.1 Existing Conditions

Existing Roadway Network

The City of Santa Barbara is served by a state freeway, highways, and local road networks. Some of these roadways are maintained by the state and others are maintained by the City.

Freeways and Highways

The State Highway System is composed of interstate freeways and state-maintained freeways and highways, high-occupancy vehicle lanes, and county highways. The following state freeways and highways operating within the CWPP area include U.S. Route 101, State Route (SR) 1, SR-144 (Sycamore Canyon Road), SR-154 (San Marcos Pass Road), and SR-192 (Foothill Road, Mountain Drive, Mission Ridge Road, and Stanwood Drive).

Local Roads

The City's Department of Public Works is generally responsible for the design, construction, operation, maintenance, and repair of roads within the City's jurisdiction. The roads maintained by the Department of Public Works in the City areas total approximately 240 miles (SBCAG 2017).

The Santa Barbara Circulation Element provides an overview of the existing street layout throughout the City; however, street classifications (i.e., arterial, collector, etc.) are not identified. Development of a new classification system is identified in Policy 2.1.8 of the 1997 Circulation Element, and as one of the two new goals outlined in the 2011 update (City of Santa Barbara 2011). Trips associated with the proposed CWPP would be spread across roads within the City of Santa Barbara.

Some of the prominent local roadways operating within the CWPP area include San Roque Road – Las Positas Road, Mountain Drive, Alameda Padre Serra, Alston Road, Salinas Street, Milpas Street, Carrillo Street, and Cliff Drive.

Traffic Conditions and Trends

The City has a diverse transportation network, serving not only vehicles, but transit riders, cyclists, and pedestrians. Among the eight incorporated cities that are part of the Santa Barbara County Association of Governments (SBCAG)—Buellton, Carpinteria, Goleta, Guadalupe, Lompoc, Santa Barbara, Santa Maria, and Solvang—the City of Santa Barbara has the highest percentage of daily vehicle miles traveled (VMT), accounting for approximately 10% of the VMT throughout the SBCAG region (SBCAG 2017).

Fast Forward 2040, further discussed in Section 4.13.2, characterizes the general traffic conditions in the SBCAG region. Approximately 66% of workers throughout the County drive alone to work; however, the number of workers driving alone has decreased each year since 1990, with the percentage of workers using transit increasing by almost

92% between 1990 and 2010, and the percentage of carpooling workers increasing by about 5% during the same time period (SBCAG 2017). As part of the 2011 Circulation Element update, the City added an additional goal to the Circulation Element, with plans to employ mobility management strategies to increase the convenience and availability of multimodal transportation systems to connect people, places, goods, and service (City of Santa Barbara 2011).

Existing Transit Corridors

Local and regional transit service for the City of Santa Barbara is primarily served by bus lines operated by the Santa Barbara Metropolitan Transit District (MTD). Additionally, regional and commuter train service is provided by the Amtrak Pacific Surfliner and Coast Starlight, as well as bus service provided by The Breeze, Clean Air Express, and Coastal Express, and other services operating throughout the Santa Barbara, Ventura, and San Luis Obispo counties.

As shown in Figure 4.13-1, the bus routes operating along Meigs Road–Carrillo Street, Las Positas Road–SR 225, Calle De Los Amigos, and Torino Drive in the southwestern area of the City operate adjacent to a Vegetation Management Unit (VMU) addition under the proposed CWPP. A brief description of these routes is provided below.

MTD Line 4 is a local route between the Transit Center and the Santa Barbara City College. This route primarily operates along Meigs Road–Carrillo Street and Cliff Drive, with peak service frequencies of 30 to 40 minutes.

MTD Line 5 is a local route between the Transit Center and La Cumbre Plaza. This route primarily operates along Cliff Drive, Las Positas Road, and within the Hidden Valley neighborhood area, with peak service frequencies of 60 minutes.

Existing Bicycle and Pedestrian Facilities

The City of Santa Barbara Bicycle Master Plan defines bikeway facility classifications, identifies the existing bicycle network throughout the City, and identifies areas for recommended improvements. The following classifications are defined in the City's Bicycle Master Plan:

- Class I: bicycle paths that have a fully separated right-of-way for the exclusive use of bicycles and pedestrians
- Class II: bicycle lanes alongside automobile travel lanes, demarcated by striping (and sometimes by painted buffers)
- Class III: bicycle routes without a designated bicycle lane, where cyclists and motorists have shared use of the roadway
- Peak-Hour: automobile parking lanes that become exclusively used for bicyclists during peak travel times of the day (typically 7:00 – 9:00 a.m. and 2:00 – 4:00 p.m.; some parking allowed from 6:00 p.m. to 7:00 a.m. in residential zones)

As shown in Figure 4.13-2, the existing Class II bicycle lanes located along Meigs Road–Carrillo Street and Las Positas Road are located adjacent to a VMU addition under the proposed CWPP. No other bicycle facilities run adjacent to a proposed CWPP VMU addition.

Pedestrian facilities, including sidewalks, curbs and gutters, and landscaping exist along the majority of City streets. An inventory of existing pedestrian facilities was completed in the 2006 Pedestrian Master Plan, identifying areas of improvement throughout the City, as well as specific corridor projects, many of which have been implemented since adoption of the Pedestrian Master Plan (City of Santa Barbara 2006).

City of Santa Barbara / CWPP

Coastal Zone Boundary

Current Vegetation Management Units

Community Fuels Treatment

MTD Transit Center

Train Station

Bus Stop

Rail Line

Bus Route

Proposed Vegetation Management Units

Proposed Additions

0 1,000 2,000 Feet

SOURCE: City of Santa Barbara

COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

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FIGURE 4.13-1

Existing Transit Facilities and Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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City of Santa Barbara / CWPP Area

Coastal Zone Boundary

Current Vegetation Management Units

Community Fuels Treatment Network

Bikeways

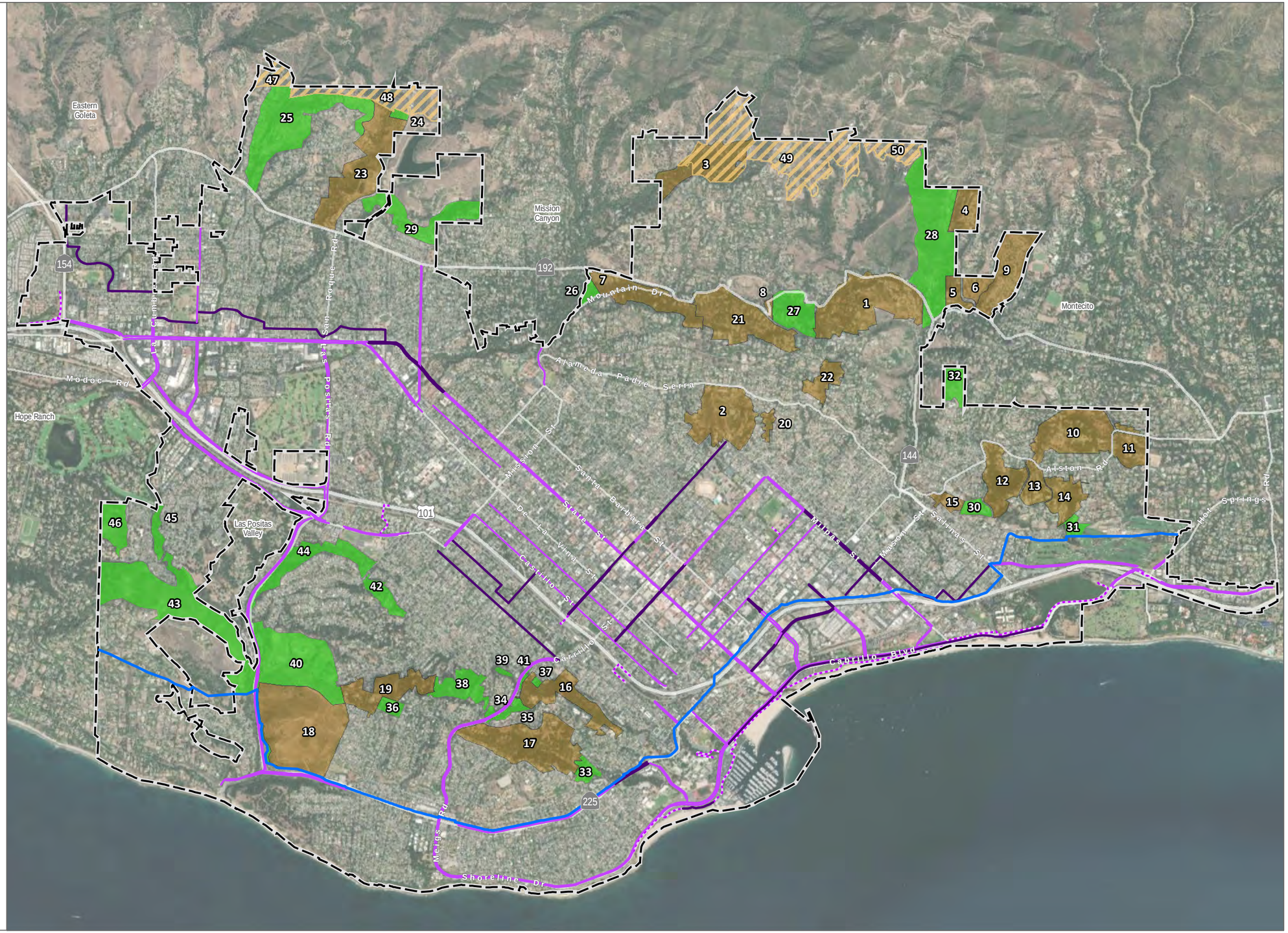
Class 1

Class 2

Class 3

Proposed **V**egetation Management **Units**

Proposed Additions



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SOURCE: City of Santa Barbara

COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

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FIGURE 4.13-2

Existing Bicycle Facilities and Vegetation Management Units

City of Santa Barbara Community Wildfire Protection Plan

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4.13.2 Relevant Plans, Policies, and Ordinances

State

California Department of Transportation

The California Department of Transportation (Caltrans) is the public agency responsible for designing, building, operating, and maintaining California's state highway system, which consists of freeways, highways, expressways, toll roads, and the area between the roadways and property lines. Caltrans is also responsible for permitting and regulating the use of state roadways. Caltrans' construction practices require temporary traffic control planning during any activities that interfere with the normal function of a roadway.

In anticipation of SB 743 implementation, Caltrans released the Draft Transportation Impact Study Guide (TISG) in February 2020 (Caltrans 2020), replacing the 2002 Guide for the Preparation of Traffic Impact Studies. Per the 2020 TISG, consistent with Senate Bill (SB) 743, Caltrans' primary review focus is also now VMT, replacing level of service (LOS) as the metric used to evaluate traffic impacts in California Environmental Quality Act (CEQA) transportation analyses. Caltrans recommends use of the State Office of Planning and Research's (OPR) recommended thresholds for land use projects and recommends following the guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018).

In addition to VMT, the 2020 TISG states that it may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the State Highway System and connections with the State Highway System. Caltrans also notes that a future update of the TISG will include the basis for requesting a transportation impact analysis not based on VMT and define elements to be included in non-VMT analysis. This is anticipated to occur in September 2020.

Senate Bill 743

On September 27, 2013, SB 743 was signed into law, which ordered a change in the way that transportation impacts are analyzed under CEQA. SB 743 requires that the OPR amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. LOS, or automobile delay, will no longer be considered an environmental impact under CEQA. Per OPR's Final Proposed Updates to the CEQA Guidelines effective on December 28, 2018, OPR added Section 15064.3 to the CEQA Guidelines, which would provide that, in most cases, VMT is the most appropriate measure of transportation impacts. OPR also proposed changes to the questions related to transportation in Appendix G of the CEQA Guidelines. OPR revised the question related to "measures of effectiveness" (threshold question A) so that the analysis focuses on circulation elements of city and county General Plans and other land use plans governing transportation. OPR also proposed to delete the second question related to LOS and insert references to new CEQA Section 15064.3. Finally, OPR proposed to clarify the question related to design features.

The new Section 15064.3(b), Criteria for Analyzing Transportation Impacts, states the following:

> If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

OPR's regulatory text indicates that a public agency may immediately commence implementation of the transportation impact guidelines, and that the guidelines will apply statewide by July 1, 2020. The following analysis uses the recently updated significance thresholds per Appendix G of the CEQA Guidelines.

Regional

Regional Transportation Plan/Sustainable Communities Strategy

SBCAG is the designated Metropolitan Planning Organization for Santa Barbara County and all eight incorporated cities within the County, including the City of Santa Barbara. SBCAG is federally mandated to develop plans for transportation, growth management, hazardous waste management, and air quality.

The Regional Transportation Plan (RTP), also known as Fast Forward 2040 was adopted in August 2017 and is a long-range planning document that defines how the region plans to invest in the transportation system over 20 years based on regional goals, multi-modal transportation needs for people and goods, and estimates of available funding. The RTP includes a Sustainable Communities Strategy (SCS) as required by SB 375. The SCS is a component of the RTP that sets forth a forecasted development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, will reduce greenhouse gas emissions from passenger vehicles and light trucks to achieve the greenhouse gas reduction targets set by the California Air Resources Board. The future land use and transportation scenario presented in the SCS must accommodate forecast population, employment, and housing sufficient to meet the needs of all economic segments of the population, including the state-mandated Regional Housing Needs Assessment, while considering state housing goals (SBCAG 2017).

Connected 2050 is the latest update to the RTP/SCS still within the planning phase at the time this document was written. SBCAG updates the SCS with the RTP every 4 years. The last update was completed in 2017. The Connected 2050 RTP-SCS update will be completed by August 2021. The final Connected 2050 RTP-SCS will provide recommendations to help cities and the County of Santa Barbara make important decisions about transportation, housing, and land-use in the next 3 to 5 years.

Santa Barbara County Congestion Management Plan

Since 1990, state statutes require that a Congestion Management Program be developed, adopted, and updated biennially for every county that includes an urbanized area. This program must include every city and the county government within that county. Federal congestion management requirements were included in the Intermodal Surface Transportation Efficiency Act in 1991. SBCAG was the designated Congestion Management Agency for Santa Barbara County in 1991; however, in July 2018, SBCAG began exploring exemption from the state's Congestion Management Program statutes under Assembly Bill 2419. In January 2019, the SBCAG Board approved a resolution exempting the region from the state Congestion Management Program statute (SBCAG 2019).

Local

City of Santa Barbara Circulation Element

The Circulation Element of the existing adopted General Plan sets the direction for the development of a comprehensive, coordinated, and continuing transportation system for the City, with a sustainability focus emphasizing alternative modes of transportation, maintaining traffic flow, and reassessing parking requirements to complement a people-oriented community (City of Santa Barbara 2011). The City Council adopted the Circulation Element into the General Plan on November 25, 1997. The 1997 Circulation Element was readopted into the 2011 General Plan update (Plan Santa Barbara), along with the addition of new Circulation Element goals and policies.

City of Santa Barbara Bicycle Master Plan

The City's Bicycle Master Plan was developed per direction of the City's adopted Circulation Element, in 1997 and was adopted by the City Council on July 26, 2016. The primary purpose of the Bicycle Master Plan is to outline the goals, policies, and implementation strategies that will improve bicycle safety, convenience, facilities, and infrastructure in the City of Santa Barbara (City of Santa Barbara 2016). Additionally, the Bicycle Master Plan depicts the general location of existing and planned bikeway routes, and provides for a system of bikeways that is consistent with the policies outlined in the current Circulation Element.

City of Santa Barbara Pedestrian Master Plan

As with the Bicycle Master Plan, the City's Pedestrian Master Plan was developed per direction of the City's adopted Circulation Element in 1997 and was adopted by the City Council on July 18, 2006. The Pedestrian Master Plan identifies infrastructure upgrades to pedestrian facilities, including intersection improvements, sidewalk completions, Americans With Disabilities Act (ADA) compliance, landscaping, and connectivity, and outlines goals, policies, and strategies to "extend Santa Barbara's distinction as one of the most pedestrian friendly urban communities in the country" (City of Santa Barbara 2006).

4.13.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to transportation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to transportation would occur if the project would:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
d) Result in inadequate emergency access.

The CWPP Initial Study (Appendix A) determined implementation of the proposed project may have a potentially significant impact in each issue area; therefore, all topics are further analyzed below.

4.13.4 Impacts Analysis

TRAF-1 Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Proposed CWPP activities were analyzed at a programmatic level, based on an analysis of ongoing activities under the 2004 Wildland Fire Plan, and an analysis of potential changes under the proposed CWPP. The City identifies a significant project-specific traffic effect when a project's net peak-hour traffic generation would constitute 1% or more of a signalized intersection's capacity at a critical intersection identified in the City's Traffic Analysis Guidelines (City of Santa Barbara 2020). For the purposes of this analysis, the trip generation of all proposed CWPP activities was analyzed to determine whether further traffic analysis would be required for any individual project or combination of concurrent projects, within the proposed CWPP.

The City proposes to consolidate and re-name the High Fire Hazard Area (HFHA) following the California Department of Forestry and Fire Protection's (CAL FIRE's) Very High Fire Hazard Severity Zone update, and change the boundaries of existing HFHA under the proposed project. Parcels are proposed to be added to the HFHA due to City incorporation boundaries and re-assessment of fire behavior modeling and vegetation data. As shown in Table 3-2 in Section 3.3.2, the Coastal Interior and Coastal Zones would be consolidated into a High Fire Hazard Severity Zone (HFHSZ) classification, with approximately 432.05 acres of land added. Additionally, the Foothills and Extreme Foothill Zones would be consolidated into a Very High Fire Hazard Severity Zone (VHFHSZ), with approximately 115.13 acres of land added.

Per Chapter 8.04 of the City of Santa Barbara Municipal Code (adopted by Ordinance No. 5920), all parcels in the HFHA are required to meet City-defined defensible space requirements year-round. Vegetation within defensible space zones, native or otherwise, must be maintained to create an effective fuel break by thinning dense vegetation and removing dry brush, flammable vegetation, and combustible growth. Although more homeowners would be required to maintain defensible space when compared to the 2004 Wildland Fire Plan, nominal trips would be associated with these maintenance activities. Additionally, as defensible space management would generally occur on private property, the proposed additions to the HFHA would not impact existing transit, bicycle, or pedestrian facilities.

Because the Institute of Transportation Engineers' Trip Generation Manual does not contain trip rates for vegetation management-related activities (ITE 2017), to accurately assess the impact of traffic related to vegetation management activities, trip generation associated with the ongoing activities under the 2004 Wildland Fire Plan was analyzed. Although the proposed CWPP includes 22 additional VMUs, the CWPP would maintain the same general vegetation management methods as described in the 2004 Wildland Fire Plan and Program Environmental Impact Report (PEIR). Review of historical data since adoption of the 2004 Wildland Fire Plan indicates that only two to eight VMUs are serviced annually, and vegetation management activities in one VMU would not occur simultaneously with management in another VMU. To provide a conservative analysis, a peak day would occur during a prescribed burning event in one VMU while vegetation management occurs in another VMU.

All workers are assumed to arrive at a vegetation management area by 8:00 a.m. and leave after 5:00 p.m., consistent with the following best management practices (BMPs) identified in Table 3-9 related to the Noise resource area in Section 3.6:

- Work would include weekdays between the hours of 8:00 a.m. to 5:00 p.m. No work will be completed on weekends or designated holidays unless fire conditions (e.g., red flag warning) dictate immediate action.

The daily off-site haul truck trips, associated with small dump trucks used to haul material to chippers for vegetation management activities and fire trucks used during prescribed burning events, would be distributed throughout the work day. Based on these assumptions, a peak day would generate approximately 30 daily trips, 13 AM peak-hour trips, and 13 PM peak-hour trips, as shown in Table 4.13-1. Using a passenger car equivalent (PCE) factor of 2.0 for small dump truck and fire truck trips, the proposed CWPP would generate approximately 38 daily PCE trips, 15 AM peak-hour PCE trips, and 15 PM peak-hour PCE trips.

Table 4.13-1. Peak-Period Trip Generation Summary

Vehicle Type	Daily Quantity		Daily Trips	AM Peak Hour			PM Peak Hour		
				In	*Out*	*Total*	*In*	*Out*	*Total*
Trip Generation									
Representative Vegetation Management									
Workers	5	Workers	10	5	0	5	0	5	5
Haul trucks	2	Trucks	4	1	0	1	0	1	1
Subtotal Vegetation Management			*14*	*6*	*0*	*6*	*0*	*6*	*6*
Representative Prescribed Burn									
Workers	6	Workers	12	6	0	6	0	6	6
Haul trucks	2	Trucks	4	1	0	1	0	1	1
Subtotal Prescribed Burn			*16*	*7*	*0*	*7*	*0*	*7*	*7*
Total			**30**	**13**	**0**	**13**	**0**	**13**	**13**
Trip Generation with PCE									
Representative Vegetation Management									
Workers (1.0 PCE)	5	Workers	10	5	0	5	0	5	5
Haul trucks (2.0 PCE)	2	Trucks	8	2	0	2	0	2	2
Subtotal Vegetation Management			*18*	*7*	*0*	*7*	*0*	*7*	*7*
Representative Prescribed Burn									
Workers (1.0 PCE)	6	Workers	12	6	0	6	0	6	6
Haul trucks (2.0 PCE)	2	Trucks	8	2	0	2	0	2	2
Subtotal Prescribed Burn			*20*	*8*	*0*	*8*	*0*	*8*	*8*
Total (w/ PCE)			**38**	**15**	**0**	**15**	**0**	**15**	**15**

Note: PCE = passenger car equivalent.

As shown in Table 4.13-1, the proposed project would generate no more than 15 PCE-adjusted trips, nor would management of the 22 additional VMUs added under the proposed CWPP increase the City's daily existing vegetation management practices under the 2004 Wildland Fire Plan and PEIR. Therefore, as trips would be temporary in nature and the proposed CWPP would not increase daily operations when compared to the 2004 Wildland Fire Plan, the 15 peak-hour trips estimated under a peak period would not have a measurable impact to traffic operations and would not constitute 1% or more of a signalized intersection's capacity at a critical intersection. As such, impacts would be **less than significant**.

TRAF-2 Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

The proposed CWPP is not a land use or transportation project, and therefore neither Section 15064.3(b)(1) nor Section 15064.3(b)(2) of the CEQA Guidelines apply. Instead, the proposed CWPP would be categorized under Section 15064.3(b)(3) qualitative analysis. The following paragraph from the Section 15064.3(b)(3) provides guidance regarding qualitative analysis:

> If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the

availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

The updated CEQA Guidelines do not establish a significance threshold, but the OPR's Technical Advisory recommends a threshold of significance for residential, office, and other land uses. The recommended threshold for per-capita or per-employee for residential or office projects, respectively, is 15% below that of existing development. There is no significance threshold for construction projects. For the purposes of this analysis, traffic associated with vegetation management activities would be consistent with the type of vehicles and operations associated with construction traffic as referenced in Section 15064.3(b)(3).

Since the OPR Technical Advisory does not recommend a quantitative method to estimate construction-related VMT, this analysis has been discussed qualitatively using reliance on fundamental CEQA principles to determine the significance of an impact.

Per the OPR Technical Advisory, a project that would generate fewer than 110 trips per day generally may be assumed to have a less than significant transportation impact. Although the vegetation management activities outlined in the proposed CWPP are not land use projects and would not generate permanent trips, they would generate temporary trips over an extended period of time. Therefore, conservatively, the criteria of less than 110 trips has been used as a screening threshold for trip-generating activities associated with the proposed CWPP.

The proposed CWPP includes modifications to the HFHA, VMUs, and vegetation management methods outlined in the 2004 Wildland Fire Plan, as detailed in Chapter 3. The SBFD has consistently implemented the vegetation management strategies in the 2004 Wildland Fire Plan and 2004 PEIR, and vegetation management methods would continue under the proposed CWPP. Vegetation management work generally will occur during the period August 1 through April 1, and prescribed burns would typically occur in the period November through May. These activities do not propose additions or appreciable changes to current vegetation management activities. Vegetation management operations would occur annually, with prioritization to a specific VMU based on the level of hazard, as well as funding, recent wildfire activity, and landowner permission. As such, the work would occur indefinitely under the proposed CWPP and vary on an annual basis, generating temporary vegetation management-related traffic that would cease after the vegetation management activity is completed. As shown in Table 4.13-1, the proposed project would generate less than 110 daily trips; therefore, impacts related to VMT would be **less than significant**.

TRAF-3 Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Temporary lane or road closures would occur during vegetation management activities, specifically during road clearance and management of VMUs adjacent to roadways. However, the CWPP proposes to maintain the same general vegetation management methods as described in the 2004 Wildland Fire Plan and PEIR. The proposed CWPP would continue to use vegetation management methods consistent with the following BMPs identified in Table 3-9 related to the Wildfire resource area in Section 3.6:

- *For safety purposes, necessary signage alerting the public to active operations should be provided.*

Signage alerting vehicles, pedestrians, and cyclists to active operations would adhere to standard traffic management procedures, including placement of warning signs, positioning of flaggers, and placement of

other warning devices, to ensure that this impact would remain less than significant. Additionally, the following traffic-specific BMPs are identified in Table 3-9, Section 3.6:

- Haul trucks entering or exiting public streets would yield to the public traffic at all times.
- All project-related staging of vehicles would be kept out of the adjacent public roadways and would occur on site or within other off-street areas.
- Traffic control and associated Traffic Control Plans should be prepared for any lane closure, detour, or other disruption to traffic circulation, including bicycle and pedestrian trails. Bicycle and pedestrian trails would remain open, to the greatest extent possible, during vegetation management activities or re-routed to ensure continued connectivity.
- Bus route and/or a bus stop access impacts associated with vegetation management activities would be coordinated with the Santa Barbara MTD.

With the above BMPs, impacts to geometric design hazards or incompatible uses would remain **less than significant**.

TRAF-4 Would the project result in inadequate emergency access?

As discussed above, the proposed CWPP would continue to implement the vegetation management methods outlined in the 2004 Wildland Fire Plan and PEIR. Additionally, the CWPP would increase the total area classified in an HFHA by approximately 547.18 acres, which would increase the number of properties required to meet defensible space requirements, as outlined in Table 3-5, Section 3.4.2. Distance space requirements would also increase under the proposed CWPP, further increasing accessibility to emergency vehicles along roadways and driveways.

Additionally, the proposed CWPP would continue to implement roadway clearance measures consistent with the City Municipal Code requiring property owners to clear flammable vegetation and combustible growth horizontally and vertically on the portions of their property that abuts highways and private streets ordinarily used for vehicle traffic. As shown in Table 3-4, Section 3.4.1, road clearance requirements would generally remain the same as considered in the 2004 Wildland Fire Plan and PEIR. Road clearance activities would reduce the amount of vegetation along roadways, enhance evacuation during a wildfire, and allow greater access for fire engines and equipment to respond during a wildfire; therefore, emergency access would be generally improved under the proposed CWPP. As such, the proposed project would result in a **less than significant impact.**

4.13.5 Level of Significance After Mitigation

With adherence to the project components, management standards, and BMPs included in Appendix E of the CWPP, all of the potential impacts described in 4.13.4 above are **less than significant.**

4.13.6 Cumulative Impacts Analysis

Cumulative transportation impacts are generally analyzed by considering the potential transportation impacts from related projects in the area. As previously discussed, CWPP impacts related to adopted policies, plans, or programs regarding public transit, bicycles, or pedestrian facilities would be less than significant, and it is not anticipated that the proposed CWPP, combined with other related projects, would result in a cumulatively considerable impact to

the City's transportation network, since individual components of the proposed CWPP would generate low, temporary, vegetation management-related traffic volumes.

Based on the conclusion above relating to conflicts or inconsistencies with CEQA Guidelines Section 15064.3(b), the proposed CWPP is not presumed to result in a significant and unavoidable impact with respect to VMT as daily traffic would not exceed 110 trips. Therefore, the proposed CWPP's VMT impact would not be cumulatively considerable.

Additionally, as previously discussed, CWPP impacts related to substantially increasing traffic hazards and inadequate emergency access would be less than significant, and no cumulatively considerable impacts would be anticipated.

4.13.7 References

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OPR (California Governor's Office of Planning and Research). 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December 2018. Accessed March 2020. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

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4.14 Tribal Cultural Resources

This section describes the existing tribal cultural resources (TCRs) conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project.

The California legislature passed Assembly Bill (AB) 52 in recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies. AB 52 establishes a consultation process with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project, if requested in writing by the tribe to the lead agency (i.e., City of Santa Barbara). Consistent with the requirements of AB 52, the Native American Heritage Commission (NAHC) identified six (6) Native American individuals/entities who would potentially have specific knowledge of the cultural resources identified within the Community Wildfire Protection Plan (CWPP or proposed project). This section incorporates information available at the time of publication of this Public Draft Program Environmental Impact Report (PEIR). The City's tribal consultation efforts under Assembly Bill (AB) 52 are ongoing. The City remains actively engaged with consulting tribes for the identification and proper treatment of Tribal Cultural Resources (TCRs).

4.14.1 Existing Conditions

The City of Santa Barbara (City) lies on an east–west trending coastal plain approximately 3 miles wide in the western portion of the Transverse Ranges geologic province situated between the Santa Ynez Mountains to the north and the Pacific Ocean to the south. The proposed CWPP project site topography ranges from flat to gentle slopes in the center of the City to moderate-steep slopes in the foothills. The relatively flat topographies within the City are generally underlain by unconsolidated alluvial deposits of silt, sand, gravel, cobbles, and boulders, most of which were washed down from the Santa Ynez Mountains over the past 1.8 million years (City of Santa Barbara 2013). The foothills are comprised of the Santa Barbara, Monterey, Rincon, and Sespe formations. The Santa Barbara Formation that underlays much of the Alta Mesa neighborhood is the youngest of these formations and is comprised of sands and silts that were deposited between 1.8 and 5 million years ago. The Monterey Shale Formation can be found exposed in the Mesa neighborhoods' sea cliffs, in portions of the Las Positas Valley, as well as portions of the Riviera neighborhood, and was formed between 5 and 23 million years ago. Finally, the Rincon Shale Formation, also exposed in the Las Positas Valley area and the Foothill and Riviera neighborhoods, was formed roughly between 16 and 23 million years ago (City of Santa Barbara 2013). Major tributaries within the City jurisdiction include from east to west, Sycamore Creek, Mission Creek, San Roque Creek, and Arroyo Burro.

There are varied habitats within the City's jurisdiction that support a wide variety of floral and faunal communities, including riparian communities, oak woodlands, grasslands, and coastal scrub. Several corridors of natural habitat that connect to more extensive natural habitats in the Santa Ynez Mountains and the Los Padres National Forest, as well as pockets of natural habitats, exist within the City. Some of these natural habitats include Parma Park in the northeast portion of the City, Andrée Clark Bird Refuge in the southeast, and Arroyo Burro Open Space, the Douglas Family Preserve, and portions of Elings Park in the southwest. The natural communities within the proposed CWPP area prior to European colonization would have consisted of annual and perennial grasslands, riparian and Southern oak woodlands, coastal sage scrub, chaparral, freshwater marsh, coastal saltmarsh, and eucalyptus woodland.

This section documents the results of a the California Historical Research Information System (CHRIS) search conducted at the Central Coastal Information Center (CCIC), a search of the NAHC Sacred Lands File, and tribal consultation conducted by the City of Santa Barbara as lead agency, pursuant to California Assembly Bill (AB) 52.

4.14.1.1 Ethnohistoric Setting

Immediately prior to the arrival of the Spanish in A.D. 1542, the people living in the Santa Barbara region collectively known today as the Chumash, consisted of a set of related ethnolinguistic groups occupying a territory that spanned from Morro Bay in the north, south to Malibu on the coast, and inland to encompass the interior South Coast Range and the northwest Transverse Range, including the Santa Ynez River Valley, the Carrizo Plain, the Cuyama Valley, and the San Emigdio Hills. The language these people spoke is considered an isolate (Goddard 1996), distinct from the languages spoken by their neighbors, the Salinan, Yokuts, Kitanemuk, Tataviam, and Gabrielino (Tongva). Internally there was considerable diversity, such that not all of the regional dialects were mutually intelligible. Today, the names for these different ethnolinguistic groups come mainly from their associations with different Mission territories: the Obispeño in the north were notably distinct from a group called the Central Chumash, which consisted of the Purisimeño, Ynezeño, Barbareño, and Ventureño. Both of these groups (Obispeño and Central Chumash) spoke languages that were in turn distinct from those spoken on the northern Channel Islands, typically grouped together under the heading of Island Chumash. Even this linguistic taxonomy masks some of the historically documented internal diversity that would include regional dialectic differences such as the Emigdiano, Castec, Matilija, Mugu, and Malibu of the Central Chumash, and the Cruzeño, Roseño, and Migueleño of the Island Chumash (see Kroeber 1925; Grant 1978a, 1978b; Golla 2011).

What we know of these people comes, in part, from the rich written accounts of a variety of sources, the earliest of which are those of the Spanish explorers to the Santa Barbara Channel and mainland, namely Cabrillo in 1542 and Vizcaíno in 1602 (Wagner 1929; Brown 1967). These observations were expanded by the accounts written during early efforts to establish evangelical Missions (and therefore Royal territory) in Alta California, namely by Portolá in 1769, de Anza in 1776, and to a lesser degree, Garcés in 1776 (Coues 1900; Bolton 1927; Gamble 2008; Priestley 1937). These accounts were further expanded by the observations and managerial records of the Mission administrators for a period of about 60 years (Geiger 1969; Geiger and Meighan 1976; Johnson 1988; Johnson 1982). After that, Euroamerican interest in Native American life made it possible for the Native views of their own history and culture to enter into the written record, primarily in this case through ethno-historic documentation of Chumash beliefs, folk tales, music, customs, and lifeways (e.g. Blackburn 1975; Hudson et al., 1981; Harrington 1942). This forms perhaps the richest body of information that we have about the Chumash; further development of this understanding continues today.

The written records and accounts of Chumash life reveal a variety of things that have been of paramount importance to archaeologists for many decades. This includes accounts of what people ate and how they acquired it, how they made various elements of material culture, and how they used it (e.g. Hudson and Blackburn 1983; Hudson and Blackburn 1979; Hudson and Blackburn 1985; Hudson and Blackburn 1986). It also includes ideas about the landscape, knowledge of the plants and animals that live in it, and of how to manage that landscape, as well as accounts of how social life was structured, and how hierarchy and power were perceived, imagined and negotiated by individuals. The ethnohistories also contain a rich account of the structure of hierarchy within Chumash life, including ideas about how money, exchange, and territory, along with the management and manipulation of those elements, fed into the structures of social power.

It is this body of knowledge that commands the lion's-share of archaeological attention, certainly since the 1980s. Of particular importance to archaeologists of the Santa Barbara Channel has been the effort to explain the evolution of the kinds of social and political complexity revealed in the rich ethno-historic records of the Chumash (King 1969, 1976). Attention paid to how people acquired and controlled resources, and how resources from different environments (namely the Islands, the mainland coast, and the interior) were moved across different boundaries and networks, has been extremely important. This involves a detailed understanding of how goods and services were transported not only between different aspects of the Chumash cultural sphere, but also between the Chumash and the people of the Central Valley, the Sierra Nevada, the South Coast, and the Desert Interior. Considerable ethnographic detail exists about the nature of market-based exchange, the use of shell-bead money, conscious control of inflation, the role of intermediaries in between-group exchange, trading parties from distant lands, and the kinds of goods transported from different areas, all of which play a significant role in both the interpretation of the archaeological record, and the design of archaeological research. Indeed, synthetic accounts of the ethnographic record occasionally offer insights about the archaeological patterns one might expect of the Chumash interaction sphere (Gamble 2008; King 1976; Johnson 1982, 1988).

Interests in the evolution of complex society in the Chumash world have therefore played a disproportionate role in the collective efforts of archaeologists over the past many decades. Therefore, it isn't surprising that the majority of archaeological research has been focused mainly on the late prehistoric record and on understanding the evolution of the many things the Europeans were able to observe or record of Chumash life. However, as with any interpretation of the past informed by ethnohistoric observation, interpreters of the Chumash and their ancestors must be cautious about the ethnographer's interpretive agency, conscious or not (Haley and Wilcoxon 1997, 1999). Contemporary re-analysis of historic observations may stimulate novel insights that engender novel directions in archaeological research.

4.14.1.2 Background Research

CHRIS Records Search

On May 15, 2020, Dudek requested a search of the CHRIS at the CCIC, located on the campus of University of California, Santa Barbara. The search conducted by CCIC staff analysts included any previously recorded cultural resources and investigations within a 1-mile radius of the proposed CWPP area (as defined previously). The CHRIS search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. Confidential records search results are on file with the City for review by eligible individuals.

Previously Recorded Cultural Resources

The CCIC records indicate that 11 cultural resources have been previously recorded within the proposed project site. Of these resources, 4 are prehistoric, 1 is a multicomponent resource containing both prehistoric and historic components and 6 are historic built resources. Within a 1-mile radius of each project area exist 890 previously recorded cultural resources. Of these resources, 80 are prehistoric, 36 are historic resource, 25 are multicomponent resources containing both prehistoric and historic components and 749 are historic built resources. Those previously recorded archaeological sites existent within the proposed project areas with Native American origin/consequence, including four prehistoric and one multicomponent, are described below and summarized in Table 4.18-1. A complete list of all previously recorded cultural resources within 1 mile of the proposed project site, and summaries can be found in Confidential Appendix E.

Prehistoric Resource: CA-SBA-32 (P-42-000032)

CA-SBA-32 is a prehistoric site measuring 198 meters north to south and 122 meters east to west (650 by 400 feet) at an elevation of 10 feet above mean seal level (amsl) and is located approximately 805 m (2,640 feet) south of closest proposed Vegetation Management Unit (VMU) (40) and overlaps proposed High Fire Hazard Area (HFHA) (T). CA-SBA-32 is documented as consisting of a "great many artifacts" and human remains and was originally formally recorded by D. Banks Rogers in his book *The Prehistoric Man of Santa Barbara Coast* (1929). The current CHRIS site record does not include any further recordation other than Rogers. Rogers states that he failed to absolutely locate the exact location of the site despite repeated surveying of the area. Rogers site description is as follows "A tradition has long persisted that an Indian village once existed near the mouth of the Arroyo Burro, an apparently ideal location for a settlement. A great many artifacts have been found upon the surface in this vicinity and fragments of two Indian crania were laid at my feet by an ambitious young dog." This site has not been evaluated for listing on CRHR or the NRHP; however, based on the description and limited site record, it may meet the criteria for eligibility on either or both the CRHR and NRHP.

Prehistoric Resource: CA-SBA-575 (P-42-000575)

CA-SBA-575 is a prehistoric site measuring 177 meters northwest to southeast and 76 meters northeast to southwest (580 by 250 feet) at an elevation of 843 feet amsl and is located approximately 90 meters (300 feet) southwest of closest proposed VMU (40) and overlaps proposed HFHA (T). CA-SBA-575 is documented as consisting of marine shell, bone, a bedrock mortar, a buried hearth, a pecked boulder, asphaltum, beads, a pottery shard, and various flaked and ground stone tools and was originally formally recorded in 1968 by Wadhams. A survey operation was conducted in 1969 by C. Stout to determine exact location of site in relation to county and city land. Another survey operation was conducted in 1978 by Wilcoxon, in order to analyze site disturbances prior to grading the area. Wilcoxon described the site as a shell midden and also noted the presence of projectile points. CA-SBA-575 was again formally recorded in 2002 by A. Munns, who performed a Phase II Archaeological Investigation to evaluate the significance of the site. Munns noted the site contained less artifacts than previously documented and theorized that CA-SBA-575 may have been a seasonal habitation site. This site has not been evaluated for listing on CRHR or the NRHP; however, based on the description and the site record, it meets the City of Santa Barbara Master Environmental Assessment criteria as an important site and likely meets the criteria for eligibility on either or both the CRHR and NRHP.

Prehistoric Resource: CA-SBA-1530 (P-42-001530)

CA-SBA-1530 is a prehistoric site measuring 200 square meters (2152 square feet) at an elevation of 50 feet amsl and approximately overlaps proposed VMU (45) and overlaps proposed HFHA (R). CA-SBA-1530 is documented as consisting of marine shell fragments and was formally recorded in 1977 by Costello and Craig, who described the site as low-density shell scatter. This site has not been evaluated for listing on CRHR or the NRHP; however, based on the description and limited site record, it does not likely meet the criteria for eligibility on either or both the CRHR and NRHP.

Prehistoric Resource: CA-SBA-3851 (P-42-003851)

CA-SBA-3851 is a prehistoric site measuring 130 meters north to south (425 feet) at an elevation of 88 feet amsl and is located approximately 120 meters (380 feet) northwest of closest proposed HFHA (N) and overlapping proposed VMU (41). CA-SBA-3851 is documented as consisting of highly weathered marine shell fragments and was originally formally recorded in 2006 by B. Bass, who described the site as marine shell scatter within a secondary depositional environment. This site has not been evaluated for listing on CRHR or the NRHP; however,

based on the site record description as a potential secondary deposit, it does not likely meet the criteria for eligibility on either or both the CRHR and NRHP.

Multicomponent Resource: CA-SBA-3749/H (P-42-003749)

CA-SBA-3749/H is a multicomponent site measuring 150 meters north to south by 210 meters east to west (492 by 689 feet) at an elevation of 100 feet amsl and is located approximately 260 meters (860 feet) southeast of closest proposed HFHA (R) and overlapping proposed VMU (43). CA-SBA-3749/H is documented as consisting of prehistoric debitage and marine shell fragments, and historic/modern debris including a shell button, aqua glass, "a hand tooled bottle finish," and ceramic fragments and was formally recorded in 2005 by G. Toren and G. Romani. The prehistoric aspect of the site is described as a possible habitation deposit or a temporary campsite. The historic aspect of the site is described as historic materials scattered and intermixed with modern debris. Toren and Romani did not state whether they believed the prehistoric and historic components of the site are considered related. It is noted that the area has been highly disturbed by both modern and historic practices. This site has not been evaluated for listing on CRHR or the NRHP; however, based on the limited site record description, it may meet the criteria for eligibility on either or both the CRHR and NRHP.

Table 4.14-1. Previously Recorded Native American Cultural Resources within Proposed Project Areas

Primary #	Trinomial	Period	Resource Description	Recorded Year (By)	NRHP/ CRHR Eligibility	Distance From Site (meters)		
						Index Page	*HFHA*	*VMU*
P-42-00032	CA-SBA-000032	P	Possible Village site containing human remains	1929 (Rogers)	ND-P	J3	0	370 SW
P-42-00575	CA-SBA-000575	P	Seasonal prehistoric habitation site that was occupied periodically within the Middle/Late Transition and Late Period	1968 (Wadhams); 2002 (Munns); 2013 (Rosenthal, Mikkelsen)	ND-P	J3	0	90 SW
P-42-01530	CA-SBA-001530	P	Low-density marine shell scatter.	1977 (Costello Craig)	ND-U	G3	0	0
P-42-03851	CA-SBA-003851	P	Highly weathered marine shell scatter, possibly secondary deposit	2006 (Bass)	ND-U	I5	120 NW	0
P-42-03749	CA-SBA-003749/H	M	Multicomponent site consisting of prehistoric debitage and marine shell fragments, as well as historic/modern refuse.	2005 (George, Toren, Romani)	ND-U	H3	260 SE	0

Notes: P = prehistoric resource; M = multicomponent resource; ND-P = NRHP or CRHR eligibility not determined, but based on criteria possibly eligible; ND-U = NRHP or CRHR eligibility not determined, but based on criteria unlikely eligible; 0 = overlaps project site.

4.14.1.3 Native American Coordination

Assembly Bill 52

A project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (California Public Resources Code [PRC] Section 21084.2). Under AB 52, a TCR must have tangible, geographically defined properties that can be impacted by project implementation. The proposed project is subject to compliance with AB 52.

A search of the NAHC's Sacred Lands Files, to determine the presence of any Native American cultural resources within the proposed project site, was requested on May 27, 2020, conducted on May 28, 2020 (Sarah Fonseca, Cultural Resources Analyst) and results received by the City on May 31, 2020 (see Confidential Appendix F). The NAHC results were positive for Native American heritage resources within the proposed project site. The NAHC identified six Native American individuals/entities who would potentially have specific knowledge of the cultural resources identified within the project site. Notification emails and letters, via USPS, were sent to the six individuals on June 3, 2020. Follow-up phone calls to each individual who had not yet responded were made on July 27 and 30, 2020, to confirm receipt of project notification. An account of all communication can be found in Table 4.14-2.

AB 52 allows tribes 30 days after receiving notification to request consultation. If a response is not received within the allotted 30 days, it is assumed that consultation is declined. To date, one response has been received as a result of the City's AB 52 consultation notification:

- **Santa Ynez Band of Chumash Indians (SYBCI)** – A response to the June 3, 2020, notification letter was received on July 14, 2020, via email from SYBCI Administrative Assistant, Susan Arakawa, in which consulting party status was requested and included a formal letter of request for consultation. An initial consultation meeting between the City and the Tribe, represented by SYBCI Tribal Cultural Resources Manager, Freddie Romero, occurred on August 10, 2020, via Zoom call. During the call, the SYBCI provided concerns regarding potential impacts to tribal cultural resources as a result of proposed project implementation. The concerns and requests communicated are as follows: (1) concern about the impact of dozer transport (large mechanical equipment) on known and unknown TCRs during fire prevention and fighting efforts; (2) request that the City work with the SYBCI to identify locations of potential impacts to tribal cultural resources pre-fire; (3) request for the Chumash Fire Department to be included in mutual wildland fire training; (4) request for the Chumash Fire Department to be included in the list of neighboring jurisdictions; (5) request the CWPP address impacts to TCRs during post-fire rehabilitation and include a plan to identify and protect TCRs prior to cleanup and restoration. On August 13, 2020, the City met with Freddie Romero (SYBCI) via Zoom call with the City's cultural consultant, represented by Dudek Senior Archaeologist Heather McDaniel McDevitt, MA, RPA, and discussed the SYBCI's concerns and requests further, as well as the cultural research and analysis results. The result of the meeting was the City's agreement to provide the SYBCI with a review of research and geographic information system (GIS) analysis results in the form of figures/maps portraying locations of known prehistoric archaeological sites and any historic sites potentially associated with Tribal history in relation to project site locations. Mr. Romero communicated that he would present the figures to the SYBCI Tribal Elders Council for their consideration and input. The Visual Summary of Cultural Resource within Project Site Packet was provided to the SYBCI via email to Mr. Romero on August 20, 2020; the packet included figures illustrating the location of each prehistoric, historic, and multicomponent cultural resource with potential Tribal association within or near the project site, a summary text of each site, and any site map provided

as a result of the records search of the CHRIS database. Mr. Romero confirmed receipt of the packet and communicated that he would provide the packet to the SYBCI Tribal Elders Council for their review. On September 25, 2020, a summary of proposed mitigation measures was provided to Mr. Romero for review and concurrence. As of the submittal of the PEIR for public review, Tribal consultation is ongoing. The Tribal Cultural Resources PEIR section will be updated upon completion of the formal AB 52 consultation process.

Table 4.14-2 summarizes the results of the AB 52 process for the proposed project. The confidential AB 52 consultation results are on file with the City.

Table 4.14-2. Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date
Santa Ynez Band of Chumash Indians, Kenneth Kahn, chairperson	June 3, 2020, Letter Memo to Kenneth Kahn	July 14, 2020 – email from SYBCI Administrative Assistant, Susan Arakawa, providing formal request for consultation in attached letter. August 10 and 13, 2020 - Freddie Romero of the SYBCI met with City staff via Zoom and expressed that there are areas within the VMU and HFHA locations that are considered archaeologically and culturally sensitive. Concerns/suggestions include placement of fire breaks and the impact dozer lines may incur. Requests to have Chumash Fire Department included in fire training and that CWPP address post-fire rehabilitation impacts to cultural/tribal resources.	Consultation meeting via Zoom conducted on August 10 and 13, 2020. Consultation is ongoing.
Barbareño/Ventureño Band of Mission Indians, Julie Lynn Tumamait-Stenslie, Chair	June 3, 2020 – email and letter memo sent to Ms. Tumamait-Stenslie; July 27, 2020 - follow-up phone call	No Response	N/A
Coastal Band of the Chumash Nation, Gino Altamarino, Chairperson	June 3, 2020 – email and letter memo sent to Mr. Altamarino; July 30, 2020 - follow-up phone call	No Response	N/A
Northern Chumash Tribal Council, Fred Collins, Spokesperson	June 3, 2020 – email and letter memo sent to Mr. Collins; July 30, 2020 - follow-up phone call	No Response	N/A

Table 4.14-2. Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date
San Luis Obispo County Chumash Council, Mark Vigil, Chief	June 3, 2020 – email and letter memo sent to Mr. Vigil; July 30, 2020 - follow-up phone call	No Response	N/A
Chumash Council of Bakersfield, Julio Quair, Chairperson	June 3, 2020 – email and letter memo sent to Mr. Quair; July 27, 2020 - follow-up phone call	No Response	N/A

4.14.2 Relevant Plans, Policies, and Ordinances

Federal

No federal regulations apply to the proposed project.

State

The California Register of Historical Resources (Public Resources Code Section 5020 et seq.)

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1(j)). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following NRHP criteria (PRC Section 5024.1(c)):

- Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history.

Resources less than 50 years old are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR, Section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing on the NRHP are automatically listed on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The State Historic Preservation Officer maintains the CRHR.

California Environmental Quality Act

The following California Environmental Quality Act (CEQA) statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, and tribal cultural resources (TCRs):

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5(b)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (14 CCR 15064.5(b)(1); PRC Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project does any of the following (14 CCR 15064.5(b)(2)):

(1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(2) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance would be materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2(a)–(c)).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC Section 21083.2(g)):

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts on non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2(a); 14 CCR 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as a TCR (PRC Sections 21074(c) and 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed in PRC Section 5097.98.

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AB 52 formalizes the consultation process between lead agencies and tribal representatives, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with a project area. This includes tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Tribal Cultural Resources

Section 4 of AB 52 adds Sections 21074 (a) and (b) to the PRC, addressing TCRs and cultural landscapes. Section 21074 (a) defines a "tribal cultural resource" as one of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   a. Included or determined to be eligible for inclusion in the California Register of Historical Resources.

b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to TCRs, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

Native American Historic Cultural Sites

The Native American Historic Resources Protection Act (PRC Section 5097, et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act), enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Health and Safety Code

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC Section 5097.98.

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5b requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County Coroner has examined the remains. PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Health and Safety Code

Section 7050.5c). The NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

No local regulations are applicable.

4.14.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to TCRs are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to TCRs would occur if the project would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
   a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
   b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The CWPP Initial Study (Appendix A) determined that each topic area should be evaluated in detail in the PEIR.

4.14.4 Impacts Analysis

TCR-1 Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC, Section 5024.1(c). In applying the criteria set forth in PRC, Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.

Under CEQA, an effect to a TCR is considered a "substantial adverse change" if it is shown that the change would materially impair the significance of the historical resource. That is, a project that demolishes or materially alters in an adverse manner those physical characteristics of a historical

resource conveying its historic significance would materially impair the significance of a historical resource. Therefore, such a change would constitute a "substantial adverse change" under CEQA.

As of the date of publication of this PEIR, the SYBCI is the only tribe to have requested consultation under AB 52. On August 10, 2020, and August 13, 2020, Mr. Freddie Romero of the SYBCI met with City staff via Zoom and expressed that there are certain areas within HFHA and VMU locations that are considered archaeologically and culturally sensitive to the SYBCI. Mr. Romero expressed concerns regarding the potential placement of fire breaks and the impact bulldozer lines could cause on a TCR. Mr. Romero included suggestions to include the Chumash Fire Department in fire training with the SBFD and that the CWPP address post-fire rehabilitation impacts to TCRs. Mitigation measures included herein were provided to Mr. Romero on September 25, 2020, with a follow up phone call to confirm receipt and discuss potential concerns. The City's tribal consultation efforts under Assembly Bill (AB) 52 are ongoing. The City remains actively engaged with consulting tribes for the identification and proper treatment of Tribal Cultural Resources (TCRs).

As discussed in Section 4.4 Cultural Resources, certain mitigation measures have been incorporated to address potential impacts to archaeological resources. These mitigation measures would also address potential impacts to TCRs. **MM-CUL-1 Cultural Resource Treatment Plan** requires the development of a Cultural Resource Treatment Plan that will identify protocols specific to the location of the SBFD's activities. **MM-CUL-2 Workers Environmental Awareness Program (WEAP) Training** would require training for individuals who may be working in culturally sensitive areas. The WEAP training would include a description of the procedures to follow in the event of an unanticipated discovery. **MM-CUL-3 Archaeological Construction Monitoring** requires archaeological monitoring during all ground-disturbance activities within CWPP Cultural Resource Sensitivity Zone B. **MM-CUL-4 Intensive Archaeological Pedestrian Surveys of CWPP Cultural Resource Sensitivity Zone** requires an intensive pedestrian survey prior to ground-disturbance activities within CWPP Cultural Resource Sensitivity Zone B. **MM-CUL-5 Inadvertent Discovery of Archaeological Resources** requires all construction work occurring within 50 feet of an inadvertent discovery to immediately stop until a Secretary of the Interior (SOI)- and City-qualified archaeologist can evaluate the nature and significance of the find. **MM-CUL-6 Inadvertent Discovery of Human Remains** requires that the Santa Barbara County Coroner, City's Environmental Analyst, SOI- and City-qualified archaeologist, and if applicable, the MLD of the applicable Native American Tribe be notified upon the inadvertent discovery of human remains. **MM-CUL-7 Post-Fire Management Assessment** requires that an SOI- and City-qualified archaeologist be retained to assess the effects of the fire and/or fire management on known and unknown cultural resources. Additional mitigation measures have been developed to further specifically address and reduce potential impacts to TCRs. **MM-TCR-1 Pre-Fire and Vegetation Management Assessment** requires City to notify consulting Tribes prior to archaeological surveys being conducted. **MM-TCR-2 Native American Construction Monitoring** requires Native American monitoring during all preplanned ground-disturbance activities occurring within known prehistoric archaeological sites or historic archaeological sites identified as associated with Native American history. **MM-TCR-3 Post-Fire Management Assessment** requires that the SBFD meet with the SYBCI at least biannually to discuss ongoing fire management planning and practices to avoid potential impacts to TCRs. Implementation of **MM-CUL-1** through **MM-CUL-7** and **MM-TCR-1** through **MM-TCR-3** would reduce impacts to TCRs to **less than significant with mitigation.**

4.14.5 Mitigation Measures

MM-CUL-1 **Cultural Resource Treatment Plan.** Potential impacts to cultural resources shall be either minimized or eliminated through development of protocols for practical adherence of mitigation measures MM-CUL-2 and MM-CUL-3 prior to and after the occurrence of vegetation management activities within Community Wildfire Protection Plan (CWPP) Cultural Resource Sensitivity Zones. These protocols shall be outlined in a Cultural Resource Treatment Plan (CRTP). The CRTP shall be developed by a City-qualified archaeologist, meeting the Secretary of Interior Standards, prior to the implementation of any CWPP ground-disturbing activities and include wording of each mitigation measure MM-CUL-2 through MM-CUL-4, specific and detailed explanation for implementation of each mitigation measure, and contact protocol. The CRTP shall be provided to all agency personnel, consulting tribes, contractors, and archaeological personnel. The existence and necessity for adherence to the CRTP shall be noted on all plans, handbooks, or the like associated with tasks that may incur ground disturbance either intentionally or inadvertently.

MM-CUL-2 **Workers Environmental Awareness Program (WEAP) Training**. All personnel participating in tasks that may incur ground disturbance either intentionally or inadvertently shall be briefed regarding unanticipated discoveries prior to the start of said activities. A basic presentation shall be prepared by a City-qualified archaeologist, meeting the Secretary of the Interior (SOI) Professional Qualification Standards to inform all City-retained personnel working on the project about the archaeological sensitivity of proposed project areas located within Community Wildfire Protection Plan Cultural Resource Sensitivity Zones. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during project activities and explain the importance of and legal basis for the protection of cultural resources. Each personnel shall also be instructed the proper procedures to follow in the event that cultural resources or human remains are encountered. These procedures include work curtailment or redirection, and the immediate contact of the site supervisor, SOI- and City-qualified archaeologist, and if human remains are encountered, the County Coroner.

MM-CUL-3 **Archaeological Construction Monitoring.** Archaeological monitoring shall be conducted during all ground-disturbance activities within public space, and when possible private properties, existent within the Community Wildfire Protection Plan Cultural Resource Sensitivity Zone B and during all activities that have the potential to disturb the ground including vegetation removal by hand and mechanical removal when such activity is within or near to a known site. A Secretary of the Interior (SOI)- and City-qualified archaeologist shall be retained to oversee and adjust monitoring efforts as needed (increase, decrease, or discontinue monitoring frequency) based on the observed potential for vegetation management activities to encounter cultural deposits or material. The archaeological monitor shall have the authority to halt all ground-disturbing activities until discovered cultural material can be properly assessed. The archaeological monitor shall be responsible for maintaining daily monitoring logs and immediately contacting the project archaeologist upon discovery of cultural material. If the project archaeologist determines the discovery to be of a nature requiring further evaluation, the project archaeologist shall contact the City as soon as possible and at least within the same working day. Further treatment of cultural material may include redirection or discontinuing ground-disturbing tasks, subsurface testing and/or evaluation and/or data recovery and/or temporary/permanent avoidance. Following the completion of ground-disturbing activities, the SOI- and City-qualified archaeologist

shall provide an archaeological monitoring report memo to the agency. The project archaeologist shall also submit the same memo to the Central Coastal Information Center for inclusion in the California Historical Research Information System database.

MM-CUL-4 **Intensive Archaeological Pedestrian Surveys of Community Wildfire Protection Plan (CWPP) Cultural Resource Sensitivity Zone.** An intensive pedestrian survey shall be conducted prior to implementation of all CWPP ground-disturbance activities within public space, and when possible private properties, existent within the CWPP Cultural Resource Sensitivity Zone B. If necessary and depending on the vegetation condition within the "CWPP Cultural Resource Sensitivity Zone" areas, the survey may be conducted concurrently or immediately subsequent to vegetation removal. The City shall retain a Secretary of the Interior (SOI)- and City-qualified archaeologist/s to conduct Phase I archaeological survey studies within the "CWPP Cultural Resource Sensitivity Zone"; the result of which will be a Phase I Archaeological Resources Report consistent with the California Environmental Quality Act and City Master Environmental Assessment guidelines. The report will include methodology, background research, survey results, interpretation and recommendations. Background research shall start with a review of the City's archaeological database created as a result of this study, but may, if determined necessary by the SOI- and City-qualified archaeologist, include a California Historical Research Information System (CHRIS) records search. Additional records search should be authorized by the City first. Upon completion, the Phase I Archaeological Resources Report shall be submitted to the Central Coastal Information Center for inclusion in the CHRIS database.

MM-CUL-5 **Inadvertent Discovery of Archaeological Resources.** In the event that archaeological resources (sites, features, or artifacts) are exposed during ground-disturbing activities within the proposed project areas (within or outside the Community Wildfire Protection Plan Cultural Resource Sensitivity Zones A and B), all construction work occurring within 50 feet of the discovery shall immediately stop until a Secretary of the Interior (SOI)- and City-qualified archaeologist can evaluate the nature and significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (14 CCR 15064.5(f); California Public Resources Code Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted. If the discovery is Native American in nature, consultation with and/or monitoring by a tribal monitor ancestrally affiliated with the area and, if possible, included in the most current City Barbareño Chumash Archaeological Site Monitors List, may be necessary.

MM-CUL-6 **Inadvertent Discovery of Human Remains.** In the event an inadvertent discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately as well as the City's Environmental Analyst and a Secretary of the Interior (SOI)- and City-qualified archaeologist. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission. (NAHC) who will provide the name and contact information for the Most Likely Descendent (MLD). Treatment of the discovery shall be decided in consultation with the MLD provided by the NAHC. Additionally, an SOI- and City-qualified archaeologist and tribal monitor ancestrally affiliated with the area and, if possible, included in the most current City Barbareño Chumash Archaeological Site Monitors List, shall be

retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

MM-CUL-7 **Post-Fire Management Assessment.** In the event that a fire occurs within public space, and when possible private properties, existent within the Community Wildfire Protection Plan Cultural Resource Sensitivity Zones A and B, a Secretary of the Interior (SOI)- and City-qualified archaeologist shall be retained to assess the effects of the fire and/or fire management on known and unknown cultural resources. The retained SOI- and City-qualified archaeologist shall provide to the City, a brief memo outlining the results of the assessment and recommendation for further treatment if necessary. Any exposure of cultural material, change in the nature of a cultural resource, or new information resulting from the fire or fire management, shall be recorded in a site record update. Based on the recommendations provided in the memo, the City may retain a SOI- and City-qualified archaeologist to conduct the recommended study or measures. All reports, memos, and site records resulting from post-fire management assessments shall be submitted to the Central Coastal Information Center for inclusion in the California Historical Research Information System database.

MM-TCR-1 **Pre-Fire and Vegetation Management Assessment**. The City shall notify all consulting Tribes prior to conducting Intensive Archaeological Pedestrian Surveys of Community Wildfire Protection Plan Cultural Resource Sensitivity Zones (MM-CUL-4). Upon request, Tribes will be provided contact information for the Secretary of the Interior (SOI)- and City-qualified archaeologist retained to conduct the surveys as well as logistical information regarding the surveys. Tribes shall be invited, but are not required, to accompany the SOI- and City-qualified archaeologist during the surveys. No survey shall be delayed or aborted due to the absence of Tribal representatives.

MM-TCR-2 **Native American Construction Monitoring.** Native American monitoring shall be conducted during all pre-planned ground disturbance activities within known prehistoric archaeological sites or historic archaeological sites identified as associated with Native American history. A Native American monitor ancestrally affiliated with the area and, if possible, included in the most current City Barbareño Chumash Archaeological Site Monitors List, shall be retained by the City prior to the commencement of all pre-planned ground-disturbance activities. The Native American monitor shall have the authority to halt all ground-disturbing activities until discovered tribal cultural resource (TCR) material can be properly assessed. The Native American monitor shall be responsible for reporting any discovered TCR material to the Secretary of the Interior- and City-qualified archaeologist retained to monitor the same pre-planned ground-disturbance activities.

MM-TCR-3 **Post-Fire Management Assessment**. The Santa Barbara Fire Department shall meet with the Chumash Fire Department at least biannually (i.e., every other year) to discuss ongoing fire management planning and practices within the City to avoid potential impacts to tribal cultural resources. Due to the sensitive nature of certain Native American resources, meeting minutes shall be prepared and maintained by the City and provided upon request to the Chumash Fire Department and the Santa Ynez Band of Chumash Indians Cultural Resources Manager.

4.14.6 Level of Significance After Mitigation

As described above, incorporation of **MM-CUL-1** through **MM-CUL-7** and **MM-TCR-1** through **MM-TCR-3** would reduce the proposed project impacts to **less than significant with mitigation.**

4.14.7 Cumulative Impacts

Impacts to TCRs identified within the proposed CWPP site and implementation of mitigation measures **MM-CUL-1** through **MM-CUL-7** and **MM-TCR-1** through **MM-TCR-3** would reduce CWPP impacts to a less than significant level on a project-specific basis. The cultural resources record search, including a search of NAHC resources, and subsequent identification of CWPP Cultural Resource Sensitivity Zones provide a greater assurance that TCRs, if encountered, would be preserved in place and evaluated according to applicable laws and regulations and this PEIR. While it is always possible to encounter subsurface resources, implementation of the proposed CWPP creates a more uniform and consistent approach to managing TCRs. Furthermore, conducting an intensive pedestrian survey in culturally sensitive areas in advance of performing work reduces the potential for an unanticipated discovery. Continued compliance with applicable cultural resource regulations and mitigation measures herein would avoid impacts to TCRs to the maximum extent practicable. As such, cumulative impacts from the proposed CWPP would be **less than significant with mitigation**.

4.14.8 References

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4.15 Public Services and Utilities

This section describes the existing conditions of the project site and vicinity as they relate to public service and utilities, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Community Wildfire Protection Plan (CWPP or proposed project).

As discussed below in Section 4.15.3, impacts associated with water, sewer, public facilities and services (i.e., police, fire, library, public facilities, governmental facilities, electrical power, natural gas and communications), and schools were determined to be less than significant in the CWPP Initial Study (Appendix A). With regard to Public Services and Utilities, the Initial Study determined that only impacts relating to solid waste are potentially significant. Therefore, this section focuses on the existing setting, plans, policies, and ordinances relating to solid waste. See Section 4.15.3 for additional detail.

4.15.1 Existing Conditions

Solid Waste and Recycling

The City provides waste and recycling services through a contracted waste hauler, MarBorg Industries. MarBorg offers the options of curbside pick-up with free, wheeled carts for trash, green waste, and recycling, as well as backyard collection service. Carts are available in 35-, 65-, and 95-gallon sizes for residential. Backyard cans are available in the 32-gallon size (MarBorg 2020). For commercial collections, carts and bins are available. Waste is typically taken to the South Coast Recycling and Transfer Station (SCRTS) or to the Tajiguas Landfill.

The SCRTS is located at 4430 Calle Real in Santa Barbara County. The facility opened in 1967 and can process up to 550 tons of waste per day. This transfer station serves as a central collection point for a large portion of the non-hazardous waste generated on the South Coast. The station receives commercial roll-off containers, as well as waste brought in by residents and small, non-franchised haulers (e.g. landscapers). The remainder, comprised of trash, is taken directly to the Tajiguas Landfill by franchised haulers, such as MarBorg (County of Santa Barbara 2020). The SCRTS also processes approximately 200 tons per day of recyclable materials including commingled recyclables, appliances, automotive batteries, bicycles, Christmas trees, construction and demolition debris, electronic devices, used tires, and wood and yard waste (County of Santa Barbara 2020a).

The Tajiguas Landfill is a County-owned and operated facility, located at 14470 Calle Real in Santa Barbara County. It has been in operation since 1967 for the disposal of municipal solid waste. This landfill serves the South Coast and the Santa Ynez and New Cuyama Valleys and can process up to 1,500 tons of trash per day. Green waste processing for the south County occurs at the site. The green waste is mulched and either sold for commercial agricultural and landscaping uses, or given to residents. The County is also in the final months of construction and commissioning of the ReSource Center, a facility designed to process all source-separated recyclables, organics, and trash via a state of the art Materials Recycling Facility and Dry Anaerobic Digestor. The ReSource Center is slated to begin operations in mid 2021 (County of Santa Barbara 2020b).

Solid Waste – Vegetation Management

Vegetation management activities are currently conducted pursuant to the 2004 CWPP and 2004 Program Environmental Impact Report (PEIR). Different vegetation management techniques are utilized, depending on vegetation type, location, condition, and configuration. In general, vegetation management techniques are classified

into four categories: manual (e.g., hand pulling, cutting, planting), mechanical (e.g., mowing, masticating, felling, yarding), biological (e.g., grazing), and prescribed fire (e.g., burn piles, broadcast burning). Under these existing conditions, when biological and prescribed fire vegetation management techniques are not conducted, biomass is generated when vegetation is treated. The majority of biomass resulting from manual and mechanical vegetation management activities is placed back on the ground at or nearby the cutting location to naturally decompose. When manual and mechanical vegetation management activities result in larger intact pieces of vegetation, such as tree branches and trunks, mechanical chipper equipment may be used to chip vegetation into small pieces that are left on or near the cutting location. The City offers chipping services to those property owners who reside in or own properties within the Wildland Fire Suppression Assessment District and are located in portions of the Very High Fire Hazard Severity Zone (VHFHSZ)(Foothill and Extreme Foothill High Fire Hazard Area Zones). Chipped material is then either left on the private property where the chipping occurred or is hauled off site and delivered to property owners within the City limits who have requested it. Chipped material is not hauled to a landfill. Guidelines are in place to facilitate recycling of nearly 100% of chipped material (invasive plant species will not be chipped).

In some cases, vegetation that is not consumed or burned cannot be left on or near its cutting location. These cases typically occur when vegetation management activities are conducted in areas with a proliferation of exotic or invasive species, as invasive and exotic plant species are not chipped. Additionally, other factors (e.g., large amounts of existing decomposing vegetation being located on or near the vegetation management area, private property owners being located outside of areas where free chipping is provided, or private property owners selecting to dispose of biomass in their green waste bins) can preclude biomass from being left on or near the site where it was initially cut. As a result, some amounts of biomass are removed from the vegetation management area and transported to the SCRTS. Once received at the SCRTS, if biomass is free from invasive or exotic species, it is combined with other organic material to produce a clean mulch product that is widely used by local residential, commercial, and agricultural uses. A Quality Assurance and Control Program is in place at the SCRTS to ensure the production of a clean mulch product. In cases where biomass cannot be processed into clean mulch (typically because it contains exotic or invasive species such as bamboo, ivy, palm fronds, yucca, pampas grass, and other highly fibrous plants), biomass is transported from the SCRTS to the Tajiguas Landfill. However, in most cases, vegetation can be either left in place, consumed, or burned, so the amount of biomass that is disposed of at Tajiguas Landfill represents a fraction of the overall biomass that is produced by existing vegetation management activities.

Tables 4.15-1 and 4.15-2 show the proposed modifications to the HFHA and VMUs. The Community Fuels Treatment Network (CFTN) would remain unchanged at 242 acres.

Table 4.15-1. High Fire Hazard Area Modifications

Existing				Proposed	
Classification	*Acreage Existing*	*Proposed Addition*	*Proposed Removal*	*Classification*	*Acreage*
Coastal Interior	702.18	270.74	1.65	High Fire Hazard Severity Zone	1,657.74
Coastal	523.51	264.44	101.48		
Foothill	2,827.18	118.56	0.0	Very High Fire Hazard Severity Zone	3,666.22
Extreme Foothill	723.91	1.68	5.11		

Source: SBFD 2020.

Table 4.15-2. Vegetation Management Units

	HFHSZ VMU (acres)	VHFHSZ VMU (acres)
Existing	292.95	908.73
Proposed	356.32	318.59acre
Total (Acres)	649.27	1,227.32

Source: SBFD 2020.
Notes: HFHSZ = High Fire Hazard Severity Zone; VHFHSZ = Very High Fire Hazard Severity Zone.

For VMUs and the CFTN, Santa Barbara Fire Department (SBFD) is limited in its ability to conduct vegetation management activities due to a number of factors that include physical topography (e.g., terrain and slope), the biological and cultural sensitivity of areas, funding, available work force, and existing workload. As a result, over the course of a 12-year period from 2008 to 2019, SBFD was only able to conduct vegetation management activities on an average of 19.37 acres per year (Anderson, pers. comm. 2020) in these areas.

For defensible space within private property, the SBFD maintains annual tracking data from 2008 through 2019 for the area of the City within the Wildland Fire Suppression Assessment District (WFSAD). Available data includes road clearance and vegetation management. The WFSAD includes the Extreme Foothill and most of the Foothill area, which are generally larger lots with more vegetation.

Extrapolating and applying the data to the Coastal and Coastal Interior areas, where parcels are generally smaller and have greater lot coverage (e.g., structures, ornamental landscape, hardscape), the acreage for road clearance and defensible space is assumed to be 50% smaller than within the WFSAD (see Table 4.15-3 WFSAD Totals 2008–2019 and Extrapolated).

Table 4.15-3. WFSAD Totals 2008–2019 and Extrapolated Coastal/Coastal Interior Totals

Category	Acres Total over 12 years	Approximate Annual Average over 12 years	Coastal/Coastal Interior Approximate Annual Average over 12 years (Assumed to be 50% Smaller than WFSAD)
Road Clearance	470	39	20
Defensible Space	163	14	7
Total (acres)	633	53	27

Source: Anderson, pers. comm. 2020

A total of 80 acres annually is assumed to be subject to defensible space or private roadway clearance management.

Based on actual SBFD data over the past 12 years, the majority of the vegetation generated is able to be chipped and left at the location. In fact, more than 4,000 tons were chipped by the SBFD between 2008 to 2019 within the WFSAD, or an average of 333 tons per year. The SBFD estimates approximately 1 ton of biomass, including City and privately maintained land, are disposed of annually at the Tajiguas Landfill (Anderson, pers. comm. 2020). These actual numbers are significantly lower than what was forecasted in the 2004 Wildland Fire Plan PEIR; the SBFD estimated approximately 426 tons of biomass on an annual basis whereas actual data shows approximately 1 ton annually.

4.15.2 Relevant Plans, Policies, and Ordinances

State

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of a desired approach to solid waste management of reducing, reusing, and recycling. AB 939 mandated local jurisdictions to meet waste diversion goals of 25% by 1995 and 50% by 2000, and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires cities and counties to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other elements included encouraging resource conservation and considering the effects of waste management operations. The diversion goals and program requirements are implemented through a disposal-based reporting system by local jurisdictions under California Integrated Waste Management Board regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered a statewide crisis. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfills operations and solid waste facilities.

In 2011, AB 341 was passed, making a legislative declaration that it is the policy goal of the state that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020. AB 341 requires that local agencies adopt strategies that will enable 75% diversion of all solid waste by 2020. This bill requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place.

AB 1826 - Mandatory Commercial Organics Recycling

In 2014, the State of California adopted AB 1826, a mandatory commercial organics recycling law that took effect in 2016. "Organic waste" means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper that is mixed in with food waste. As of January 1, 2017, businesses (including public entities) and multifamily residential dwellings of five units or more units that generate 4 cubic yards or organic waste per week are mandated to recycle their organic waste.

Local

City of Santa Barbara General Plan, Local Coastal Program, and Climate Action Plan

The City's General Plan, Local Coastal Program, and Climate Action Plan provide goals, policies, and regulations that govern land use within the City and are discussed in detail in Section 4.9, Land Use. All three planning documents identify waste reduction as a goal promoted by the City and identify strategies that the City can use to minimize waste entering local landfills. Most of the goals, policies, and strategies that relate to solid waste would be implemented at the City level (e.g., explore partnerships with other agencies to facilitate construction of a waste-to-energy facility at the Tajiguas Landfill, undertake measures to increase local green waste capacity, continue to work with businesses to recycle, reduce, or eliminate waste etc.) and are not easily applicable to the proposed project. The following policies are those policies contained in the General Plan (City of Santa Barbara 2011) and Climate Action Plan (City of Santa Barbara 2012) that relate to solid waste and are relevant to the proposed project:

- **General Plan – Environmental Resources Policy ER22. Solid Waste Management Programs.** Continue and expand City recycling programs for resource reduction, reuse, and recycling of solid waste.
- **General Plan – Environmental Resources Policy ER22.5. Increase Diversion.** Continue to work with businesses to recycle, reduce or eliminate waste.

- **General Plan – Waste Reduction Policy PS8. Solid Waste Management Programs.** Continue and expand City recycling programs for resource reduction, reuse, and recycling of solid waste.
- **City of Santa Barbara Climate Action Plan – Policy 45. City facilities recycling (City program; target 2015).** Establish additional comprehensive recycling programs at City facilities with the target of reaching overall City operations waste diversion rate of 50% by 2015 and 60% by 2020.
- **City of Santa Barbara Climate Action Plan – Policy 61. Additional green waste capacity (City program; target 2020).** Undertake measures to increase local green waste capacity.

4.15.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services and utilities are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, as modified by the City. According to Appendix G of the CEQA Guidelines, a significant impact related to public services and utilities would occur if the project would:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

f) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

   i. Fire Protection.
   ii. Police Protection
   iii. Schools
   iv. Parks
   v. Other Public Facilities

The CWPP Initial Study determined implementation of the proposed project would result in less than significant impacts with regard to issue areas a, b, c, and f listed above. Therefore, these topics have been eliminated from further analysis.

Issue areas d and e relate to solid waste. The City has not adopted impact significance thresholds related to a project's solid waste contribution. However, most of the solid waste generated in the City is transported to Tajiguas Landfill. The County of Santa Barbara, which operates Tajiguas Landfill, has developed impact significance thresholds related to the impacts of development on remaining landfill capacity. The County of Santa Barbara adopted revised construction and operational solid waste generation thresholds and guidelines in October 2008. These thresholds are utilized by the City to analyze solid waste impacts.

With regard to construction, according to the County's thresholds of significance, any construction, demolition or remodeling project of a commercial, industrial, or residential development that is projected to create more than 350 tons of construction and demolition debris is considered to have a significant impact on solid waste generation. However, because the proposed project does not involve a construction phase, this threshold is not considered.

With regard to operational solid waste impacts, the County thresholds are based on the projected average solid waste generation for Santa Barbara County from 1990–2005. The County assumes a 1.2% annual increase (approximately 4,000 tons per year) in solid waste generation over the 15-year period. The County's threshold for project-specific impacts to the solid waste system is 196 tons per year (this figure represents 5% of the expected average annual increase in solid waste generation [4,000 tons per year]) for project operations. Source reduction, recycling, and composting can reduce a project's waste stream by as much as 50%. If a proposed project generates 196 or more tons per year after reduction and recycling efforts, impacts would be considered significant and unavoidable. Proposed projects with a project-specific impact as identified above (196 tons per year or more) would also be considered cumulatively significant, as the project specific threshold of significance is based on a cumulative growth scenario. However, as landfill space is already extremely limited, any increase in solid waste of 1% or more of the expected average annual increase in solid waste generation [4,000 tons per year], which equates to 40 tons per year, is considered an adverse significant cumulative impact.

4.15.4 Impacts Analysis

PSU 1 Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

As discussed above in Section 4.15.1, Existing Conditions, for VMUs and the CFTN, SBFD is limited in its ability to conduct vegetation management activities due to a number of factors that include physical topography (e.g., terrain and slope), the biological and cultural sensitivity of areas, funding, available work force, and existing workload. As a result, SBFD is only able to conduct vegetation management activities on an average of 19.37 acres per year (Anderson, pers. comm. 2020) on VMUs and the CFTN. Private property defensible space and roadway clearance is estimated at approximately 80 acres per year. As such, the total annual acreage subject to treatment is estimated at 99.37 acres, resulting in approximately 1 ton of biomass hauled away from the cutting location containing non-native or exotic species that are ultimately landfilled at Tajiguas Landfill each year. This equates to approximately 1 ton of biomass for every 99.37 acres.

Implementation of the proposed project would result in new area subject to vegetation management by the City and by private property owners. The City's new VMUs would include 649.27 acres within the High Fire Hazard Severity Zone (HFHSZ) and 1,227.32 within the VHFHSZ (no changes to the CFTN are proposed). Land subject to maintenance by private property owners would increase by approximately 432.05 acres within the proposed HFHSZ (Coastal and Coastal Interior) and approximately 115.13 acres within the proposed VHFHSZ (Extreme Foothill and Foothill).

If the SBFD and private owners were to conduct vegetation management activities on all new areas all in one year, biomass would be produced, which could affect the capacity of the SCRTS and Tajiguas Landfill. However, even in a hypothetical scenario where SBFD were able to scale its annual operations by 100% and private property owners performed all defensible space management, the total unusable biomass generated by the proposed project that could not be consumed, burned, or composted would total 2,423.77 acres, generating approximately 24.39 tons of biomass annually. When compared to the project-specific threshold of 190 tons, impacts would be **less than significant**.

PSU-2 Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

As discussed in Section 4.15.2, applicable federal, state, and local management and reduction statutes and regulations related to solid waste include AB 939 and AB 341, which set solid waste diversion targets of 75%. Additionally, the City's General Plan and Climate Action Plan include goals and policies that are consistent with the intent of AB 939 and AB 341. As discussed above, because SBFD is impacted in its ability to treat vegetation due to deficiencies in funding, available work force, and existing workload, and the proposed project would not address those deficiencies, the proposed project would effectively result in no increase in the amount of biomass produced each year. Even in a hypothetical scenario where SBFD were able to scale its annual operations by 100% and private property owners performed all defensible space management, the total unusable biomass generated by the proposed project that could not be consumed, burned, or composted would total 24.39 tons, which would be below the County's solid waste thresholds, which were developed to address long-term capacity of the Tajiguas Landfill. Moreover, the proposed project inherently contains practices aimed at reducing the amount of solid waste produced as a result of vegetation management activities. For example, vegetation management techniques include biological and prescribed fire vegetation management techniques that do not generate biomass. When these techniques are not conducted, the majority of biomass resulting from manual and mechanical vegetation management activities is placed back on the ground at or nearby the cutting location to naturally decompose. When manual and mechanical vegetation management activities result in larger intact pieces of vegetation, such as tree branches and trunks, mechanical chipper equipment may be used to chip vegetation into small pieces that are left on or nearby the cutting location. For biomass that is removed from the cutting location, if biomass is free from invasive or exotic species, it is combined with other organic material to produce a clean mulch product that is widely used by local residential, commercial, and agricultural uses. As a result, the majority of the biomass generated by the proposed project is diverted from being landfilled, consistent with applicable state and local management and reduction statutes and regulations related to solid waste. Therefore, impacts would be **less than significant**.

4.15.5 Mitigation Measures

The proposed project would not result in significant impacts; therefore, no mitigation is required.

4.15.6 Level of Significance After Mitigation

With adherence to the project components, management standards, and best management practices included in Appendix E of the CWPP, all of the potential impacts described in Section 4.15.3 above are **less than significant**.

4.15.7 Cumulative Impacts

As discussed in Section 4.15.3, any increase in solid waste of 1% or more of the expected average annual increase in solid waste generation [4,000 tons per year], which equates to 40 tons per year, is considered an adverse significant cumulative impact. The proposed project even in a hypothetical scenario where SBFD were able to scale its annual operations by 100% and private property owners performed all defensible space management, the total unusable biomass generated by the proposed project that could not be consumed, burned, or composted would total 25.39 tons (24.39 acres for the new HFHA and VMUs and 1 ton for existing activities under the 2004 Wildland Fire Plan). Therefore, impacts would **be less than significant**.

4.15.8 References

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4.16 Wildfire

This section describes the existing wildfire conditions of the proposed Community Wildfire Protection Plan (CWPP) area (all portions of the City of Santa Barbara [City] excluding the Santa Barbara Airport property), identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the CWPP (or proposed project). Specifically, this section addresses the potential environmental impacts of the project on adopted emergency plans, the potential to exacerbate wildfire risks, and the potential to expose people or structures to significant risk associated with wildfires.

Potential wildfire impacts resulting from implementation of the proposed CWPP were evaluated based on a review of existing resources, data, and applicable laws, regulations, guidelines, and standards. The Santa Barbara Fire Department's (SBFD's) current fire management program is performed under the City's 2004 Wildland Fire Plan (SBFD 2004) and Final Program Environmental Impact Report (PEIR) for the 2004 Wildland Fire Plan (City of Santa Barbara 2004). The 2004 Wildland Fire Plan is considered the environmental baseline for purposes of this PEIR. This section focuses on the effect of the proposed project on wildfire risk resulting from changes proposed by the CWPP (Dudek 2020).

4.16.1 Existing Conditions

Wildfires are a regular and natural occurrence in most of California. However, the number of fires and acres burned annually has increased in recent years. These wildfires are mostly human-triggered, suggesting that the historic fire interval has been artificially affected across large areas. In addition, wildfire suppression efforts over the last several decades may have aided in the accumulation of fuels in some natural communities (Minnich 1983; Minnich and Chou 1997), resulting in larger and more intense wildfires. Large wildfires have had, and continue to have, a substantial and recurring role in California landscapes (Keeley and Fotheringham 2003), in part because (1) California landscapes become highly flammable each fall; (2) the climate in the region has been characterized by fire climatologists as the worst fire climate in the United States (Keeley 2004) with foehn winds (e.g., Sundowner winds) occurring during autumn after a 6-month drought period each year; and (3) ignitions via anthropogenic sources have increased or are increasing in many wildland or Wildland-Urban Interface (WUI) areas.

Fire environments are dynamic systems and are influenced by many types of environmental factors and site characteristics. Fires can occur in any environment where conditions are conducive to ignition and fire movement. The three major components of fire environment are vegetation (fuels), climate, and topography. The state of each of these components and their interactions with each other determines the potential characteristics and behavior of a wildfire. In addition, the type, location, and intensity of a wildfire can affect wildlife, vegetation, air quality, water quality, and slope stability to varying degrees, as discussed below.

4.16.1.1 Vegetation/Fuels

As described in Section 4.3, Biological Resources, there are 13 vegetation communities/land cover types in the City, as presented in Table 4.16-1. Figure 4.3-3 in Section 4.3 (Biological Resources) depicts vegetation communities/land cover types in the City.

Table 4.16-1. Vegetation Communities and Land Covers in the CWPP Area

Community/Land Cover	Acres	Percentage
Herbaceous Communities		
California Annual Grassland	535	4.5%
Coastal Perennial Grassland	36	0.3%
Subtotal	*571*	*4.8%*
Upland Scrub Communities		
Coastal Sage Scrub	1,182	10.0%
Chaparral	238	2.0%
Subtotal	*1,420*	*12.0%*
Woodland and Forest Communities		
Riparian Woodland/Creek	173	1.5%
Southern Oak Woodland	1,140	9.7%
Subtotal	*1,313*	*11.1%*
Barren Natural Land Covers		
Coastal Bluff	15	0.1%
Coastal Strand/Beach	123	1.0%
Subtotal	*137*	*1.2%*
Anthropogenic and Other Land Covers		
Golf Course	219	1.9%
Orchard	236	2.0%
Parkland	60	0.5%
Urban	7,686	65.1%
Unmapped	162	1.4%
Subtotal	*8,363*	*70.8%*
Total	**11,805**	**100.0%**

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (bark thickness, leaf size, branching patterns), and fuel loading/fuel arrangement (ladder fuels). For example, grass-dominated plant communities become seasonally prone to ignition and produce lower intensity, higher spread rate fires. In comparison, coastal sage scrub and chaparral can produce higher heat intensity and higher flame lengths under strong, dry wind patterns, but do not typically ignite or spread as quickly as light, flashy grass fuels. Fire behavior in oak woodlands is typically much less intense than wildfires burning in chaparral and coastal sage scrub communities, though the reduction of fire as an ecosystem process in oak woodlands allows for an accumulation of surface and understory fuels that connect ground vegetation to tree canopies (ladder fuels), resulting in some oak woodlands being more susceptible to severe, crown-consuming fires (McCreary 2004).

Another important factor is the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes disrupts plant succession, setting plant communities to an earlier state where less fuel is present for a period of time as the plant community begins its succession again. High frequency fires tend to convert shrublands to grasslands or maintain grasslands, while fire exclusion tends to convert grasslands to shrublands, over time. In general, biomass and associated fuel loading will increase over time, assuming that wildfires do not occur, or fuel reduction efforts are not implemented. It is possible to alter successional pathways for varying plant communities through manual alteration.

4.16.1.2 Weather

The climate in the City of Santa Barbara is characterized by warm summers and mild winters with relatively dry weather. The City's climate is influenced by the semi-permanent subtropical high-pressure cell off the Pacific Coast. This cell creates typically warm, dry summers and wet winters. Fog is also frequently experienced in the City due to the humid marine air coming into contact with the warmer air over land. This atmospheric condition usually occurs in the early morning or evening and particularly during late spring and early summer (City of Santa Barbara 2010). Fog regulates moisture content in the low-lying atmosphere, plants, and soils, and thus is inherently connected to fire hazard.

Live fuel moisture content, a measure of the relative mass of water and indicator of ignitability, for most vegetation in the Santa Ynez Foothills reaches the driest point in the late summer or early fall period. Seasonal drying of vegetation produces conditions that can result in fuel-driven wildfires and fire-associated climatic changes which produce a condition referred to as a plume-dominated wildfire. Plume-dominated wildfires are fires where the energy produced by the fire, in conjunction with atmospheric instability, creates significant convective forces and increased wind speeds. Such fires are incredibly unpredictable, spread in various directions simultaneously, and exhibit extreme fire behavior.

The average annual high temperature calculated from January 1893 to June 2016 for the Santa Barbara area is 70.8° Fahrenheit (°F), with higher temperatures in summer and early fall (June through September) reaching up to an average of 77.1°F. The average annual low temperature is 50.2°F and can reach an average low temperature of 43°F. The average annual precipitation for the area is 17.73 inches, with the most rainfall concentrated in December (2.82 inches), January (3.98 inches), February (3.86 inches), March (2.97 inches), and April (1.21 inches). Average rainfall is much less during June (0.08 inches), July (0.02 inches), and August (0.03 inches) (WRCC 2020).

The regional prevailing wind patterns are from the west or northwest, but the presence of the Pacific Ocean causes a diurnal wind pattern known as the land/sea breeze system. Santa Barbara also periodically experiences significant downslope wind and warming events. These strong winds are referred to as "Sundowner winds," since they often begin in the late afternoon or early evening. Sundowner winds are typically associated with a rapid rise in temperature and a decrease in relative humidity. In the most extreme Sundowner wind events, wind speeds can be gale-force or higher, and temperatures over the coastal plain can rise to above 100°F. These winds typically manifest in midsummer to midfall as a result of hot temperatures; however, recorded midwinter, mild temperature Sundowner winds have occurred. Sundowner winds have historically resulted in significant property damage, as well as extreme fire danger (Bleier 1998).

Dry Sundowner winds promote the ignition and rapid spread of wildfires by drying fuels and fanning the flames of fires once they are started. The wind's greatest effect on fire tends to be in autumn when vegetation has been desiccated after a long dry summer and before the onset of the winter rainy season. Winter rainfall is highly variable in Southern California. However, large fires have occurred during Sundowner conditions as late as February. Surface winds can also be influenced locally by topography and slope variations (Westerling et al. 2004).

The fire season in the Santa Barbara area has historically occurred between June and October as the fog recedes earlier in the day, and vegetation begins to dry out from regular, dry, offshore winds. The fire season would typically end in November with the onset of winter rainfall, cooler temperatures, and higher relative humidity, with fires less common from December to April. However, climate change effects are extending fire season throughout the state, and the fire season in the Santa Barbara area may ultimately be year-round, as observed with the 2017 Thomas Fire (December) and the 2009 Jesusita Fire (May), for example. The greatest fire danger for this area coincides with the period when the Sundowner winds are at their strongest.

Certain weather conditions can increase fire risk, resulting in the declaration of a Red Flag Warning by the National Weather Service. A Red Flag Warning means warm temperatures, very low humidity, and stronger winds are expected to combine to produce an increased risk of fire danger. The City is located in the Santa Barbara County South Coast Weather Zone (CAZ239). The City's Red Flag Warning Plan identifies policies and procedures to be followed by SBFD during Red Flag Warnings and High Risk Days, including monitoring weather conditions, notifying City Departments and the media, revoking burn permits, flying red flags at fire stations, and ensuring that staff and equipment are within the City should an event occur. High Risk Days are defined days when there is a minimum 20% chance of either a new large fire occurring or significant growth on existing fires within the South Coast Area.

4.16.1.3 Topography

The City of Santa Barbara is characterized by steeply sloping foothills and narrow canyons to the north, and low-lying and gently sloping coastal plains and an uplifted mesa to the south. The foothills and canyons meet the coastal plain to the south and southeast and slope upward to the east–west trending Santa Ynez Mountains. The uplifted mesa steeply slopes from the coastal plain to form a relatively flat and high sheer cliff face. Multiple drainages and hillslopes extend upwards from the boundary of the coastal plain and foothills towards the ridgeline of the Santa Ynez Mountains. Elevations in the City range from sea level to approximately 1,100 feet above mean sea level along the northern boundary of the City (USGS 2015; CAL FIRE 2008; City of Santa Barbara 2005).

Slopes throughout the City and surrounding Santa Ynez mountains are predominately south to southwest facing. Aspect can affect solar exposure rates and thus increase a slope's susceptibility to fire hazards. South and west-facing slopes are subject to a higher intensity of thermal heating from the sun and consequently have higher temperatures and lower fuel moistures. These slope aspects are typically dominated by lighter fuels (brush, grasses). North–facing slopes receive less solar exposure (and thus less heating) and east-facing slopes have earlier heating but also earlier cooling as the sun tracks across the sky. North- and east-facing slopes typically have heavier fuel loads (trees).

Terrain affects wildfire movement and spread. Steep terrain typically results in faster upslope fire spread due to pre-heating of uphill vegetation. Flat areas typically result in slower fire spread when absent of windy conditions. Topographic features such as saddles, canyons, and chimneys (land formations that collect and funnel heated air upward along a slope) may form unique circulation conditions that concentrate winds and funnel or accelerate fire spread. For example, fire generally moves slower downslope than upslope. Terrain may also buffer, shelter, or redirect winds away from some areas based on canyons or formations on the landscape. Saddles occurring at the top of drainages or ridgelines may facilitate the migration of wildfire from one canyon to the next.

The narrow drainage and sub-drainage topographic features of the Santa Ynez Mountains have the capability to funnel winds, increase wind speeds, erratically alter wind direction, and facilitate fire spread and promote extreme fire behavior. This is especially true during Sundowner wind events when strong northerly winds are aligned with the downslope direction of the canyons and watersheds of the Santa Ynez Mountains. The topography of Santa Barbara is, therefore, capable of producing wind conditions that promote extreme wildfire behavior.

4.16.1.4 Fire and Ignition History

Fire history is an important component of fire planning and can provide an understanding of fire frequency, fire type and behavior, most vulnerable community areas, and significant ignition sources, among others. Several large-scale fires have been recorded by fire agencies in the area, primarily associated with the Santa Ynez Mountain foothills. The topography, vegetation, and climatic conditions in the Santa Barbara area combine to create a unique situation capable of supporting large-scale, high-intensity, and sometimes damaging wildfires, such as the 2017 Thomas Fire.

Nearly all significant wildfires in the Santa Barbara area have burned in the months of July, September, or October. This timeframe coincides with the end of the dry summer season, where vegetation has lower fuel moistures, and Sundowner winds are prominent. The largest and most damaging fires in the area have occurred during such winds. Most vegetation fires ignited within the City occur in the more urban areas rather than in the foothill areas. However, ignitions in the foothill areas have the potential to spread throughout large expanses of wildland fuels and cause more widespread landscape damage than would a vegetation ignition in an urban setting (SBFD 2004).

The history of wildfire ignitions in the Santa Barbara area is directly related to human activity. Wildfire occurrence in the Santa Barbara area predominately occurs in the Santa Ynez Mountains. Mechanized and power equipment use (e.g., mowers) is a potential ignition source and was responsible for the Jesusita and Zaca fires. Arson, campfires, and a vehicle fire have also been sources of significant wildland fires in the Santa Barbara area, including the Whittier, Gibraltar, Brea, Tea and Gap fires. However, the largest recorded fire within the County, the Thomas Fire, ignited as a result of line slap (lines coming into contact with each other, creating an electrical arc, which deposits hot, burning or molten material onto the ground into a receptive fuel bed). The history of regional wildfires in the Santa Barbara area is graphically presented in Figure 3-2, Fire History, in Chapter 3, Project Description.

While the history of mapped fires in the City predominately occurs in the foothill area of the City, ignitions and small fires do occur in the coastal area of the City, and their locations are not represented in Figure 3-2, Fire History. The size of these fires is relatively small due to quick response and suppression actions taken by the SBFD and Santa Barbara County Fire Department. Such small fires are typically excluded from mapping databases. For example, fire perimeter data from the California Department of Forestry and Fire Protection (CAL FIRE; depicted in Figure 3-2) includes fires dating to the late 1800s, but only includes those over 10 acres in size (CAL FIRE 2020).

4.16.1.5 Environmental Effects of Wildfires

Although wildfire can benefit natural ecosystems that have evolved with occasional burning and that benefit from the stimulation of growth through the reproduction of plants and wildlife habitat, fire can also be detrimental to biological and other natural resources, such as air quality and water quality.

Biological Resources

Flora

Grassland communities, usually non-native grasses, will readily establish after wildfires in chaparral and scrub communities. With repeated burning at short intervals of up to several years, it is possible to convert chaparral and scrub to non-native grasslands. Chaparral and scrub vegetation communities will typically re-sprout and absent fire or other disturbances will return to pre-fire conditions. Chaparral communities also tend to repopulate many forest types following stand-replacing fire. Chaparral may establish for the first several years after the fire event, whereupon the tree cover will begin to establish (USFS 2000a). Coast live oak recovers rapidly from moderate-severity fire, and sprouts from the bole, branches, and /or root crown after fire damage. Where oaks are present, fire exclusion in coastal sage scrub and mesic chaparral communities allows coast live oak to increase in density and reduce understory diversity and abundance (Steinberg 2002).

Because vegetation communities can be converted following fire, these changes in dominant vegetation communities can drastically affect plant and animal habitat and can affect the prevalence of special-status species.

Fauna

Generally speaking, fires injure or kill a relatively small proportion of wild animals. For example, birds and larger mammals can flee wildfire, and small mammals and reptiles can seek refuge in subterranean burrows. Habitat changes resulting from fires have a much more profound impact on faunal populations and communities than does the fire itself. Fires can result in short-term increases in vegetation productivity and the availability and nutrient content of forage and browse (USFS 2000b). These increases can in turn lead to increases in herbivore populations. However, any increase in population size is highly dependent upon the population's ability to survive in the post-fire environment (USFS 2000b). In general, fires that devastate a landscape featuring many shrubs and trees reduce habitat cover for species requiring cover and increase habitat for species (such as raptors) that prefer open areas (USFS 2000b).

Air Quality

Carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons, and other constituent materials are all present in wildfire smoke. The specific composition of smoke depends largely on the fuel type (vegetation types contain different amounts of cellulose, oils, waxes, and starches, which when ignited produce different compounds). In addition, hazardous air pollutants and toxic air contaminants, such as benzene and formaldehyde, are also present in smoke. However, the principal pollutant of concern from wildfire smoke is particulate matter. In general, particulate matter from smoke is very small in size and can be inhaled into the deepest recesses of the lungs, presenting a serious health concern (Lipsett 2008).

Factors including weather, stage of fire, and terrain can all dictate fire behavior and the impact of wildfire smoke. Wind, for instance, generally results in lower smoke concentrations because wind causes smoke to mix with a larger volume of air. Large quantities of pollutants can also be released by wildland fires over a relatively short period of time. Air quality during large fires can become severely hazardous and can remain impaired for several days after the fire is ignited (Lipsett 2008).

Black carbon is a short-lived climate pollutant that contributes to climate change air pollution and has negative human health impacts. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death, and is produced from the incomplete combustion of fossil fuels and biomass burning (e.g., wildfires). Black carbon contributes to atmospheric warming by absorbing solar radiation and influencing cloud formation (Forest Climate Action Team 2018).

Water Quality

Fire can impact water quality by increasing potential for erosion and sedimentation in areas where vegetation has been burned, resulting in increased water temperature through removal or drastic modification of shade-providing trees and vegetation. Water chemistry can also be altered through the introduction of pollutants and chemical constituents. Aquatic environments may also be impacted through the introduction of fire retardant chemicals used during firefighting activities.

Erosion and Sedimentation

Watersheds severely burned by wildfire are vulnerable to accelerated rates of soil erosion and can experience large amounts of post-fire sediment deposits. As seen after the 2017 Thomas Fire, which burned approximately 281,893 acres, heavy rains following a fire event can result in mudslides and debris flow where stabilizing vegetative cover has

been removed by wildfire. A catastrophic debris flow followed the Thomas Fire on January 9, 2018. This debris flow affected Montecito and the Coast Village Road area of the City of Santa Barbara, causing millions of dollars in damage and taking 23 lives. This was the largest loss of life from a natural disaster in the Santa Barbara area in recent history.

Increases in post-fire suspended sediments in streams and lakes (in addition to possible increases in turbidity) can result from erosion and overland flow, channel scouring, and creep accumulations in stream channels after an event (USFS 2005). While less is known regarding the effect of fire on turbidity, it has been observed that post-fire turbidity levels in stream water are affected by the steepness of the burned watershed (USFS 2005). The little data available regarding post-fire turbidity levels has indicated that U.S. Environmental Protection Agency (EPA) water quality standard for turbidity can be exceeded after a fire event (USFS 2005). In some cases, during severe, slow-moving fires, the combustion of vegetation during wildfires creates a gas that can penetrate the soil. As the soil cools, this gas condenses and forms a waxy coating that causes the soil to repel water. This phenomenon, called hydrophobicity, increases the rate of surface water runoff as water percolation into the soil is reduced (Moench and Fusaro 2012).

The threat to water quality from erosion following wildfire was analyzed by CAL FIRE (2009). This analysis estimates an expected erosion rate if an area experiences a high severity fire and considers information on fire rotation to better identify locations that are more likely to experience frequent high severity fires (CAL FIRE 2010). Mapping data generated from this analysis indicates that the City is classified as primarily having no post-fire erosion potential, though portions of the City's existing High Fire Hazard Area (HFHA)—Coastal, Coastal Interior, Foothill, and Extreme Foothill—exhibit low, moderate, and high post-fire erosion potential. The Extreme Foothill Zone exhibits the highest concentration of moderate and high post-fire erosion potential in the City (CAL FIRE 2009).

Water Temperature

When fire burns stream bank vegetation and shade trees, water temperature can rise, which in turn can lead to thermal pollution, which leads to increased biological activity in the stream. Increased activity levels place a greater demand on the dissolved oxygen content of the water and can affect the survivability and sustainability of aquatic populations and communities (USFS 2005). Water temperature increases up to 62° F have been recorded in stream flows following fires in which the stream bank vegetation was burned (USFS 2005).

Water Chemistry

Ash deposits generated by a fire can affect the pH of water immediately after the event, potentially increasing to levels that violate water quality standards. In addition, increases in the pH of nearby soil can also cause increases in stream flow pH (USFS 2005). Dissolved nitrogen levels can increase after fires as a result of accelerated mineralization and nitrification (dissolved nitrogen is commonly studied as an indicator of fire disturbance), but these levels do not typically exceed established water quality standards (USFS 2005). Dissolved phosphorous, sulfur, chloride, and total dissolved solids levels can increase after a fire, but studies have shown that these increases typically do not result in violation of drinking water quality standards (USFS 2005).

Fire Retardant

The use of fire retardants to protect communities, sensitive resources, or other assets has proven highly effective, but it can have a direct effect on aquatic environments. The use of ammonium-based retardants can affect water quality, and, in some instances, they can be toxic to aquatic biota (USFS 2005). Nitrogen-containing retardants can potentially affect drinking water quality, and retardants containing sodium ferrocyanide can potentially be lethal for aquatic organisms (USFS 2005).

4.16.2 Relevant Plans, Policies, and Ordinances

Federal

Healthy Forests Restoration Act

The 2003 Healthy Forests Restoration Act gives incentives for communities to engage in comprehensive forest planning and prioritization. This legislation includes statutory incentives for the U.S. Forest Service and the Bureau of Land Management to give consideration to the priorities of local communities as they develop and implement forest management and hazardous fuel reduction priorities. The Act emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects, and it places priority on treatment areas identified by communities themselves in a CWPP. A CWPP serves as a mechanism for community input and identification of areas presenting high fire hazard risk as well as identification of potential projects intended to mitigate such risk.

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. National Fire Protection Association standards are recommended guidelines and nationally accepted good practices in fire protection, but are not laws or codes unless adopted as such or referenced as such by the California Fire Code or the local fire agency.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995, updated in 2001, and again in 2009, by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions (USFS et al. 2009). An important component of the Federal Wildland Fire Management Policy is the acknowledgement of the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy and its implementation are founded on the following guiding principles:

- Firefighter and public safety are the first priorities in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.

National Fire Plan

The National Fire Plan was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability. The plan continues to provide invaluable technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (USFS 2019).

International Fire Code

Created by the International Code Council, the International Fire Code addresses a wide array of conditions hazardous to life and property including fire, explosions, and hazardous materials handling or usage (although not a federal regulation, but rather the product of the International Code Council). The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated in order to protect life and property (often times these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted.

International Wildland-Urban Interface Code

The International Wildland–Urban Interface Code is published by the International Fire Code and is a model code addressing wildfire issues.

State

California Code of Regulations

Title 14 Natural Resources

Title 14, Division 1.5, Chapter 7, Subchapter 3, Fire Hazard, sets forth requirements for defensible space if the distances specified above cannot be met. For example, options that have similar practical effects include noncombustible block walls or fences, 5 feet of noncombustible material horizontally around the structure, hardscape landscaping or reduced exposed windows on the side of the structure with a less-than-30-foot setback, or additional structure hardening such as those required in the California Building Code (CBC), California Code of Regulations Title 24, Part 2, Chapter 7A.

Title 24 California Building Standards Code

California Building Code

Part 2 of Title 24 contains the CBC. Chapter 7A of the CBC regulates to building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a WUI fire area. The purpose of this chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone (FHSZ) within a State Responsibility Area or a WUI fire area to resist the intrusion of flames or burning embers projected by a vegetation fire and to contribute to a systematic reduction in conflagration losses. New buildings located in such areas must comply with the ignition-resistant construction standards outlined in CBC Chapter 7A.

California Fire Code

Chapter 9 of Title 24 contains the California Fire Code (CFC), which incorporates by adoption the International Fire Code with necessary California amendments. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the WUI and fire hazard areas.

The CFC and Office of the State Fire Marshal provide regulations and guidance for local agencies in the development and enforcement of fire safety standards. The CFC is updated and published every 3 years by the California Building Standards Commission.

California Public Resources Code

California Public Resources Code Section 4290 requires minimum fire safety standards related to defensible space that are applicable to residential, commercial and industrial building construction in State Responsibility Area lands and lands classified and designated as Very High FHSZs (VHFHSZs). These regulations include road standards for fire apparatus access, standards for signs identifying roads and buildings, fuel breaks and green belts, and minimum water supply requirements. It should be noted that these regulations do not supersede local regulations that equal or exceed minimum regulations required by the state.

California Public Resources Code Section 4291 requires a reduction of fire hazards around buildings located adjacent to a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered in flammable material. It is required to maintain a minimum 100 feet of vegetation management around all buildings and is the primary mechanism for conducting fire prevention activities on private property within CAL FIRE jurisdiction. Further, California Public Resources Code 4291 requires the removal of dead or dying vegetative materials from the roof of a structure, and trees and shrubs must be trimmed from within 10 feet of the outlet of a chimney or stovepipe. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

California Government Code

California Government Code Sections 51175 through 51189 provide guidance for classifying lands in California as fire hazard areas and requirements for management of property within those lands. CAL FIRE is responsible for classifying FHSZs based on statewide criteria and makes the information available for public review. Further, local agencies must designate, by ordinance, VHFHSZs within their jurisdiction based on the recommendations of CAL FIRE.

Section 51182 sets forth requirements for maintaining property within fire hazard areas, such as defensible space, vegetative fuels management, building materials, and standards. Defensible space consists of 100 feet of fuel modification on each side of a structure, but not beyond the property line unless findings conclude that the clearing is necessary to significantly reduce the risk of structure ignition in the event of a wildfire. Clearance on adjacent property shall only be conducted following written consent by the adjacent owner. Further, trees must be trimmed from within 10 feet of the outlet of a chimney or stovepipe; vegetation near buildings must be maintained; and roofs of structures must be cleared of vegetative materials. A local agency may exempt certain standards set forth in Section 51182 for buildings with an exterior constructed entirely of nonflammable materials and may vary the requirements associated with management of fuels surrounding the structures in such cases.

California Department of Forestry and Fire Protection

CAL FIRE is tasked with reducing wildfire-related impacts and enhancing California's resources. CAL FIRE responds to all types of emergencies including wildland fires and residential/commercial structure fires. In addition, CAL FIRE is responsible for the protection of approximately 31 million acres of private land within the state and, at the local level, is responsible for inspecting defensible space around private residences. CAL FIRE is responsible for enforcing State of California fire safety codes included in the California Code of Regulations and California Public Resources Code. California Public Resources Code 4291 states generally that any person operating any structure located on brush-covered lands or land covered with flammable material is required to maintain defensible space around the structure. California Code of Regulations Title 14 Section 1254 identifies minimum clearance requirements required around utility poles. In State Responsibility Areas within the jurisdiction of CAL FIRE, the Fire Safety Inspection Program is an important tool for community outreach and enforcement of state fire codes.

CAL FIRE also inspects utility facilities and makes recommendations regarding improvements in facility design and infrastructure. Joint inspections of facilities by CAL FIRE and the utility owner are recommended by CAL FIRE so that each entity may assess the current state of the facility and successfully implement fire prevention techniques and policies. Violations of state fire codes discovered during inspections are required to be brought into compliance with the established codes. If a CAL FIRE investigation reveals that a wildfire occurred as a result of a violation of a law or negligence, the responsible party could face criminal and/or misdemeanor charges. In cases where a violation of a law or negligence has occurred, CAL FIRE has established the Civil Cost Recovery Program, which requires parties liable for wildfires to pay for wildfire-related damages.

Fire Hazard Severity Zones

CAL FIRE mapped FHSZs in Santa Barbara County based on fuel loading, slope, fire history, weather, and other relevant factors as directed by California Public Resources Code Sections 4201–4204 and Government Code Sections 51175–51189. FHSZs are ranked from Moderate to Very High (VHFHSZ) and are categorized for fire protection within a Federal Responsibility Area, State Responsibility Area, or Local Responsibility Area under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively.

California Strategic Fire Plan

The 2019 Strategic Fire Plan for California reflects CAL FIRE's focus on (1) fire prevention and suppression activities to protect lives, property, and ecosystem services; and (2) natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan for California provides a vision for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2019). Plan goals include the following:

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.

3. Support and participate in the collaborative development and implementation of local, county and regional plans that address fire protection and landowner objectives.
4. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
5. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
6. Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
7. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
8. Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the state. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed.

Local

Santa Barbara City Fire Code

Through Ordinance No. 5920, the Santa Barbara City Fire Code adopts and amends the California Fire Code (2019 Edition) based on the model International Fire Code, as published by the International Code Council (2018 Edition), and all standards and secondary codes referenced in said codes, as defined in Santa Barbara Municipal Code Section 8.04.10. Local amendments to the California Fire Code are specified in Santa Barbara Municipal Code Section 8.04.020, which established the City's 2004 Wildfire Plan (recognized as the CWPP in 2011) as providing policy direction for the WUI area. In addition, local amendments to the California Fire Code must be based on geological, topographical, or climatic condition findings and must be submitted and accepted by the California Building Standards Commission to be valid.

Section 4907 of the Santa Barbara City Fire Code outlines defensible space requirements in the City. Specifically, Section 4907.1.1 states:

> Persons owning, leasing, controlling, operating or maintaining buildings or structures in, upon or adjoining hazardous fire areas, and persons owning, leasing or controlling land adjacent to such buildings or structures, shall follow defensible space requirements outlined in 4907. 1 through

> 4907.9. For purposes of this section, defensible space requirements shall apply to persons owning, leasing or controlling land with hazardous vegetation that is within the defensible space of structures on adjacent properties.

Section 4907.2 of the Santa Barbara City Fire Code requires the following defensible space setback requirements:

> Maintain an effective firebreak by removing and clearing away flammable vegetation and combustible growth from areas within 30 to 150 feet of such buildings or structures as outlined in the following zones:
>
> 1. Coastal Interior: 30 to 50 feet brush clearance from structures
> 2. Coastal: 50 to 70 feet brush clearance from structures
> 3. Foothill: 100 feet brush clearance from structures
> 4. Extreme Foothill: 150 feet brush clearance from structures

City Building Code

The City Building Code (Municipal Code Chapter 22.04) adopts and amends the CBC (2019 Edition), based on the model International Building Code and others (e.g., California Electrical Code) by reference, subject to the amendments specified in Sections 22.04.020 through 22.04.070. As with the Santa Barbara City Fire Code, local amendments to the CBC must be based on specific findings and must be submitted and accepted by the California Building Standards Commission to be valid. Structural fire protection standards are addressed in the building codes and address structural hardening requirements for buildings located within a HFHA as defined by the City of Santa Barbara Fire Department and consistent with Chapter 7A of the CBC. Structural hardening requirements address roofing, exterior coverings, decking materials, windows and doors, eaves, and vents, among others. The intent of these requirements is to minimize the potential for structural ignition through radiant or convective heat exposure or ember intrusion.

City of Santa Barbara General Plan

The City of Santa Barbara General Plan establishes goals, policies, and implementation measures to guide development and sustainability, and address issues related to the health, safety, and welfare of its current and future citizens. The following elements of the City's General Plan include goals, policies, and implementation measures that address the impacts of wildland fires.

- **Land Use Element:** Contains goals, policies, and implementation actions related to land use, growth management, community design, and neighborhoods.
- **Environmental Resources Element:** Establishes goals and policies that specifically address hillside protection and conservation of open space, discourage development in high fire areas, and limit development on steep slopes.
- **Safety Element:** Contains goals and policies to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from large-scale hazards.

City of Santa Barbara Local Coastal Program

The California Coastal Act of 1976 establishes goals and provisions for a designated Coastal Zone along the entire California coastline. Within the City of Santa Barbara, the Coastal Zone generally extends inland 0.5 miles from the ocean and includes about 6 miles of the City's shoreline. Approximately 70% of the City's Coastal Zone is held in public ownership, including numerous beaches and parks, an extensive public waterfront, and a full working harbor.

Development in the Coastal Zone is reviewed for compliance with the City's Local Coastal Program and the Coastal Act. The Local Coastal Program has two parts:

- A Coastal Land Use Plan, which includes the kind, location, density, and intensity of land uses within the Coastal Zone, and coastal access and coastal resource protection policies and development standards; and
- An Implementation Plan, which includes development standards and other ordinances relating to coastal access and coastal resource protection, and maps that delineate zoning districts within the Coastal Zone.

Local Hazard Mitigation Plan

The City of Santa Barbara Local Hazard Mitigation Plan Annex to the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan serves as a complete hazard mitigation planning tool for the City of Santa Barbara. The emphasis of this plan is on assessing and avoiding identified risks, implementing loss reduction measures for existing exposures, and ensuring critical services and facilities survive a disaster. Further, the plan contains updated capability assessment information, vulnerability assessment, and mitigation strategies for each of the identified hazards, including wildfire. By having a completed and approved plan, the City is eligible for mitigation grant funding made available by the Federal Emergency Management Agency, which may involve funds for identified fire hazard reduction projects. The plan is reviewed annually with input from the SBFD Wildland Fire Specialist, then updated for Federal Emergency Management Agency approval every 5 years.

Under the plan, wildfires are classified as either wildland fires or WUI fires. WUI fires are further subdivided into three categories: (1) classic WUI exists where well-defined urban and suburban development presses up against open expanses of wildland areas; (2) the mixed WUI is characterized by isolated homes, subdivisions, and small communities situated predominantly in wildland settings; and 3) the occluded WUI exists where islands of wildland vegetation occur inside a largely urbanized area. Generally, much of the City's HFHA would be classified as either the classic or mixed WUI category.

Mutual Aid Agreements

Like most California communities, the SBFD relies heavily on mutual aid resources to augment firefighting resources if a wildfire or other emergency situation occurs. No community has the resources sufficient to cope with all emergencies for which the potential exists. In times of large scale wildfires and disasters, the City of Santa Barbara relies on neighboring agencies, including the Montecito Fire Protection District, Carpinteria-Summerland Fire Protection District, and Santa Barbara County Fire Department, to provide equipment and personnel for fire suppression, prevention, and investigation of wildfires. Likewise, when called upon, SBFD provides the same assistance to outside agencies in need (City of Santa Barbara 2004b).

4.16.3 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines is used by the City of Santa Barbara as the threshold of significance for projects requiring environmental review under CEQA (14 CCR 15000 et seq.). According to CEQA Guidelines Appendix, a significant impact related to wildfire would occur if the project would:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The CWPP Initial Study (City of Santa Barbara 2020) determined that thresholds a) and b) above would have beneficial impacts with implementation of the proposed project and that threshold c) above would have no impact. Therefore, these topics have been eliminated from further analysis.

4.16.4 Impacts Analysis

WLD-1 Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As discussed in Section 4.5, Geology and Soils, the Geology and Geohazards Technical Report for the City of Santa Barbara (City of Santa Barbara 2013a) identified landslide hazard risk areas throughout the City and categorizes risk as "Very Low," "Low," "Moderate," and "High." Areas of the City designated as having a "High" landslide hazard risk are naturally unstable and subject to slope failure even without being modified by grading or other development-related processes. Most of the proposed additions to the City's HFHA are located within High Landslide Risk areas (City of Santa Barbara 2013b), which indicates that many structures are on relatively steep slopes. All parcels in the additions to the HFHA would require defensible space, and, given slopes in this area, many may require increased defensible space (up to 300 feet).

Vegetation management for defensible space purposes would remove or otherwise alter vegetative cover. Vegetation contributes to slope stability though plant root growth (which binds soil particles), by moderating wind speeds, and by intercepting rainfall, which reduces the erosive impact of water by reducing its velocity. Although vegetation management associated with defensible space would typically involve little to no ground disturbance and would not require complete removal of vegetation, management can reduce its contribution to slope stability. Removal of vegetation for defensible space in the HFHA could create or exacerbate unstable soils, potentially increasing the potential for slope instability and mudslides, and increasing runoff and soil erosion rates.

Defensible space treatments are intended to moderate fire behavior to increase structure protection capabilities. This is achieved by reducing fuel loads by altering the horizontal and vertical arrangement of retained shrubs and trees and mowing grasses/weeds that ignite readily. As such, fires burning in defensible space areas would be less likely to consume all vegetation, and a fire's heat output would be

less than that of a fire burning in untreated vegetation. Post-fire, and compared with non-treated areas, defensible space areas would be less likely to exhibit conditions that would exacerbate runoff or decrease slope stability through retention of vegetation and reduced potential for soil hydrophobicity.

For defensible space areas that would occur on steep and potentially unstable slopes, mitigation measure **MM-WLD-1, Erosion Control,** would be implemented to ensure that the SBFD incorporates erosion control best management practices (BMPs) into Ordinance No. 5920 (High Fire Hazard Area Landscape Requirements) on slopes in excess of a 10% gradient, further reducing the potential for unstable slopes. **MM-WLD-2, Post-Fire Assessment**, would be implemented to evaluate slope conditions in post-fire areas.

As discussed in Section 4.5, Geology and Soils, most of the proposed additions to the City Vegetation Management Units (or VMUs) are located within High Landslide Risk areas. As noted above, vegetation management activities, while involving little to no ground disturbance and not involving complete removal of vegetation, can reduce its contribution to slope stability. Removal of vegetation in VMUs could create or exacerbate unstable soils, potentially increasing the potential for slope instability and mudslides, and increasing runoff and soil erosion rates.

Fires burning in VMUs would also be less likely to consume all vegetation, and a fire's heat output would be less than that of a fire burning in untreated vegetation. Post-fire, and compared with non-treated areas, treated VMUs would be less likely to exhibit conditions that would exacerbate runoff or decrease slope stability through retention of vegetation and reduced potential for soil hydrophobicity.

Vegetation management activities conducted in VMUs would be completed in accordance with the Vegetation Management Standards and Techniques (Appendix E of the proposed CWPP), which include BMPs to minimize erosion potential. For vegetation management that would occur on steep and potentially unstable slopes in VMUs, **MM-GEO-1, Erosion Control**, would be implemented to ensure that the SBFD incorporates BMPs on slopes in excess of a 10% gradient, further reducing the potential for unstable slopes. Implementation **of MM-WLD-2, Post-fire Assessment**, would be implemented to evaluate slope conditions in post-fire areas.

Vegetation management methods within VMUs and the Community Fuels Treatment Network would remain the same as those identified in the 2004 Wildland Fire Plan and associated PEIR. Prior to conducting vegetation management activities, SBFD would develop a work plan that identifies the specific areas to be treated, BMPs to be used based on site-specific circumstances, and any subsequent monitoring that would be needed. All vegetation management would be done in accordance with the Vegetation Management Standards and Techniques (Appendix E of the proposed CWPP). As discussed, for vegetation management in VMUs and the Community Fuels Treatment Network conducted on steep and/or potentially unstable slopes, **MM-GEO-1** and **MM-WLD-1** would be implemented to ensure that the SBFD incorporates BMPs on slopes in excess of a 10% gradient, which would reduce the impact of vegetation treatment and removal on unstable slopes.

As such, with incorporation of **MM-GEO-1** and **MM-WLD-1**, impacts associated with the proposed project would be **less than significant**.

4.16.5 Mitigation Measures

Mitigation measure **MM-WLD-1** shall be implemented to minimize reduce the risk associated with post-fire flooding, landslide or erosion.

MM-WLD-1 **Erosion Control**. Revise City Ordinance No. 5290 (High Fire Hazard Area Landscape Requirements) to require that landscape plans for defensible space areas on slopes exceeding 10% gradient incorporate erosion control techniques and/or best management practices to minimize erosion potential resulting from vegetation management and maintenance activities.

MM-WLD-2 **Post-fire Assessment**. Following any wildfire that burns into the Community Wildfire Protection Plan area, a post-fire field assessment shall be conducted by an engineering geologist to identify any areas that may be subject to increased risk of post-fire flooding, landslide or erosion. Any recommendations identified by the geologist to mitigate such risk shall be implemented by the City.

4.16.6 Level of Significance After Mitigation

With implementation of **MM-GEO-1, MM-WLD-1,** and **MM-WLD-2,** and adherence to the project components, management standards, and BMPs included in Appendix E of the proposed CWPP, potential impacts related to wildfire would be **less than significant.**

4.16.7 Cumulative Impacts

The proposed project sets forth policies to reduce impacts associated with wildfire and wildfire risk. The policies and actions focus on codes and standards, funding, fire rehabilitation, evacuation, fire protection, vegetation/fuels management, and public education. Action items identify tasks to be implemented by the SBFD, and other responsible City departments, to achieve the stated goal of protecting lives, property, and natural resources threatened by wildland fire. The proposed project would result in cumulatively beneficial impacts due to reduced wildfire risk.

4.16.8 References

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5 Other CEQA Considerations

5.1 Significant Unavoidable Environmental Impacts

This section is prepared in accordance with Section 15126.2(b) of the California Environmental Quality Act (CEQA) Guidelines, which requires the discussion of any significant environmental effects that cannot be avoided if a project is implemented. These include impacts that can be mitigated, but cannot be reduced to a less than significant level. An analysis of environmental impacts of the proposed project has been conducted and is contained in this Program Environmental Impact Report (PEIR). A total of 16 issue areas were analyzed in detail in Chapter 4, Environmental Impact Analysis. According to the environmental impact analysis presented in Chapter 4, the Community Wildfire Protection Plan (CWPP or proposed project) would result in significant unavoidable adverse impacts associated with cumulative impacts to aesthetics and visual resources, biological resources, and air quality, as summarized below.

Aesthetics

As discussed in Section 4.1, Aesthetics, the proposed CWPP would result in the thinning and removal of vegetation on public and private properties, including removal of large eucalyptus trees, limbing of oak trees, and removal of dense understory shrubs, grasses and accumulated flammable material in existing and proposed High Fire Hazard Area and Vegetation Management Units. As with the 2004 Wildland Fire Plan, vegetation management and the resulting altered appearance of vegetation and landscaping under the proposed CWPP could contribute to a past and ongoing cumulatively significant impact due to alteration of views in the City and outside the City limits through removal of vegetation and establishing landscaping elements that are out of character with the native landforms and vegetation, such as creation of fire breaks. Mitigation measure **MM-AES-1** would be implemented, which would help to maintain the natural appearance of the landscape. Nonetheless, cumulative impacts related to visual resources and aesthetics impacts would be significant and unavoidable.

Air Quality

As discussed in Section 4.2 Air Quality, the proposed CWPP would include recurring maintenance and vegetation management activities. The vegetation management techniques can be classified into four categories: manual (hand pulling, cutting, planting), mechanical (mowing, masticating, felling, yarding), biological (grazing), and prescribed fire (burn piles, broadcast burn). Emission sources include the use of offroad equipment (chainsaws, skip loaders, chippers) and vehicles as well as prescribed burns. Activities of the proposed project would generate reactive organic compound (ROC) and oxides of nitrogen (NO_x) emissions (which are precursors to ozone [O_3]). Project-generated emissions would exceed the Santa Barbara County Air Pollution Control District's emission-based significance thresholds for ROC and particulate matter less than or equal to 10 microns in diameter (PM_{10}). Mitigation measure **MM-AQ-1 Prescribed Burning** would be implemented to reduce emissions of ROC and PM_{10} generated during prescribed burn events. **MM-AQ-2 Air Curtain Burner** would be implemented to reduce short-term non-cancer impacts to sensitive receptors. **MM-AQ-3 Covers**, **MM-AQ-4 Haul Route Approval,** and **MM-AQ-5 Disturbed Soil** would be implemented to reduce emissions of ROC and PM_{10} and exposure of sensitive receptors. Nonetheless, cumulative impacts related to air quality would be significant and unavoidable.

Biological Resources

As discussed in Section 4.3, Biological Resources, the proposed CWPP would affect vegetation communities and biological habitats (special-status species habitats, wetlands) by thinning native vegetation, pruning oak and other

trees, and removing understory plants. At any one location, these actions are not expected to cause a significant impact to any biological resources based on the proposed vegetation management methods and Best Management Practices incorporated in the proposed CWPP, and with the incorporation of **MM-BIO-1** through **MM-BIO-7**. However, these impacts would, over time, contribute to a cumulative impact from past, present, and future projects and actions by public and private parties that result in habitat removal and/or degradation. Most of the City has been developed, and native habitat occurs in fragments on steep slopes, in canyons, in several blocks of habitat in the northern part of the City, and along creek corridors. As with the 2004 Wildland Fire Plan (SBFD 2004) and as determined by the 2004 Final PEIR (SBFD and CDD 2004), "any future action that continues to reduce or otherwise degrade native habitat would contribute to a past and ongoing significant impact to the biological resources of the City." Therefore, the proposed CWPP would contribute to a past and ongoing cumulative impact to biological resources that would be significant and unavoidable through the expansion of High Fire Hazard Area and Vegetation Management Units.

5.2 Effects Found Not To Be Significant

Section 15128 of the CEQA Guidelines requires a statement that briefly indicates the reasons that various possible significant effects of a project were determined not be significant and were therefore not discussed in detail in the PEIR. As stated in the CEQA Guidelines, such a statement may be contained in an attached copy of an Initial Study. The Initial Study for the proposed project is included in this PEIR as Appendix A. As described and substantiated in Appendix A, the following issue areas were not found to be significant and were not further analyzed in the PEIR: agricultural and forestry resources, energy, mineral resources, and population and housing. Additional CEQA checklist thresholds that were screened out for other environmental resource areas are described in the Initial Study and are also identified in each resource section of Chapter 4.

While impacts associated with population and housing were determined to be less than significant in the Initial Study prepared for the project, due to comments received in the scoping process, the PEIR included a more comprehensive evaluation of the proposed project's potential impacts to population and housing as Section 4.11, Population and Housing. As demonstrated in the analysis include herein, impacts from project implementation relative to population and housing would be less than significant.

5.3 Significant Irreversible Environmental Changes

Uses of nonrenewable resources during the proposed project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly, secondary impacts (such as a highway improvement that provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Section 15126.2(c) of the CEQA Guidelines requires that an EIR evaluate the proposed project's irretrievable commitments of resources to assure that current consumption is justified.

Implementation of the proposed project would occur City-wide. The proposed CWPP would include proposed modifications to the High Fire Hazard Area, modifications to proposed Vegetation Management Units, and modifications to vegetation management methods, as described in Chapter 3, Project Description. Implementation of the proposed project would not increase the intensity of use on the proposed CWPP project site compared to existing conditions. Additionally, implementation would not include any changes to land use or construction of any structures that would commit future generations to similar use. Energy would be consumed for implementation of

the proposed CWPP in the form of fossil fuel (e.g., diesel and other petroleum fuels) combustion in the engines of vehicles and equipment that would be used for vegetation removal/management.

Vegetation management methods requiring the use of mechanized equipment include practices such as rearranging vegetation structures, compacting or chipping vegetation material, and moving material to landings, staging areas, or burn piles. Mechanical equipment includes, but is not limited to, masticators, tractors, and chippers. As discussed in Section 4.2, Air Quality, the City only has one crew performing mechanical vegetation removal, and vegetation removal will only occur once per year at each site. The analysis determined that the project would not exceed emissions thresholds and would not result in inefficient, or unnecessary, consumption of energy resources. Further, the use of mechanized equipment for vegetation management is ongoing under the 2004 Wildland Fire Plan, and it is not anticipated that implementation of the proposed CWPP would result in an increased use of motorized equipment. While some vegetation management activities, such as establishing fuel breaks, would require the use of mechanized equipment, the proposed CWPP would also employ a variety of vegetation management methods, including the use of hand tools and biological (e.g., grazing) methods, which would reduce reliance on mechanized equipment. For these reasons, the proposed project would not result in significant irreversible environmental changes.

5.4 Growth Inducement and Indirect Effects

According to Section 15126.2(d) of the CEQA Guidelines, growth-inducing impacts of the proposed project shall be discussed in the EIR. Growth-inducing impacts are those effects of the proposed project that might foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. According to CEQA Guidelines Section 15126.2(d), increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place without the implementation of the proposed project. Typically, the growth-inducing potential of a project would be considered significant if it results in growth or population concentration that exceeds those assumptions included in pertinent master plans, land use plans, or projections made by regional planning authorities. However, the creation of growth-inducing potential does not automatically lead to growth, whether it would be below or in exceedance of a projected level.

A project can have direct and/or indirect growth-inducement potential. For example, direct growth inducement would result if a project involved construction of new housing. A project can have indirect growth inducement potential if it would establish substantial unplanned new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises), or if it would involve a substantial construction effort with substantial short-term employment opportunities or long-term employment opportunities that indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service or infrastructure development.

The environmental effects of induced growth are secondary or indirect impacts of the proposed project. Secondary effects of growth could result in significant, adverse environmental impacts, which could include increased demand on community or public services, increased traffic and noise, degradation of air and water quality, and conversion of agricultural land and open space to developed uses.

The Population and Housing chapter of this PEIR discussed the potential growth inducement of the proposed project. No new homes would be constructed as part of the proposed project, nor would the project result in construction of additional infrastructure or otherwise remove an obstacle to growth. Rather, the proposed CWPP proposes a series of fire risk reduction methods to address existing development within the City within existing and proposed High Fire Hazard Area and Vegetation Management Units.

Regarding employment opportunities, it is anticipated that vegetation management activities associated with the proposed project would be conducted by existing Santa Barbara Fire Department employees, existing City residents, or residents of neighboring cities. Further, vegetation management would be conducted incrementally, and would not result in the creation of permanent, long-term employment opportunities. Therefore, it is not anticipated that the employment generated by the proposed project would lead to a substantial influx of residents to the City. Due to the ability of the existing regional population to provide an ample employment pool within proximity to the proposed CWPP area and due to the minor increase in employment relative to total jobs available in the City, the proposed project would not generate substantial population growth. Further, as discussed in Section 4.11, Population and Housing, the proposed CWPP could place limitations on new housing development in the proposed expanded High Fire Hazard Severity Areas, should City Council adopt such a provision. As such, the growth-inducing impacts of the project would be minimal. The proposed project would not result in significant adverse secondary effects related to growth inducement.

5.5 References

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6 Alternatives

Section 15126.6 of the California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126(a)). The CEQA Guidelines direct that the selection of alternatives be governed by "a rule of reason." The alternatives selected for detailed review in the EIR may be limited to those that "would avoid or substantially lessen one or more of the significant effects of the project" and would "feasibly attain most of the basic objectives of the project." The selection of alternatives and their discussion must "foster informed decision making and public participation" (14 CCR 15126 (a)). In determining what alternatives should be considered in an EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and any unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency's decision-making body (see PRC Section 21081(a)(3)). This chapter identifies potential alternatives to the Community Wildfire Protection Plan (CWPP or proposed project) and evaluates them, as required by CEQA.

6.1 Project Objectives

As noted above, consideration of the project's objectives is an important criterion in evaluating alternatives. The City of Santa Barbara Fire Department (SBFD) is proposing to implement a comprehensive fire management program, called a Community Wildfire Protection Plan (CWPP), to protect lives, property, and natural resources threatened by wildland fire. While not a governing document requiring action, a CWPP is a strategic plan that outlines a series of policies and action items which are intended to guide implementation of the CWPP. The policies and actions focus on codes and standards, funding, fire rehabilitation, evacuation, fire protection, vegetation/fuels management, and public education. The CWPP's objectives include:

- Develop a comprehensive plan that incorporates procedures and programs to mitigate wildfire risks to the City.
- Engage stakeholders including the people, businesses, and organizations that live and work in the City, especially in the City's High Fire Hazard Area, as well as the adjacent jurisdictions.
- Inform and educate stakeholders about wildfire risk and shared community and individual responsibilities for fire safety.
- Add, remove, or leave unchanged High Fire Hazard Area based on technical data and fire modeling.
- Consolidate and rename City High Fire Hazard Area and severity zones to be consistent with California Department of Forestry and Fire Protection.
- Provide guidance for future vegetation maintenance activities, future roadway access strategies, and development strategies, defensible space, and home hardening within the High Fire Hazard Area.
- Maintain consistency between the Community Wildfire Protection Plan and existing City plans and policies, including but not limited to the City of Santa Barbara General Plan, Climate Action Plan, and Coastal Land Use Plan.
- Balance fire mitigation strategies with the City's goals of maintaining a vibrant economy and protecting natural resources, historic resources, and community character.

- Provide a basis to seek grant funding or other funding mechanisms to support the goals and policies of the proposed Community Wildfire Protection Plan.
- Reduce potential greenhouse gas emissions resulting from a wildfire by reducing vegetative fuel and structural ignition potential.
- Provide a policy framework to enable property owners in areas with wildland fire risk to work with private insurance companies on issues of coverage and cost of insuring private property.

6.2 Rationale for Alternatives Selected

CEQA Guidelines Section 15126.6 provides direction for the discussion of alternatives to a proposed project. This section requires the following:

- A description of "a range of reasonable alternatives to the project, or to the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." [Section 15126.6(a)]
- A setting forth of alternatives that "shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project." [Section 15126.6(f)]
- Discussion of a No Project Alternative, and "if the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." [Section 15126.6(e)(2)]
- A discussion and analysis of alternative locations "that would substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR." [Section 15126.6(f)(2)(BA)]

The CEQA Guidelines emphasize that the selection of alternatives should be based primarily on the ability to avoid or significantly lessen significant impacts relative to a proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are the following (CEQA Guidelines Section 15126.6(c)):

i. Failure to meet most of the basic project objectives,
ii. Infeasibility due to such factors such as site suitability as it pertains to various land use designations, economic viability, availability of infrastructure, regulatory limitations, and jurisdictional boundaries, or
iii. Inability to avoid significant environmental impacts.

6.3 Alternatives Considered But Rejected

CEQA Guidelines Section 15126.6(c) recommends that an EIR identify alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. According to the CEQA Guidelines, among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plan or regulatory limitations, jurisdictional boundaries, and whether the applicant can reasonably acquire, control, or otherwise have

access to the alternative site. Several alternatives for the proposed project were rejected from further analysis consistent with Section 15126.6(c) of the CEQA Guidelines. A description of each alternative and the rationale for rejection is provided below.

6.3.1. Use of Pesticides

The Use of Pesticides Alternative would enable the use of pesticides (including herbicides) for vegetation management. The application of pesticides could reduce the need to remove vegetation using mechanized equipment and hand-held power tools by limiting plant growth and thereby limiting mowing, felling, masticating, etc. It could also reduce the need for follow-up maintenance of treated vegetation using mechanized equipment and hand-held power tools (e.g., chainsaws). The reduction of mechanized equipment would result in fewer air emissions and lower potential for a spill of fuel (e.g., gasoline or diesel). However, this alternative was rejected due to incompatibility with the City's Integrated Pest Management Strategy and based on prior SBFD practices. Enacted in 2004, the Integrated Pest Management Strategy avoids the use of pesticides wherever feasible and only as a last resort with the least toxic pesticides being the preferred choice. Pesticides may be applied according to a zone system (red, yellow, green) based on potential for exposure to humans and sensitive habitats. Green zones are areas of high exposure potential, and only pesticides designated as "Green," which show very limited human and environmental impacts, may be used. Yellow zones are areas with less potential for harm from exposure, and a broader range of "Yellow" materials are permitted (City of Santa Barbara 2006). Several City parks within both the Very High Fire Hazard Severity Zone (VHFHSZ) and High Fire Hazard Severity Zone (HFHSZ) are classified as "Green Parks," thereby requiring a very limited use of pesticides. Existing vegetation management practices under the 2004 Wildland Fire Plan do not rely on pesticide use (SBFD 2004). As such, this alternative was rejected.

6.4 Alternatives Carried Forward for Consideration

The following alternatives are evaluated in this Program EIR (PEIR):

- **No Project Alternative** assumes that SBFD would continue to implement fire management practices consistent with the existing 2004 Wildland Fire Plan. There would be no changes to the existing names or boundaries of the High Fire Hazard Area (HFHA). The current quantity, location, and extent of Vegetation Management Units (VMUs) and the Community Fuels Treatment Network (CFTN) would remain, and vegetation management activities would continue consistent with the 2004 Wildland Fire Plan.
- **Vegetation Management Unit (VMU) Alternative** assumes that the existing City HFHA would be consolidated and renamed such that the Foothill and Extreme Foothill Zones would be renamed as the City's Very High Fire Hazard Severity Zone (VHFHSZ), and the Coastal and Coastal Interior Zones would be renamed High Fire Hazard Severity Zone (HFHSZ). No expansion or other changes to the boundaries of the HFHA would occur. This alternative would also add new VMUs within the consolidated HFHA, with acreages as shown in Table 6-1 later in this chapter. No changes to the CFTN would be made under this alternative. This alternative is shown on Figure 6-1.

These alternatives are described in detail below; descriptions focus on the identification of elements that differ from the CWPP. Following the description of each alternative is an evaluation of the degree to which the alternative meets the objectives of the CWPP, and an analysis of the environmental impacts of each alternative. Table 6-2 at the end of this chapter presents a comparison of the environmental effects of each alternative relative to the CWPP. It identifies whether an alternative would avoid any significant and unavoidable impact of the CWPP and presents the degree of environmental effects relative to the CWPP as a qualitative analysis (similar to, less than, greater than) for each resource area.

6.4.1. Comparison of Impacts of the No Project Alternative to the Proposed CWPP

CEQA Guidelines Section 15126.6(e) requires that an EIR evaluate and analyze the impacts of the No Project Alternative. When the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the No Project Alternative will be the continuation of the plan, policy, or operation into the future. Therefore, the No Project Alternative assumes implementation of the 2004 Wildland Fire Plan with no changes to the boundaries or nomenclature of the Extreme Foothill/Foothill areas to VHFHSZ and Coastal/Coastal Interior to HFHSZ. VMUs and the CFTN would remain unchanged and as described in the 2004 Wildland Fire Plan. Vegetation management practices would continue as currently implemented by the SBFD.

Aesthetics

Under the No Project Alternative, visual resources would be primarily affected by vegetation management activities implemented by the SBFD and landowners performing defensible space management. The 2004 Final PEIR for the Wildland Fire Plan (2004 Final PEIR) concluded that impacts to visual resources would be significant and unavoidable because "modification of vegetation and landscaping under the Plan could contribute to a past and ongoing cumulatively significant impact due to land development in the City and outside the City limits that removes native vegetation, creates barren slopes or road cuts, and establishes landscaping elements that are out of character with the native landforms and vegetation" (SBFD and CDD 2004). The City would continue to maintain 23 VMUs. Defensible space performed by property owners would occur within the existing Extreme Foothill/Foothill areas and Coastal/Coastal Interior areas. Certain VMUs are located in proximity to existing public parks and other scenic viewing areas as is private property subject to defensible space requirements. Under the proposed project, the total area of vegetation management, both by the City and private property owners, would increase, potentially creating additional visual impacts from scenic viewing areas and scenic highways, and may negatively impact the visual character of the area. Although impacts under the 2004 Wildland Fire Plan were found to be significant and unavoidable, the No Project Alternative would have aesthetics impacts **less than** the proposed project.

City of Santa Barbara / CWPP

Coastal Zone Boundary

Existing Vegetation Management Units

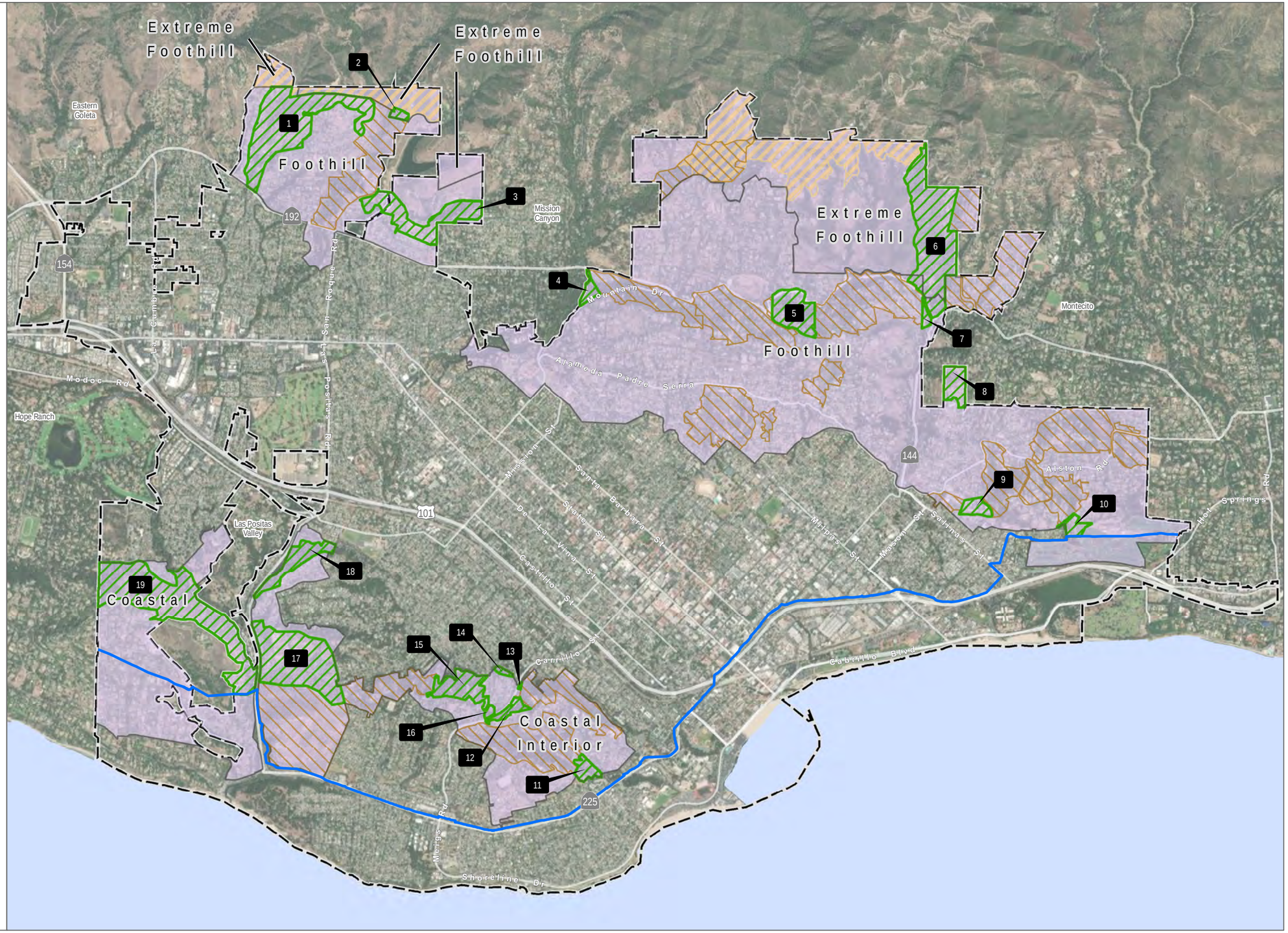
Community Fuels Treatment Network

Existing City of Santa Barbara High Fire Hazard Area

Coastal, Coastal Interior, Foothill, and Extreme Foothill

Proposed Modifications to City's Vegetation Management Areas

Proposed Additional Vegetation Management Units (1-19)



0 1,000 2,000 Feet

SOURCE: City of Santa Barbara

COMMUNITY WILDFIRE PROTECTION PLAN
CITY OF SANTA BARBARA

DUDEK

FIGURE 6-1

Vegetation Management Unit Alternative

City of Santa Barbara Community Wildfire Protection Plan

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Air Quality

Under the No Project Alternative, the SBFD would perform activities using equipment and methods established in 2004 Wildland Fire Plan. Air emission-related impacts associated with vegetation management (e.g., chain saws, chippers, smoke) were determined to be minor and temporary in the 2004 Final PEIR. Acreage subject to treatment, and therefore the use of mechanized equipment generating emissions, would be smaller than that under the proposed project. Mitigation to reduce air quality impacts would be required. As such, the No Project Alternative would have air quality impacts **less than** the proposed project.

Biological Resources

Under the No Project Alternative, vegetation management activities would continue consistent with the 2004 Wildland Fire Plan. Biological habitats would be affected by thinning native vegetation, pruning oak trees, and removing or treating understory plants. At any one location, these actions would not cause a significant biological impact based on the proposed vegetation management methods and environmental protection measures incorporated in the 2004 Wildland Fire Plan. However, these impacts would, over time, contribute to past, present, and future projects and actions by public and private parties that result in habitat removal and/or degradation. Most of the City has been developed, and native habitat occurs in fragments on steep slopes, in canyons, and along creek corridors. Under the proposed project, additional vegetation management activities would occur both by the City and by private property owners for defensible space management, resulting in the potential loss of additional habitat above that contemplated in the 2004 Wildland Fire Plan. Mitigation to minimize impacts to biological resources would be required. As such, the No Project Alternative would have biological resource impacts **less than** the proposed project.

Cultural Resources

Under the No Project Alternative, activities conducted by the SBFD under the current 2004 Wildland Fire Plan may cause ground disturbance in areas with cultural sensitivity. In accordance with the 2004 Wildland Fire Plan, work is stopped and redirected in the event of a find in the field. The proposed project would result in limited ground disturbance typically related to operation of mechanized equipment, such as a backhoe, that could potentially impact a subsurface resource. Mitigation measures would be required to minimize potential cultural resource impacts. Although the acreage of vegetation management activities would increase in acreage under the proposed project, similar measures to the 2004 Wildland Fire Plan would be implemented in the event of work occurring in a culturally sensitive area. Furthermore, as discussed in greater detail in Section 4.4 Cultural Resources, based on a cultural records search of the entire City within the proposed project boundary, culturally sensitive areas, including Native American Heritage Commission sites, have been identified on a new GIS data map set to help further inform SBFD staff when completing work and enabling measures to be in place to reduce potential impacts. As such, the No Project Alternative would have cultural resources impacts **similar to** the proposed project.

Geology and Soils

Under the No Project Alternative, the SBFD would continue to implement the existing 2004 Wildland Fire Plan, which could cause increased potential for erosion and sedimentation when ground-disturbing activities, such as operation of large mechanized equipment, occurs. Measures included in the 2004 Wildland Fire Plan and in the proposed project would minimize potential erosion and sedimentation by implementing best management practices to reduce the exposure of soils and preserve slopes to the greatest extent feasible. As such, the No Project Alternative would have geology and soils impacts **similar to** the proposed project.

Greenhouse Gas Emissions

Under the No Project Alternative, the SBFD would continue to implement the 2004 Wildland Fire Plan. At the time of approval of the 2004 Wildland Fire Plan, greenhouse gas (GHG) emissions were not a consideration under CEQA. Senate Bill 97 was enacted in 2007 requiring the State Office of Planning and Research to develop, and the California Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those amendments became effective in 2010 with additional revisions in 2018. Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor (H_2O). Some GHGs, such as CO_2, CH_4, and N_2O, can occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil-fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Human-caused GHGs, which are produced by certain industrial products and processes, have a much greater heat-absorption potential than CO_2. They include fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The proposed project would undertake regular vegetation management as part of the CWPP to reduce fuel loads. The fuels management activity was based on input from the City and was estimated to include up to one prescribed burn per year, mechanical fuels management at 12 locations, and biological and manual vegetation management. These activities are effectively the same activities as contemplated in the 2004 Wildland Fire Plan so while it is not possible to compare calculated emissions estimates from 2004, qualitatively, emissions are assumed to be similar. The proposed project also would require mitigation to reduce potential GHG impacts. However, the total reduction in fuel load would be less than the proposed project and in the event of a wildfire, would result in a greater release of GHG emissions. As such, the No Project Alternative would have GHG emissions impacts **greater than** the proposed project.

Hazards and Hazardous Materials

Under the No Project Alternative, mechanized equipment and hand tools requiring fuel and lubricants would still be used to treat vegetation and for other activities described in the 2004 Wildland Fire Plan. Relatively small amounts of hazardous materials, such as diesel, gasoline, and lubricating oils, would be used for tools and equipment. These materials are not considered extremely hazardous and are used routinely for operation of tools and equipment in both urban and rural settings. Several hazardous materials sites are located within the boundaries of the current 2004 Wildland Fire Plan boundaries (SBFD and CDD 2004). The proposed project would also require the use of these same types of materials, and these materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. Three Leaking Underground Storage Tank (LUST) sites are located within the proposed vegetation management areas. These sites have been remediated and received closure from the overseeing regulatory agency. In addition to the LUST sites discussed above, one cleanup site and one land disposal site were identified within the proposed VMUs included with the proposed project. Brooks Institute of Photography, 2190 Alston Road, has documented soil contamination above Santa Barbara County cleanup levels. The land disposal site is the Elings Park Closed Landfill (also known as the Las Positas Landfill, 1298 Las Positas, which is now Elings Park. This site is a closed landfill with ongoing monitoring, managed by the Central Coast Regional Water Quality Control Board and California Department of Resources Recyling and Recovery (CalRecycle). As such, the No Project Alternative would have hazard and hazardous materials impacts **similar to** the proposed project.

Hydrology and Water Quality

Under the No Project Alternative, vegetation removal and controlled burns in areas where steep slopes occur would continue as described in the 2004 Wildland Fire Plan. Activities could result in minor increases in flows from affected areas because vegetation in these areas would no longer absorb a portion of the runoff in the area. The proposed project would include activities similar to the 2004 Wildland Fire Plan. Although the proposed vegetation management activities would typically involve little to no ground disturbance, vegetation can act as a binding, stabilizing otherwise potentially unstable soils. Removal of vegetation in the HFHA could create or exacerbate unstable soils, potentially increasing the potential for soil erosion rates. Mitigation would be required. As such, the No Project Alternative would have hydrology and water quality impacts **similar to** the proposed project.

Land Use

Under the No Project Alternative, the SBFD would continue to implement the practices and policies under the 2004 Wildland Fire Plan. No changes to land use would occur, and no consolidation and renaming of the HFHA would occur. The proposed project would implement a set of policies and practices that would not change or alter land use within the City. The renaming of the HFHA would correspond to activities that property owners would perform, such as defensible space management, but would not change any underlying General Plan land use designation or zoning district, nor would it establish an overlay district. As such, the No Project Alternative would have land use impacts **similar to** the proposed project.

Noise

Under the No Project Alternative, the SBFD would implement vegetation management practices using noise generating equipment consistent with the 2004 Wildland Fire Plan. Equipment such as chainsaws and chippers generate noise and in close proximity to sensitive receptors such as residences could cause a short-term impact. However, the area affected would be smaller than that of the proposed project. The proposed project would also use noise-generating equipment similar to the equipment described in the 2004 Wildland Fire Plan (chippers, chainsaws). The proposed project would also limit noise-generating activities on weekdays between the hours of 7:00 a.m. to 5:00 p.m. No work will be completed on weekends or designated holidays unless fire conditions (e.g., red flag warning) dictate immediate action. As such, the No Project Alternative would have noise impacts **less than** the proposed project.

Population and Housing

Under the No Project Alternative, the policies of the 2004 Wildland Fire Plan would continue to be implemented. As noted in the 2004 Final PEIR for the Wildland Fire Plan, population and housing was dismissed in the City's Initial Study because implementation of the Wildland Fire Plan would not affect population growth or available housing. As discussed in Section 4.11, Population and Housing, of this PEIR, the proposed project would not propose any policies or measures related to creation of new housing or businesses or creation of roads or infrastructure. The proposed project would be limited to fire hazard management activities and would not displace any numbers of existing people or housing necessitating the need to construct replacement housing elsewhere. As such, the No Project Alternative would have population and housing impacts **similar to** the proposed project.

Recreation

Under the No Project Alternative, vegetation management practices and ground-disturbing activities would continue to occur consistent with the 2004 Wildland Fire Plan in areas within and near recreational facilities, such as City parks. The proposed project would expand the HFHA and VMUs such that additional recreational facilities could be impacted by activities conducted under the CWPP. Although coordination between the SBFD and Parks and Recreation Department would occur to minimize potential impacts to recreational users, by virtue of the increased acreage, additional park users may be impacted by noise, dust, or other vegetation management activities As such, the No Project Alternative would have recreational impacts **less than** the proposed project.

Transportation

Under the No Project Alternative, the 2004 Wildland Fire Plan practices would continue. Additional traffic associated with work crews performing vegetation management on local roadways and intersections would be minor and localized. Because the Institute of Transportation Engineers' Trip Generation Manual does not contain trip rates for vegetation management-related activities (ITE 2017), to accurately assess the impact of traffic related to vegetation management activities, trip generation associated with the ongoing activities under the 2004 Wildland Fire Plan was analyzed. Although the proposed CWPP includes 22 additional VMUs, the CWPP would maintain the same general vegetation management methods as described in the 2004 Wildland Fire Plan and PEIR. Review of historical data since adoption of the 2004 Wildland Fire Plan indicates that only two to eight VMUs are serviced annually, and vegetation management activities in one VMU would not occur simultaneously with management in another VMU. As discussed in Section 4.13, Transportation, the proposed CWPP would not increase daily operations when compared to the 2004 Wildland Fire Plan, the 15 peak-hour trips estimated under a peak period would not have a measurable impact to traffic operations. As such, the No Project Alternative would have transportation impacts **similar to** the proposed project.

Tribal Cultural Resources

Under the No Project Alternative, the SBFD would continue to implement the 2004 Wildland Fire Plan. At the time of approval of the 2004 Wildland Fire Plan, Tribal Cultural Resources were not an independent consideration under CEQA. Prior to this date, Native American resources had been considered as a part of the analysis of cultural resources. Assembly Bill 52 created the new requirements with regard to tribal cultural resources that went into effect in July 2015. The 2004 Wildland Fire Plan implements a stop work and redirect measure to avoid potentially damaging a cultural resource. The proposed project takes into account a much broader emphasis on Native American resources under Assembly Bill 52 and requires formal consultation with Native American tribes. Culturally sensitive areas, including Native American Heritage Commission sites, have been identified on a new GIS data map set to help further inform SBFD staff when doing work in areas of Native American sensitivity. Similar to the 2004 Wildland Fire Plan, mitigation measures are also required to minimize potential impacts. As such, the No Project Alternative would have tribal cultural resource impacts **greater than** the proposed project.

Public Services and Utilities

Under the No Project Alternative, activities generating solid waste would continue consistent with the 2004 Wildland Fire Plan. Biomass material generated by the 2004 Wildland Fire Plan would generally be suitable for delivery to the Santa Barbara County green waste management program. The County will not accept certain non-native invasive species such as ivy, palm fronds, yucca, pampas grass, and other highly fibrous plants, as they are problematic (binding the tub grinders) and are instead generally routed to a landfill, as there are no known beneficial

uses for these types of plants. The proposed project would also generate the same types of waste materials that may be chipped and used at the site, applied as mulch, or sent to the County's Greenwaste management project or landfill. As such, the No Project Alternative would have public services and utilities impacts **similar to** the proposed project.

Wildfire

Under the No Project Alternative, the wildfire management measures outlined in the 2004 Wildland Fire Plan would continue. At the time of approval of the 2004 Wildland Fire Plan, wildfire was not an independent consideration under CEQA. Wildfire risk was considered as part of the hazards/hazardous materials analysis. Senate Bill 1241 introduced consideration of a project's potential to create or exacerbate wildfire risk. The new CEQA requirement for wildfire went into effect in December 2018. The 2004 Wildland Fire Plan designated new fire hazard areas (Extreme Foothill, Foothill, Coastal, and Coastal Interior) and established management practices to reduce wildfire risk, such as vegetation treatment. The proposed project would consolidate, expand, and rename Extreme Foothill and Foothill as VHFHSZs and Coastal and Coastal Interior as HFHSZs. The nomenclature is consistent with CAL FIRE, most California counties and cities, and other emergency management agencies, such as the California Office of Emergency Services (CalOES) to provide better coordination and communication during a wildfire event. Additionally, the expanded HFHA and VMUs would provide vegetation management to more areas of the City to reduce wildfire risk. As such, the No Project Alternative would have wildfire impacts **greater than** the proposed project.

Conclusion

The No Project Alternative would have fewer impacts in five resource areas: aesthetics, air quality, biological resources, noise, and recreation. The No Project Alternative would have similar impacts in eight resource areas: cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, population and housing, transportation, and public services and utilities. The No Project Alternative would have greater impacts in three resource areas: GHG emissions, tribal cultural resources, and wildfire.

However, the No Project Alternative would only partially meet the objectives set by the SBFD. The No Project Alternative would not add or remove HFHA based on technical data and fire modeling and would therefore not reduce wildfire risk in these areas and in the City; it would not rename the current Extreme Foothill, Foothill, Coastal, and Coastal Interior zones, creating better consistency across emergency response organizations; it would not eliminate confusion when referring to Coastal and Coastal Interior Zones in the context of the State Coastal Zone, the General Plan, and Coastal Land Use Plan where the Coastal Zone is a regulatory boundary established by the state; and, it would not reduce the potential for release of GHG emissions by reducing vegetative fuel and structural ignition potential. Therefore, because the No Project Alternative would only partially meet the project objectives identified by the SBFD, it is environmentally inferior to the proposed CWPP.

6.4.2 Vegetation Management Unit Alternative

Aesthetics

Under the VMU Alternative, visual resources would be primarily affected by vegetation management activities implemented by the SBFD and landowners performing defensible space management. The boundaries of the Extreme Foothill and Foothill zones would be consolidated into the VHFHSZ, and the Coastal and Coastal Interior zones would be consolidated into the HFHSZ. Within these areas would be new VMUs to be maintained by the SBFD, as shown in Table 6-1, VMU Alternative Acreages. Certain new VMUs would be located in proximity to public parks and other scenic viewing areas. Defensible space would remain the same as currently required in the 2004 Wildland Fire Plan.

Table 6-1. VMU Alternative Acreages

	HFHSZ VMU (acres)	VHFHSZ VMU (acres)
Existing	292.95	707.10
Proposed	356.32	520.22
Total (Acres)	**649.27**	**1,227.32**

Under the proposed project, the total area of vegetation management by the City would increase, potentially creating additional visual impacts from scenic viewing areas and scenic highways, and may negatively impact the visual character of the area. Although aesthetic impacts under the VMU Alternative would be comparable, the overall acreage would be slightly smaller and therefore would have aesthetics impacts **less than** the proposed project.

Air Quality

Under the VMU Alternative, the SBFD would perform activities using equipment and methods similar to those described in the CWPP. Air emission-related impacts associated with vegetation management (e.g., chain saws, chippers, smoke) would be consistent with the CWPP. However, the acreage subject to treatment would be smaller, and therefore the use of mechanized equipment generating emissions would be smaller than that under the proposed project. Mitigation to reduce air quality impacts would be required. As such, the VMU Alternative would have air quality impacts **less than** the proposed project.

Biological Resources

Under the VMU Alternative, vegetation management activities would occur consistent with the CWPP. Biological habitats would be affected by thinning native vegetation, pruning oak trees, and removing or treating understory plants. At any one location, these actions would not cause a significant biological impact based on the proposed vegetation management methods and environmental protection measures. However, the acreage of vegetation treatment would be smaller in the VMU Alternative. Under the proposed project, additional vegetation management activities would occur by the City, resulting in the potential loss of additional habitat above that which would occur in the VMU Alternative. Mitigation to minimize impacts to biological resources would be required. As such, the VMU Alternative would have biological resource impacts **less than** the proposed project.

Cultural Resources

Under the VMU Alternative, activities conducted by the SBFD would be substantially similar to those proposed under the CWPP. Both the VMU Alternative and the proposed project would result in limited ground disturbance typically related to operation of mechanized equipment, such as a backhoe, that could potentially impact a subsurface resource. Mitigation measures would be required to minimize potential cultural resource impacts. Although the acreage of vegetation management activities would be smaller under the VMU Alternative, similar measures would be implemented in the event of work occurring in a culturally sensitive area. Furthermore, as discussed in greater detail in Section 4.4 Cultural Resources, based on a cultural records search of the entire City within the proposed project boundary, culturally sensitive areas, including Native American Heritage Commission sites, have been identified on a new GIS data map set to help further inform SBFD staff when completing work and enabling measures to be in place to reduce potential impacts. As such, the VMU Alternative would have cultural resources impacts **similar to** the proposed project.

Geology and Soils

Under the VMU Alternative, the SBFD would implement the measures contained within the CWPP but with a smaller total acreage for vegetation management. In each case, there is the potential for erosion and sedimentation when ground-disturbing activities, such as operation of large mechanized equipment, occurs. However, incorporation of measures within the CWPP in both the VMU Alternative and the CWPP would minimize potential erosion and sedimentation by implementing BMPs to reduce the exposure of soils and preserve slopes to the greatest extent feasible. As such, the VMU Alternative would have geology and soils impacts **similar to** the proposed project.

Greenhouse Gas Emissions

Under the VMU Alternative, the SBFD would implement the measures contained within the CWPP, however, only within the existing HFHA (Extreme Foothill, Foothill, Coastal, and Coastal Interior) and proposed new VMUs. Under the VMU Alternative, only new VMUs within the current HFHA would be managed by the City, increasing potential fuel loads outside of the current HFHA. Potential GHG emissions would be greater under the VMU Alternative in the event of a wildfire. As such, the VMU Alternative would have GHG emissions impacts **greater than** the proposed project.

Hazards and Hazardous Materials

Under the VMU Alternative, mechanized equipment requiring fuel and lubricants would still be used to treat vegetation and for other activities described in the CWPP. Relatively small amounts of hazardous materials, such as diesel, gasoline, and lubricating oils, would be used to operate the heavy equipment. These materials are not considered extremely hazardous and are used routinely for operation of heavy machinery in both urban and rural settings. The VMU Alternative and the proposed project would both require the use of these same types of materials, and these materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. The same cleanup site and land disposal site are within the proposed VMUs in both the VMU Alternative and the proposed project. As such, the VMU Alternative would have hazard and hazardous materials impacts **similar to** the proposed project.

Hydrology and Water Quality

Under the VMU Alternative, vegetation removal and controlled burns would occur consistent with the CWPP; however, the acreage of VMUs would be smaller than under the proposed project. Activities could result in minor increases in flows from affected areas because vegetation in these areas would no longer absorb a portion of the runoff in the area. Although the proposed vegetation management activities would typically involve little to no ground disturbance, vegetation can act as a binding, stabilizing otherwise potentially unstable soils. Removal of vegetation in the HFHA could create or exacerbate unstable soils, potentially increasing the potential for soil erosion rates. However, even with the reduced acreage, the VMU Alternative would be substantially similar to the proposed project. As such, the VMU Alternative would have hydrology and water quality impacts **similar to** the proposed project.

Land Use

Under the VMU Alternative, the boundaries of the HFHA would be consolidated and renamed but would not be expanded. The same practices and policies would occur under the VMU Alternative and the proposed project. However, there would be a smaller acreage of City-maintained VMU. No changes to land use would occur, and no

consolidation and renaming of the HFHA would occur. As with the proposed project, the VMU Alternative would not change any underlying general plan land use designation or zoning district; nor would it establish an overlay district. As such, the VMU Alternative would have land use impacts **similar to** the proposed project.

Noise

Under the VMU Alternative, vegetation management practices using noise-generating equipment would be similar to the proposed project. Both the VMU Alternative and the proposed project would limit noise-generating activities on weekdays between the hours of 7:00 a.m. to 5:00 p.m. No work will be completed on weekends or designated holidays unless fire conditions (e.g., red flag warning) dictate immediate action. However, under the VMU Alternative, the reduced acreage of VMU treatment could potentially reduce the number of sensitive receptors affected by activities conducted by the SBFD. Additionally, defensible space activities would be reduced because the HFHA would not be expanded. As such, the VMU Alternative would have noise impacts **less than** the proposed project.

Population and Housing

Under the VMU Alternative and as with the proposed project, no policies or measures related to creation of new housing or businesses or creation of roads or infrastructure would be included. Both the VMU Alternative and the proposed project would be limited to fire hazard management activities and would not displace any numbers of existing people or housing necessitating the need to construct replacement housing elsewhere. As such, the VMU Alternative would have population and housing impacts **similar to** the proposed project.

Recreation

Under the VMU Alternative, vegetation management practices and ground-disturbing activities would occur in areas within and near recreational facilities, such as City parks. However, only new VMUs within the existing HFHA would be included, potentially reducing the potential impacts to recreational users. The proposed project would expand the HFHA and VMUs such that additional recreational facilities could be impacted by activities conducted under the CWPP. Although coordination between the SBFD and Parks and Recreation Department would occur to minimize potential impacts to recreational users, by virtue of the increased acreage, additional park users may be impacted by noise, dust, or other vegetation management activities. As such, the VMU Alternative would have recreational impacts **less than** the proposed project.

Transportation

Under the VMU Alternative, activities would be substantially similar to those proposed in the CWPP. As discussed in Section 4.13, Transportation, the proposed CWPP would not increase daily operations when compared to the 2004 Wildland Fire Plan, the 15 peak-hour trips estimated under a peak period would not have a measurable impact to traffic operations. Given that the VMU Alternative would have substantially similar areas, although smaller, than the proposed project and generally the same roadways would be affected, the VMU Alternative would have transportation impacts **similar to** the proposed project.

Tribal Cultural Resources

Under the VMU Alternative, activities would be substantially similar to the proposed project; however, the acreage of disturbance would be smaller since the VMU area would only include those within the existing HFHA. Both the VMU Alternative and the proposed project would address a much broader emphasis on Native American resources.

Culturally sensitive areas, including Native American Heritage Commission sites, have been identified on a new GIS data map set to help further inform SBFD staff when doing work in areas of Native American sensitivity. As such, the VMU Alternative would have tribal cultural resource impacts **similar to** the proposed project.

Public Services and Utilities

Under the VMU Alternative, activities generating solid waste would be consistent with the proposed project; however, less biomass material would be anticipated given the smaller acreage of VMU and defensible space. However, the SBFD's program of chipping and mulching materials would generally offset the increase in biomass. All other public services under the VMU Alternative and the proposed CWPP would be substantially similar. As such, the VMU Alternative would have public services and utilities impacts **similar to** the proposed project.

Wildfire

Under the VMU Alternative, the wildfire management measures would be similar to the proposed project. Both the VMU Alternative and the proposed project would consolidate and rename Extreme Foothill and Foothill as VHFHSZs and Coastal and Coastal Interior as HFHSZs. The nomenclature is consistent with CAL FIRE and other emergency management agencies to provide better coordination and communication during a wildfire event. However, the VMU Alternative would result in a smaller area of treated vegetation by the City and also by property owners maintaining defensible space, which is a critical component of the CWPP. As such, the VMU Alternative would have wildfire impacts **greater than** the proposed project.

Conclusion

The VMU Alternative would have fewer impacts in five resource areas: aesthetics, air quality, biological resources, noise, and recreation. The VMU Alternative would have similar impacts in nine resource areas: cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, population and housing, transportation, tribal cultural resources, and public services and utilities. The VMU Alternative would have greater impacts in two resource areas: GHG emissions and wildfire.

However, the VMU Alternative would only partially meet the objectives set by the SBFD. The VMU Alternative would not add or remove HFHAs based on technical data and fire modeling and would therefore not reduce wildfire risk in these areas and in the City; and it would not reduce the potential for release of GHG emissions by reducing vegetative fuel and structural ignition potential. Therefore, because the VMU Alternative would only partially meet the project objectives identified by the SBFD, it is environmentally inferior to the proposed CWPP.

6.5 Environmentally Superior Alternative

If an alternative is considered clearly superior to the proposed project relative to identified impacts, Section 15126.6 of the CEQA Guidelines requires that alternative to be identified as the environmentally superior alternative. By statute, if the environmentally superior alternative is the No Project Alternative, an EIR must also identify an environmentally superior alternative among the other alternatives. One alternative was considered and dismissed as discussed in Section 6.3, Alternatives Considered but Rejected. Two alternatives to the proposed CWPP were considered: the No Project Alternative and the VMU Alternative. As shown in Table 6-2 Comparison of Alternatives to the Proposed CWPP, the VMU Alternative is considered to be the environmentally superior alternative. Table 6-2 shows the comparison of alternatives by resource area based on the analysis provided above and determines the total impacts that are environmentally superior to the proposed CWPP. Similar to golf, the lower score represents the alternative with fewer impacts in comparison to the proposed project.

Table 6-2. Comparison of Alternatives to the Proposed CWPP

Impact	Alternative 1: No Project	Alternative 2: VMU Alternative
Aesthetics	−1	−1
Air Quality	−1	−1
Biological Resources	−1	−1
Cultural Resources	0	0
Geology and Soils	0	0
Greenhouse Gas Emissions	+1	+1
Hazards and Hazardous Materials	0	0
Hydrology and Water Quality	0	0
Land Use and Planning	0	0
Noise	−1	−1
Population and Housing	0	0
Recreation	−1	−1
Transportation	0	0
Tribal Cultural Resources	+1	0
Public Services and Utilities	0	0
Wildfire	+1	+1
Total (environmentally superior only)	**−2**	**−3**
Avoids an impact or eliminates need for mitigation?	No	No

Notes: 0 = similar impact to CWPP; +1 = greater impact than CWPP; - 1 = less impact than CWPP.

Based on review of the alternatives considered, the City has determined that the VMU Alternative would be environmentally superior to the No Project Alternative and the proposed project because it would reduce significant and unavoidable impacts while still obtaining most objectives of the project. Therefore, the VMU Alternative is considered to be the environmentally superior alternative.

6.6 References

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