



CITY OF HALF MOON BAY BICYCLE AND PEDESTRIAN MASTER PLAN

INITIAL STUDY /
MITIGATED NEGATIVE DECLARATION

JULY 2019



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City of Half Moon Bay Bicycle and Pedestrian Master Plan

Initial Study / Mitigated Negative Declaration

July 2019

Prepared for:



City of Half Moon Bay
Planning Division
501 Main Street
Half Moon Bay, CA 94019

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**City of Half Moon Bay
Bicycle and Pedestrian Master Plan Project
Draft Mitigated Negative Declaration**

Project: Half Moon Bay Bicycle and Pedestrian Master Plan

Lead Agency: City of Half Moon Bay

Project Proponent: City of Half Moon Bay

Availability of Documents: The Initial Study for this Mitigated Negative Declaration is available for review at:

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PROJECT DESCRIPTION

The City of Half Moon Bay (City) intends to adopt and implement the City of Half Moon Bay Bicycle and Pedestrian Master Plan (BP Master Plan). The BP Master Plan is needed to guide the development of infrastructure improvements to enhance efficient and safe bicycling and walking transportation choices in Half Moon Bay. It is needed to provide overall guidance for long-term decision-making by City staff and identify priorities for bicycle and pedestrian facility improvements and development.

The BP Master Plan identifies needs and prioritizes infrastructure improvements to the City's pedestrian and bicycle facilities and programs. The BP Master Plan builds off the existing infrastructure, acknowledges current safety issues, and recommends improvements to address current and future demand based on current conditions and anticipated infill development. The key components of the BP Master Plan include existing conditions assessment, recommendations for improvements to existing bicycle and pedestrian networks, and an implementation element, which includes priority projects.

PROPOSED FINDINGS

The City of Half Moon Bay has reviewed the attached Initial Study and determined that the Initial Study identifies potentially significant project effects, but:

1. Revisions to the master plan incorporated herein as mitigation would avoid or mitigate the effects to a point where no significant effects would occur; and
2. There is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment. Pursuant to California Environmental Quality Act (CEQA) Guidelines Sections 15064(f)(3) and 15070(b), a Mitigated Negative Declaration has been prepared for consideration as the appropriate CEQA document for the project.

BASIS OF FINDINGS

Based on the environmental evaluation presented in the attached Initial Study, the project would not cause significant adverse effects related to agricultural and forestry resources, air quality, cultural resources, energy, geology/soils, greenhouse gas emissions, hazards/hazardous materials, hydrology/water quality, land use/planning, mineral resources, population/housing, public services, recreation, traffic, utilities/service systems, and wildfire. The project does not have impacts that are individually limited, but cumulatively considerable.

The project would have potentially significant impacts relative to light and glare and biological resources and mitigation measures have been incorporated into the BP Master Plan to reduce these impacts to less than significant levels.

Mitigation Measures

The project could result in significant adverse effects on light and glare and biological resources. However, the BP Master Plan has been revised to include the mitigation measures listed below, which reduce these impacts to a less-than-significant level. With implementation of these mitigation measures, the project would not result in nighttime light and glare, substantially degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.

Mitigation Measure AEST-1 (All Existing and Planned Infrastructure Improvements): To avoid light and glare impacts from BP Master Plan projects and to protect the Coastsides dark night skies valued by the City, the City shall require a lighting plan for each improvement project that contains a night lighting element to it. The lighting plan should provide design and illumination requirements of the project and address how the plan reduces any light and glare impacts and protects dark night skies, to the satisfaction of the Community Development Director and/or decision-making body for any associated discretionary permit. The lighting plan shall specify how light will be shielded and contained within the project area to the greatest extent possible.

Mitigation Measure BIO-1: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to review and implementation of any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, each BP Master Plan project, including on-street and off-street projects, would need to be evaluated to determine if it is within 100 feet of a sensitive habitat and a biological report would be prepared for any project that occurred within 100 feet of a sensitive habitat. These biological reports would include measures to protect sensitive natural communities and special-status plant species.

To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-1 requires that when the biological report identifies that BP Master Plan projects are located in or adjacent to sensitive plant species habitat, a qualified biologist shall work with the City and/or contractor to designate the work area and any staging areas with high-visibility orange construction fencing if deemed applicable by the qualified biologist. Disturbance to vegetation shall be kept to the minimum necessary to complete the project activities.

Mitigation Measure BIO-2: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report for any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any off-street project with special-status plant species or sensitive natural communities. The biological report would include measures to protect sensitive natural communities and special-status plant species.

To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-2 requires that, at a minimum, the biological report recommend surveys for special-status plant species be conducted prior to approval of any BP Master Plan project with ground disturbing activities at off-street project locations where suitable habitat for such species is present.

The measure shall require a qualified botanist to conduct focused botanical surveys according to CNPS (CNPS 2001), CDFW (CDFW 2018c), and USFWS (USFWS 2002) at the proper time(s) of year during reported blooming periods when the plants are identifiable. The measure shall also require the qualified botanist to prepare a survey results report for submittal to the City and any other appropriate regulatory agencies (e.g., CDFW). The report shall include, but shall not be limited to, the following: (1) a description of the survey methods; (2) a discussion of the survey results; (3) a map showing the project area and the location of any special-status plants encountered, and (4) recommended measures to avoid impacts to special-status plant species.

A qualified botanist is an individual who possesses the following qualifications: 1) experience conducting floristic field surveys; 2) knowledge of plant taxonomy and plant community ecology; 3) familiarity with the plants of the area, including rare, threatened, and endangered species; and 4) familiarity with the appropriate state and federal statutes related to plants and plant collecting.

Mitigation Measure BIO-3: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any project that occurred within or adjacent to sensitive habitat, including habitat for special-status animal species. The biological report would include measures to protect any special-status animal species.

To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-3 requires that the following measures be implemented prior to and during construction when the biological report identifies that BP Master Plan projects are within or adjacent to suitable habitat for special-status animal species to avoid harming special-status wildlife species: California red-legged frog (CRLF), San Francisco Garter Snake (SFGS), Western Pond turtle (WPT), and San Francisco dusky-footed woodrat.

All Species

- a) Work Area Delineation. Prior to any construction activities, the work area and any staging areas shall be delineated with wildlife exclusion fencing (see Measure 2 below) and/or high-visibility orange construction fencing.
- b) Worker Environmental Awareness Training. A qualified biologist shall conduct an employee education program prior to any construction. The education program shall consist of a brief presentation to explain biological resources concerns to contractors, their employees, and any other personnel involved in construction of the project. The program shall include, at a minimum, the following: a description of relevant special-status species, nesting birds, and bats along with their habitat needs as they pertain to the project area; a report of the occurrence of these species in the project vicinity, as applicable; an explanation of the status of these species and their protection under the federal and state regulations; a list of measures being taken to reduce potential impacts to natural resources during project construction and implementation; instructions to follow in the case of observing a special-status species on the work site, and a summary of the penalties for violating local, state, and/or federal law regarding special-status species. A fact sheet conveying this information shall be prepared for distribution to the above-mentioned people and anyone else who may enter the project area. Upon completion of training, employees

shall sign a form stating that they attended the training and agree to all the conservation and protection measures.

- c) Flagging Sensitive Vegetation. Prior to initiation of any construction activities within the vicinity of sensitive habitat, a qualified biologist shall clearly delineate the sensitive habitat areas.
- d) Pre-construction Survey for Special-Status Species. A qualified biologist shall conduct a pre-construction survey within the construction area for the presence of CRLF, SFGS, WPT, and San Francisco dusky-footed woodrat (within a 50-foot buffer from the project area boundary, if possible). The survey will be conducted immediately prior to the initial onset of construction activities. If any of these, or other special-status, species are found, work will not commence until the appropriate state and/or federal resource agencies are contacted and avoidance and mitigation measures are in place.
- e) Construction Site Sanitation. Food items may attract wildlife into the construction site, which will expose them to construction-related hazards. The construction site shall be maintained in a clean condition. All trash (e.g., food scraps, cans, bottles, containers, wrappers, and other discarded items) will be placed in closed containers and properly disposed of.
- f) Species Discovery. If an animal is found at the work site and is believed to be a protected species, work shall be halted, and a qualified biologist shall be contacted for guidance. Care must be taken not to harm or harass the species. No wildlife species shall be handled and/or removed from the construction area by anyone except agency-approved biologists.

CRLF and SFGS

- g) Wildlife Exclusion Fence. In areas where suitable habitat is present (e.g., creeks, wetlands, watercourses and ditches) and upland habitat (e.g., coastal scrub, non-native grassland), and as identified by the biological report required under Zoning Code 18.35.035, prior to any ground disturbance in the project area, an agency-approved temporary wildlife exclusion barrier shall be installed along the limits of disturbance. An agency-approved biologist shall inspect the area prior to installation of the barrier. The barrier shall be designed to allow the California red-legged frog and San Francisco garter snake to leave the impact area and prevent them from entering the impact area and will remain in place until all development activities have been completed. This barrier shall be inspected daily and maintained and repaired as necessary to ensure that it is functional and is not a hazard to California red-legged frogs or San Francisco garter snakes on the outer side of the barrier. The fence shall be a minimum of three feet in height, buried in the soil at least four inches, and the base backfilled to form a tight seal to discourage CRLF and SFGS from crawling under and entering the work area. If the fence cannot be buried, the base shall be weighed down and sealed with gravel bags.
- h) Silt Fencing. If work will disturb soil or includes digging or trenching, silt fencing shall be installed between any waterbodies (e.g., creeks, watercourses and ditches, wetlands) within or adjacent to BP Master Plan project areas. A silt barrier can be added to the wildlife exclusion fence instead to minimize the amount of fencing installed. During construction, the fence shall be checked every day for damage or breaks before construction activities commence. Any damage to the fence shall be repaired in a timely manner.

- i) Daily Fence Inspections. While any wildlife exclusion fencing is present in the project area, a qualified biologist shall inspect the area inside of the exclusion fence for CRLF and SFGS every day before construction activities commence. If any special-status species are found, construction activities shall not be allowed to start until the USFWS and/or CDFW are consulted and have approved an appropriate course of action. Such action could include leaving the animal alone to move away on its own or the relocation of the animal to outside of the work area by an agency-approved biologist.
- j) Wildlife Entrapment. The contractor shall avoid the use of monofilament netting, including its use in temporary and permanent erosion control materials. All holes greater than one-foot deep must be sealed overnight to prevent the entrapment of wildlife. Where holes or trenches cannot be sealed, escape ramps that are no greater than 30 percent slope shall be positioned such that entrapped wildlife will be able to escape. The escape ramps should be at least one-foot wide and covered/fitted with a material that provides traction.
- k) Daily Species Inspections for Open Trenches or Holes. A qualified biologist and/or contractor trained by a qualified biologist shall inspect any open trenches or holes within BP Master Plan project areas with suitable habitat for CRLF, SFGS, and other special-status species every day before construction activities commence. If any special-status species are found, construction activities will not be allowed to start and the USFWS and CDFW will be consulted on an appropriate course of action.

San Francisco Dusky-Footed Woodrat

- l) San Francisco Dusky-Footed Woodrat. If any San Francisco dusky-footed woodrat houses are found in the project area, they shall be marked in the field with flagging and their location shall be recorded with a Global Positioning System unit. If a San Francisco dusky-footed woodrat house is identified within an area of disturbance, the City shall attempt to preserve the house and maintain an intact dispersal corridor between the house and undisturbed habitat. An adequate dispersal corridor is considered to be a minimum of 50 feet wide and have greater than 70 percent vegetative cover. Even if such a corridor is infeasible, the City shall avoid physical disturbance to the woodrat house, if feasible. If the woodrat house cannot be avoided, CDFW shall be notified and information regarding the house location(s) and relocation plan shall be provided to the CDFW for review and approval. With approval from CDFW, a qualified biologist shall dismantle and relocate the house material. Prior to the beginning of construction, a qualified biologist shall deconstruct the house by hand. Materials from the house shall be dispersed into adjacent suitable habitat that is outside of the disturbance area. During the deconstruction process the biologist shall attempt to assess if there are juveniles in the house. If immobile juveniles are observed, the deconstruction process shall be discontinued until a time when the biologist believes the juveniles will be fully mobile. A 10-foot wide no-disturbance buffer will be established around the house until the juveniles are mobile. The house may be dismantled once the biologist has determined that adverse impacts on the juveniles would not occur. All disturbances to woodrat houses will be documented in a construction monitoring report and submitted to City.

Mitigation Measure BIO-4: Any BP Master Plan project shall be designed to avoid sensitive vegetation communities (e.g., ESHA), to the greatest extent feasible. Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. The

biological report would include a map of sensitive natural communities and measures to protect sensitive natural communities.

If, despite avoidance measures, the project results in any loss of sensitive vegetation communities or the loss of habitat quality, compensatory mitigation shall be required at the minimum ratios required by the California Coastal Commission (10:1 for native tree replacement, 4:1 for wetlands, 3:1 for riparian and other specified habitats, and 2:1 for coastal sage scrub not occupied by listed species), or more if required by other regulatory agencies, by means of restoration (e.g., removing non-native plants and planting native vegetation) in similar habitat adjacent to the project (i.e., area of disturbance). The City shall prepare a Restoration and Monitoring Plan for any loss of sensitive vegetation communities. The Restoration and Monitoring Plan shall be made available to the public for review for a period of at least 30 days prior to Plan implementation. The Plan shall describe the methods and practices to be employed, and include, at a minimum, the following:

- A clear statement of the goals of the restoration for all habitat types;
- Designation of a qualified biologist as the Restoration or Mitigation Manager responsible for all phases of the restoration;
- Identification of the parties responsible for the Plan implementation;
- A specific grading plan, if the topography must be altered;
- A specific erosion control plan, if soil or other substrate will be disturbed during restoration;
- A weed eradication plan designed to eradicate existing weeds and control future invasion by exotic species;
- A planting plan based on the natural habitat type;
- An irrigation plan that describes the method and timing of watering and ensures removal of watering infrastructure by the end of the monitoring period;
- A monitoring plan with performance goals/success criteria, assessment methods, and a schedule; and
- Feasible contingency measures if success criteria are not met within the established timeframe.

HALF MOON BAY BICYCLE AND PEDESTRIAN MASTER PLAN PROJECT INITIAL STUDY

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Chapter 1. Introduction

1.1 Project Background

The City of Half Moon Bay (City) intends to adopt and implement the City of Half Moon Bay Bicycle and Pedestrian Master Plan (BP Master Plan). The City currently has no cohesive plan to manage, improve, and expand its bicycle and pedestrian network. The BP Master Plan is needed to guide the development of programs and facilities to enhance bicycling and walking as practical, efficient, and safe transportation choices in Half Moon Bay. It is needed to provide overall guidance for long-term decision making by City staff and identify priorities for bicycle and pedestrian facility improvements and development.

The BP Master Plan identifies needs and prioritizes improvements to the City's pedestrian and bicycle facilities and programs. The BP Master Plan builds off the existing infrastructure, acknowledges current safety issues, and recommends improvements to address current and future demand based on current conditions and anticipated infill development. The BP Master Plan provides a blueprint for the City to eventually implement a complete bicycle and pedestrian network. The key components of the BP Master Plan include existing conditions assessment, recommendations for improvements to existing bicycle and pedestrian networks¹, and an implementation element, which includes priority projects. The BP Master Plan components are further described in Section 2 below.

The City is the lead agency for the project under the California Environmental Quality Act (CEQA) and has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) for the BP Master Plan. This report has been prepared to comply with Section 15063 of the State CEQA Guidelines, which sets forth the required contents of an Initial Study.

1.2 Purpose of CEQA

CEQA Guidelines Section 15002 establishes the basic purposes of CEQA which are to:

1. Inform government decision makers and the public about the potential, significant environmental effects of proposed activities.
2. Identify ways that environmental damage can be avoided or significantly reduced.
3. Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures.
4. Disclose to the public the reason why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The adoption of the BP Master Plan is considered a project under CEQA (CEQA Guidelines Section 15378(a)(1)). Per Section 15063 of the CEQA Guidelines, the City has prepared this Initial Study to determine if the project may have a significant effect on the environment. All aspects and phases of the BP Master Plan are considered in the Initial Study; site-specific projects identified in the BP Master Plan would undergo additional CEQA review when the City is ready to move forward with the project and project design plans are developed.

¹ The recommendations in the BP Master Plan are designed as a guide and decision-making tool for the City and do not necessarily include every needed bicycle and pedestrian facility improvement and/or development. The BP Master Plan presents the recommendations for facility improvements and/or development, but the implementation of these features would be subject to a separate CEQA process. Therefore, some recommendations may evolve or not be fully implemented depending on the design process, community input, neighborhood compatibility, or environmental constraints.

If the Initial Study analysis determines there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment, the City will prepare an Environmental Impact Report (EIR) or determine whether a previously prepared EIR would adequately analyze the project at hand.

The City may prepare a Negative Declaration (ND) or a Mitigated Negative Declaration (MND) for the project if the Initial Study determines there is no substantial evidence that the project, or any of its aspects, may cause a significant effect on the environment.

1.3 Potential Environmental Impacts

As described in greater detail throughout the document, adoption of the BP Master Plan would result in future projects that have the potential for significant impacts to light and glare from new night lighting and sensitive biological resources. Mitigation measures have been applied to the project to reduce these potentially significant impacts to less than significant levels. Pursuant to Section 15097 of the CEQA Guidelines, lead agencies are required to prepare a Mitigation Monitoring and Reporting Program (MMRP) that describes the roles and responsibilities in monitoring and reporting on the implementation of the proposed mitigation measures identified in the IS/MND. The impacts and mitigation measures identified in this IS/MND are summarized in the MMRP, presented in Appendix A of this document.

1.4 Lead Agency Name and Address

City of Half Moon Bay
Planning Division
501 Main Street
Half Moon Bay, California 94019

1.5 Contact Person and Phone Number

Scott Phillips, Associate Planner
City of Half Moon Bay, Planning Division
Phone: 650-726-8299; Email: Sphillips@hmbcity.com

1.6 Document Organization

The purpose of this document is to evaluate the potential environmental effects of the BP Master Plan. This document is organized as follows:

- Chapter 1 – Introduction. This chapter introduces the project and describes the purpose and organization of this document.
- Chapter 2 – Project Description. This chapter describes the project location, area, site, objectives, and characteristics.
- Chapter 3 – Environmental Checklist and Responses. This chapter contains the Environmental Checklist that identifies the significance of potential environmental impacts resulting from implementation of the project.
- Chapter 4 – Report Preparation. This chapter lists of those involved in document preparation.
- Appendices

Chapter 2. Project Description

2.1 Project Background

The BP Master Plan is intended to guide the development of programs and facilities to enhance bicycling and walking for residents, workers, and visitors within the City of Half Moon Bay (City). The BP Master Plan identifies needs and prioritizes improvements to the City's pedestrian and bicycle facilities and programs. It builds off existing infrastructure, acknowledges current safety issues, and recommends improvements to address current and future demand based on current conditions and anticipated infill development. The BP Master Plan also provides the City with the necessary tools to apply for grant funding for BP Master Plan implementation.

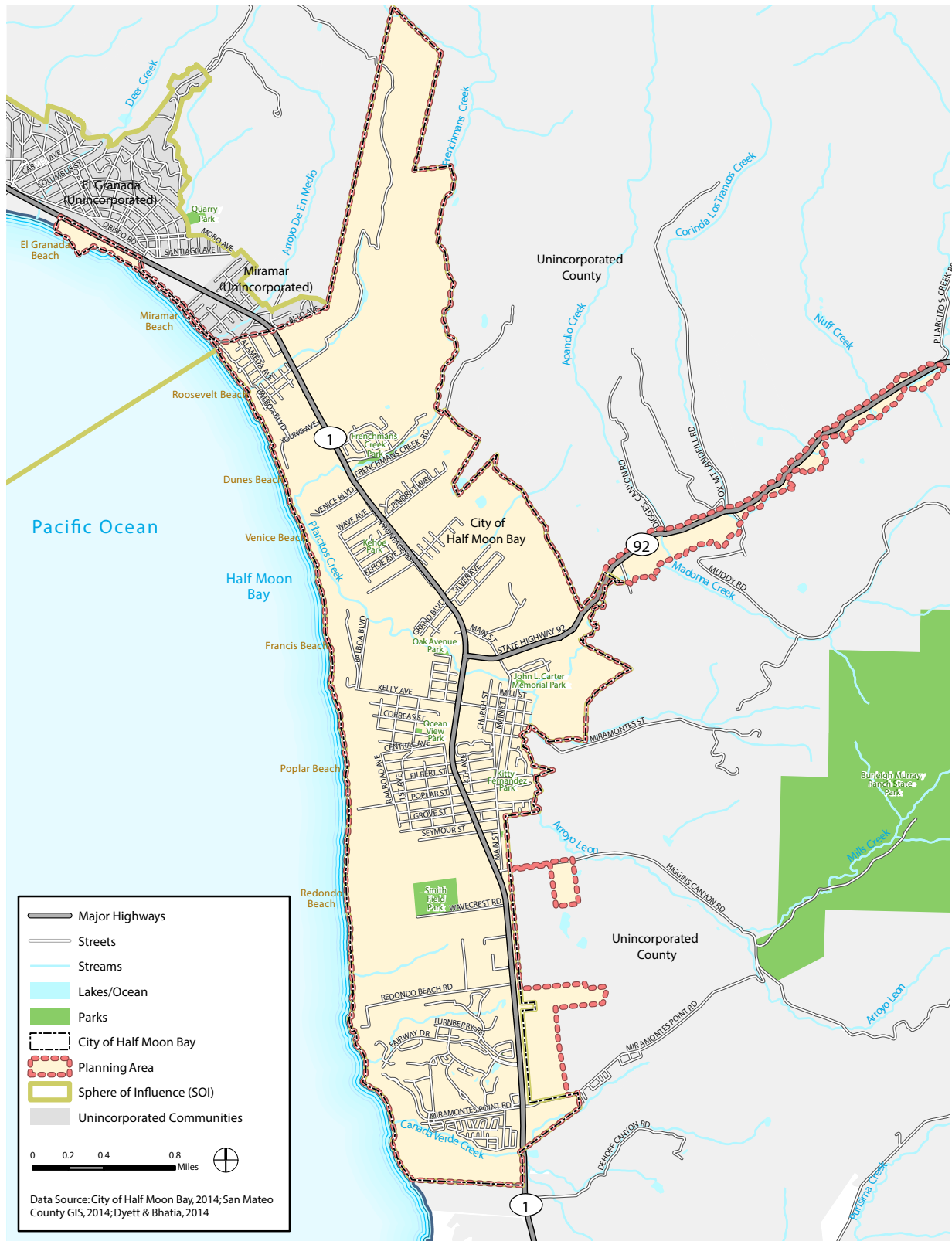
The BP Master Plan Implementation Plan and recommendations for the pedestrian and bicycle network are designed as a guide and decision-making tool and do not necessarily include every needed bike or pedestrian facility improvement or development over time. Some recommendations may evolve or not be fully implemented depending on the design process, community input, neighborhood compatibility, or environmental constraints. The future planning and design efforts for each project will consider these items as well as other implementation criteria.

2.2 Planning Area

The BP Master Plan planning area includes the entire City boundary and extends approximately six miles along the Pacific coast and encompasses approximately 4,267 acres. The planning area is located entirely within the California Coastal Zone and is therefore subject to the California Coastal Act provisions. Overall, the planning area is consistent with the City boundaries, with the addition of several small unincorporated areas of San Mateo County to the southeast (Figure 2.3-1: Planning Area Map). The unincorporated areas are included for consideration because they are directly related to the bicycle and pedestrian planning needs for Half Moon Bay. Throughout the planning area, undeveloped, agricultural, open space, and residential uses are the most dominant uses.

2.3 Project Location and Setting

The City is situated along the San Mateo County coastline, approximately 23 miles south of downtown San Francisco at the edge of the Bay Area region (Figure 2.3-2: Bicycle and Pedestrian Master Plan Vicinity Map). The scenic setting, downtown amenities, farm stands, and recreational opportunities make the City an attractive destination for tourists year-round. It is connected to Pacifica and San Francisco to the north and Santa Cruz to the south by Highway 1 and connected to San Mateo, the Peninsula, and the East Bay by Highway 92. The City extends over six miles along the Pacific Ocean. The California Coastal Trail runs north-south along the coast in the City and provides bicycle and pedestrian access to the beach at several locations.



Source: City of Half Moon Bay, 2014

Figure 2.3-1 Planning Area Map

City of Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND



Source: City of Half Moon Bay, 2014

Figure 2.3-2 Vicinity Map

City of Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

2.4 Land Uses and Setting

The BP Master Plan planning area contains an alternating mix of urban and undeveloped or rural land uses clustered around Highways 1 and 92. Throughout the area, agricultural, open space, and residential uses are the most dominant, though large tracts of land are given to nursery and greenhouse operations around the edges of the city and along Highway 92. Land uses within the City differ from those found in the portion of the planning area outside of city limits. The majority of land in the City is dominated by an alternating pattern of agriculture, single-family residential, and open space, with a higher diversity of other uses found clustered near the city's downtown core (e.g., commercial and mixed uses, institutional uses, residential uses, and parks). In the portion of the planning area outside of the City boundaries in unincorporated San Mateo County, nursery and greenhouse operations dominate, and agricultural and industrial uses make up larger percentages of the land than they do within the City.

2.5 Existing Transportation Setting

Highway 1 runs north-south through the center of the City and is the main connection for neighborhoods located on either side of the highway. Highway 1 currently constrains pedestrian and bicycle mobility due to limited crossing opportunities, heavy traffic and/or high speeds, and lack of consistent pedestrian pathways along the Highway. The Highway 1 gridlock during weekday and weekend peaks acts as a barrier to cohesive east-west connections from downtown to the coast. Highway 92 runs east-west through the center of the City and connects to other communities along the San Francisco Bay peninsula to the east. Based on a collision analysis, there are several locations considered unsafe for vulnerable road users, including Highway 1 and Main Street.

With a relatively small geographic size, there is opportunity within the City for improving circulation through the bicycle and pedestrian networks to make it easier and safer for residents and visitors to walk and bike in the City.

2.6 Existing Bicycle and Pedestrian Facilities

2.6.1 Bicycle Facilities

The bicycle network includes several types of bikeways, bicycle parking, self-repair stations, signage, and related elements (Figure 2.6-1: Existing Bicycle Network). The existing bicycle network provides excellent recreational opportunities with the California Coastal Trail and provides some north/south connections with the Naomi Partridge Trail, but the rest of the bicycle network is disjointed and does not provide safe, comfortable connections to key destinations such as downtown or schools.

The Coastal Access and Recreation Chapter of the Local Coastal Plan (LCP) creates a framework to protect and enhance public access to the shoreline. The City's existing multi-use trails, including the California Coastal Trail, Naomi Partridge Trail, and the developed segment of the Pilarcitos Creek Trail (between Highway 92 to the east, with a grade separated crossing of Highway 1 and terminating at the western end of Oak Avenue Park), provide linkages that support coastal access for bicycles and pedestrians. Existing segments of these multi-use trails are shown in Figure 2.6-1: Existing Bicycle Network.

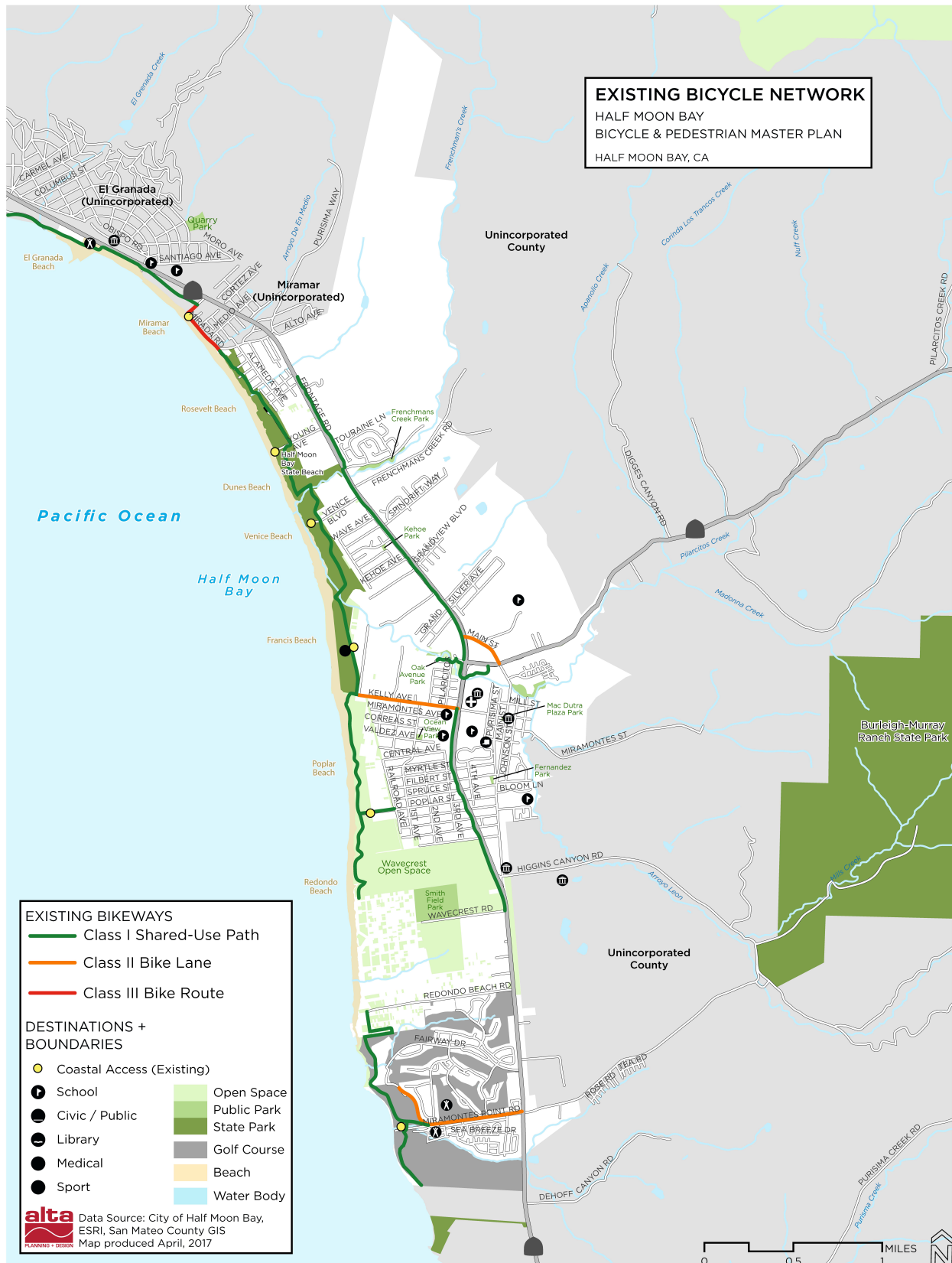


Figure 2-6.1 Existing Bicycle Network

City of Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

Specific bicycle facility elements are described below.

Class I Shared Use Paths

Class I shared use paths are off-street facilities dedicated exclusively to use by bicyclists and pedestrians. The City currently has 9.8 miles of Class I shared-use paths.

Class II Bicycle Lanes

Class II facilities are on-street bike lanes (typically five feet wide) that can be enhanced with a painted buffer added to the side of the lane for higher visibility. There are currently 1.6 miles of Class II bicycle lanes in the City, although none of these bike lanes are buffered.

Class III Bicycle Routes

Class III bike routes are streets where the travel lane is shared by drivers and bicyclists on roadways with low levels of motor vehicle traffic and speeds and may include “share the road” signs or pavement markings. There are 0.3 mile of Class III bike routes in the City.

Class IV Separated Bikeways

Class IV separated bikeways are on-street bike facilities that are separated from vehicle traffic by some sort of physical separation (e.g., bollards, curbs, plant boxes, grade separation, parked cars). The City does not currently have Class IV facilities.

Bicycle Boulevards (i.e., neighborhood greenways) are a type of bicycle route that uses traffic calming, in addition to pavement markings and signage to create a comfortable bikeway that also reduces speeds and, often, cut through traffic in residential neighborhoods. The City does not currently have any bicycle boulevards.

2.6.2 Pedestrian Facilities

The existing pedestrian network in the City consists of major connector streets with mostly complete sidewalks and residential streets with incomplete sidewalks or no sidewalks. A comprehensive sidewalk review was not conducted as part of the BP Master Plan; however, several roadways that provide key connections to the coast, downtown, schools, and/or transit areas were identified as missing sidewalks or walkways or containing significant sidewalk gaps (e.g., Purissima Street, Kelly Avenue, and Miramontes Street). In addition, obstructed sidewalks, sidewalks that are narrow, or areas with sidewalk gaps are present throughout the City. Many neighborhoods in the City also lack pedestrian connections to other neighborhoods or key destinations (e.g., shopping centers, schools, downtown). The BP Master Plan and its associated Design Guidelines also acknowledges that many Half Moon Bay neighborhoods prefer to not have traditional sidewalks for various reasons (e.g., drainage, aesthetics, limited space, etc.) and therefore the BP Master Plan also includes alternate approaches for implementing pedestrian access improvements, sidepaths, pedestrian lanes, and shared use streets.

2.6.3 Connections to Adjacent Jurisdictions

While the BP Master Plan focuses on the connectivity within the City, connections to regional networks and adjacent communities are also important (Figure 2.6-2: Regional Bicycle Network). Several routes in the City’s bikeway network are designated as routes of County or regional significance.

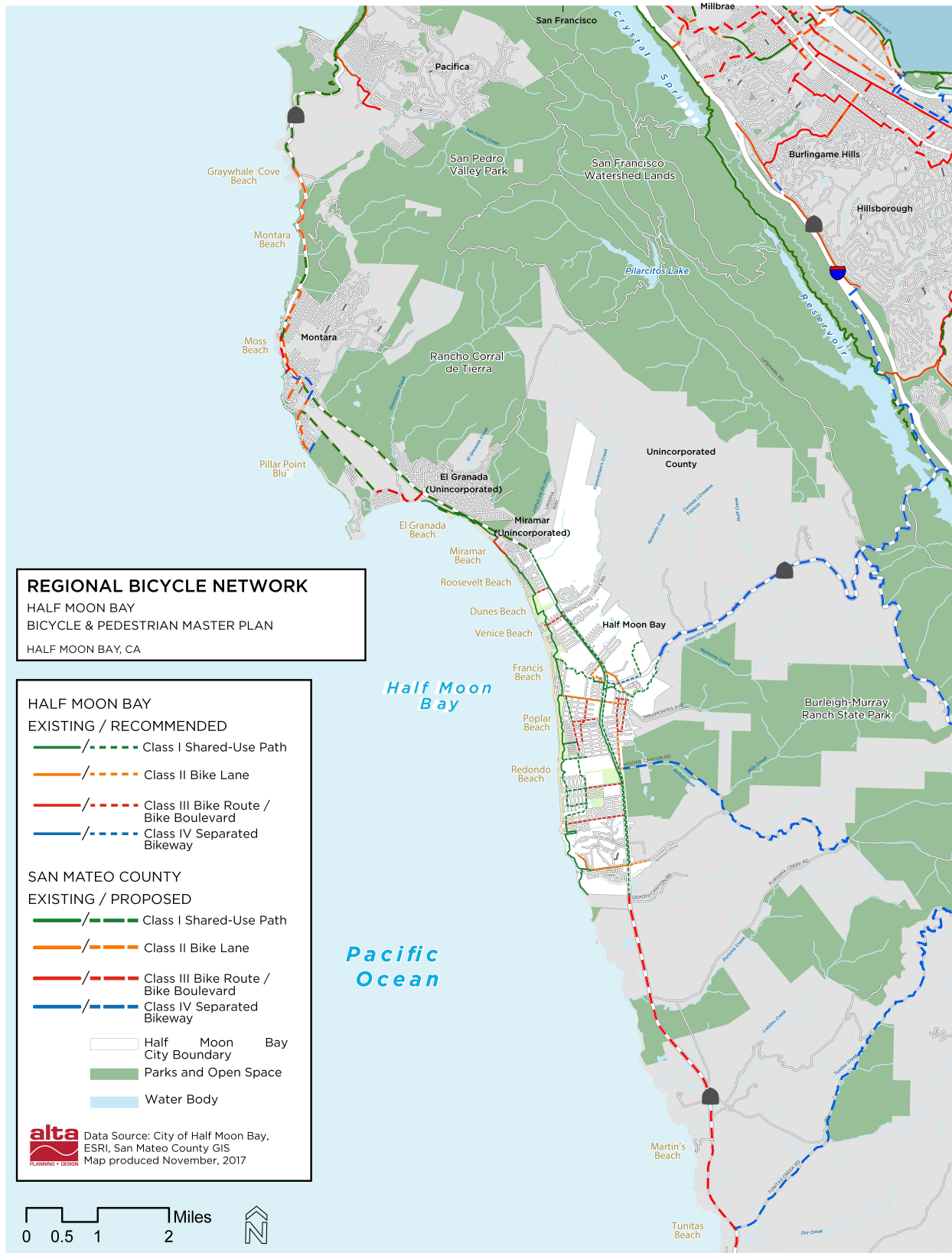


Figure 2.6-2 Regional Bicycle Network

City of Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

2.7 Relationship to Other Plans

2.7.1 Local Coastal Program

The Local Coastal Program (LCP) consists of a local coastal land use plan (LUP), a subdivision ordinance, a zoning ordinance and zoning map, and other actions, which taken together, implement the California Coastal Act. Half Moon Bay's LCP was certified in 1996. The LCP includes policies that support coastal access via trails, bicycle access generally, and by addressing traffic congestion on Highway 1. The LCP also requires protection of sensitive coastal resources, including environmentally sensitive habitat areas (ESHA) and visual resources. The BP Master Plan was crafted to acknowledge these resources and plan within the constraints they may impose.

At the time the BP Master Plan was developed, the City was preparing a comprehensive update of the LCP. The draft LCP identifies the City's downtown core area as the area where future development should be concentrated to support a diverse mix of pedestrian-oriented businesses, shops, housing, and public spaces. Denser areas like the downtown also provide the greatest opportunity to increase walking and bicycling. To support a walkable downtown, the BP Master Plan analyzed development of regulations to ensure a pedestrian-oriented environment.

The Coastal Access and Recreation chapter of the LCP creates a framework to protect and enhance public access to the shoreline. This chapter provides an overview of existing and planned bicycle and pedestrian coastal access, including gaps and areas of opportunities in the existing bicycle and pedestrian network. The draft LCP envisions a more comprehensive bicycle and pedestrian network within the City that connects the City's trails, Downtown, and the beaches. The draft LCP also identifies opportunities for transforming Highway 1 into a "Town Boulevard" to improve coastal access and circulation for visitors, workers, and residents. Coastal access and the "Town Boulevard" are important concepts in the BP Master Plan.

2.7.2 Half Moon Bay General Plan

The General Plan is a visionary document required by California law. It presents long-term development goals for the future of the jurisdiction and must include at least a Land Use, Transportation, Housing, Conservation, Noise, Open Space, and Safety element. The City's General Plan incorporates the LCPLUP as the General Land Use Plan Element. The City's Circulation Element was updated in 2013 and focuses on multi-modal mobility, safety, and connectivity. A complete streets policy was also established in the 2013 update. The BP Master Plan is consistent with the 2013 Circulation Element. In particular, Goal 4 of the Circulation Element covers a broad range of supporting policies and implementing actions that pertain directly to the components of the BP Master Plan, such as reducing vehicle trips and improving community character by fostering a pedestrian and bicycle network.

Since the Circulation Element was updated in 2013, the City has been working on a comprehensive update to the General Plan in conjunction with the LCP update. Because the draft policies for the General Plan were recently crafted, they are included as a starting point for the framework of the BP Master Plan. The draft Circulation Element (e.g., complete streets, functional and cohesive transportation network, pedestrian and bicycle travel, and transportation management demand) and draft Healthy Community Element (e.g., walk, bike, and transit assessments and audits, neighborhood walkability, bicycle linkages, trail improvements and connections, and trail development) are especially relevant to the BP Master Plan. The BP Master Plan builds on the policy direction developed for these elements and recommends a series of programs aimed to make riding a bicycle and walking the City safer.

2.7.3 Other Plans

A number of other documents were reviewed during the BP Master Plan development to identify policies related to bicycling and walking in the City. These include the San Mateo County Comprehensive Bike and Pedestrian Plan (2011), San Mateo Countywide Transportation Plan (2016), Plan Bay Area 2040 (2017), San Mateo County Congestion Management Transportation Plan (2015), Regional Transportation Improvement Program (2016), draft Connect the Coastside (2016), California Transportation Plan 2040 (2016), Toward an Active California: California State Bicycle and Pedestrian Plan (2017), Caltrans Strategic Management Plan (2015), California Complete Streets Policy (2008), Smart Mobility Framework (2010), Caltrans Highway Design Manual, California Manual on Uniform and Traffic Control Devices, Main Street California (2013), and Complete Intersections; A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians (2010). The BP Master Plan does not develop a new set of policies for the City and instead supports the existing policies set in the existing LCP and General Plan, as well as the draft LUP and General Plan updates.

2.8 Master Plan Description

The proposed BP Master Plan is the result of a rigorous analysis of the existing bicycle and pedestrian network as well as an extensive community engagement process. An overview of this planning process is presented in BP Master Plan, Chapter 1. The BP Master Plan presents the vision of Half Moon Bay's active transportation network through the establishment of recommendations for bicycle and pedestrian network, programs, improvements, and development.

2.8.1 Key Themes

There are five key themes that helped shape the recommendations for the BP Master Plan. These themes include the following:

- Highway 1 acts as a barrier for pedestrians and bicyclists and does not reflect the unique character of the City. Recommendations for Highway 1 focus on the following:
 - Providing parallel bicycle and pedestrian trails on each side of Highway 1.
 - Improving crossings of Highway 1 for bicyclists and pedestrians.
 - Creating a "Town Boulevard" with improved wayfinding, gateways, and placemaking.
- Providing safe, comfortable access to the coast, the beach recreation areas, and the California Coast Trail is important for the bicycle and pedestrian network in the City. Recommendations for coastal access focus on the following:
 - Studying improvements to key east-west streets that connect to the coast.
 - Improving and formalizing informal trails in select locations that connect to the California Coastal Trail.
 - Improving the California Coastal Trail, including closing gaps.
- The City is home to several vulnerable groups, including children, seniors, and transportation disadvantaged populations who need safe and comfortable pedestrian and bicycle access to key destinations in the City. Recommendations for these groups focus on the following:

- Improving safe routes to school and improved bicycle connections for Half Moon Bay High School, Pillaritos Alternative High School, Cunha Middle School, and Hatch and Seacrest Elementary Schools.
- Creating a pedestrian priority zone to prioritize high quality sidewalk facilities surrounding schools, senior housing, and low-income housing.
- Residential neighborhoods in the City are not well-connected to each other or to key destinations. Residential access recommendations focus on the following:
 - Improving bicycle and pedestrian circulation within neighborhoods through traffic calming, bike boulevards, and bike routes.
 - Creating neighborhood street design guidelines that allow for flexibility to respond to the unique character of each neighborhood while improving safety and connectivity.
 - Studying pedestrian only trails to better connect neighborhoods.
 - Improving subdivision standards to require pedestrian and bicycle connections between cul-de-sacs and subdivisions, when feasible.
 - Providing parallel trails on either side of Highway 1 and high-visibility crossing of Highway 1 at several intersections.
- Downtown is a key destination with accessibility constraints at the Main Street Bridge and significant cut-through traffic on weekends and during special events. Recommendations to improve downtown connections focus on the following:
 - Studying improvements to Main Street and parallel streets to better accommodate bicyclists and pedestrians.
 - Improving bicycle connectivity to downtown with improved intersections and bikeways.

2.9 Master Plan Recommendations

The following sections provide an overview of the projects recommended by the BP Master Plan. More details about each type of facility design can be found in the BP Master Plan Design Guidelines. These design guidelines are intended to inform decision-making but are not strict standards. The location and design of all pedestrian and bicycle facilities will take into account compatibility with adjacent uses and the design and location of those proposed near creeks or other ESHA will be guided by the LCP and Zoning Code requirements (e.g., biological assessments permitted uses, setbacks, and development standards). The full list of project recommendations can be found in Appendix B of this Initial Study.

2.9.1 Pedestrian Recommendations

Pedestrian recommendations focus on improving pedestrian connections throughout the City, including improving pedestrian crossings, improving connections between destinations and neighborhoods, and providing design guidelines to facilitate consistent and comfortable pedestrian infrastructure over time. Many of the specific pedestrian recommendations overlap with the bicycle improvements in working to improve the overall active transportation network. Pedestrian recommendations (Figure 2.9-1: Pedestrian Recommendations) are divided into pedestrian zones to provide a framework for decision making for pedestrian improvements to address different neighborhood needs.

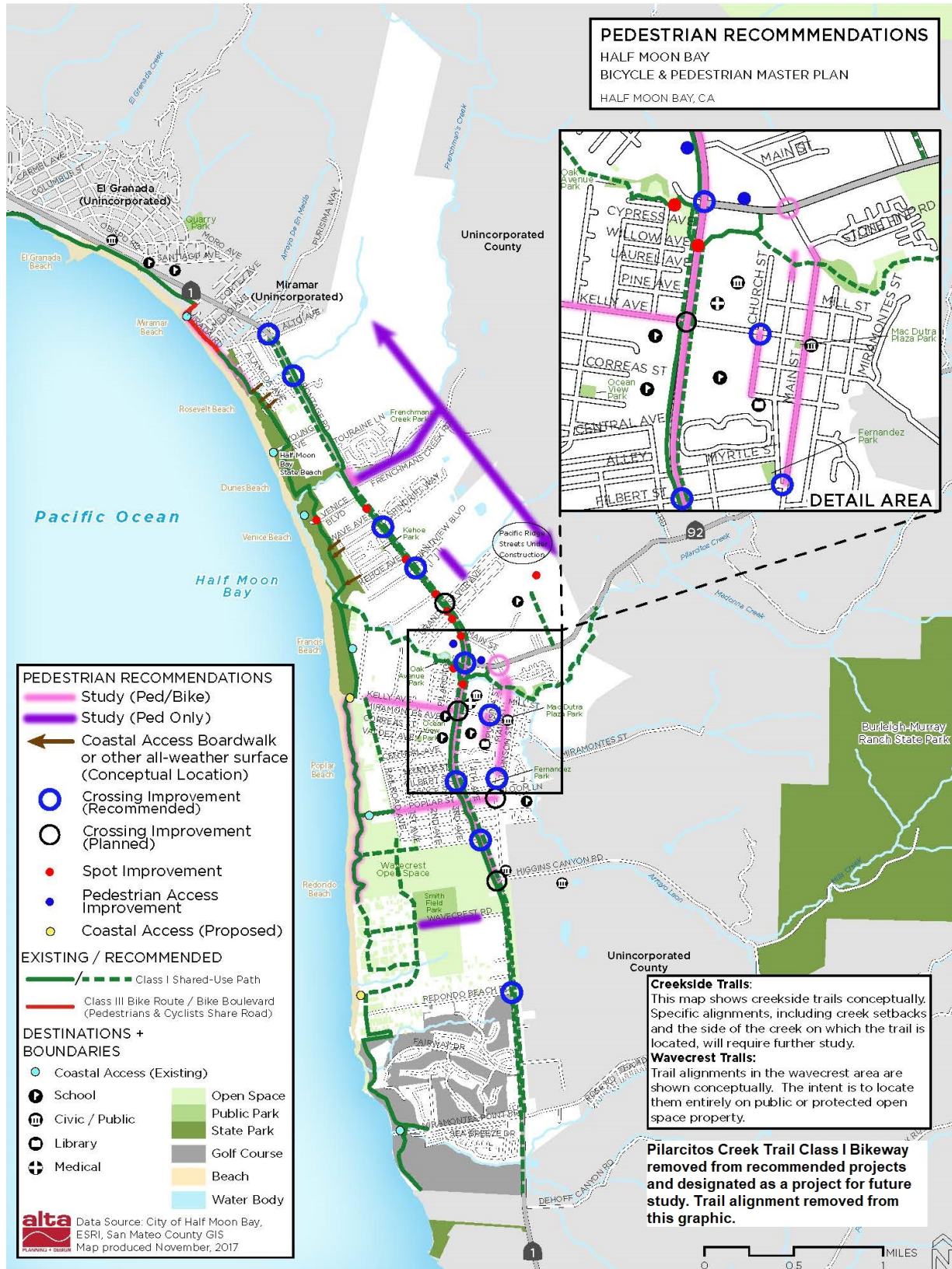


Figure 2.9-1 Pedestrian Recommendations

City of Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

These zones include:

- Pedestrian Priority Zones
- Coastal Access Pedestrian Zones
- Neighborhood Pedestrian Zones

2.9.2 Traffic Calming

Traffic calming treatments can be implemented in select neighborhoods in the City to improve the pedestrian environment. Traffic calming includes treatments such as curb extensions, traffic circles, speed bumps, or chicanes.

2.9.3 Bicycle Recommendations

The proposed bikeway network includes a total of 17.4 miles of new bikeway facilities (Figure 2.9-2: Recommended Bikeway Network). It is not meant to accommodate every bicycle trip in the City, but instead provides a backbone of primary routes. Once completed, this network would create more direct routes that are safer for the majority of those bicycling in Half Moon Bay. Specific improvements will be defined during the design phase for each project following the standards set forth in the BP Master Plan Bicycle and Pedestrian Design Guidelines. The location and design of all bicycle facilities will take into consideration compatibility with adjacent uses, and the design and location of those proposed near creeks or other ESHA will be guided by LCP and Zoning Code requirements for biological assessment, permitted uses, setbacks, and development standards. In addition to the bicycle network, spot location improvements and bicycle parking improvements are recommended.

The bikeway recommendations include Class I Shared-Use Path recommendations (Table 2.9-1: Class I Bikeway Recommendations), Class II Bike Lane recommendations (Table 2.9-2: Class II Bike Lane Recommendations), Class III Bike Routes and Bicycle Boulevard recommendations (Table 2.9-3: Class III Recommendations), and Class IV Separated Bikeway recommendations (

Table 2.9-4: Class IV **Recommendations**).

Class I Shared-Use Path

Class I bikeways are off-street facilities dedicated exclusively for use by bicyclists and pedestrians. Trail alignments close to ESHA and/or agricultural uses shall take into consideration the City's policies for protecting habitat and agriculture, which are Coastal Act priorities. Specific alignments for Creekside trails will require further study. Trail alignments will provide adequate setbacks from riparian, wetlands, and other sensitive habitat areas, from adjacent residential uses, and from adjacent agricultural fields.

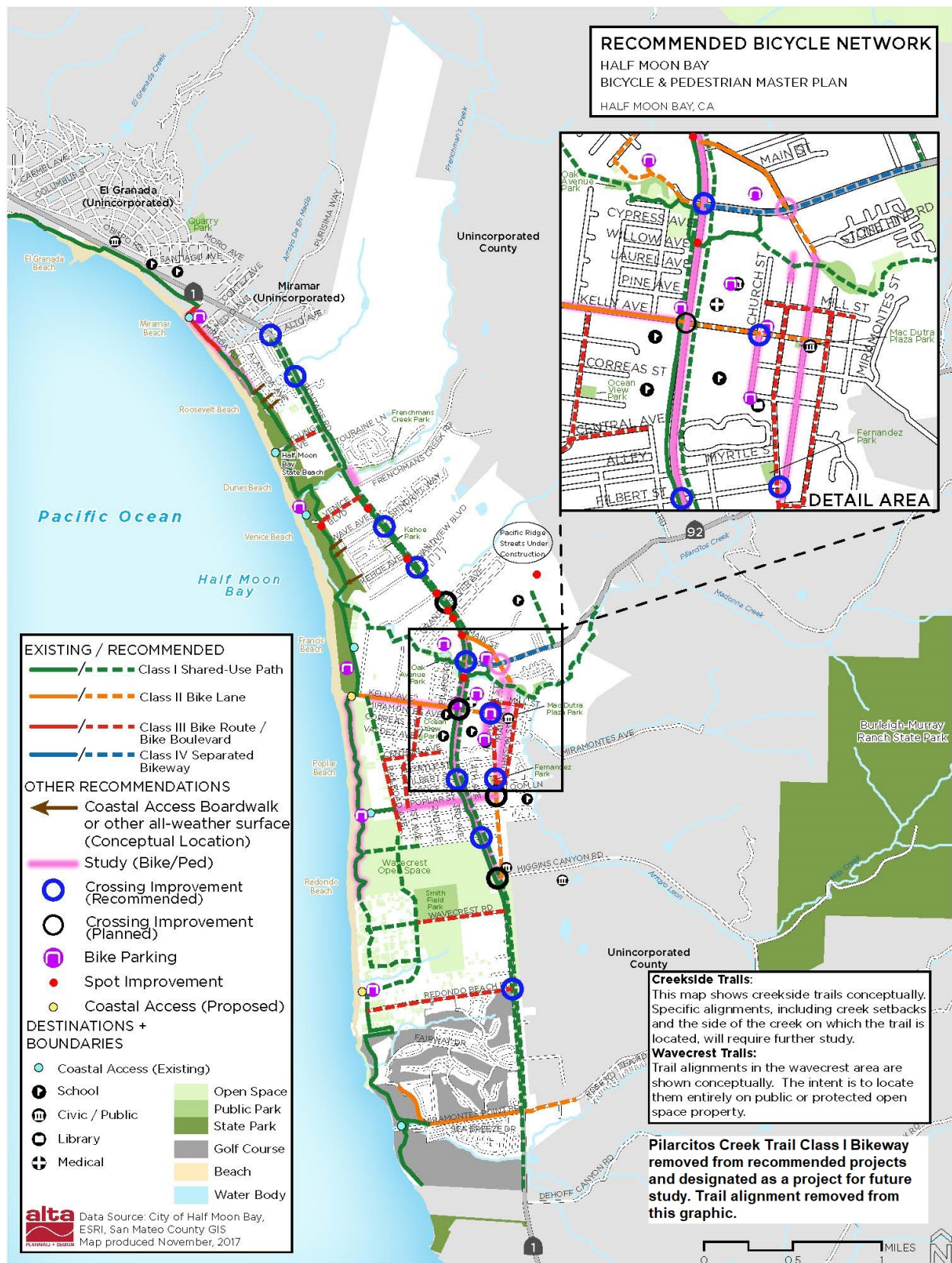


Figure 2.9-2 Recommended Bikeway Network

City of Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

Table 2.9-1: Class I Bikeway Recommendations

Name	Cross Street A	Cross Street B	Status	Mileage
Coastal Trail Extension	South end of California Coastal Trail	Redondo Beach Rd	Grant Application Submitted	1.18
California Coastal Trail to Wavecrest Road Connection	Wavecrest Road	California Coastal Trail	--	0.20
Eastside Parallel Trail	Frenchmans Creek Road	Miramontes Point Road	Preliminary Design and Environmental Review in Progress ²	3.78
Eastside Parallel Trail – North	Roosevelt Boulevard	City limit	--	0.26
Half Moon Bay High School Trail	Highway 92	High School	--	0.32
Highway 1/Naomi Patridge Gap Closure	Heskin Avenue	Kelly Avenue	--	0.26
Naomi Patridge Trail Extension – North	Ruisseau Francais Avenue	City limit	--	0.84
Naomi Patridge Trail Extension – South	400 feet South of Wavecrest Road	City limit	Grant Application Submitted	1.58
Railroad Avenue Trail	Kelly Avenue	Central Avenue	--	1.36
Railroad Avenue Trail Extension	Grove Street	Wavecrest Road	--	0.54
Seymour Street Coastal Trail Spur	California Coastal Trail	Seymour Street	--	0.32
Wavecrest Road California Coastal Trail Spur	California Coastal Trail	Wavecrest Road	--	0.29
Total Mileage				10.93
Note: Table 3-4 of the BP Master Plan lists the Pilarcitos Creek Trail as a recommended Class I Bikeway. After publishing the Draft BP Master Plan, the City decided to remove the Pilarcitos Creek trail from the recommended projects and designate it as a project for future study.				

² The preliminary design and environmental review are being conducted as part of the Hwy 1 North Project and only includes the Eastside Parallel Trail from Spindrift Way to Terrace Avenue. The City recently certified the IS/MND prepared for the this project which enables the City to proceed with obtaining grant funding.

Class II Bike Lanes

Class II facilities are on-street bike lanes and are typically five feet wide but can also be enhanced with a painted buffer added to the side of the lane with green paint for higher visibility. There are 1.7 miles of recommended Class II facilities and 0.2 miles of Class II buffered facilities.

Table 2.9-2: Class II Bike Lane Recommendations

Name	Cross Street A	Cross Street B	Status	Mileage
Kelly Avenue Bike Lanes	Highway 1	Johnston Street	--	0.32
Main Street Bike Lanes	Highway 92	Main Street Bridge	In Preliminary Design Phase	0.11
Main Street Buffered Bike Lanes	Highway 1	Highway 92	In Preliminary Design Phase	0.24
Miramontes Point Road Bike Lanes	Highway 1	City limit	Under Construction	0.30
Heskin Avenue Bike Lanes	Strawflower Shopping Center	Highway 1	--	0.44
South Main Street Bike Lanes	Spruce Street	Higgins Canyon Road	--	0.52
Total Mileage				1.93

Class III Bike Lanes and Bicycle Boulevards

Class III bike lanes are routes that are shared by cars and bicyclists and are typically designated on roads with lower levels of vehicle traffic. Class III routes in California require a "Bike Route" sign and can include additional signage or pavement markings if warranted. There are 4.4 miles of proposed Class III facilities.

Bike Boulevards (considered Class III facilities) are generally deemed as low-volume, low-speed streets that have been optimized for bicycle travel using traffic calming treatments. The Master Plan recommends 1.6 miles of bicycle boulevards.

Table 2.9-3: Class III Recommendations

Name	Cross Street A	Cross Street B	Status	Mileage
Bike Boulevards				
Alsace Lorraine/1st Street Bike Boulevard	Kelly Avenue	Poplar Street	--	0.61
Johnston Street/Monte Vista Lane Bike Boulevard	Mill Street	Main Street	--	0.49

Name	Cross Street A	Cross Street B	Status	Mileage
Purissima Street Bike Boulevard	Mill Street	Filbert Street	--	0.47
Venice Boulevard Bike Route	Venice Beach/California Coastal Trail	Highway 1	--	0.31
Bike Lanes Central Avenue Bike Route	Railroad Avenue	3 rd Avenue	--	0.34
Mill Street Bike Route	Church Street	San Benito Street	--	0.21
Railroad Avenue Bike Route	Central Avenue	Poplar Street	--	0.42
Redondo Beach Road Bike Route	California Coastal Trail	Highway 1	--	0.83
Wavecrest Road Bike Route	Highway 1	End of Wavecrest Road	--	0.50
Young Avenue Bike Route	California Coastal Trail	Highway 1	--	0.20
Total Mileage				4.38

Class IV Separated Bikeways

Class IV Separated Bikeways are typically on-street bike facilities that are physically separated from vehicle traffic by curbs, planter boxes, bollards, grade separation, parked cars, or other treatments. The BP Master Plan recommends 0.5 miles of Class IV bikeways.

Table 2.9-4: Class IV Recommendations

Name	Cross Street A	Cross Street B	Status	Mileage
Highway 92 Separated Bikeway	Highway 1	Main Street	--	0.17
Highway 92 Separated Bikeway	Main Street	Half Moon Bay High School	--	0.34
Total Mileage				0.51

Crossing Improvements

The BP Master Plan includes several crossing improvements that would benefit both bicyclists and pedestrians (Table 2.9-5: Crossing Recommendations; Figure 2.9-3: Crossing Recommendations).

Table 2.9-5: Crossing Recommendations

Name	Cross Street A	Cross Street B	Status	Notes
Kelly Avenue at Highway 1 Crossing Improvements	Kelly Avenue	Highway 1	--	Planned: Install High Visibility Crosswalks and Lead Pedestrian Intervals. Recommended: Consider Protected Intersection.
Higgins Canyon Road at Highway 1 Beacon	Higgins Canyon Road	Highway 1	In Design as Part of Highway 1 North Project	Planned: Pedestrian Hybrid Beacon.
Terrace Avenue at Highway 1 Beacon	Terrace Avenue	Highway 1	Part of Highway 1 North Project	Planned: Pedestrian Hybrid Beacon.
Poplar Street at Main Street Crossing Improvements	Poplar Street	Main Street	--	Planned: Reconfigure intersection to add Americans with Disabilities Act (ADA) access and high visibility crosswalk
Highway 92 at Highway 1 Crossing Improvements	Highway 92	Highway 1	--	Recommended: High visibility crosswalks; consider protected intersection to improve safe crossings for bike/pedestrians.
Highway 92/Main Street Protected Intersection	Highway 92	Main Street	--	Study: Protected Intersection.
Grandview Boulevard and Highway 1 Beacon	Grandview Boulevard	Highway 1	--	Recommended: Pedestrian Hybrid Beacon.
Mirada Road at Highway 1 Beacon	Mirada Rd	Highway 1	--	Recommended: Pedestrian Hybrid Beacon.
Redondo Beach Road at Highway 1 Beacon	Redondo Beach Rd	Highway 1	--	Recommended: Pedestrian Hybrid Beacon.
Roosevelt Boulevard at Highway 1 Beacon	Roosevelt Boulevard	Highway 1	--	Recommended: Pedestrian Hybrid Beacon.
Filbert Street at Highway 1 Beacon	Filbert Street	Highway 1	--	Recommended: Pedestrian Hybrid Beacon or Activated Flashing Beacon.
Spindrift Way at Highway 1 Beacon	Spindrift Way	Highway 1	--	Recommended: Pedestrian Hybrid Beacon; pave a connection between roadway and trail.

Name	Cross Street A	Cross Street B	Status	Notes
Filbert Street at Purissima Street /Main Street Crossing Improvements	Filbert Street	Purissima Street/Main Street	--	Recommended: Raised intersection, high visibility crosswalks, bulbouts.
Seymour St at Highway 1 Beacon	Seymour Street	Highway 1	--	Recommended: Activated Flashing Beacon.
Church Street at Kelly Avenue Crossing Improvements	Church Street	Kelley Avenue	--	Recommended: Traffic calming such as roundabout or curb extensions.

The crossing improvements are organized by planned projects and recommended projects. Projects are currently being planned for installation by the City and recommended projects are new and will require further determination as to the best facility for the crossing as well as consultation with Caltrans. Various types of crossing improvements are identified for each location including protected intersections and special crosswalk beacons. A brief description of each crossing improvement type follows:

- **Protected Intersections.** Protected intersections (e.g., corner islands, bicycle crossings, bicycle signals) provide a greater separation and protection for bicyclists and reduces the number of conflict points with motor traffic.
- **Pedestrian Hybrid Beacon.** Pedestrian hybrid beacons or high-intensity activated crosswalks consist of a signal-head with two red lenses over a single yellow lens on the major street and pedestrian and/or bicycle signal heads for the minor streets. The lenses remain dark until a pedestrian or bicyclist pushes the call button to activate the beacon.
- **Activated Flashing Beacon.** Activated flashing beacons are user-actuated flashing lights that supplement warning signs at mid-block crosswalks. Flashing beacons can be installed on either two-lane or multi-lane roadways.

Spot Improvements

Several existing facilities in the City would benefit from spot improvements to meet current practices; better define the bikeway network; and improve the bikeway network effectiveness, accessibility, and safety. Spot improvements include widening a bridge, improving lighting, opening gates for access, and installing raised crosswalks. Recommended spot improvements are provided in Table 2.9-6: Recommended Bicycle and Pedestrian Spot Improvements and Figure 2.9-4: Spot Improvement Recommendations.

Commercial Access

The commercial shopping centers on both sides of Highway 1 at Highway 92 provide poor pedestrian access to the stores within the shopping centers. Although this is private property and the City has limited ability to update the current conditions, the City can create development standards (such as requiring physically separated walkways within parking lots that connect to sidewalks) that will improve pedestrian access if these sites are redeveloped or other commercial sites are developed in the future.

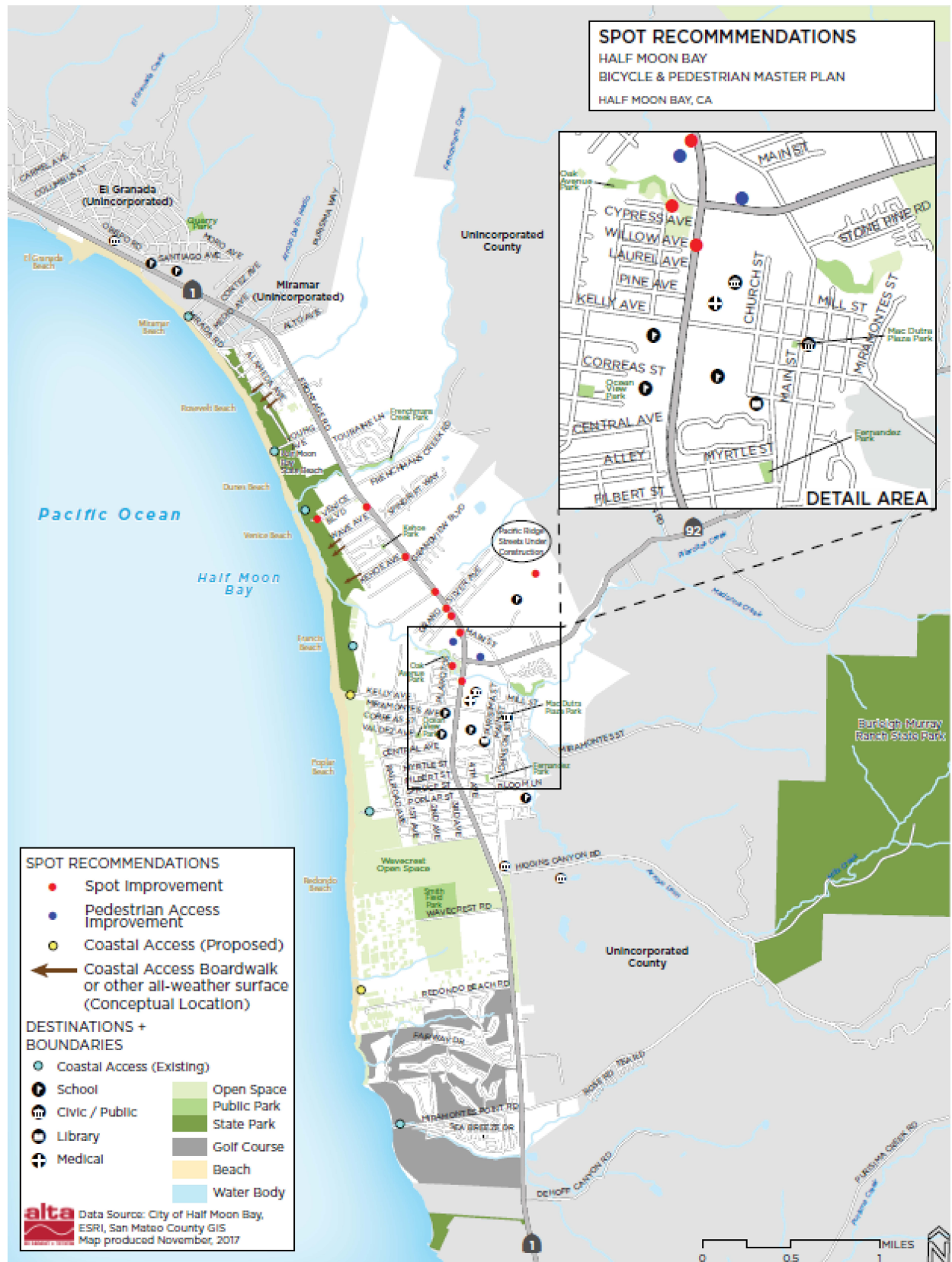


Figure 2.9-4 Spot Improvement Recommendations

City of Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

Table 2.9-6: Recommended Bicycle and Pedestrian Spot Improvements

Name	Cross Street A	Cross Street B	Status	Notes
Naomi Patridge Trail and Belleville Boulevard Spot Improvements	Naomi Patridge Trail	Belleville Boulevard	--	Install raised crosswalk; replace existing trail stop signs with yield signs.
Naomi Patridge Trail and Grand Boulevard Spot Improvements	Naomi Patridge Trail	Grand Boulevard	--	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield sign.*
Naomi Patridge Trail and Kehoe Avenue Spot Improvements	Naomi Patridge Trail	Kehoe Avenue	--	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs.*
Naomi Patridge Trail and North Frontage Road Spot Improvements	Naomi Patridge Trail	North Frontage Road	--	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs.*
Naomi Patridge Trail and South Frontage Road Spot Improvements	Naomi Patridge Trail	South Frontage Road	--	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs.*
Naomi Patridge Trail and Strawflower Shopping Center Spot Improvements	Naomi Patridge Trail	Strawflower Shopping Center	--	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs.
Terminus Upper Terrace/High School Connection	Terminus Upper Terrace Avenue	High School Grounds	--	Maintain an opening at Upper Terrace Avenue allowing access to the High School grounds; consider traffic calming to reduce potential speeding issues; work with School District to educate parents about safe behavior.
Pilarcitos Creek Undercrossing at Highway 1	Pilarcitos Creek	Highway 1	--	Improve lighting, clean up vegetation and debris.
Roosevelt Boulevard and California Coastal Trail Boardwalk	Roosevelt Boulevard	California Coastal Trail	--	Install all-weather access; alignments undetermined; boardwalks preferable but may consider other all-weather surfaces (location is conceptual).
Wave Avenue and California Coastal Trail Boardwalk	Wave Avenue	California Coastal Trail	--	Install all-weather access; alignments undetermined; boardwalks preferable but may consider other all-weather surfaces (location is conceptual).

Name	Cross Street A	Cross Street B	Status	Notes
Naomi Patridge Trail Bridge	Heskin Avenue	Pilarcitos Avenue	--	Add curb cut for bicycle access from bridge to Heskin Avenue; widen bridge.
Venice Boulevard and California Coastal Trail Signage and Crosswalk	Venice Boulevard	California Coastal Trail	--	Install stop or yield sign and high visibility crosswalk on Venice Boulevard at California Coastal Trail crossing.
* The City will consider this improvement for inclusion in the Highway 1/Terrace Avenue Project during the design process for that project.				

Coastal Access Boardwalks

All-weather access is recommended to connect Casa del Mar and Miramar neighborhood streets to the California Coastal Trail. Boardwalk access is preferred, but other surfaces could be considered. The exact alignments are undetermined at this point, but potential locations are provided in Table 2.9-7: Potential Locations for Coastal Access Boardwalks.

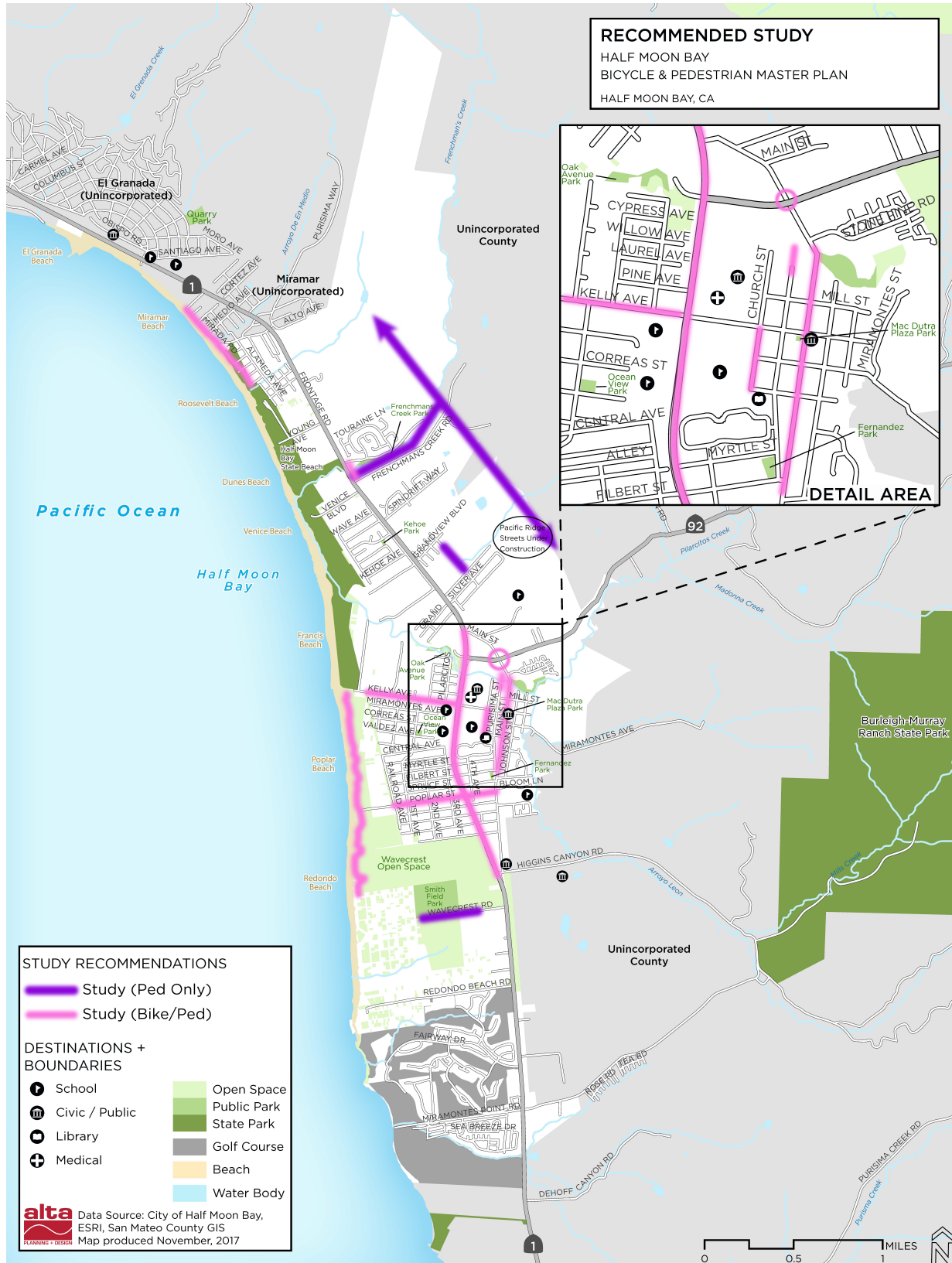
Table 2.9-7: Potential Locations for Coastal Access Boardwalks

Name	Cross Street A	Cross Street B
Beach Avenue and California Coastal Trail Boardwalk	Beach Avenue	California Coastal Trail
Roosevelt Boulevard and California Coastal Trail Boardwalk	Roosevelt Boulevard	California Coastal Trail
San Pablo Avenue and California Coastal Trail Boardwalk	San Pablo Avenue	California Coastal Trail
St. John Avenue and California Coastal Trail Boardwalk	St. John Avenue	California Coastal Trail
Washington Boulevard and California Coastal Trail Boardwalk	Washington Boulevard	California Coastal Trail
Wave Avenue and California Coastal Trail Boardwalk	Wave Avenue	California Coastal Trail

2.9.4 Future Studies

Recommended Studies

The BP Master Plan recommends several studies for corridor or spot improvements (Figure 2.9-5: Recommended Studies). The studies include street and trail projects that can help improve access and connectivity for the City's active transportation network but require additional analysis and community input to assess the feasibility and/or evaluate routes or design options before specific recommendations can be made. These studies are especially important for potential projects with limited available roadway width or environmental concerns, or that require additional community engagement or involve several jurisdictions.



Source: Alta Planning & Design, 2017

The City recognizes that the recommended studies involve improvements that require a focused planning and environmental evaluation process with community participation prior to any decision regarding project implementation. For example, studies for facilities near an ESHA would need to consider LCP and Zoning Code requirements (e.g., biological assessment requirements, permitted uses, and development standards). Studies would, ultimately, help the City and the public understand the potential trade-offs that might arise during project implementation. The study recommendations include both bicycle and pedestrian recommendations and pedestrian-only studies.

CEQA does not consider undertaking a feasibility study to be a project under CEQA. Therefore, this Initial Study does not analyze the BP Master Plan recommended studies and any projects that result from the studies would be considered separate projects that would require separate review under CEQA.

2.10 Plan Implementation

Chapter 4 of the BP Master Plan presents projects the community has identified as priorities for implementation and describes the strategy the City has elected to follow to facilitate the implementation of the bicycle and pedestrian programs and improvements. The City Council considers the recommendations of the Bicycle and Pedestrian Advisory Committee (BPAC), Planning Commission, and City staff and directs prioritization of projects based on need, available funding, and other factors. For each project approved, the City will follow a process of evaluation and assessment, including studies or permits forming a project team, assigning a project manager, determining required costs, identifying any necessary studies, and planning the appropriate community outreach and involvement.

The BP Master Plan specifies that all traffic impact studies, street improvement projects, land use changes, and development projects implement applicable bikeway projects and pedestrian improvements, contribute developer impact fees if appropriate, and consider BP Master Plan Design Guidelines and the City's street policies. Review of new projects shall also include an assessment of impacts to existing bicycle and pedestrian safety, access, and mobility and strategies to mitigate impacts. Any projects that could impact sensitive biological resources would be required to prepare environmental studies identifying any environmental constraints and a more detailed design should be developed before the final configuration is determined.

The BP Master Plan recommends that a monitoring program for the implementation of the BP Master Plan be put in place. The monitoring program may include collision monitoring, operations monitoring, and bicycle and pedestrian monitoring.

The BP Master Plan recommends implementation of a regular maintenance program to keep bicycle and pedestrian facilities in good, usable condition. The maintenance program would address signage, striping, pavement markings, bike racks, and fix-it stations; regular sweeping of on-street and off-street facilities; repair of obstructions and potholes; and implementation of a pedestrian and bicycle facility and improvement maintenance log.

2.11 High Priority Projects

The recommended top priority projects are listed in Table 2.11-1: Top Priority Projects. This list serves as a guide but is not intended to dictate the order of implementation. Over time, priorities may change, or opportunities may occur that allow other projects to happen sooner. The BP Master Plan is intended to provide the flexibility to evaluate new circumstances and take advantage of new opportunities. A number of small-scale projects were not included in the prioritization process because they can be implemented as part of the City's regular order of

business as funding is available and are likely categorically exempt from CEQA review. These projects are listed in Table 2.11-2: Small-Scale Project Recommendations.

Table 2.11-1: Top Priority Projects³

Name ⁴	Cross Street A	Cross Street B
Kelly Avenue Bike Lanes	Highway 1	Johnston Street
Main Street Bike Lanes	Highway 92	Main Street Bridge
Main Street Buffered Bike Lanes	Highway 1	Highway 92
Miramontes Point Road Bike Lanes	Highway 1	City limit
Alsace Lorraine/1st Street Bike Boulevard	Kelly Avenue	Poplar Street
Highway 92 Separated Bikeway	Highway 1	Main Street
Eastside Parallel Trail	Frenchmans Creek Road	Miramontes Point Road
Church Street at Kelly Avenue Crossing Improvements	Church Street	Kelly Avenue
Upper Terrace/ High School Connection	Upper Terrace Avenue	High School Grounds
Highway 92 at Highway 1 Crossing Improvement	Highway 92	Highway 1

Table 2.11-2: Small-Scale Project Recommendations

Name	Cross Street A	Cross Street B	Notes
Bike Parking			
All city parks	-	-	At least two bike racks at each city-owned park.
San Mateo County Sheriff's Substation	Cabrillo Highway	Kelly Avenue	Three bike racks at sheriff's substation, next to the farmers market.
Highway 1 at Main Street	Highway 1	Main Street	At least five racks at stores.
Highway 92 at Main Street /Highway 1	Highway 92	Main Street / Highway 1	At least five bike racks at stores.

³ The prioritization process does not preclude the City from pursuing opportunities as they arise to implement other projects on the project recommendation list but helps to create a strategy for pursuing funding to implement the projects that will have the greatest impact on creating a safe, comfortable, and complete active transportation network.

⁴ The Pilarcitos Creek Trail Class I Bikeway Project was removed from top priority projects and designated as a project for future study.

Name	Cross Street A	Cross Street B	Notes
Kelly Avenue at Church Street	Kelly Avenue	Church St	Three bike racks.
Kelly Avenue at Highway 1	Kelly Avenue	Highway 1	At least three bike racks near restaurants.
Mirada Road and California Coastal Trail	Mirada Road	California Coastal Trail	Four bike racks.
Poplar Beach	Poplar Street	Poplar Beach	Five bike racks at Poplar Beach parking area.
Redondo Beach Road and California Coastal Trail	Redondo Beach Rd	California Coastal Trail	Four bike racks.
Half Moon Bay Library	Correas Street	Church Street	Five bike racks; may already be planned.
State Beach	2 nd Avenue	Francis State Beach	Four bike racks at State Beach parking area.
Venice Beach	Venice Boulevard	Venice Beach	Four bike racks at Venice Beach parking area.
Crossing Improvements			
Correas Street at Main St Street	Correas Street	Main Street	High visibility crosswalks.
Balboa Boulevard at California Coastal Trail	Balboa Road	California Coastal Trail	High visibility crosswalk.
Johnston Street at Miramontes Street	Johnston Street	Miramontes Street	High visibility crosswalks.
Kelly Avenue at Main Street	Kelly Avenue	Main Street	High visibility crosswalks.
Kelly Avenue at Pilarcitos Avenue	Kelly Avenue	Pilarcitos Avenue	High visibility crosswalks, consider flashing stop signs.
Kelly Avenue at Purissima Street	Kelly Avenue	Purissima Street	High visibility crosswalks.
Lewis Foster Drive at Main Street	Lewis Foster Drive	Main Street	High visibility crosswalks; consider pedestrian hybrid beacon or flashing beacon.
Mill Street at Main Street	Miramontes Street	Main Street	High visibility crosswalks, curb extensions.
Miramontes Street at Main Street	Miramontes Street	Main Street	High visibility crosswalks.

Name	Cross Street A	Cross Street B	Notes
Miramontes Street at Church Street	Miramontes Street	Church Street	Add new high visibility crosswalk.
Miramontes Point Road at Highway 1	Miramontes Point Road	Highway 1	High visibility crosswalks; add new crosswalk.
N Main Street at Highway 1	Main Street	Highway 1	High visibility crosswalks; protected intersection.
Poplar Street at Highway 1	Poplar Street	Highway 1	High visibility crosswalks.
Other improvements			
Main Street Bridge Signage	Main Street	100 feet South of Stone Pine Road	Short term: install signage to warn drivers of bikes/pedestrians on bridge 100 feet south of Stone Pine Road.
California Coastal Trail Center Stripe	North end of California Coastal Trail (Mirada Road)	Poplar Beach Parking Lot	Paint a center stripe along the California Coastal Trail to better indicate directionality.

2.12 Other Public Agencies Approval Required

The City of Half Moon Bay is the primary authority having jurisdiction over adoption and implementation of the BP Master Plan and certification of the CEQA document. During implementation for any physical improvements requiring additional City review or permits, those processes shall be adhered to as applicable. The City does have partner agencies that may have permit and/or approval authority over specific projects or programs recommended in the BP Master Plan; however, these won't be known until specific projects that involve these agencies come forward. Additionally, as specific projects come forward, permits or approvals may be required from other regulatory agencies (such as Caltrans, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, California Coastal Commission, Regional Water Quality Control Board, and California State Parks) depending on the nature of the specific project and the environment in which it occurs.

2.12.1 City Standard Conditions of Approval / Avoidance Measures

The following Standard Conditions of Approval / Avoidance Measures will be incorporated into the planning, design, and construction of projects implemented under the BP Master Plan to minimize the potential adverse effects of the projects on the environment. The measures are considered Standard Conditions of Approval that apply to all projects permitted in the City and are considered part of the project. The City will incorporate these BMPs into the project's Conditions of Approval and will include these measures on all construction documents.

Table 2.12-1: City of Half Moon Bay Standard Procedures and Conditions of Approval

Resource Area	Condition
Air Quality	<p>Fugitive Dust. To reduce potential fugitive dust that may be generated by project construction activities, the City of Half Moon Bay shall implement the following BAAQMD basic construction measures when ground disturbing activities have the potential to generate fugitive dust:</p> <ul style="list-style-type: none"> • All active construction areas will be watered twice daily or more often if necessary. Increased watering frequency will be required whenever wind speeds exceed 15 miles-per-hour. • All active construction areas will be watered twice daily or more often if necessary. Increased watering frequency will be required whenever wind speeds exceed 15 miles-per-hour. • Cover stockpiles of debris, soil, sand, and any other materials that can be windblown. Trucks transporting these materials will be covered. • All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day or as often as necessary to keep them free of dust and debris associated with site construction. The use of dry power sweeping is prohibited. • Subsequent to clearing, grading, or excavating, exposed portions of the site will be watered, landscaped, treated with soil stabilizers, or covered as soon as possible. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas and previously graded areas inactive for 10 days or more. • Installation of sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replanting of vegetation in disturbed areas as soon as possible after completion of construction. • Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes. Clear signage will be provided for construction workers at all access points. • All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the City of Half Moon Bay regarding dust complaints. This person will respond and take corrective action within 48 hours. The BAAQMD's phone number will also be visible to ensure compliance with applicable regulations.
Air Quality	<p>Consistency with BAAQMD Climate Action Plan. The City shall screen all projects using the criteria listed below (BAAQMD Basic Construction Mitigation Measures) to determine whether the project has the potential to result in a significant air quality impact. A project not consistent with one or more of the construction-related screening criteria listed below shall have an air quality analysis prepared and shall be reviewed under CEQA:</p> <ul style="list-style-type: none"> • Demolition activities (if there are any) are consistent with BAAQMD Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing.

Resource Area	Condition
	<ul style="list-style-type: none"> • Construction does not include simultaneous occurrence of more than two construction phases (e.g., grading, paving, and building construction would not occur simultaneously). • Construction does not include simultaneous construction of more than one land use type (e.g., the project does not involve commercial and recreational land uses in the same project). • Construction does not require extensive site preparation (maximum daily grading would not exceed 0.6 acres). • Construction does not require extensive material transport and considerable haul truck activity (greater than 10,000 cubic yards).
Air Quality, Energy, and Greenhouse Gases	<p>Construction Emission Reduction/Energy Efficiency Best Management Practices</p> <p>To reduce construction equipment related fuel consumption and emissions of criteria air pollutants, toxic air contaminants, and GHGs, the City shall implement the following best management practices:</p> <ul style="list-style-type: none"> • Electric-powered and liquefied or compressed natural gas equipment shall be employed instead of diesel-powered equipment to the maximum extent feasible. Where possible, the electrical service shall be provided to construction work areas to avoid the need to power equipment with generators. • The design shall be energy efficient and incorporate renewable energy design elements including, but not limited to: <ul style="list-style-type: none"> • Exterior energy design elements; • Internal lighting service and climatic control systems; and • Building siting and landscape elements.
Aesthetics	<ul style="list-style-type: none"> • Lighting. All exterior lighting will be fully shielded so that no light source is visible from outside the project area, except as expressly approved in the project plans.
Biology	<ul style="list-style-type: none"> • Environmental Review. Environmental assessments, in accordance with Zoning Code 18.35.035, will be completed by a qualified biologist for all appropriate projects. A biological report will be prepared that maps all sensitive habitat and/or special-status species and recommends avoidance and minimization measures to reduce impacts to sensitive biological resources. • Creek Setbacks. Specific alignments for creekside trails including creek setbacks and on which side of the creek the trail should be located on, will require further study. Creekside trail alignments will provide adequate setbacks from riparian areas, wetlands, and other ESHA. • Nesting Birds. Surveys for nesting birds as required by federal, state, and local regulations would be undertaken in areas where suitable habitat for such species is present to minimize potential adverse impacts to these species. When construction and construction-related activities (including but not limited to mobilization and staging, clearing, grubbing, tree removal, vegetation removal, fence installation, demolition, and grading) occur within the avian nesting season (from February 1 to September 15), all

Resource Area	Condition
	<p>suitable habitat within the area of disturbance including staging and storage areas plus a 250-foot (passerines) and 1,000-foot (raptor nests) buffer around these areas shall be thoroughly surveyed, as feasible, for the presence of active nests by a qualified biologist no more than five days before commencement of any site disturbance activities and equipment mobilization. If project activities are delayed by more than five days, an additional nesting bird survey shall be performed prior to start of work. Active nesting is defined as a bird building a nest, sitting in a nest, a nest with eggs or chicks in it, or adults observed carrying food to the nest. The results of the surveys shall be documented and provided to the City.</p> <p>If pre-construction nesting bird surveys result in the location of active nests, no site disturbance and mobilization of heavy equipment (including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, fence installation, demolition, and grading), shall take place within 250 feet of non-raptor nests and 1,000 feet of raptor nests, or as determined by a qualified biologist in consultation with the CDFW, until the chicks have fledged. Monitoring will be required to ensure compliance with relevant California Fish and Game Code requirements. Monitoring dates and findings shall be documented.</p> <ul style="list-style-type: none"> • Roosting Bats. In areas where suitable bat habitat is present, surveys for roosting bats as required by state and local regulations would be undertaken to minimize potential adverse impacts to these species. No more than five days before the start of construction-related activities (including but not limited to mobilization and staging, clearing, grubbing, tree removal, vegetation removal, fence installation, demolition, and grading), a survey of suitable roosting bat habitat shall be conducted within the project site, including a 50-foot buffer. If evidence of bat roosting (e.g., guano accumulation, acoustic or visual detections) is found, CDFW shall be consulted to determine appropriate measures, such as bat exclusion methods, if the roost cannot be avoided. The results of the surveys shall be documented. • Tree Protection. The following tree protection measures will be implemented during construction: <ul style="list-style-type: none"> a) Pursuant to Municipal Code Section 7.40.040, any grading, excavation, demolition or construction activity performed within the drip line of a heritage tree (as defined in Municipal Code Section 7.40.020) shall require submittal of a tree protection plan for review and approval by the city manager, or his or her designee, prior to issuance of any permit for grading or construction. The tree protection plan shall be prepared by a certified arborist and shall address issues related to protective fencing and protective techniques to minimize impacts associated with grading, excavation, demolition and construction. b) Prior to commencement of construction, construction fencing will be placed around the drip line of all trees proposed for preservation.

Resource Area	Condition
	<p>c) No grading or other construction will occur within the drip line of any tree proposed for preservation except in conformance with a Tree Protection Plan approved by the Community Development Director.</p> <p>d) No vehicle, equipment or materials will be parked or stored within the drip line of any tree proposed for preservation.</p>
Hazardous Materials	<ul style="list-style-type: none"> During the design phase of a project the City will conduct screening research to ensure the proposed project would not be located on or immediately adjacent to unremediated contaminated soils. The City of Half Moon Bay will conduct a search of the three relevant lists of hazardous materials sites, which include List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database, <i>List of Leaking Underground Storage Tank Sites by County and Fiscal Year from Water Board GeoTracker database</i>, and List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC, during the design phase of recommended projects in order to identify any active remediation sites. The design will consider the findings of this search. are listed on the Cortese List pursuant to Government Code Section 65962.5 by the Department of Toxic Substances Control (DTSC 2018). The City shall investigate whether the project would be located in areas of past agricultural use and perform soil sampling consistent with state and County regulations.
Land Use	<ul style="list-style-type: none"> Adjacent Land Use. Measures such as fencing, signage, grade separation, and/or provision for temporary closure of trails when agricultural chemicals must be used on adjacent fields should be considered to minimize conflicts between trail users and adjacent land uses. Creek Setbacks. Specific alignments for creekside trails including creek setbacks and on which side of the creek the trail should be located on, will require further study. Creekside trail alignments will provide adequate setbacks of trails from adjacent residential uses and adjacent agricultural fields and should generally be located outside of the meander belt of the creek.
Geology	<ul style="list-style-type: none"> CBC Compliance. All structures will be constructed in compliance with the standards of the current California Codes of Regulations Title 24, including Building Code, Residential Code, Administrative Code, Mechanical Code, Plumbing Code, Electrical Code, Energy Code, Fire Code and Green Building Code to the satisfaction of the Building Official.
Hydrology and Water Quality	<ul style="list-style-type: none"> Erosion and Sediment Control Plan. An erosion and sediment control plan will be submitted that shows effective Best Management Practices (BMP) and erosion and sediment control measures for the project both during construction and full operation. Construction plans will also include the “construction best management practices” plan sheet.

Resource Area	Condition
	<ul style="list-style-type: none"> • Hazardous Materials. Any materials deemed hazardous by the San Mateo County Department of Health that are uncovered or discovered during the course of work will be disposed in accordance with regulations of the San Mateo County of Health.
Cultural Resources	<ul style="list-style-type: none"> • Archaeological / Historic Resource Reports. Archaeological and Historic Resource reports shall be prepared for projects with subsurface earthwork in areas that are archaeologically sensitive, such as along creeks or adjacent to known resources according to the requirements of Half Moon Bay Municipal Code, Chapter 18.38 Coastal Resources Protection and Chapter 18.39 Historic Resources Preservation. <p>For all projects the following measures shall be Standard Conditions of Approval:</p> <ul style="list-style-type: none"> • Discovery of Human Remains. Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California, in the event of the discovery of human remains during construction, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The County Coroner will be notified and will determine whether the remains are Native American. If the Coroner determines the remains are Native American and are not subject to his authority, he will notify the California Native American Heritage Commission who will attempt to identify descendants of the deceased Native American(s). If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the permittee shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. • Discovery of Archaeological Resources. If subsurface historic or archaeological resources are uncovered during construction, all work will stop, the applicant will notify the Community Development Director and retain a qualified archaeologist to perform an archaeological reconnaissance and identify any mitigation measures required to protect archaeological resources. Subsurface excavation will not resume until expressly authorized by the Director.
Noise	<ul style="list-style-type: none"> • Construction Hours. Construction work will be limited to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday; 8:00 a.m. to 6:00 p.m. Saturdays; and 10:00 a.m. to 6:00 p.m. Sundays and holidays, except as expressly authorized by the City Engineer in conformance with Section 14.40.020 of the Half Moon Bay Municipal Code.
Traffic	<p>Construction Traffic Management Plan. For all construction projects affecting vehicle, bicycle, or pedestrian circulation patterns, the City will prepare a construction traffic management plan which will outline vehicle traffic control measures to ensure safety and vehicle flow during construction, and which ensures bicycle and pedestrian safety and provides for adequate access during construction.</p>

Chapter 3. Environmental Checklist and Responses

1. **Project Title:** Half Moon Bay Bicycle and Pedestrian Master Plan
2. **Lead Agency Name and Address:** City of Half Moon Bay
501 Main Street
Half Moon Bay, CA 94019
3. **Contact Person and Phone Number:** Scott Phillips, Associate Planner
City of Half Moon Bay
Planning Division
Email: SPhillips@hmbcity.gov
(650) 650-726-8299
4. **Project Location:** Citywide, Half Moon Bay, CA 94019
5. **Project Sponsor's Name and Address:** City of Half Moon Bay
501 Main Street
Half Moon Bay, CA 94019
6. **General Plan Designation:** N/A. Project improvements recommended throughout City, in multiple land use designations.
7. **Zoning:** N/A. Project improvements recommended throughout City, in multiple zoning designations.
8. **Description of the Project:** See Project Description.
9. **Surrounding Land Uses and Setting:** The BP Master Plan encompasses the entire City which extends approximately six miles along the Pacific coast and includes approximately 4,267 acres. The planning area is located entirely within the California Coastal Zone and is therefore subject to the California Coastal Act provisions. The planning area is generally consistent with the City boundaries although the Plan addresses limited areas outside the City boundary. The planning area contains an alternating mix of urban and undeveloped or rural land uses clustered around Highways 1 and 92. Throughout the area, agricultural, open space, and residential uses are the most dominant, though large tracts of land are given to nursery and greenhouse operations around the edges of the city and along Highway 92.
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)** No other agency approvals are need for adoption of the BP Master Plan.
11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?** The City received a consultation request from the Torres Martinez Desert Cahuilla Indians (Thermal, California, May 11, 2016) who do not appear to have any geographic or cultural affiliation with the project area. The City has previously made attempts to contact the Torres Martinez Desert Cahuilla Indians, but the City has not received any response.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

<input checked="" type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Public Services
<input type="checkbox"/>	Agricultural and Forestry Resources	<input type="checkbox"/>	Hazards and Hazardous Materials	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Air Quality	<input type="checkbox"/>	Hydrology/Water Quality	<input type="checkbox"/>	Transportation
<input checked="" type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Utilities/Service Systems
<input type="checkbox"/>	Energy	<input type="checkbox"/>	Noise	<input type="checkbox"/>	Wildfire
<input type="checkbox"/>	Geology/Soils	<input type="checkbox"/>	Population/Housing	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project COULD have a significant effect on the environment, there WILL NOT be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Scott Phillips
Signature

7/23/19
Date

Scott Phillips
Printed Name

Associate Planner
Title

City of Half Moon Bay
Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in 5. below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a. the significance criteria or threshold, if any, used to evaluate each question; and
 - b. the mitigation measure identified, if any, to reduce the impact to less than significance.

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3.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project: *</i>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, 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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Except as provided in Public Resources Code Section 21099				

3.1.1 Environmental Setting

The City of Half Moon Bay is situated along the San Mateo County coastline, approximately 23 miles south of downtown San Francisco at the edge of the San Francisco Bay Area region (Figure 2.3-1: Planning Area Map). It is connected to Pacifica and San Francisco to the north and Santa Cruz to the south by Highway 1 and connected to San Mateo, the Peninsula, and the East Bay by Highway 92. The City extends over six miles along the Pacific Ocean and is approximately 6.5 square miles. The coast is generally characterized by bluff-backed sandy beaches, with bluffs rising to approximately 80 feet in height.

The City is located on the coastal plain between the foothills and the Pacific Ocean. The City occupies the area from the ocean to an average of approximately one mile inland. The northeast corner of the City limits reaches inland approximately two miles along Frenchmans Creek into the canyon. Since the City is situated on the coastal plain, the overall landform is generally flat, with a gradual rise in elevation from west to east, as the City limits approach the coastal foothills. The hills rise up to the east and provide a visual backdrop for most of the City.

The visual character of the City is defined by its setting on the marine terrace between an exceptional picturesque coastline and the scenic foothills of the Santa Cruz Mountains. Natural vegetation of the region includes oaks, redwood, and fir trees in the hills. Willows and alders follow the creeks and drainages on their way to the ocean. Stands of Monterey cypress and Monterey pine trees also occur throughout the planning area. These species are not naturally occurring in Half Moon Bay but are adapted to the coastal climate and often planted as windbreaks. Large eucalyptus trees have also established themselves throughout the region

and are part of the visual landscape. Coastal bluffs, wetlands and marshes are part of the vegetative interface between land and the sea.

Highway Corridors

Highways 1 and 92 are the primary access points to and through Half Moon Bay, and as a result provide many travelers with their first visual impressions of the City.

Highway 1. Highway 1 is the primary north-south route through the City. As a result, a large share of the visual impression of the City is experienced from this corridor. Views at the City perimeter along Highway 1 include agricultural uses and open space, mixed with residential neighborhoods and a few roadside businesses. Notable gateways along the highway include: a northern gateway where Highway 1 enters Half Moon Bay at Mirada Road, Highway 1 where it intersects with North Main Street, another where it intersects with Kelly Avenue, and a gateway to Downtown located at the merge point with South Main Street, and a southern gateway providing for a sense of arrival from the south in the vicinity of Miramontes Point Road.

Highway 92. Highway 92 serves as the eastern gateway to the City at its intersection with Main Street. As the highway winds down from the hills, the curving alignment and groves of mature roadside trees just east of town tend to limit longer-range views. Continuing west however, the highway straightens out, revealing a brief vista of Half Moon Bay and the ocean beyond. This spatial dynamic along westbound Highway 92 contributes to a sense of arrival from an agricultural perspective (roadside farms, farms stands and displays) to coastside community enclave. Two gateways are located along Highway 92: one as it enters Half Moon Bay from the east, and another at its intersection with Main Street.

Except for Class I trails, most of the BP Master Plan improvements are located within the City's built environment and are primarily within the existing roads rights-of-way. The Master Plan identified major activity generators including coast/beaches, schools, downtown, shopping centers, and parks which are most commonly visited and where bicycle and pedestrian access should be enhanced. These activity centers have varying visual setting characteristics with the most sensitive being the coast, beaches, and parks. The other activity centers would represent the built environment with few sensitive visual resources.

Coastal access routes and the California Coastal Trail provide public access to many scenic resources in Half Moon Bay. Existing coastal access points and the California Coastal Trail are indicated in Figure 2.6-1.

Sensitive Scenic and Visual Resources

Many portions of the City qualify as scenic or visual resources. The currently-adopted LCP (City 1996) identifies the following visual resource areas (VRAs): scenic corridors, broad ocean views, scenic coastal access routes, upland slopes, planned development areas, old Downtown, and significant plant communities.

Because Half Moon Bay is separated from the more densely populated Bay side of San Mateo County by the Santa Cruz Mountains, the nighttime ambient lighting environment is much lower and easier to maintain. Though not specifically protected by the existing LCP, dark night skies are a stated community value, and they also provide a highly desirable experience for visitors from urban settings.

Existing Trails within Scenic Resources

Only two existing trails fall within a City-designated VRA, the limits of which are defined by the City's Municipal Code in the Regulatory Setting below. The first, the California Coast Trail

segment between Washington Boulevard at the north and Wave Avenue at the south, is located within a VRA for its broad ocean views from Highway 1. Two additional existing segments of the Coastal Trail are located within a VRA because they are within a Planned Development Area. These segments are between Metzgar Street and its terminus north of Wavecrest Road and between Redondo Beach Road and the southern city limit. The second is Naomi Patridge Trail, also divided into two segments, along the west side of Highway 1. The first segment is situated between Frenchman's Creek to the north and Wave Avenue to the south, also an area designated for its broad ocean views. The second segment of Naomi Patridge Trail within a VRA, designated for falling within a planned development area, is located between Seymour Street to the north and Wavecrest Road to the south.

Representative pictures of most types of pedestrian and bicycle facilities within the City are presented below.



Example of Naomi Patridge Trail along Highway 1 near Grand Avenue, including signage.



Section of the Coastal Trail parallel to the Poplar Beach bluffs.



Coastal Trail and lookout point over Poplar Beach with access trail leading down.



View of existing coastal access point with signage from parking lot at Poplar Beach; Photo credit: 2018 Draft LCLUP Scenic and Visual Resources Chapter



Trail passing through Oak Avenue Park grass area with Oak Avenue visible in the left of the photo and Pilarcitos Creek riparian vegetation visible on the right in the photo.



Viewshed of Pacific Ocean from Coastal Trail south of Washington Blvd; Photo credit: 2018 Draft LCLUP Scenic and Visual Resources Chapter



Main Street Bridge featuring streetscape to Heritage Downtown and roadside trees; Photo credit: 2018 Draft LCLUP Scenic and Visual Resources Chapter

3.1.2 Regulatory Setting

Coastal Act

As defined by the Coastal Act, “sensitive coastal resource areas” include highly scenic areas and special communities or neighborhoods which are significant visitor destination areas (Section 30116). The Coastal Act considers the scenic and visual qualities of coastal areas to

be a resource of public importance and provides for the protection of these qualities through requirements on siting and design and visual compatibility of new development, minimizing the alteration of natural landforms, and restoration and enhancement of visual quality.

The Coastal Act delineates several types of sensitive coastal resource areas, including two that specifically pertain to scenic resources: highly scenic areas and special communities or neighborhoods which are significant visitor destination areas. Furthermore, the Coastal Act prioritizes protection of views from public places such as trails, parks, vistas, rights-of-way, and areas with public access easements. Views from private property are not a Coastal Act policy concern.

Half Moon Bay Local Coastal Plan - 1996

The current LCP (1996) incorporates Coastal Act directives for the preservation of coastal scenic resources. The Statewide Interpretive Guidelines adopted by the California Coastal Commission establish the Coastal Act's concern with the protection of ocean and coastal views from public areas rather than coastal views from private residences where no public vistas are involved." Therefore, Chapter 7 of the LCP addresses protection of views of scenic areas and visual resources visible from public roads and trails, public vista points, public recreation areas, and beaches. In addition, this section addresses preservation of the character and quality of distinctive architectural and historical resources of the City.

The LCP directs that scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of the surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.

- Policies protecting visual resources in the City's existing LCP that are relevant to the BP Master Plan proposed improvements are listed below. Chapter 4 policies 4-1 through 4-5 concerning the permitting of seawalls and other cliff-retaining structures are deemed not relevant to BP Master Plan recommendations addressed in this Initial Study. Chapter 7 Visual Resources Policies discuss planning issues related to the City's scenic resources, covering issue areas such as upland slopes; roadside views, city pattern, and scenic highways; protection of significant structures and historic areas; and design guidelines for new development. The LCP identifies Half Moon Bay's eastern hillsides as a major attribute of the City's visual setting, identifies the need to protect quality views as seen from Highway 1, acknowledges the need for stronger efforts to preserve historic resources, and acknowledges the lack of and need for specific design guidelines for new development. Policies in this section address the Highway 1 scenic corridor, the placement of utilities, the design of beachside parking facilities and recreational structures, design review for new development, development on upland slopes, and ocean view blockage. Relevant policies are presented below:
 - Policy 7-1: The City will establish regulations to protect the scenic corridor of Highway 1, including setbacks for new development, screening of commercial parking, and landscaping in new developments. The City will establish and map scenic corridors for Highway 1 to guide application of the policies of this chapter. Minimum standards shall include all areas within 200 yards of State Highway 1 which are visible from the road.
 - Policy 7-2: Bluff top structures shall be set-back from the bluff edge sufficiently far to ensure that the structure does not infringe on views from the beach and along the bluff top parallel to the bluff edge except in areas where existing

structures on both sides of the proposed structure already impact public views from the beach or along the bluff top. In such case, new structures shall be located no closer to the bluff edge than adjacent structures.

- Policy 7-9: New development shall be sited and designed so as to avoid or minimize destruction or significant alteration of significant existing plant communities identified in the General Plan (which include riparian vegetation along stream banks, and notable tree stands).
- Policy 7-10: New development on upland slopes visible from Highway 1 and Highway 92 as indicated on the Visual Resources Overlay Map, shall not involve grading or building siting which results in a significant modification of the hillscape; where trees must be removed for building purposes, reforestation shall be provided as a part of any new development to maintain the forested appearance of the hillside. Structures shall be subordinate in appearance to the natural landform, shall be designed to follow the natural contours of the landscape, and shall be sited so as not to intrude into the skyline as seen from public viewing places.
- Policy 7-11: New development along primary access routes from Highway 1 to the beach, as designated on the Land Use Plan Map, shall be designed and sited so as to maintain and enhance the scenic quality of such routes, including building setbacks, maintenance of low height of structures, and landscaping which establishes a scenic gateway and corridor.
- Policy 7-12: In areas affording broad views of the ocean from Highway 1 as indicated on the Visual Resources Overlay Map, all new development shall be reviewed by the Planning Commission to ensure conformance with the following criteria: (a) Structures shall be sited and designed to preserve unobstructed broad views of the ocean and shall be clustered to the maximum extent feasible. (b) A landscaping plan shall be included in the development plans for approval and shall provide for landscaping which, when mature, will not impede public views of the ocean. (c) Building height shall not exceed one story or 15 feet, unless an increase in height would not obstruct public views to the ocean from the Highway or would facilitate clustering of development so as to result in greater view protection.
- Policy 7-13: The City will establish regulations to protect scenic corridors along all designated primary shoreline access routes where existing permits or development does not exist.

City of Half Moon Bay General Plan – Park and Recreation Element - 1995

The Park and Recreation Element provides policy and direction for the planning, protection, and development of recreational resources throughout the City. Inherent in these policies are goals which are complimentary to the values expressed in the Local Coastal Land Use Program's Visual Resource section. The following objectives and policy of this Element apply to Half Moon Bay's aesthetic character in relation to bicycle and pedestrian facilities:

- Objective 1.3: Require high quality, state of the art planning and design for all park and facility development.
- Objective 2.2: Develop recreation trails which link the community and accommodate pedestrians, bicyclists, and, where appropriate, equestrians.
- Objective 3.4: Utilize ordinances and easements to ensure that significant natural resources are protected during development.

Half Moon Bay Municipal Code, Chapter 18 Zoning

City of Half Moon Bay Zoning Code Chapter 18.37 details the Visual Resource Protection Standards for four types of VRAs and implements the LCP policies with more precise location descriptions and development standards. Development projects are subject to the standards for review by the planning department staff, and Planning Commission. All new development projects within or adjacent to VRAs shall meet the visual resource standards established in Chapter 18.37. BP Master Plan projects located in or adjacent to VRAs would be subject to this Chapter.

The specific purpose and intent of these visual resource protection standards are to:

- Protect the scenic and visual qualities of coastal areas as a resource of public importance.
- Ensure that new development is located so as to protect views to and along the ocean and scenic coastal areas.
- Minimize the alteration of natural land forms.
- Restore and enhance visual quality in visually degraded areas.
- Allow development only when it is visually compatible with the character of the surrounding areas.

Section 18.37.020 directs the City to prepare and maintain maps of all designated VRAs within the City, based on the Visual Resource Overlay Map contained in the City's LCLUP. VRAs within the City are identified as the following:

- Scenic Corridors. VRAs along the Highway One corridor and scenic beach access routes, defined as follows:
 - Highway One Corridor. Located on both sides of Highway One, for a distance of two hundred yards in those areas where Highway One is designated as a scenic highway by the state of California and in those areas shown on the visual resources overlay map in the city's LUP.
 - Broad Ocean Views. Areas providing broad ocean views from Highway One, as indicated on the visual resources overlay map in the city's LCP land use plan. Specifically, these areas are located within the following boundaries:
 - Between the breakwater in Pillar Point Harbor on the north to Magellan Avenue on the south.
 - Between the southerly edge of the city of Naples subdivision on the north and Sweetwood State Park on the south.
 - Between Frenchman's Creek on the north and Wave Avenue of El Mar Beach Subdivision on the south.
 - Scenic Coastal Access Routes. Primary access routes from Highway One to major parking facilities adjacent to the state beaches: Young Avenue, Venice Boulevard, and Kelly Avenue; and secondary access routes from Highway One to minor parking facilities: Wavcrest Road, Redondo Beach Road, Miramontes Point Road.
- Upland Slopes. Scenic hillsides which are visible from Highway One and Highway 92, as indicated on the visual resources overlay map. These areas occur include hillside areas above the one hundred sixty-foot elevation contour line which are located:

- East of the proposed Foothill Boulevard, comprising portions of Carter Hill and Dykstra Ranch properties.
 - Southeast of Pilarcitos Creek and east of Arroyo Leon, comprising a portion of land designated as open space reserve in the land use plan.
 - East of the Sea Haven Subdivision, being a portion of the Gravance property designated urban reserve in the land use plan.
 - East of the Nurseryman's Exchange properties and lower Hester-Miguel lands, comprising all of the upper Hester-Miguel lands designated as open space reserve in the land use plan.
- Planned Development Areas. New development within planned development areas shall be subject to development conditions as stated in LUP for each planned development, to design review standards set forth in this title, and standards set forth in this chapter regarding landscaping, signs, screening, lighting, parking areas and utilities.
 - Old Downtown. The historic downtown area, once known as "Spanish Town," is a VRA identified on the city's land use plan visual resources overlay map. The old downtown is included within the larger planning area of the Half Moon Bay downtown specific plan. However, the "old downtown" referred to in this chapter pertains specifically to the following area:
 - Properties on both sides of Main Street, bounded on the north by Pilarcitos Creek and extending several properties south of Correas Street where historic buildings exist as visual resources.
 - Properties on both sides of Kelly and Miramontes Streets, bounded by Church Street to the west and extending several properties east of San Benito Street where historic buildings exist as visual resources.
 - Properties on both sides of Purissima, Johnston and San Benito Streets, bounded by Kelly Street to the north and several properties to the south of Correas Street where historic buildings exist as visual resources

Sections 18.37.025, 18.37.030, 18.37.035, and 18.37.040 contain design and development standards for beach viewshed areas, scenic corridors, upland slopes, and old downtown.

Section 18.37.045, Significant Plant Communities, identifies significant plant communities (including riparian vegetation, notable tree stands, and unique species) that shall be preserved whenever possible:

- Cypress stands or rows in Miramar Beach, Wavecrest, Arleta Park/Miramontes Terrace southwest of Railroad Avenue.
- Eucalyptus stands or rows along Naples Creek (Guerrero Avenue site), and in North Wavecrest.
- Riparian vegetation located adjacent to all bodies of water, intermittent or perennial, man-made, or natural

Other significant plant communities include:

- Cypress rows located elsewhere in the City including but not limited to along Highway 92 on the Pilarcitos Cemetery property and Nurseryman's Exchange property, and along Highway One on Cunha School property.
- Groupings of native trees, such as Coast live oak, Holly oak, California sycamore, and Monterey pine, where they may occur in the City.
- California wild strawberry located on bluffs within the City.

Section 18.37.045 contains Plant Community Preservation Guidelines consisting of preparation of biological resource reports by a qualified biologist to evaluate development impacts on a significant plant community and to determine protection/preservation measures. These guidelines also require project siting such that the development will not disturb existing notable tree stands including their root systems, nor to intrude upon riparian vegetation or the habitat of existing unique vegetative species. Should no feasible alternatives exist to preserve existing sensitive plant communities, permits for removal and replacement of vegetation are required.

Half Moon Bay Downtown Specific Plan - 1995

The Downtown Specific Plan (DSP) contains objectives, policies, and programs for the portion of Half Moon Bay's commercial area lying south of State Route 92 and east of Highway 1 in the vicinity of Main Street. The DSP addresses the majority of critical aesthetic and visual resource issues associated with downtown Half Moon Bay. The following policies are relevant to aesthetic and visual resources that are part of the BP Master Plan.

- 4.311 Enhance the visual appeal of the principal gateways into the downtown area shown on Exhibit 2 of the Specific Plan.
- 4.312 Encourage removal of features that detract from the visual appeal of gateways into the downtown, such as sign clutter and inoperative vehicles.
- 4.321 Install landmark signs at three or more locations to direct visitor traffic into the downtown area and utilize banners, landscaping and other features to draw the attention of person traveling past gateway locations.
- 4.410 Endeavor to preserve heritage trees located within the Specific Plan area.
- 4.411 Support and augment the ongoing street tree program initiated and perpetuated by the Main Street Beautification Committee and work with the Committee to develop a Downtown Street Tree Master Plan.
- 4.414 Encourage the selection of street tree species which will not obscure the visibility of storefront signage.
- 4.512 Increase the number of public signs directing visitors to stores, services, points of interest, and public parking areas.
- 4.521 Identify the most suitable locations for installation of directional signage within public rights-of-way.
- 4.522 The design of signs to be installed in public rights-of-way shall be reviewed by the Architectural Review Committee to ensure compatibility with the visual character of the downtown area.

Bicycle and Pedestrian Master Plan: Design Guidelines

In conjunction with the BP Master Plan, the City has prepared a BP Master Plan Design Guidelines that serves as an inventory of pedestrian and bicycle design treatments and provides guidelines for their development to implement the Half Moon Bay BP Master Plan. These treatments and design guidelines are important because they represent the tools for creating a walking- and bicycle-friendly, safe, accessible community, and will help ensure that improvements are appropriate for the specific location. The Design Guidelines have been developed consistent with the following federal guidelines as well as state design guidelines implemented through Caltrans:

- American Association of State Highway and Transportation Officials (AASHTO) Guide for the Planning, Design and Operation of Pedestrian Facilities, provides comprehensive

guidance on planning and designing for people on foot. AASHTO Guide for the Development of Bicycle Facilities, provides guidance on dimensions, use, and layout of specific bicycle facilities

- The AASHTO A Policy on Geometric Design of Highways and Streets (2011) commonly referred to as the “Green Book,” contains the current design research and practices for highway and street geometric design.
- The National Association of City Transportation Officials’ (NACTO) Urban Bikeway Design Guide (2012) and Urban Street Design Guide (2013) are collections of nationally recognized street design standards and offers guidance on the current state of the practice.

The Design Guidelines provide background context for both the pedestrian and bicycle users and provide recommendations for design of the recommended improvements. Because community character varies throughout Half Moon Bay, a flexible approach is needed to the preferred design recommendations for both bicycle and pedestrian improvements. Some neighborhoods do not have sidewalks and the community may want to retain their rural character by implementing alternative pedestrian treatments. Other areas have high pedestrian demand and should be a priority for sidewalk improvements and gap closures. Because of these variables, pedestrian zones are created within the community, each with associated guidelines to facilitate the implementation of a complete and safe pedestrian network.

The Design Guidelines provide standardized recommendations for the construction of recommended improvements

3.1.3 Discussion

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact.

All Project Types: As described in the Environmental Setting, there are many highly valued scenic vistas throughout the City. BP Master Plan recommendations within sensitive scenic resource areas are listed in Table 3.1-1 through Table 3.1-5 below, along with associated VRA designations based on the Municipal Code. Segments of the Coastal Trail and the Terminus Upper Terrace/High School Connection spot improvement are near a scenic vista, which is also within a VRA as defined in Municipal Code Chapter 18.37. Therefore, this recommendation would be subject to the VRA guidelines in that chapter, which would prevent any adverse effects to the scenic vista. The impact would be less than significant.

All BP Master Plan improvements would be designed, constructed, and maintained according the BP Master Plan Design Guidelines, City General Plan and LCLUP policies, and Municipal Code Chapter 18.37 Visual Resource Protection Standards for the four types of VRAs. Conformance with all City standards and policies would ensure BP Master Plan improvements do not impact scenic vistas. Most recommended improvements would not be structures with height and mass; most improvements would be to the sidewalk, street, or trail system, which would not extend up into a view of a scenic vista. In some cases, new facilities will provide new public vista points, which could be considered a beneficial impact.

Table 3.1-1: Class I Recommendations in VRAs

Name	Cross Street A	Cross Street B	VRA Designation
California Coastal Trail to Wavecrest Road Connection	Wavecrest Road	California Coastal Trail	Scenic Corridors: Scenic Coastal Access Route; Planned Development Area
Eastside Parallel Trail	Frenchmans Creek Road	Miramontes Point Road	Scenic Corridors: Scenic Coastal Access Route; Planned Development Area
Half Moon Bay High School Trail	Highway 92	High School	Upland Slopes
Highway 1/Naomi Patridge Gap Closure	Heskin Avenue	Kelly Avenue	Scenic Corridors: Scenic Coastal Access Route
Naomi Patridge Trail Extension – North	Ruisseau Francais Avenue	City limit	Scenic Corridors: Broad Ocean Views
Railroad Avenue Trail Extension	Grove Street	Wavecrest Road	Scenic Corridors: Scenic Coastal Access Route; Planned Development Area
Wavecrest Road California Coastal Trail Spur	California Coastal Trail	Wavecrest Road	Scenic Corridors: Scenic Coastal Access Route; Planned Development Area

Table 3.1-2: Class II Recommendations in VRAs

Name	Cross Street A	Cross Street B	VRA Designation
Kelly Avenue Bike Lanes	Highway 1	Johnston Street	Old Downtown
Main Street Bike Lanes	Highway 92	Main Street Bridge	Old Downtown

Table 3.1-3: Class III Recommendations in VRAs

Name	Cross Street A	Cross Street B	VRA Designation
Alsace Lorraine/1st Street Bike Boulevard	Kelly Avenue	Poplar Street	Scenic Corridors: Scenic Coastal Access Route
Johnston Street/Monte Vista Lane Bike Boulevard	Mill Street	Main Street	Old Downtown
Mill Street Bike Route	Church Street	San Benito Street	Old Downtown
Purissima Street Bike Boulevard	Mill Street	Filbert Street	Old Downtown

Name	Cross Street A	Cross Street B	VRA Designation
Redondo Beach Road Bike Route	California Coastal Trail	Highway 1	Scenic Corridors: Scenic Coastal Access Route; Planned Development Area
Venice Boulevard Bike Route	Venice Beach/California Coastal Trail	Highway 1	Scenic Corridors: Scenic Coastal Access Route
Wavecrest Road Bike Route	Highway 1	End of Wavecrest Road	Scenic Corridors: Scenic Coastal Access Route
Young Avenue Bike Route	California Coastal Trail	Highway 1	Scenic Corridors: Scenic Coastal Access Route

Table 3.1-4: Crossing Recommendations in VRAs

Name	Cross Street A	Cross Street B	VRA Designation
Kelly Avenue at Highway 1 Crossing Improvements	Kelly Avenue	Highway 1	Scenic Corridors: Scenic Coastal Access Route
Higgins Canyon Road at Highway 1 Beacon	Higgins Canyon Road	Highway 1	Planned Development Area
Redondo Beach Road at Highway 1 Beacon	Redondo Beach Rd	Highway 1	Scenic Corridors: Scenic Coastal Access Route
Church Street at Kelly Avenue Crossing Improvements	Church Street	Kelly Avenue	Old Downtown

Table 3.1-5: Recommended Bicycle and Pedestrian Spot Improvements in VRAs

Name	Cross Street A	Cross Street B	VRA Designation
Naomi Patridge Trail and North Frontage Road Spot Improvements	Naomi Patridge Trail	North Frontage Road	Scenic Corridors: Broad Ocean Views
Terminus Upper Terrace/High School Connection	Terminus Upper Terrace Avenue	High School Grounds	Upland Slopes
Wave Avenue and California Coastal Trail Boardwalk	Wave Avenue	California Coastal Trail	Scenic Corridors: Broad Ocean Views
Venice Boulevard and California Coastal Trail Signage and Crosswalk	Venice Boulevard	California Coastal Trail	Scenic Corridors: Scenic Coastal Access Route

- b) **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

Less Than Significant Impact.

All Projects: Highway 1 is a state designated Scenic Highway beginning at the southern City limits and continuing south (Caltrans, 2011). And although the span of Highway 1 within City limits is not an officially designated Scenic Highway, Coastal Commission guidance to the City reaffirms the City's intent to protect Highway 1 and views from it. The planning and implementation of any future BP Master Plan projects would be done consistent with adopted City policy including the LCLUP and Chapter 18.37 of the Municipal Code. Implementing BP Master Plan projects consistent with adopted City policy would prevent significant visual impacts to scenic resources.

- c) **In non-urbanized areas, 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 Impact.

All Projects: The visual quality of the City's existing pedestrian and bicycle facilities varies with their size, location, topography, vegetation, and adjacent land uses. The BP Master Plan recommendations within VRAs are listed in Tables 3.1-1 through 3.1-5. In addition, sample photographs of the existing setting at the sites of some recommendation locations are provided below to show the existing visual character.



Recommended site for Class II bike lane at Highway 92 and Main Street; Photo credit: 2018 Draft LCLUP Scenic and Visual Resources Chapter



Recommended site for crossing improvement and Class III Bike Boulevard at Main Street near Kitty Fernandez Park



Recommended site for Class I bike lane along Highway 1 at Poplar Street



Recommended site for Class III Bike Boulevard at Central Avenue

As described in the Regulatory Setting, Chapter 18.37 of the Municipal Code identifies specific VRAs requiring protection. BP Master Plan recommended improvements located within a VRA are subject to the relevant development standards set forth in Chapter 18.37 regarding landscaping, signs, screening, lighting, parking areas, and utilities. BP Master Plan recommendations within VRAs are distinguished in Tables 3.1-1 through 3.1-5.

In addition to VRAs, the currently-adopted LCP (City 1996) requires protection of all sensitive visual resources, as described in the Regulatory Setting. As Tables 3.1-1 through 3.1-5 indicate, many recommendations from the BP Master Plan could potentially affect scenic resources in Half Moon Bay. Construction of the project recommendations, which could include grading at off-road locations, installation of fencing or lighting, landscaping, and potentially disturbing existing vegetation, constitutes an impact to scenic resources by substantially altering the project area's setting. Because impacts resulting from the construction process would be short-term, and any vegetated areas disturbed by construction would be revegetated, the impact is not considered significant.

As no structures are anticipated and construction would be limited to the ground level, construction of off-road recommended features would not intrude on the visual setting or character of areas listed in Tables 3-1 through 3-5. However, off-road trail construction has the potential to remove heritage trees. Should a project propose the removal of one or more heritage trees, the City would comply with the Heritage Tree Ordinance in determining whether the removal is appropriate and in implementing tree replacement requirements if tree removal is approved. Therefore, off-road trail construction and recommended features would have a less than significant impact on visual and scenic resources.

Adoption of the BP Master Plan would not authorize any specific development, or the construction of improvements contemplated in the BP Master Plan. Specific development or improvement projects recommended by the BP Master Plan would require further evaluation under CEQA once design and implementation information become available. Many of the BP Master Plan recommendations for the individual projects are minor in nature or small features and would not degrade the existing visual character of the project location or its surroundings. Certain types of improvements or modifications contemplated under the BP Master Plan could

be implemented if they are found not to be a project under CEQA, or the City can document that these improvements do not have potentially significant environmental impacts and the project is eligible for a Categorical Exemption.

As all BP Master Plan projects would be designed and implemented consistent with the adopted LCLUP and the municipal code to maintain the value, character, and integrity of the visual setting, the adoption of the BP Master Plan will not cause a significant impact to the visual character of a trail or its surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact with Mitigation.

All Project Types: Some existing on-street bicycle and pedestrian facilities have lighting for night security and sign illumination. The BP Master Plan recommends pedestrian hybrid beacons at some pedestrian crossings and improving lighting at spot improvement locations, which could contribute to new lighting to an already lighted area or introduce a strong source of light in an otherwise dark area. Mitigation Measure AEST-1 presented below would reduce these potential impacts to less than significant.

Adoption of the BP Master Plan would not authorize any specific construction of improvements contemplated in the BP Master Plan. Specific development or improvement projects recommended by the BP Master Plan would be developed according to the BP Master Plan Design Guidelines, the LCLUP, the City's Municipal Code, and General Plan policies in effect at the time the project was being designed and constructed. Some projects may require additional CEQA review if the City identifies it may have adverse environmental impacts.

Future projects could include some form of night lighting, such as security lighting. The City does not currently have adopted lighting standards. As described above, dark night skies are a community value which provide a highly desirable experience for local residents and visitors from urban settings. Without an adopted lighting standard that specifically addresses unwanted light and glare and maintaining dark night skies, future bicycle and pedestrian projects could create light and glare impacts. Mitigation Measure AEST-1 is recommended to prevent nighttime light and glare impacts from trial improvement projects.

Implementation of AEST-1 would BP Master Plan improvement projects are designed to prevent light and glare impacts.

Mitigation Measures:

Impact AEST-1: Implementation of BP Master Plan recommendations could result in night light and glare impacts and reduce the dark night skies valued within the City.

Mitigation Measure AEST-1 (All Existing and Planned Infrastructure Improvements): To avoid light and glare impacts from BP Master Plan projects and to protect the Coastsides dark night skies valued by the City, the City shall require a lighting plan for each improvement project that contains a night lighting element to it. The lighting plan should provide design and illumination requirements of the project and address how the plan reduces any light and glare impacts and protects dark night skies, to the satisfaction of the Community Development Director and/or decision-making body for any associated discretionary permit. The lighting plan shall specify how light will be shielded and contained within the project area to the greatest extent possible.

Effectiveness: This measure would avoid significant light and glare impacts

Implementation: This measure shall be required by the City during project design

Timing: Project design phase.

Monitoring: A lighting plan shall be submitted as part of project design.

3.1.4 References

- California Department of Transportation (Caltrans), 2011. Officially Designated Scenic Highways. Accessed December 11, 2018. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.html. Updated September 7, 2011.
- Dyett & Bhatia. 2014. Plan Half Moon Bay: Existing Conditions, Trends and Opportunities Assessment. Prepared for the City of Half Moon Bay. Revised July 2014. Accessed July 16, 2018. <http://www.planhmb.org/reports-and-products.html>.
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- Half Moon Bay, City of. 2013. General Plan. Circulation Element. November 19.
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3.2 AGRICULTURAL AND FOREST RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project*:</i>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
*In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				

3.2.1 Environmental Setting

The following information is summarized from The Draft General Plan and Local Coastal Land Use Plan, Agriculture Element, October 2018.

Agricultural Land

The California Coastal Act Section 30113 defines "prime agricultural land" as consistent with subsections 1, 2, 3, or 4 of Government Code Section 51201(c), as follows:

(c) "Prime agricultural land" means any of the following:

- (1) All land that qualifies for rating as class I or class II in the Natural Resource Conservation Service land use capability classifications.
- (2) Land which qualifies for rating 80 through 100 in the Storie Index Rating.

(3) Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture.

(4) Land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars (\$200) per acre.

Under the Coastal Act's four-part definition, Half Moon Bay's prime agricultural land primarily falls within categories 1, 2, and 4: land that qualifies for rating as class I or class II in the Natural Resource Conservation Service (NRCS) land use capability classifications, land which qualifies for rating 80 through 100 in the Storie Index Rating, and land planted with fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years. As of 2018, there are no livestock operations that produce food or fiber within the city.

Land in Half Moon Bay that meets the definition of prime and non-prime agricultural land is quantified in Table 3.2-1 and shown in Figure 3.2-1: Prime and Non-Prime Agricultural Land which is from October 2018 Draft Local Coastal Land Use Plan Draft Agriculture Element. Additionally, there are prime and non-prime areas in the unincorporated County parts of the Planning Area. Much of the Prime Farmland is currently under cultivation, and much of the Unique Farmland coincides with nursery or greenhouse uses. Additionally, there are areas classified by the Farmland Mapping and Monitoring Program (FMMP) in the unincorporated parts of the City's BP Master Plan area.

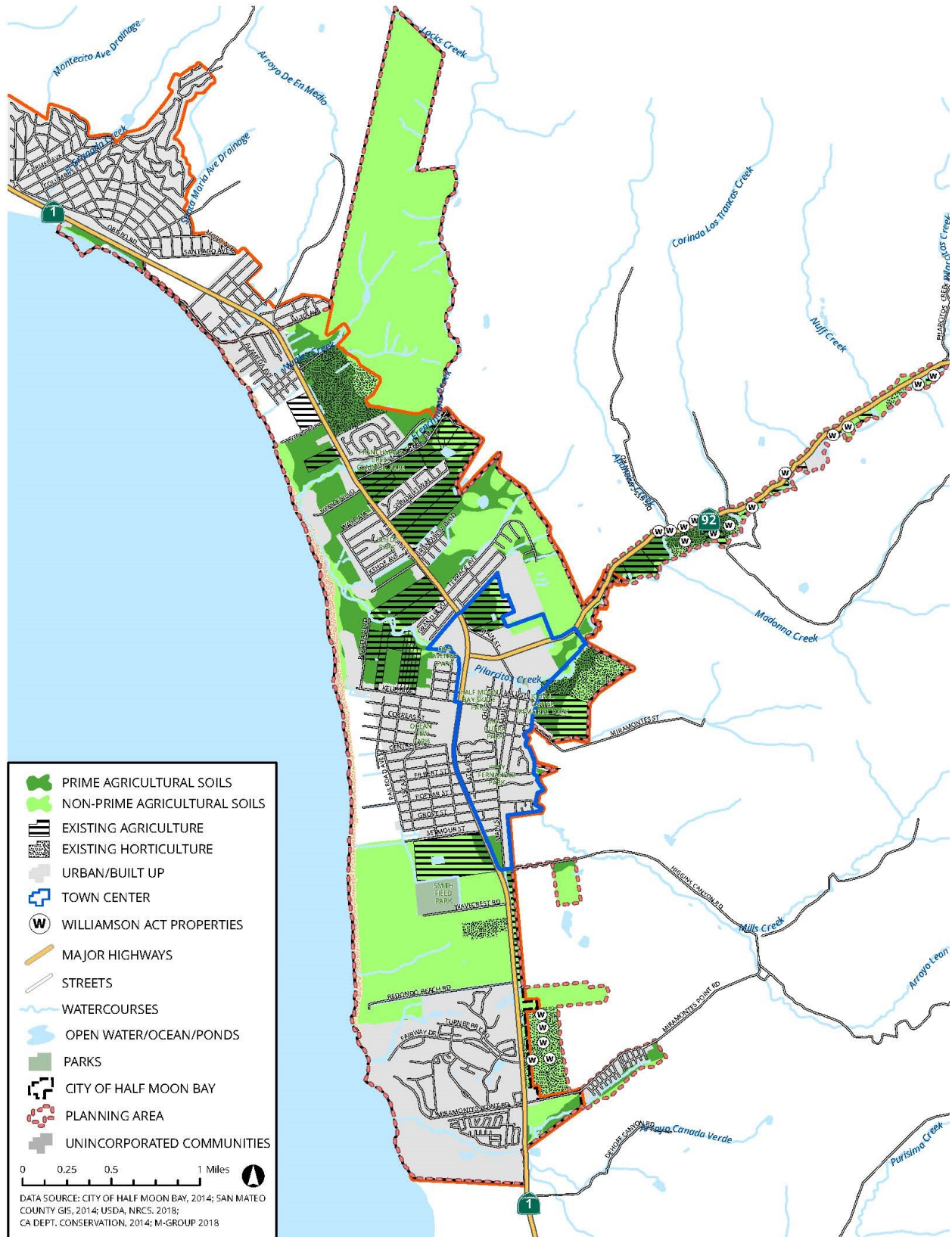
Table 3.2-1: Prime and Non-Prime Agricultural Land

Agricultural Land Type	Acres ⁽¹⁾
Prime	1,247
Non-Prime	2,411
Total Agricultural Land	3,658
(1) This is land in the planning area of the LCP update; not within city limits Source: San Mateo County GIS 2014, NRCS 2018, acreage estimates from GIS	

The following areas near BP Master Plan recommendation sites are designated Prime Farmland:

- Along Highway 1 between Seymour Street and Higgins Canyon Road
- Along east side of Highway 1 between the north end of Main Street and Highland Avenue
- Along Highway 1 between Terrace Avenue and Spindrift Way
- Along Venice Boulevard
- Along south side of Young Avenue
- Along Highway 1 between Wave Avenue and Frenchmans Creek
- Along Highway 1 between Touraine Lane and Alto Avenue
- South of Red Hawk Court

No other BP Master Plan recommendations are on or near agricultural lands.



Source: M-Group, 2018

Figure 3.2-1 Prime and Non-Prime Agricultural Land

City of Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

Forest Land

Public Resources Code section 12220(g) defines “forest land” as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allow for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Public Resources Code Section 4526 defines “timber land” as land which is available for, and capable of, growing a crop of trees of a commercial species for lumber or other forest products, including Christmas trees. The City of Half Moon Bay does not contain any private or public forestry or timberland (CDFW 2015). Private Christmas tree farms along Highway 92 are within San Mateo County.

Although the City does have some pockets of forested areas, none of these forested areas are part of a conservation program and no commercial logging is occurring within the City. The California Department of Conservation’s Farmland Mapping and Monitoring Program identifies many properties associated with the BP Master Plan recommendations and future projects as Urban and Built-up Land. These areas are in the following vicinities: Between Redondo Beach Road and the southern City limit, the downtown core, and all residential neighborhoods. The Forest Legacy Program (FLP) is a conservation program administered by the U.S. Forest Service in partnership with State agencies to encourage the protection of privately-owned forest lands through conservation easements or land purchases. No FLP properties are located in Half Moon Bay.

3.2.2 Regulatory Setting

State

California Coastal Act

Coastal Act policies require the protection of agricultural lands within the Coastal Zone by mandating that the maximum amount of prime agricultural land be maintained in production and supporting techniques that limit conflicts between agricultural and urban uses (Section 30241), and by providing criteria for the determination of the viability and economic feasibility of agricultural uses (Section 30241.5). Under the Coastal Act, productive agricultural lands may only be converted if continued agricultural use is not feasible or if conversion would preserve prime agricultural land elsewhere or allow for the concentration of development in such a way as to preserve coastal resources (Section 30242). The Coastal Act also provides for the protection of the long-term productivity of soils and timberlands by limiting their conversion to other uses (Section 30243).

Coastal Act Policy 30241

The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the area's agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following: (a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses. (b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural uses is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development. (c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250. (d) By developing available lands not agriculture prior to the conversion of lands suited for agricultural (e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality. (f) By assuring that all divisions

of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of prime agricultural lands.

Coastal Act Policy 30242

All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless: (1) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Williamson Act

The Williamson Act, also known as the California Land Conservation Act of 1965, provides a means for local governments and private landowners to preserve agricultural uses. The Williamson Act allows cities and counties to enter into 10-year contracts with landowners, restricting the use of specific parcels of land to agricultural or other related open space uses in exchange for lower property tax assessments based on farming and open space uses as opposed to potentially much higher full market values for lands where development is likely. There are no Williamson Act contracts within Half Moon Bay's city limits.

Local

City of Half Moon Bay Local Coastal Program & Land Use Plan, 1996

The primary goal of the City's LCP is to ensure that the local government's land use plans, zoning ordinances, zoning maps, and implementation actions meet the requirements, provisions and policies of the Coastal Act.

The Half Moon Bay LCLUP and the Zoning Ordinance together constitute the "Local Coastal Program" for the City's coastal zone. The LCLUP is the policy component of the LCP; and the Zoning Ordinance, which is the City's Local Coastal Implementation Plan (LCIP), provides standards and requirements that implement the LCLUP. Chapter 8 of the LCLUP addresses Agriculture and the policies represent the City's application of the Coastal Act policies. The policies recognize agriculture as a valuable economic resource to the region and maintenance of the City's economic base partially depends on the continued strength of the horticulture industry. Policies address Williamson Act lands, City development practices which will phase development so as to maintain land in agriculture/field flower production, the City's support of water supply expansion to support agriculture, and the City's support of programs to implement agricultural enhancement programs.

Policy 8-4: The City will phase development to maintain land in field flower production as long as feasible (as defined in Section 30108 of Coastal Act).

Policy 8-5: Lands designated Urban Reserve on the Land Use Plan Map shall not be eligible for development approval and shall not receive a permit for development, other than for uses permitted under the designation Urban Reserve, except upon the happening of one of the following conditions: (a) In the case of land which is within an agricultural preserve and subject to a Williamson Act contract as of July 1, 1980, expiration of the Williamson Act contract. (b) In the case of land which is not subject to a Williamson Act contract, the expiration of 10 years from the effective date of this Plan.

Policy 8-6: Lands designated Open Space Reserve on the Land Use Plan Map shall not be eligible for development approval and shall not receive a permit for development, other than for uses permitted under the designation Open Space Reserve, unless and until there are no alternative areas appropriate for infilling within the City for the proposed use and no division of such lands shall be permitted until development approval is obtained pursuant to this policy.

3.2.3 Discussion

Would the project:

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**
- b) **Conflict with existing zoning for agricultural use or a Williamson Act contract?**

Less Than Significant Impact (Responses a-b). There are no Williamson Act contracts within the City.

On-Street Projects: On Street bike lanes or paths, and other improvements that follow the alignment of existing roadways will not convert any agricultural resources to a non-agricultural use, nor conflict with existing zoning for agricultural use.

Off-Street Projects: Some BP Master Plan improvements and recommendations, particularly off-street Class I trails, are located adjacent to prime agricultural lands. The implementation of these recommendations has the potential to create a recreation – agricultural land use conflict through the exposure of the public to nuisance impacts (dust and noise) and potentially hazardous materials related to active agricultural activities.

Existing pedestrian and bicycle trails currently travel near or adjacent to active agriculture uses, primarily along Highway 1 and portions of the Coastal Trail along the coastal bluffs. BP Master Plan trail and spot improvement recommendations would be near agriculture operations (agriculture or horticulture) in the northern portion of the City along Highway 1, along Frenchmans Creek, by Young Avenue, Kelly Avenue, and Seymour Street, and along the east side of Highway 1 between Redondo Beach Road and Miramontes Point Road. Trail alignments along Highway 1 would have little flexibility on the alignment location while other trail segments would have greater flexibility as to the exact location of the trail and could provide a buffer separation between the trail use and the active agriculture if it is determined necessary.

For BP Master Plan recommended projects proximate to active agricultural uses, the City shall take into consideration its policies for protecting agriculture uses, which are Coastal Act priorities. Chapter eight of the currently-adopted LCLUP contains several policies directed at protecting agricultural uses from land use conflicts. As the City implements the BP Master Plan, it will do so consistent with the LCLUP policies adopted at the time the project is being designed and approved.

Specific alignments for Creekside trails including creek setbacks and on which side of the creek the trail should be located, will require further study. The BP Master Plan calls for Creekside trail alignments to provide adequate setbacks of trails from agricultural operations. Measures such as fencing, signage, grade separation, and/or provision for temporary closure of trails when agricultural chemicals must be used on adjacent fields would be considered to minimize conflicts between trail users and adjacent land uses.

Potential effects to prime farmland caused by projects recommended by the BP Master Plan would be considered during the design phase of each project. As the City designs and implements trail projects consistent with current LCLUP policies which specifically address the protection of agricultural uses from encroaching urban land uses and from potential land use conflicts, the impacts to prime agricultural land from implementation of the BP Master Plan would be less than significant.

- c) **Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public**

Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

- d) Result in the loss of forest land or conversion of forest land to non-forest use?**
- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?**

No Impact. (Responses c – e).

All Projects: Adoption of the BP Master Plan would not result in projects that would convert any forest land to a non-forest use or conflict with existing zoning for timberland because the City has no designated forest land. Therefore, the BP Master Plan would not result in impacts to any agricultural or forestry resources.

3.2.4 References

California Department of Conservation (CDC). 2014. *California Important Farmland Finder*. Accessed December 4, 2018. <http://maps.conservation.ca.gov/ciff/>

California Department of Fish and Wildlife Habitat Conservation Branch. January 13, 2015. Private Timberlands and Public Lands in Northern California.

Half Moon Bay, City of. 1996. Local Coastal Program and Land Use Plan.

Half Moon Bay, City of. 2016. General Plan and Local Coastal Land Use Plan. April 2016 Draft.

Half Moon Bay, City of. 2018. Local Coastal Land Use Plan Draft Agriculture Element. October 2018 Draft

San Mateo County (SMC). 2014. *Open San Mateo County: William Act Parcels*. Accessed September 12, 2018. <https://data.smcgov.org/Housing-Development/Williamson-Act-Parcels/sq6e-7j5j/dat>.

United States Forest Service. Forest Legacy Assessment Project. Accessed December 6, 2018. <https://usfs.maps.arcgis.com/apps/webappviewer/index.html?id=9d083b89bd254c23acf56f8143e0c119>.

3.3 AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project*:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				

3.3.1 Environmental Setting

The project area is within the San Francisco Bay Area Air Basin (SFBAAB), which is comprised of the following nine counties: all of Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin, Napa, and the southern portions of Solano and Sonoma. The SFBAAB is generally characterized by a Mediterranean climate with warm, dry summers and cool, damp winters. Local air quality is influenced by climate and local meteorology, especially wind speed and direction and temperature, along with topography, which can limit or facilitate the dispersal of air pollutants. Half Moon Bay is in the Peninsula Subregion of the air district, which extends from the area northwest of San Jose to the Golden Gate. The Santa Cruz Mountains extend up the center of the peninsula. The Coastside, located to the west of the mountains, frequently experiences a high incidence of cool, foggy weather in the summer, due to coastal ocean upwelling and northwest winds. This climate contrasts to areas east of the mountains, which experience warmer temperatures and few foggy days. Because of a combination of physiographic and climatic factors the Coastside has a relatively low potential for pollutant buildups, compared to the higher potential present east of the mountains (Half Moon Bay, 2016).

During the summer daytime, high temperatures near the coast are primarily in the mid-60s, whereas areas farther inland are typically in the high-80s to low-90s. Nighttime low temperatures on average are in the mid-40s along the coast and low- to mid-30s inland.

The federal and state governments have established ambient air quality standards for “criteria” pollutants considered harmful to the environment and public health. National Ambient Air Quality Standards (NAAQS) have been established for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), fine particulate matter (particles 2.5 microns in diameter and smaller, or PM_{2.5}), inhalable coarse particulate matter (particles between 2.5 and 10 microns in diameter, or PM_{2.5} and PM₁₀), and sulfur dioxide (SO₂).

California Ambient Air Quality Standards (CAAQS) are more stringent than the national standards for the pollutants listed above and include the following additional pollutants: hydrogen sulfide (H₂S), sulfates (SO_x), and vinyl chloride. In addition to these criteria pollutants, the federal and state governments have classified certain pollutants as hazardous air pollutants (HAPs) or toxic air contaminants (TACs), such as asbestos and diesel particulate matter (DPM).

The SFBAAB is currently designated as non-attainment for both the 1-hour and 8-hour state ozone standards, the 8-hour national ozone standard, the state annual average PM_{2.5} standard, the national 24-hour PM_{2.5} standard, and the state annual average and 24-hour PM₁₀ standards (BAAQMD 2017a). Because of the coastal marine conditions found in Half Moon Bay, high ozone concentrations are generally not applicable to the City. In San Mateo County, PM_{2.5} exceeds the national standard only on about one day each year. San Mateo County frequently receives fresh marine air from the Pacific Ocean, which passes over the coastal hills. In winter, PM_{2.5} may be transported into San Mateo County from other parts of the Bay Area, adding to wood smoke, which may lead to elevated concentrations, but these are rarely high enough to exceed health standards and thus would not be expected to be exceeded on the Coastside (City of Half Moon Bay 2016).

3.3.2 Regulatory Setting

Federal

U. S. Environmental Protection Agency - 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 the setting of National Ambient Air Quality Standards (NAAQS) for “criteria pollutants” under the Clean Air Act. 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

California Air Resources Board

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 the California Air Resources Board (CARB), with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB has established the CAAQS, which are generally more restrictive than the NAAQS.

In addition, CARB establishes the process for the identification and control of toxic air contaminants (TACs) and includes provisions to make the public aware of significant toxic exposures and for reducing risk. 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 non-cancer health effects. 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.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is responsible for maintaining air quality and regulating emissions of criteria and toxic air pollutants within the SFBAAB. The BAAQMD carries out this responsibility by preparing, adopting, and implementing plans, regulations, and rules designed to achieve attainment of state and national air quality standards.

In April 2017, the BAAQMD adopted its Spare the Air-Cool the Climate 2017 Clean Air Plan (Clean Air Plan). The 2017 Clean Air Plan updates the most recent Bay Area ozone plan, the 2010 Clean Air Plan, in fulfillment of state ozone planning requirements. This plan presents the District's Ozone Strategy and addresses PM, TACs, and greenhouse gas (GHG) emissions in a single, integrated document that contains control strategies describing specific measures and actions the BAAQMD and its partners will implement to improve air quality, protect public health, and protect the climate. These measures focus on stationary and area sources, mobile sources, control measures, land use, and energy and climate measures. Over the next 35 years, the 2017 Clean Air Plan will focus on the three following goals:

- Attain all state and national air quality standards;
- Eliminate disparities among Bay Area communities in cancer health risk from toxic air contaminants; and
- Reduce Bay Area GHG Emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050.

The Plan includes 85 distinct control measures to help the region reduce air pollutants and has a long-term strategic vision which forecasts what a clean air Bay Area will look like in the year 2050. The control measures aggressively target the largest source of GHG, ozone pollutants, and particulate matter emissions – transportation. The 2017 Clean Air Plan includes more incentives for electric vehicle infrastructure, off-road electrification projects such as Caltrain and shore power at ports, and reducing emissions from trucks, school buses, marine vessels, locomotives and off-road equipment (BAAQMD, 2017b).

The BAAQMD has developed CEQA Air Quality Guidelines, which indicate a proposed project would be determined to be consistent with the BAAQMD 2017 Clean Air Plan if the project:

1. Supports the primary goals of the 2017 Clean Air Plan. The primary goals of the plan are to (1) attain air quality standards; (2) reduce population exposure and protect public health in the Bay Area; and (3) reduce GHG emissions and protect the climate.
2. Includes applicable control measures from the Clean Air Plan.
3. Does not disrupt or hinder implementation of any Clean Air Plan control measures.

The CEQA Air Quality Guidelines also include thresholds of significance for criteria air pollutants, health risks associated with exposure to TACs, and GHGs (BAAQMD 2017c). These thresholds of significance developed by the BAAQMD have been scientifically designed to assist the SFBAAB in attaining the air quality standards established by the State and federal government, as well as protect public health. Table 3.3-1: BAAQMD Criteria Air Pollutant Threshold of Significance below shows the thresholds of significance established for criteria air pollutants.

Table 3.3-1: BAAQMD Criteria Air Pollutant Threshold of Significance

Pollutant	Construction Emissions	Operational Emissions	
	Daily Emissions (lb/day)	Daily Emissions (lb/day)	Annual Emissions (tons/year)
Reactive Organic Gases (ROG)	54	54	10
Oxides of Nitrogen (NOx)	54	54	10
Exhaust PM10	82	82	15
Exhaust PM2.5	54	54	10
Fugitive Dust PM10/PM2.5	Best Management Practices	None	-
Local CO	None	9.0 ppm (8-hr. avg.) 20.0 ppm (1-hr. avg.)	-
BAAQMD, 2017c			

3.3.3 Discussion

Future implementation of improvement projects envisioned in the BP Master Plan would result in air quality emissions during construction activities like clearing, grubbing, grading, and facilities installation. In general, the projects contemplated in the BP Master Plan are minor in nature and would not have a substantial adverse effect on air quality. The City would implement the Standard Conditions of Approval in Table 2.12-1 as appropriate to control dust emissions during construction.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact.

All Project Types: As described below, the BP Master Plan would not conflict with nor hinder implementation the BAAQMD's 2017 Clean Air Plan.

First Primary Goal of the 2017 Clean Air Plan: Attainment of Air Quality Standards

Implementation of the BP Master Plan would be consistent with the first primary goal of the Clean Air Plan, which is to attain air quality standards. The 2017 Clean Air Plan is based on regional population and employment projections in the Bay Area, which were compiled by the Association of Bay Area Governments. The BP Master Plan does not propose new housing, and any increase in job opportunities resulting from future construction of the projects/improvements identified in the BP Master Plan are anticipated to be served by the existing, local population. Thus, adoption of the BP Master Plan would not result in growth of the community and would not generate new long-term emissions that would result in a conflict with the BAAQMD thresholds of significance (see Table 3.3-1).

The BAAQMD's thresholds of significance were scientifically designed to assist the SFBAAB in attaining the air quality standards established by the State and federal government. Although subsequent construction of projects and improvements identified in the BP Master Plan would generate criteria air pollutants, the level of emissions generated by these projects are not

anticipated to be substantial because the construction of linear bicycle and pedestrian facilities, as well as the other improvements identified in the BP Master Plan, are not anticipated to require substantial, prolonged use of heavy equipment operations or hauling activities in levels that could exceed BAAQMD construction thresholds for ROG, NO_x, and exhaust PM.

The City currently services and maintains its existing bicycle and pedestrian infrastructure. Typical activities associated with the maintenance and upkeep of existing facilities may include but are not limited to: vehicle trips taken by City employees/contractors to such facilities, debris removal from bike lanes and trails, trail maintenance, and maintenance of paved areas. These activities and emissions associated with them would continue to occur regardless of whether the BP Master Plan is approved or not and would not constitute a change to the physical environment.

The majority of improvements envisioned in the BP Master Plan (e.g., improving pedestrian crossings, traffic calming measures, new sidewalks to close gaps, striping of Class II/III bike lanes, construction of new Class I trail segments, placement of bike racks/parking and fix it stations, etc.) are minor, would not result in substantial adverse effects to air quality, and therefore, would not inhibit the BAAQMD's first primary goal of the CAP.

The BAAQMD's CEQA Air Quality Guidelines contain screening criteria to provide lead agencies with a conservative indication of whether a proposed project could result in potentially significant air quality impacts when compared to the BAAQMD's recommended thresholds of significance. Consistent with the BAAQMD's guidance, if a project meets all the screening criteria, it would not result in a significant air quality impact. Although the BAAQMD's CEQA Air Quality Guidelines do not present a specific size-based screening threshold for bicycle and pedestrian improvement projects, the construction-related screening size for a City Park land use is 67 acres (i.e., city park projects less than 67 acres in size would generally not result in significant air quality impacts). Although this land use type is not similar to the proposed BP Master Plan and cannot be used as direct comparison, it does provide general information and context for the BP Master Plan's potential construction-related emissions. Therefore, it is determined that if BP Master Plan projects are carried out consistent with all other BAAQMD construction related screening criteria, the project would not result in a significant air quality impact or violation and, therefore, would be consistent with the 2017 Clean Air Plan's goal to attain air quality standards. These screening measures include (also presented in Table 2.13-1 in Project Description):

1. Demolition activities (if there are any) are consistent with BAAQMD Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing.
2. Construction does not include simultaneous occurrence of more than two construction phases (e.g., grading, paving, and building construction would not occur simultaneously).
3. Construction does not include simultaneous construction of more than one land use type (e.g., the project does not involve commercial and recreational land uses in the same project).
4. Construction does not require extensive site preparation.
5. Construction does not require extensive material transport and considerable haul truck activity (greater than 10,000 cubic yards).

Based on the thresholds of significance presented in Table 3.3-1, fugitive dust emissions are potentially significant without the application of the BAAQMD *Basic Construction Mitigation*

Measures. As such, the City would impose the dust control measure listed in Table 2-11 of Project Description. Implementation of this dust control condition during future construction projects would ensure the project would produce less than significant levels of fugitive dust emissions.

It is anticipated that subsequent review and approval of projects/improvements identified in the BP Master Plan would not exceed the BAAQMD's thresholds of significance for criteria air pollutants, and therefore, would not hinder the first primary goal of the CAP that is to attain air quality standards.

Second Primary Goal of the 2017 Clean Air Plan: Eliminate Disparities Among Bay Area Communities in Cancer Health Risk from Toxic Air Contaminants

Implementation of the BP Master Plan would be consistent with the second primary goal of the 2017 Clean Air Plan, which is to eliminate disparities among Bay Area communities in cancer health risk from TACs. The BP Master Plan would not result in new sources of TACs (e.g. oil refineries, power plants, landfills, dry cleaners, etc.). The BP Master Plan identifies plans to improve numerous pedestrian and bicycle facilities that would help to reduce both visitor and resident vehicle trips. A key goal of the BP Master Plan is to provide a connected and accessible network of sidewalks, paths, and trails for residents and visitors throughout the City. Implementation of the BP Master Plan could indirectly reduce vehicular travel and associated criteria air pollutant emissions from mobile sources. These actions would improve local air quality and assist in the protection of public health.

All projects envisioned in the BP Master Plan would be designed and implemented consistent with adopted City ordinances and policies which includes the Municipal Code, LCP, and General Plan in effect at the time the Master Plan project is being implemented.

2017 Clean Air Plan Control Measures

Adoption and implementation of the BP Master Plan would not disrupt or otherwise interfere with the control measures identified in the BAAQMD's 2017 Clean Air Plan. Chapter 5 of the 2017 Clean Air Plan contains the BAAQMD's strategy for achieving the plan's climate and air quality goals. It identifies 85 distinct control measures grouped by nine economic sectors, including transportation (TR) and waste (WA) sectors. The 2017 Clean Air Plan's control measures are primarily implemented via the BAAQMD's rulemaking and permitting authority or through BAAQMD financial incentive programs, inter-agency coordination, and technical planning assistance services. Table 3.3-2 below presents the applicable control measures from the 2017 Clean Air Plan that are relevant to the BP Master Plan's potential emissions sources.

Given the information presented above, the BP Master Plan would be consistent with the 2017 Clean Air Plan.

Table 3.3-2: Applicable Control Measures of the 2017 Clean Air Plan

Control Measure	Applicability
Control Measure TR22, Construction, Freight and Farming Equipment	This 2017 Clean Air Plan measure is implemented via the BAAQMD's financial incentive programs, inter-agency coordination, and technical planning assistance services. As described under Table 2.12-1, the City has incorporated BMPs into the proposed project to reduce construction GHG emissions through the use of electrified equipment, limited idling times, and recycling of construction waste and debris.
Control Measure TR9, Bicycle and Pedestrian Access and Facilities	The BP Master Plan seeks to improve bicycle and pedestrian access throughout the City.
Control Measure WA4, Recycling and Waste Reduction	This 2017 Clean Air Plan measure is implemented via BAAQMD information dissemination services, such as recommended best practices, development of model ordinances, etc. The City would comply with Chapter 14.50 of the Municipal Code pertaining to construction waste and recycling requirements (see Section 3.8.2).

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?

Less Than Significant Impact.

All Projects: The SFBAAB is an area of non-attainment for national and state ozone, state PM₁₀, and national and state PM_{2.5} air quality standards (BAAQMD 2017a). Regarding cumulative impacts, the BAAQMD's CEQA Air Quality Guidelines state (BAAQMD 2017c, pg. 2-1):

"SFBAAB's non-attainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulative considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary."

As discussed under paragraph a) above, the proposed BP Master Plan does not conflict with the BAAQMD's 2017 Clean Air Plan and is not anticipated to result in significant air quality impacts or violations. As such, the proposed BP Master Plan would not result in a cumulatively considerable net increase in emissions of ozone precursor pollutants, PM_{2.5}, or PM₁₀ within the SFBAAB.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact.

All Projects: As discussed above, most projects identified in the BP Master Plan are relatively minor in nature. Construction activities related to park projects and/or improvements would emit PM_{2.5} from equipment exhaust. Nearly all PM_{2.5} emissions from construction equipment exhaust would be DPM, a TAC. Although construction of potential BP Master Plan projects would emit criteria and hazardous air pollutants, the level of emissions generated by these projects would be small, short in duration, and disperse quickly due to the areas on- and off-shore wind patterns. Therefore, the implementation of the BP Master Plan would not expose residential, school, park, or other sensitive residential receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact.

All Projects: Construction of projects would generate typical odors associated with construction activities, such as fuel and oil odors and asphalt paving odors. The odors generated would be intermittent, localized in nature, and would disperse quickly. Therefore, implementation of the BP Master Plan would not create objectionable odors affecting a substantial number of people.

3.3.4 References

Bay Area Air Quality Management District (BAAQMD). 2017a. "Air Quality Standards and Attainment Status." Air Quality Standards. BAAQMD, Planning, Rules, and Research Division, Emission Inventory and Air Quality Related. January 5, 2017. Web. January 17, 2019. <<http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status>>.

_____. 2017b. "2017 Clean Air Plan: Spare the Air, Cool the Climate". BAAQMD, Planning, Rules, and Research Division. April 19, 2017.

_____. 2017c. California Environmental Quality Act Air Quality Guidelines. San Francisco, CA. June 2010, updated May 2017.

City of Half Moon Bay 2106. General Plan and Local Coastal Land Use Plan First Public Draft Conservation and Open Space Element. November 2016.

3.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The biological resources analysis focuses on the recommended BP Master Plan projects. The City will apply standard conditions (described in Project Description) to implementation of the BP Master Plan recommendations. As the City implements the recommendations of the BP Master Plan (and undertakes projects not specifically called out in the BP Master Plan), the proposed project would be evaluated and additional CEQA review prepared for the project based on specific design and construction plans.

3.4.1 Environmental Setting

The BP Master Plan area contains a diverse mixture of plant communities and habitat types, including habitat types that are unique to coastal areas along the Pacific Ocean. The BP Master Plan area is generally bounded by the Santa Cruz Mountains along the eastern edge, the community of El Granada to the north, the Pacific Ocean to the west, and agricultural lands to the south.

The northern portion of the BP Master Plan area includes two arms that run to the northwest and northeast from the northern edge of the City boundary. The northwestern arm is narrow and runs along a thin strip of sandy beach between Pillar Point Harbor and Miramar Beach approximately one mile to the south. The northeastern arm stretches into the coastal hills and covers a large area of relatively undeveloped northern coastal scrub and Monterey pine (*Pinus radiata*) forest bounded to the east by Frenchmans Creek. The width of the BP Master Plan area expands south of these two arms, and includes sandy beach, sea cliffs, central dune scrub, and northern coastal scrub along the western margin near the ocean, and a mix of agricultural, developed, ruderal/landscaped, northern coastal scrub, and non-native grassland habitats inland from the coast. Interspersed within these habitats are pockets of eucalyptus (*Eucalyptus* spp.) forest, Monterey pine forest, Monterey cypress (*Cuperssus macrocarpa*) forest, and riparian corridors where coastal streams including Arroyo de en Medio, Frenchmans Creek, Apanolio Creek, Corinda Los Trancos Creek, Nuff Creek, Pilarcitos Creek, Arroyo Leon, and Canada Verde Creek flow through the BP Master Plan area to the Pacific Ocean. Isolated areas of coastal and valley freshwater marsh and vernal marsh are located within central coastal scrub and non-native grassland habitats east and west of Highway 1. Developed, ruderal, and landscaped areas are also present throughout the BP Master Plan area in the form of disturbed roadside areas, residential neighborhoods, agricultural operations, retail facilities, and golf courses (Figure 3.4-1: BP Master Plan Area Habitat Types).

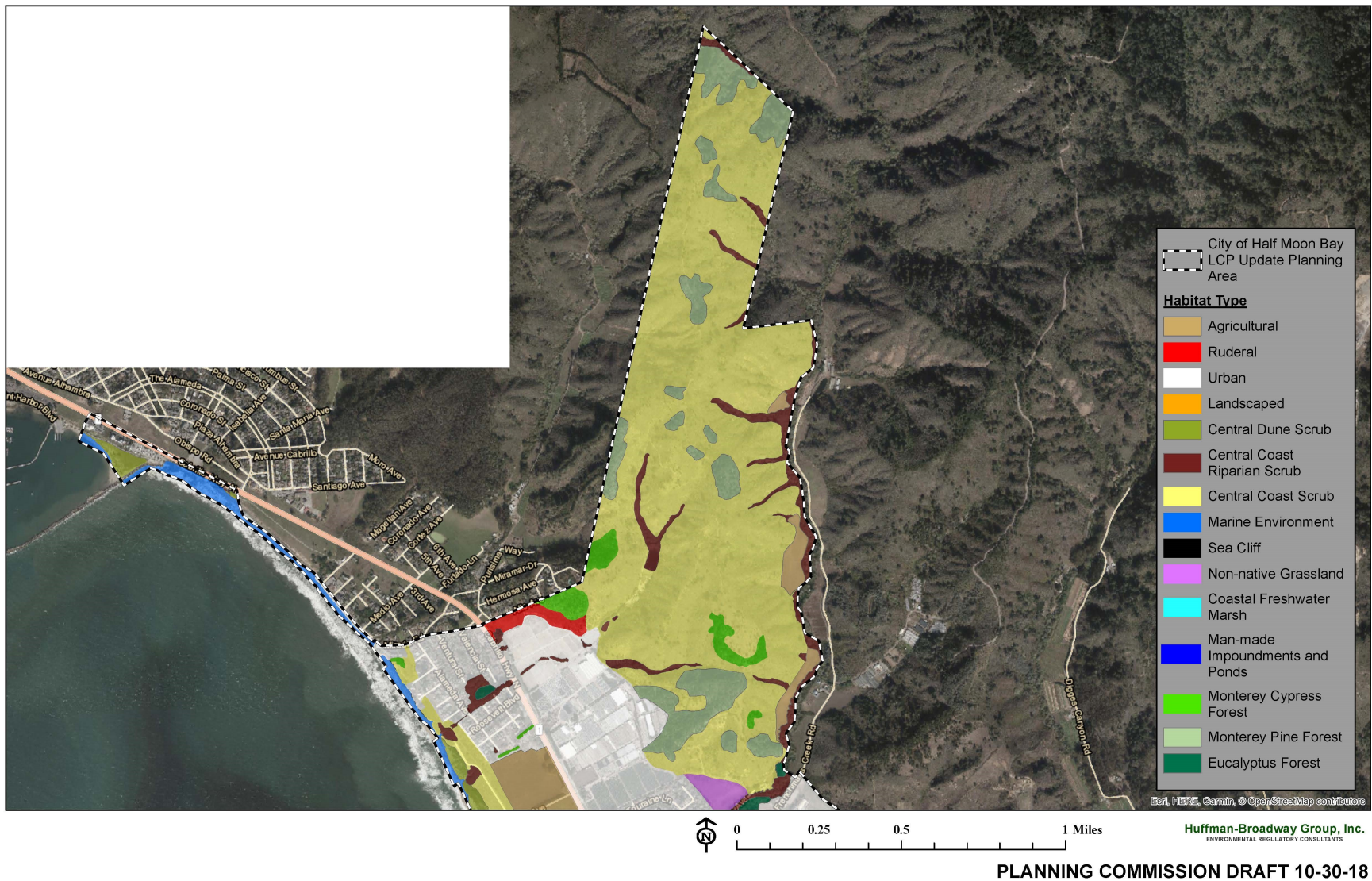
Methods

Background Research

MIG reviewed the following sources for information relevant to biological resources within the BP Master Plan area:

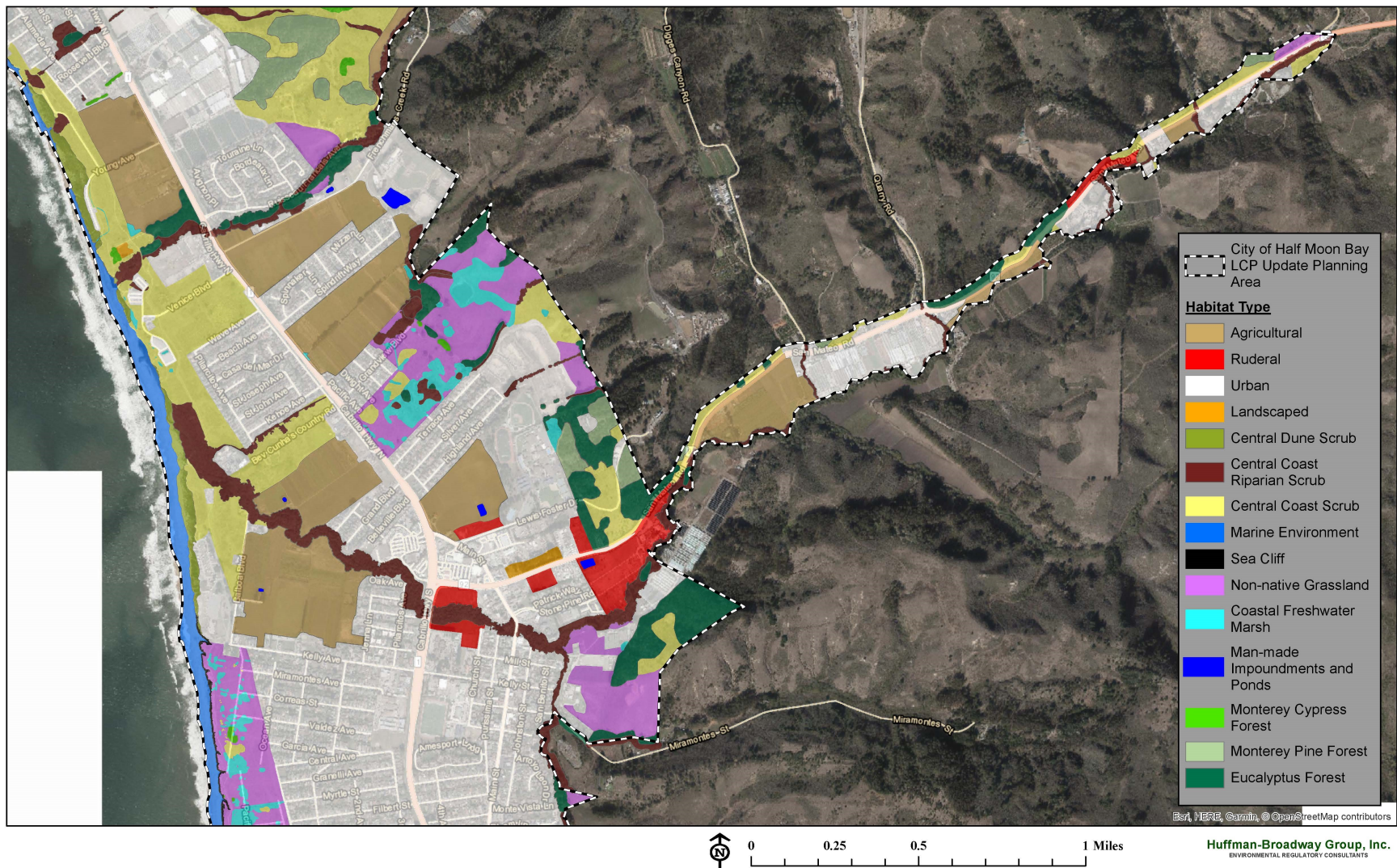
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) record search for six⁵ U.S. Geological Survey (USGS) 7.5-minute quadrangles (i.e., Half Moon Bay, Woodside, Montara Mountain, San Mateo, La Honda, San Gregorio) surrounding the BP Master Plan area and within a 5-mile radius of the BP Master Plan area (CDFW 2018).
- California Native Plant Society (CNPS) Rare Plant Program Inventory of Rare and Endangered Plants of California record search within a 5-mile radius of the BP Master Plan area (CNPS 2018).
- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) search within the BP MASTER PLAN area (USFWS 2018a).
- USFWS National Wetlands Inventory (USFWS 2018b).

5 Since the project area borders the Pacific Ocean, only a six 7.5-minute quadrangle search could be conducted.



Source: Huffman-Broadway Group, Inc., 2018; Figure 6-1 Habitat Types in the LCP Planning Area, Sheet 1 of 3

Figure 3.4-1: Habitat Types in the LCP Planning Area, Sheet 1 of 3
Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

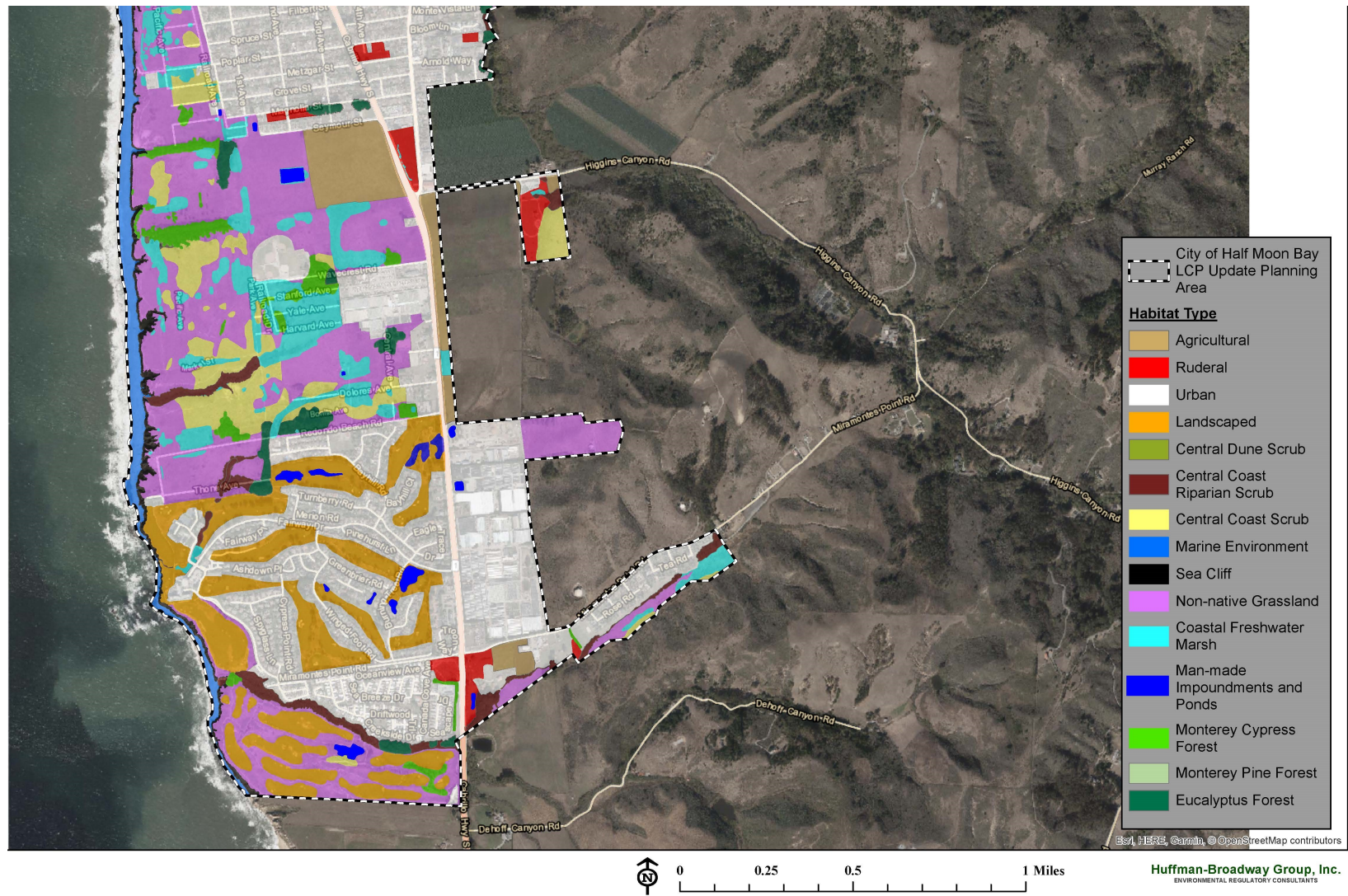


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Source: Huffman-Broadway Group, Inc., 2018; Figure 6-1: Habitat Types in the LCP Planning Area, Sheet 2 of 3

Figure 3.4-1: Habitat Types in the LCP Planning Area, Sheet 2 of 3

Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND



Source: Huffman-Broadway Group, Inc., 2018; Figure 6-1:
Habitat Types in the LCP Planning Area, Sheet 3 of 3

Figure 3.4-1: Habitat Types in the LCP Planning Area, Sheet 3 of 3

Half Moon Bay Bicycle and Pedestrian Master Plan IS/MND

- Aerial photographs of the project area (Google Earth Pro 2018).
- eBird records (eBird 2018).
- iNaturalist records (Cal Academy of Science 2018).
- Plan Half Moon Bay Existing Conditions, Trends, and Opportunities Assessment Report (Existing Conditions Report; SWCA 2014).
- Half Moon Bay-Local Coastal Land Use Plan: Chapter 6 Natural Resources Element (City 2018).
- Biological Resources Assessment for 32 Jenna Lane (Coast Range Biological and Biosearch Associates 2015).
- Highway 1/North Main Street to Spindrift Way Project Initial Study/Mitigated Negative Declaration (FirstCarbon Solutions 2018).
- Highway 1/North Main Street to Spindrift Way Project Biological Assessment (FirstCarbon Solutions 2018).
- Highway 1 Trail Improvements Phases 2, 3, and 4 Coastal Resource Conservation Biological Report (H.T. Harvey and Associates [H.T. Harvey] 2010).
- North Cabrillo Highway Subdivision Biological Resources Assessment (WRA Environmental Consultants [WRA] 2010).
- Biological Resources Assessment for Property #1511-1137 (Coast Ridge Ecology 2013).
- Seymour Bridge Replacement Project Biological Resources Report (H.T. Harvey 2015).
- Biological Resource Evaluation for the Citywide Drainage Ditch Maintenance Project (SWCA 2013).
- City of Half Moon Bay Magnolia Park Maintenance Project Biological Report (H.T. Harvey 2012).
- Smith Field Biological Resources Evaluation (WRA 2014).

Vegetation Communities and Other Habitats

Vegetation communities are assemblages of plant species that occur together in the same area, which are defined by species composition and relative abundance. Plant communities in the BP Master Plan area (Figure 3.4-1) were classified in the Existing Conditions Report (SWCA 2014) and the Draft Half Moon Bay-Local Coastal Land Use Plan: Chapter 6 Natural Resources Element (City 2018) and are described in more detail below.

Developed

Developed habitat includes areas where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, such as pavement, parking lots, buildings, and turf grass.

Ornamental Vegetation

Ornamental vegetation includes lands that have been planted with landscaping and are usually maintained on an ongoing basis. Such landscaping may include native and non-native plantings. Ornamental vegetation can include turf grass, ornamental shrubs and trees such as maples (*Acer* spp.), eucalyptus (*Eucalyptus* spp.), pine trees (*Pinus* spp.), camphors (*Cinnamomum camphora*), ash trees (*Fraxinus* spp.), as well as many others. Native trees such

as coast redwood (*Sequoia sempervirens*) are also present as ornamental vegetation throughout the City.

Disturbed/Ruderal

Disturbed/ruderal land includes areas regularly cleared of vegetation, lands that are composed of primarily non-native plant species, or areas regularly disturbed by human activities. Within the BP Master Plan area, disturbed/ruderal land includes areas where the ground is bare, the soils are compacted, and the vegetation community is dominated by non-native species like brome (*Bromus* spp.), italian ryegrass (*Festuca perennis*), slender oats (*Avena barbata*), and bristly ox-tongue (*Helminthotheca echioides*).

Redwood Woodland

Redwood woodland is dominated by redwoods with little understory. Redwood woodland could be considered ESHA by the California Coastal Commission (CCC) if it supports special-status species, including nesting raptors.

Eucalyptus Woodland

Eucalyptus woodland would be considered ESHA during the avian breeding season (generally March 1 through September 15) if nesting raptors or other special status nesting birds are present. However, the City LCP also designates blue gum eucalyptus (*Eucalyptus globulus*) as an undesirable invasive plant species. Eucalyptus woodland consists of stands of non-native, invasive eucalyptus trees that are usually devoid of understory with the exception of a few hardy grasses. Stands generally range from 98 to 180 feet high. The understory within eucalyptus grove typically includes species such as, ivy (*Hedera helix*), jade plant (*Crassula ovata*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), coffeeberry (*Rhamnus californica*), California wild strawberry (*Fragaria vesca*), and California bee plant (*Scrophularia californica*).

Monterey Cypress Grove

Monterey cypress groves could be considered ESHA by the CCC if it supports special-status species, including nesting raptors. Monterey cypress (*Cupressus macrocarpa*) grove is dominated by Monterey cypress and often has very little understory. Many groves in the City were likely planted as windbreaks. Within this habitat type the tree canopy is predominately composed of Monterey cypress, but some eucalyptus or Monterey pine may be scattered throughout. The understory this habitat type generally consists of bare ground and/or leaf litter.

Monterey Pine Forest

Monterey pine (*Pinus radiata*) forest could be considered ESHA by the CCC if it supports special-status species, including nesting raptors. Monterey pine forest is dominated by Monterey pine, with some coast live oak (*Quercus agrifolia*) contributing to the canopy structure. Monterey pine stands often contain a component of Monterey cypress. The understory of the community is variable in both composition and density. Only four native populations of Monterey Pine are known, two in Monterey County (including the largest population which is on the Monterey Peninsula), one near Año Nuevo in southern San Mateo County, and one on Guadalupe Island in Mexico. Monterey pine has been widely planted as an ornamental and commercial species. All Monterey pines observed in the BP Master Plan area are non-native stands that were originally planted during urbanization of the area and are now mostly in declining conditions from bark beetle infestation, disease, and old age.

Sea Cliff

Sea cliffs are considered ESHA by the CCC. Sea cliffs are steep faces along the coast that are subject to marine erosion. Sea cliffs are exposed to wind and waves and are largely devoid of vegetation in steep areas due to erosion. Non-native ice plant (*Carpobrotus edulis* and *C. chilensis*) dominates the flatter areas associated with this habitat, although some ruderal vegetation is present as well.

Central Coast Riparian Scrub

Riparian scrub is considered a sensitive natural community by the CDFW and an ESHA by CCC. Central coast riparian scrub communities occur adjacent to flowing freshwater, along some perennial drainages, or in depressions near groundwater. This community consists of dense thickets dominated by willows (*Salix* spp.). The understory of central coast riparian scrub varies from sparse to dense and typically includes poison oak, California blackberry, coyote brush (*Baccharis pilularis*), blackberry (*Rubus* spp.), stinging nettle (*Urtica dioica*), nasturtium (*Tropaeolum* sp.), California sagebrush (*Artemisia californica*), and various other native and introduced species. Central coast riparian scrub occurs in annual and perennial drainages in the BP Master Plan area, including Arroyo de en Medio, Frenchmans Creek, Apanolio Creek, Corinda Los Trancos Creek, Nuff Creek, Pilarcitos Creek, Arroyo Leon, and Canada Verde Creek. Riparian scrub in the BP Master Plan area is dominated by arroyo willow (*Salix lasiolepis*) and Sitka willow (*Salix sitchensis*). Other trees, such as eucalyptus, are also present within some of the riparian areas.

Agriculture

Cultivated irrigated and non-irrigated agricultural fields are present in the BP Master Plan area. Crops include, but are not limited to, various flower and vegetable crops. Agricultural areas are regularly disturbed by discing or plowing soil and other field preparation, planting and raising of crops, and harvest operations. The edges of cultivated areas often support ruderal vegetation along disturbed margins of farm roads and in fallow areas that are left unplanted.

Non-Native Grassland

Non-native grassland could be considered ESHA if it contains special-status species. Non-native grasslands consist of a dense to sparse cover of non-native annual grasses that often occur in fine-textured, usually clay soils, that are moist or saturates during the winter rainy season and dry during the summer and fall. Vegetation within the non-native grassland includes Italian ryegrass, rattail fescue (*Festuca myuros*), birdsfoot trefoil (*Lotus corniculatus*), California oat grass (*Danthonia californica*), bristly ox-tongue, Mediterranean barley (*Hordeum marinum*), and velvet grass (*Holcus lanatus*).

Central Coastal Scrub

Central coastal scrub could be considered ESHA if it contains special-status species. Central coastal brush scrub consists of low, dense shrubs (approximately 0.5 to 2 meters tall) with scattered grassy openings. It occurs on windy, exposed sites. Species typical of this community include California sagebrush, buckwheat (*Eriogonum* spp.), and sage (*Salvia* spp.). Other plants that could be found in this community include wild strawberry, seaside golden yarrow (*Eriophyllum staechadifolium*), jubata grass (*Cortaderia jubata*), and coffeeberry. Within the City, northern coastal scrub habitat is present west of Highway 1 along coastal bluffs and in the

northeast arm of the BP Master Plan area in the coastal hills west of Frenchmans Creek. This community also commonly overlaps with non-native grassland throughout the City.

Coastal Terrace Prairie

Coastal terrace prairie is not acknowledged in the 1996 LUP; however, it is considered ESHA in the Draft LUP update. Coastal terrace prairie is a combination of grasslands, wetlands, and scrub habitat containing a large percentage of native plants. This habitat type has a large, variable mixture of native perennial grasses and forbs, native and non-native annual forbs, and non-native grasses. Native species found in this habitat include maritime brome (*Bromus maritimus*), California oat grass (*Danthonia californica*), meadow barely (*Hordeum brachyantherum*), and perennial goldfields (*Lasthenia californica* ssp. *macrantha*).

Creek

Creeks are considered ESHA by CCC and are protected by CDFW, U.S. Army Corps of Engineers (USACE), and Regional Water Quality Control Board (RWQCB). Creeks are perennial and seasonal linear water features (i.e., features that flow year-round or throughout the wet season). Creeks in the BP Master Plan area include Arroyo de en Medio, Frenchmans Creek, Apanolio Creek, Corinda Los Trancos Creek, Nuff Creek, Pilarcitos Creek, Arroyo Leon, and Canada Verde Creek. The banks of the creeks are vegetated by central coast riparian scrub (see central coast riparian scrub above).

Drainages and Watercourses

Drainages and watercourses, including, but not limited to, Kehoe Watercourse, Seymour Drainage, Wavecrest Ditch, Poplar Drainage, Magnolia Drainage, Kelly Drainage, Railroad Avenue Drainage, Cabrillo Property Drainage, Miramontes Drainage, Grove Street Ditch, and Central Drainage are present within the BP Master Plan area. Many of the watercourses found along roads have been created via excavation. Vegetation includes ruderal vegetation and coastal and valley freshwater marsh vegetation. The drainages likely only convey water from storm events, incidental rainfall, or intercepted sheet flow from the surrounding areas.

Seasonal Wetland

Seasonal wetlands include depressed areas that meet the USACE and/or CCC definition of a wetland. USACE seasonal wetlands meet all three criteria for a wetland (i.e., hydrology, soils, and vegetation) while CCC wetlands only meet one or two of the criteria.

Seasonal wetlands often occur in association with the northern coastal scrub habitat and/or non-native grassland. These wetlands are dominated by non-native species including, but not limited to, common rush (*Juncus patens*), cattail (*Typha* sp.), tule (*Scirpus* sp.), sedges (*Carex* sp.), pennyroyal (*Mentha pulegium*), common spikerush (*Eleocharis macrostachya*), curly dock (*Rumex crispus*), field mint (*Mentha arvensis*), Monterey centaury (*Zeltnera muehlenbergii*), and rabbitsfoot grass (*Polypogon monspeliensis*), cutleaf plantain (*Plantago coronopus*), Mediterranean barley, spreading rush (*Juncus patens*), Italian ryegrass, and bristly ox-tongue.

Common Wildlife Likely to Occur

Common wildlife in the BP Master Plan area consists of common species adapted to urban areas, as well as those that travel through the Santa Cruz Mountains. Mammals such as eastern fox squirrel (*Sciurus niger*), native and non-native mice and rats, Botta's pocket gopher (*Thomomys bottae*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and striped skunk (*Mephitis mephitis*); and reptiles or amphibians such as western fence lizard (*Sceloporus occidentalis*), northern alligator lizard (*Elgaria coerulea*), and California slender salamander (*Batrachoseps attenuatus*) occur throughout the City. There are also three

documented monarch butterfly (*Danaus plexippus*) overwintering sites within the planning area; two along Frenchmans Creek and one in Wavecrest.

Bird species such as Anna's hummingbird (*Calypte anna*), bushtit (*Psaltiriparus minimus*), black phoebe (*Sayornis nigricans*), California scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), California towhee (*Melospiza crissalis*), Wilson's warbler (*Cardellina pusilla*), Swainson's thrush (*Catharus ustulatus*), American robin (*Turdus migratorius*), and various raptor species, including red-tailed hawk (*Buteo jamaicensis*), Barn owl (*Tyto alba*), sharp-shinned hawk (*Accipiter striatus*), Great Horned owl (*Bubo virginianus*) also nest and forage in appropriate habitat in the City.

Special-Status Species

For the purposes of this assessment, special-status species include the following:

- Plant or animal species listed, proposed for listing, or candidate for possible future listing as threatened or endangered under the Federal Endangered Species Act (FESA, 50 CFR §17.12);
- Plant or animal species listed or candidate for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA, Fish and Game Code §2050 et seq.);
- Plant species listed as rare under the California Native Plant Protection Act (Fish and Game Code §1900 et seq.);
- Animal species listed as a Fully Protected (CFP) Species (Fish and Game Code §§3511, 4700, 5050, and 5515);
- Animal species listed as a California Species of Special Concern (CSSC) by the CDFW;
- Plant species considered by CNPS and CDFW to be "rare, threatened, or endangered in California" (Ranks 1A, 1B, and 2);
- Plant or animal species considered by the City LCP and/or Zoning Code to be unique species.

The potential occurrence of special-status plant and animal species within the BP Master Plan area was evaluated by developing a list of special-status species that are known to or have the potential to occur in the vicinity of the BP Master Plan area based on a search of the CNDDDB, CNPS, and USFWS databases. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the field survey. Each species was evaluated for its potential to occur within the BP Master Plan area according to the following criteria:

No Potential: There is no suitable habitat present (i.e., habitats are clearly unsuitable for the species requirements [e.g., foraging, breeding, cover, substrate, elevation, hydrology, plant community, disturbance regime]). Additionally, there are no recent known records of occurrence in the vicinity of the BP Master Plan area. The species has no potential of being found in the BP Master Plan area.

Low Potential: Limited suitable habitat is present (i.e., few of the habitat components meeting the species requirements are present and/or the majority of habitat is unsuitable or of very low quality). Additionally, there are no or few recent known records of occurrence in the vicinity of the BP Master Plan area. The species has a low probability of being found in the BP Master Plan area.

Moderate Potential. Suitable habitat is present (i.e., some of the habitat components meeting the species requirements are present and/or the majority of the habitat is suitable or of marginal quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the BP Master Plan area. The species has a moderate probability of being found in the BP Master Plan area.

High Potential: Highly suitable habitat is present (i.e., all habitat components meeting the species requirements are present and/or the habitat is highly suitable or of high quality). Additionally, there are few or many records of occurrences within the last ten years and within close vicinity of the BP Master Plan area. This species has a high probability of being found in the BP Master Plan area.

Present or Assumed Present. Species was observed in the BP Master Plan area or has a recent (within five years) recorded observation in the CNDDDB or literature within the BP Master Plan area.

Special-status species expected to occur within or adjacent to the BP Master Plan area are described further below. A complete list of all special-status species with potential to occur within 5 miles of the BP Master Plan area, their regulatory status, and habitat requirements are provided in Appendix C.

Special-Status Plants

Forty-four special-status plant species have documented occurrences and/or have potential to occur within the BP Master Plan area. In addition, California wild strawberry and Monterey pine are included as a unique species in the City LCP and have been documented within the BP Master Plan area. Of the 46 special-status plant species, only 23 were determined to have a moderate or high potential to occur. Other species were excluded as possibly occurring within the BP Master Plan area due to the lack of essential habitat requirements for the species, the lack of known occurrences near the BP Master Plan area, lack of connectivity with areas of suitable or occupied habitat, and/or the BP Master Plan area is not within the species known range of distribution. The following section describes the plant species with moderate or high potential to occur within the BP Master Plan project areas in greater detail.

Blasedale's Bent Grass

Blasedale's bent grass (*Agrostis blasedaei*) is a perennial rhizomatous herb that is listed by CNPS as California Rare Plant Rank (CRPR) 1B.2. This species occurs in coastal bluff scrub, coastal dune, and coastal prairie habitats below 492 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present along the sea cliffs near Wavecrest Road and other suitable coastal prairie and coastal bluff scrub habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Bent-Flowered Fiddleneck

Bent-flowered fiddleneck (*Amsinkia lunaris*) is an annual that is listed by CNPS as CRPR 1B.2. This species occurs in coastal bluff scrub, cismontane woodland, and valley and foothill grassland habitats from 10 to 1,640 feet in elevation. Although this species has not been documented within the BP Master Plan area, this species could occur within coastal bluff and grassland habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

California Wild Strawberry

California wild strawberry (*Fragaria vesca*) is a unique species in the City due to its vulnerability to cross breeding as a result of the State's strawberry industry. This species naturally occurs along the coast in sandy soils on coastal bluffs, cliffs, and road cuts. California wild strawberry is not considered a unique species at locations over 0.5-mile from the coast. California wild strawberry could occur within the sea cliff habitat, central coastal scrub habitat, and woodland habitat in the BP Master Plan area. Therefore, this species was considered to have a high potential to occur within suitable habitat within the the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Chaparral Ragwort

Chaparral ragwort (*Senecio aphanactis*) is an annual herb that is listed by CNPS as CRPR 2B.2. This species occurs in chaparral, cismontane woodland, and coastal scrub habitats, including sometimes in alkaline habitats, from 50 to 2,624 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within the coastal scrub and woodland habitats within the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Choris' Popcornflower

Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*) is an annual herb that is listed by the CNPS as CRPR 1B.2. Choris' popcornflower occurs in mesic chaparral, coastal prairie, and coastal scrub habitats from 10-525 feet in elevation. This species is threatened by development, foot traffic, and non-native plants. Within the BP Master Plan area, Choris' popcornflower has been observed in coastal scrub habitat between the Pacific Ocean and Highway 1, including near Poplar and Railroad Avenue and within 0.5-mile of Smith Field Park near Wavecrest Road. As a result, Choris' popcornflower could occur within the disturbed/ruderal, central coastal scrub habitat, non-native grassland, and sea cliff habitat within the BP Master Plan area. Therefore, this species was considered to have a high potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Coast Lily

Coast lily (*Lilium maritimum*) is perennial bulbiferous herb that is listed by the CNPS as CRPR 1B.1. This species occurs in a broad range of plant communities, including closed-cone coniferous forest, coastal prairie, and coastal scrub habitats from 16 to 1,558 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within the coastal bluff scrub, woodland, wetland, coastal prairie, and grassland habitats in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Coast Yellow Leptosiphon

Coast yellow leptosiphon (*Leptosiphon croceus*) is an annual herb that is listed by the CNPS as CRPR 1B.1. Coast yellow leptosiphon typically occurs in coastal bluff scrub or coastal prairie habitat from 33-490 feet in elevation. Coast yellow leptosiphon has been documented in coastal bluff scrub habitat near Half Moon Bay, but not within Half Moon Bay. The habitat for this occurrence was dominated by ice plant and disturbed by cliff erosion, which is similar to much of the habitat within the BP Master Plan area. Therefore, this species was considered to have a

moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Coastal Marsh Milk-Vetch

Coastal marsh milk-vetch (*Astragalus pycnostachyus* var. *pycnostachyus*) is a perennial herb that is listed by CNPS as CRPR 1B.2. This species occurs in mesic coastal dunes, coastal scrub, and coastal salt marsh and streamside marshes and swamps below 98 feet in elevation. Although this species has not been documented in the BP Master Plan area, suitable habitat is present within the coastal scrub and wetland habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Coast Triquetrella

Coast triquetrella (*Triquetrella californica*) is a moss that is listed by CNPS as CRPR 1B.2. This species occurs in the soil in coastal bluff scrub and coastal scrub habitat from 33 to 328 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within the coastal bluff and coastal scrub habitats in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Hall's Bush-Mallow

Hall's bush-mallow (*Malacothamnus hallii*) is a perennial evergreen shrub that is listed by the CNPS as CRPR 1B.2. This species occurs in chaparral and coastal scrub habitats from 33 to 2,493 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within the coastal scrub habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Kellogg's Horkelia

Kellogg's horkelia (*Horkelia cuneata* var. *seicea*) is a perennial herb that is listed by CNPS as CRPR 1B.1. It occurs in sandy or gravelly openings in closed-cone coniferous forests, maritime chaparral, coastal dunes, or coastal scrub from 32-656 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within closed-cone coniferous forest and coastal scrub habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Marin Checker Lily

Marin checker lily (*Fritillaria lanceolate* var. *tristulis*) is a perennial bulbiferous herb that is listed by the CNPS as CRPR 1B.1. It occurs in coastal bluff scrub, coastal prairie, and coastal scrub habitat from 50-49 feet. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within coastal bluff, coastal prairie, coastal scrub, and grassland habitat in the BP Master Plan area. Therefore, this species was considered to have a

moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Marsh Microseris

Marsh microseris (*Microseris paludosa*) is a perennial herb that is listed by CNPS as CRPR 1B.2. It occurs in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland habitat from near sea level to 1,164 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present in the within woodland, coastal scrub, and grassland habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Monterey Pine

Monterey pine is a unique species in the City. This species is perennial evergreen shrub that occurs within closed-cone coniferous forests and cismontane woodlands. There are only three native stands of Monterey pine left in California including, Ano Nuevo, Cambria, and the Monterey Peninsula. This species has been introduced in many areas, including within the BP Master Plan area. This species was considered to have a high potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Oregon Polemonium

Oregon polemonium (*Polemonium carneum*) is a perennial herb that is listed by the CNPS as CRPR 2B.2. It occurs in coastal prairie, coastal scrub, and lower montane coniferous forest habitat from sea level to 6,000 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present in the within coastal prairie, coastal scrub, and coniferous habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Pappose Tarplant

Pappose tarplant (*Centromadia parryi* ssp. *parryi*) is an annual herbaceous herb that is listed as by CNPS as CRPR 1B.2. This species typically occurs in chaparral, coastal prairie, meadows and seeps, and valley and foothill grassland communities at elevations less than 1,378 feet. Although this species has not been documented within the BP Master Plan area, suitable habitat is present in the within coastal prairie, wetland, and grassland habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur in the within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Perennial Goldfields

Perennial goldfields (*Lasthenia californica* ssp. *macrantha*) are annual to perennial forbs that are listed by the CNPS as CRPR 1B.2. Perennial goldfields typically occur on mesas, benches, and bluff faces in coastal bluff scrub, coastal dunes, and coastal scrub from 16-1,710 feet in elevation. Perennial goldfields have been documented along bluff top trails north of Poplar Beach between Seymore Bridge and Francis State Beach, near Wavecrest, and the area west of Railroad Avenue. As a result, perennial goldfields could occur within the disturbed/ruderal, northern coastal scrub habitat, and sea cliff habitat within the BP Master Plan area. Therefore, this species was considered to have a high potential to occur within suitable habitat within

suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Point Reyes Horkelia

Point Reyes horkelia (*Horkelia marinensis*) is a perennial herb that is listed by CNPS as CRPR 1B.2. It occurs in sandy soil in coastal dunes, coastal prairie, and coastal scrub from near sea level to 2,477 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within coastal prairie, coastal scrub, and grassland habitats within the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Rose Leptosiphon

Rose leptosiphon (*Leptosiphon roaceaus*) is an annual herb that is listed by the CNPS as CRPR 1B.1. This species occurs in coastal bluff scrub habitat below 328 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within the coastal bluff scrub habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

San Francisco Campion

San Francisco campion (*Silene verecunda* ssp. *verecunda*) is a perennial herb that listed by the CNPS as CRPR 1B.2. It occurs in sandy soils in coastal bluff scrub, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland habitats from 98 to 2,116 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within the coastal bluff, coastal prairie, coastal scrub, and grassland habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

San Francisco Bay Spineflower

San Francisco Bay spineflower (*Chorizanthe cuspidate* var. *cuspidata*) is an annual herb that is listed by the CNPS as CRPR 1B.2. It occurs in sandy soils coastal bluff scrub, coastal dune, coastal prairie, and coastal scrub habitats from near sea level to 705 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within the coastal bluff, coastal prairie, coastal scrub, and grassland habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Short-leaved Evax

Short-leaved evax (*Hespervax sparsiflora* var. *vrevifolia*) is an annual herb that is listed by CNPS as CRPR 1B.2. It occurs in sandy soils in coastal bluff scrub, coastal dune, and coastal prairie habitat from sea level to 705 feet in elevation. Although this species has not been documented within the BP Master Plan area, suitable habitat is present within coastal bluff, coastal prairie, and grassland habitat within the BP Master Plan area. Therefore, this species was considered

to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Western Leatherwood

Western leatherwood (*Dirca occidentalis*) listed by the CNPS as CRPR 1B.2 species. It is a perennial deciduous shrub that is found in mesic broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland habitats. It is generally known from the San Francisco Bay area; specimens have been collected from Alameda, Contra Costa, Marin, Santa Clara, San Mateo, and Sonoma counties. Primary threats to this species are the loss of habitat and impacts to roadside populations during road maintenance. Western leatherwood could occur within the riparian and other woodland habitat in the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas. However, BP Master Plan projects are not currently proposed within riparian woodland areas.

Special-Status Wildlife

Thirty-two special-status animal species have documented occurrences and/or have potential to occur within the BP Master Plan area. Four wildlife species are also listed by the City LCP as unique species, including San Francisco tree lupine moth (*Grapholita edwardsiana*), California brackish water snail (*Tryonia imitator*), southern sea otter (*Enhydra lutra nereis*), and globose dune beetle (*Coelus globosus*) and could occur within the BP Master Plan area. Of the 36 special-status animal species, only 16 were determined to have a moderate or high potential to occur. Other species were determined to have no potential to occur within the BP Master Plan area due to the lack of essential habitat requirements, the lack of known occurrences within the BP Master Plan area, local range restrictions, regional extirpations, lack of connectivity with areas of suitable or occupied habitat, incompatible land use, and/or habitat degradation/alteration of on-site or adjacent lands. The following section describes species with moderate or high potential to occur within the BP Master Plan project areas in greater detail.

California red-legged frog (CRLF)

CRLF (*Rana draytonii*) is listed as threatened under FESA and is a CSSC. CRLF occurs in grassland, riparian woodland, oak woodland, and coniferous forest. This species requires quiet freshwater pools, slow-flowing streams, and freshwater marshes with heavily vegetated shores for breeding. These frogs typically stay near the shore hidden in vegetation rather than in open water. CRLF frequently occupies seasonal bodies of water and in some areas these habitats may be critical for persistence and breeding. CRLF may lie dormant during dry periods of the year or during drought, utilizing animal burrows (typically California ground squirrel; *Otospermophilus beecheyi*) to aestivate. CRLF disperse during the wet months during autumn, winter, and spring. Recently metamorphosed CRLF expand outward from their pond of origin and adults migrate toward breeding ponds. Frogs disperse through many types of upland vegetation and use a broader range of habitats outside of the breeding season. CRLF have been documented within the BP Master Plan area at the City Golf Links, the City Corporation Yard, the Caltrans mitigation site, Pilarcitos Creek, Frenchmans Creek, Arroyo Canada Verde, Wavecrest, and the Casa Del Mar neighborhood. Therefore, this species was considered to have a high potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

San Francisco garter snake (SFGS)

SFGS (*Thamnophis sirtalis tetrataenia*) is listed as endangered under both FESA and CESA. SFGS range is extremely limited, occurring only along the San Francisco Bay peninsula. The

historical distribution of the San Francisco garter snake included wetland areas on the San Francisco Peninsula from the San Francisco County line south along the eastern and western foothills of the Santa Cruz Mountains to at least Upper Crystal Springs Reservoir and Año Nuevo Point in San Mateo County, and Waddell Creek in Santa Cruz County. Today, the San Francisco garter snake is restricted to San Mateo County and has been found in creeks in Half Moon Bay.

SFGS are observed most often near standing water, such as ponds, lakes, marshes and sloughs. However, temporary ponds and other seasonal water bodies are also utilized. Emergent and bankside vegetation such as cattail, bulrush, and rush are preferred cover. The interface between stream and pond habitats and grasslands is used for basking, and nearby dense vegetation in water often provides escape cover. SFGS remain close to areas of standing water with significant emergent vegetation but breeding habitat for the species also includes open grassy uplands and shallow marshland with adequate emergent vegetation and the presence of both Pacific tree frog (*Pseudacris regilla*) and CRLF. The species also uses the dens of burrowing mammals for overwintering and as cover much of the year.

Adult snakes sometimes estivate (enter a dormant state) in rodent burrows during summer months when ponds dry. On the coast, snakes hibernate during the winter, but further inland, if the weather is suitable, snakes may be active year-round. Recent studies have documented SFGS movement over several hundred yards away from wetlands to hibernate in upland small mammal burrows; the Center for Biological Diversity reports a migration distance of 0.6 mile. San Francisco garter snakes can also move into upland habitats during summer to prey on amphibians aestivating in small mammal burrows (Barry 1993).

SFGS forages extensively in aquatic habitats. Adult snakes feed primarily on CRLF. They may also feed on juvenile bullfrogs, but they are unable to feed on the larger adults. Adult bullfrogs likely prey on smaller SFGS and may be a contributing factor in its decline. Newborn and juvenile SFGS depend heavily upon Pacific treefrogs as prey. If newly metamorphosed Pacific treefrogs are not available, the young may not survive (USFWS 2007).

The only known sightings of SFGS in Half Moon Bay are of an individual that was found near the mouth of Pilarcitos Creek during environmental review of the California Coastal Trail around 1990 and of another individual found along Pilarcitos Creek near downtown Half Moon Bay in June of 2004. The species occurs in the Pilarcitos Creek watershed near Crystal Springs Reservoir the species may occur along Pilarcitos Creek between Half Moon Bay and Crystal Springs within areas that have not been surveyed. Other areas within the BP Master Plan area have been recognized by the USFWS as suitable dispersal habitat for the species including the areas of Wavecrest, Beachwood, and Pacific Ridge. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Western pond turtle (WPT)

WPT (*Emys marmorata*) is designated as a CSSC. WPT is often seen basking above the water but will quickly slide into the water when it feels threatened. The species is active from around February to November and may be active during warm periods in winter. WPT hibernates underwater, often in the muddy bottom of a pool and may estivate during summer droughts by burying itself in soft bottom mud. When creeks and ponds dry up in summer, some turtles that inhabit creeks will travel along the creek until they find an isolated deep pool, others stay within

moist mats of algae in shallow pools while many turtles move to woodlands above the creek or pond and bury themselves in loose soil where they will overwinter.

Pond turtles are normally found in and along riparian areas, although females have been reported up to a mile away from water in search of appropriate nest sites. The preferred habitat for these turtles includes ponds or slow-moving water with numerous basking sites (e.g., logs, rocks), food sources (i.e., plants, aquatic invertebrates, and carrion), and few predators (e.g., raccoons, introduced fishes, and bullfrogs). Typically, the female excavates a nest in hard-packed clay soil in open habitats (usually on south-facing slopes) within a few hundred yards of a watercourse.

There are no records of this species occurring in Half Moon Bay, but this species is known to occur throughout the San Francisco Bay area. The creeks within the City and their associated riparian corridors, wetlands, watercourses and drainage ditches could provide suitable habitat for WPT. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

American Peregrine Falcon

American peregrine falcon (*Falco peregrinus anatum*) is designated as a CFP. This species known geographic distribution includes most of California during migration and winter. Breeding occurs along the coast of southern and central California, in the inland coastal mountains, in the Klamath Mountains and Cascade Range, in the Sierra Nevada, and in the Channel Islands. American peregrine falcon is found near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds, as well as human-made structures. Their nest consists of a scrape or a depression or ledge in an open site. American peregrine falcon is known to nest at Devils Slide, which is north of the BP Master Plan Area; however, it is not known to nest or expected to nest within the BP Master Plan area. This species is occasionally found foraging in the BP Master Plan area and winters in the area. Therefore, this species was considered to have a moderate potential to winter/migrate within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Bryant's Savannah Sparrow

Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*) is designated as a CSSC. This sparrow occupies low tidally-influenced habitats, adjacent ruderal areas, moist grasslands within and just above the fog belt, and, sometimes drier grasslands. A sizeable and important breeding and wintering population of Bryant's savannah sparrow has been documented within the BP Master Plan area. The area of highest documented use by this species is Wavecrest and the area west of Railroad Avenue, generally the area of the ocean bluffs between Kelly Avenue and Redondo Beach Road. Lower densities of this species are known to exist south of Redondo Beach Road adjacent to the golf course and some also occur to the north of Kelly Avenue. Therefore, this species was considered to have a moderate potential to nest within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Golden Eagle

Golden eagle (*Aquila chrysaetos*) is designated as a CFP. This species is a resident and migrant throughout California, except in the center of the Central Valley. It frequents rolling foothills, mountain areas, sage-juniper flats, and desert. Golden eagle is occasionally found in the BP Master Plan area in the winter, including near Wavecrest. This species is not known to or expected to nest within the BP Master Plan area. This species was considered to have a

moderate potential to winter/migrate within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Grasshopper Sparrow

Grasshopper sparrow (*Ammodramus savannarum*) is designated as a CSSC. Grasshopper sparrow is a ground nesting bird that prefers moderately open grasslands and prairies with patchy bare ground. This species avoids grassland with extensive shrub cover. Suitable habitat for grasshopper sparrow can be found throughout the BP Master Plan area in the mosaic of grassland, wetland, and coastal scrub habitats on the ocean bluffs between Kelly Avenue and Redondo Beach Road. Grasshopper sparrow has been documented as a nesting species at Wavecrest and the coastal terrace prairie habitat between Poplar Avenue and Kelly Avenue, as well as the grasslands in the vicinity of the Johnston House. Therefore, this species was considered to have a moderate potential to nest within suitable habitat within the the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*) is designated as a CSSC. The loggerhead shrike is a predatory songbird associated with open habitats interspersed with shrubs, trees, poles, fences, or other perches from which it can hunt. Nests are built in densely foliated shrubs or trees, often containing thorns, which offer protection from predators and on which prey items are impaled. Suitable habitat for Loggerhead Shrike occurs in the BP Master Plan area, particularly in the grassland and scrub habitats of the coastal bluffs. During some winters, loggerhead shrikes can be found in the BP Master Plan area on the coastal bluffs between Ocean Colony and Kelly Avenue and also in the area around the historical Johnston House. Therefore, this species was considered to have a moderate potential to nest or winter/migrate within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Northern Harrier

Northern harrier (*Circus cyaneus*) is designated as a CSSC. The northern harrier nests in marshes and grasslands, usually those with tall vegetation and moisture sufficient to inhibit accessibility of nest sites to predators. Northern harriers forage in a variety of open habitats, especially during the non-breeding season. The species is fairly widespread as a forager in grasslands, extensive wetlands, and agricultural areas in the San Francisco Bay area during migration and winter. During the breeding season, the northern harrier occurs primarily along the coast, where it nests in extensive marshes and grasslands, and in tidal marsh along South San Francisco Bay. Northern harrier is known to nest within the BP Master Plan area and regularly occurs in the BP Master Plan area in the winter. Therefore, this species was considered to have a high potential to nest or winter/migrate within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Olive-Sided Flycatcher

Olive-sided flycatcher (*Contopus cooperi*) is designated as a CSSC. This species is a summer resident and migrant in California mainly from mid-April through early October with the breeding season extending from early May to late August. Olive-sided flycatcher is uncommon to common during spring and summer in a wide variety of forest and woodland habitats throughout much of California. Nesting birds require large, tall trees, usually conifers, as a substrate for nesting and for roosting sites. Optimal breeding sites are in late-successional conifer forests with open canopies from sea level up to timberline. Suitable breeding sites for olive-sided flycatcher within the BP Master Plan area are mainly on the inland side of the Master Plan area

where taller Monterey pines and Monterey cypress occur. This species was considered to have a moderate potential to nest within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Short-eared Owl

Short-eared owl (*Asio flammeus*) is designated as a CSSC. Short-eared owl occurs in open habitat such as grasslands, wet meadows, and marshes. Requires tall, herbaceous vegetation for nesting and daytime refuge. This species typically occurs in areas where small mammals, especially voles (*Microtus* spp.), are plentiful.

This species is not expected to nest within the BP Master Plan area. Short-eared owls winter in the BP Master Plan area along the ocean bluffs, including the area of Wavecrest and the area west of Railroad Avenue. A population of up to five of these owls winters annually at Wavecrest and the area west of Railroad Avenue. Therefore, this species was considered to have a high potential to winter within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Although the species has become scarce in the last decade, Wavecrest is considered the most important wintering site for the species in San Mateo County and is one of the most important wintering sites in the San Francisco Bay Area. Although the CSSC designation protects only nesting sites, during past considerations of the Wavecrest area in 1999, staff of the CDFW indicated that protections for the population may be warranted, and biologists from the California Coastal Commission worked on protection of the wintering population under LCP policies regarding unique species.

Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a state threatened species. Swainson's hawks are only known to breed in the Central Valley, Great Basin area of northeastern California, Shasta Valley, Owens Valley, and the Mohave Desert. This species breeds in stands with few trees in juniper-sage flats, riparian corridors, and oak savannah. Swainson's hawks require suitable adjacent foraging areas such as grasslands or agricultural fields. Swainson's hawks are occasionally found in the BP Master Plan area at Wavecrest in the winter and fall migration. An individual observed in the winter of 1998-1999 was the first bird known to overwinter in this area. Therefore, this species was considered to have a moderate potential to winter the off-street trail BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

White-tailed kite

White-tailed kite (*Elanus leucurus*) is designated as a CFP. White-tailed kite is resident in a variety of open habitats, including agricultural areas, grasslands, scrub and open chaparral habitats, meadows, and emergent wetlands throughout the lower elevations of California. Nests are constructed mostly of twigs and placed in small to large trees, often at habitat edges or in isolated groves (Dunk 1995). This species preys upon a variety of small mammals and other vertebrates.

White-tailed Kites are a common winter foraging species in the BP Master Plan area within the grassland, wetlands, and scrub habitats on the ocean bluffs of Wavecrest and the area west of Railroad Avenue. In September of 2007, a communal roost of over 100 individuals could be seen in this area. White-tailed Kites have also nested in recent years at Wavecrest in trees south of Smith Field park. Nesting may also have occurred near Miramontes Point in Ocean Colony. Suitable nesting habitat for white-tailed kite is present within the tall trees throughout the BP Master Plan area. In addition, suitable foraging/wintering/migration habitat is present

within the agricultural and grassland areas within the BP Master Plan area. Therefore, this species was considered to have a high potential to nest and/or winter within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

San Francisco dusky-footed woodrat

The San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) is designated as a CSSC and is one of eleven historically described subspecies of the dusky-footed woodrat (packrats) found in forest and shrubland communities throughout much of California and Oregon. They consume a wide variety of nuts and fruits, fungi, foliage and some forbs. Many species are good climbers and rock dwellers, and dusky-footed woodrats are highly arboreal. Evergreen or live oaks and other thick-leaved trees and shrubs are important habitat components for the species. This species requires dense understory and disappears if underbrush is cleared or burned. Woodrat houses have been found in ornamental trees (e.g. *Callistemon* sp.; bottlebrush) adjacent to parking lots when there is wooded habitat with a thick understory close by. If appropriate habitat is present, woodrats can occur quite close to suburban development.

San Francisco Dusky-footed woodrats are nocturnal species that are well known for their large terrestrial stick houses, some of which can last for twenty or more years. Houses typically are placed on the ground against or straddling a log or exposed roots of a standing tree, and, are often located in dense brush. Nests are also placed in the crotches and cavities of trees and in hollow logs. Sometimes arboreal nests are constructed in habitat with evergreen trees such as live oak.

In the BP Master Plan area, San Francisco dusky-footed woodrat is fairly common in riparian vegetation and central coast scrub, and in wooded habitats (including eucalyptus), particularly on the inland side of the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Pallid Bat

Pallid bat (*Antrozous pallidus*) is designated as a CSSC. Pallid bat is found in dry, open habitats including deserts, grasslands, shrublands, woodlands, and forests. This species roosts in protected structures (e.g., old buildings, bridges, caves, mines, and hollow trees) and rocky outcrops. Pallid bat has not been reported from the BP Master Plan area, but suitable habitat for this species is present. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

Townsend's big-eared bat

Townsend's big-eared bat (*Corynorhinus townsendii*) is designated as a CSSC. It is a medium-sized bat with extremely long, flexible ears, and small yet noticeable lumps on each side of the snout. They are found in a variety of habitats from forests to desert scrub. They prefer to roost in open caves. However, they will use a variety of other roost types, particularly abandoned buildings, mines, and tunnels. When roosting they do not tuck themselves into cracks and crevices like many bat species do but prefer large open areas. This species is sensitive to disturbance, and it has been documented that they will abandon roost sites after human interference.

Townsend's big-eared bat hibernates throughout its range during winter months when temperatures are between 0°C and 11.5 degrees Celsius (32-53 degrees Fahrenheit). While

hibernating, it hangs alone or in small groups in the open, with fur erect to provide maximum insulation and with ears coiled back. These bats emerge late in the evening to forage and are swift, highly maneuverable fliers. Prey items include small moths, flies, lacewings, dung beetles, and sawflies.

Townsend's big-eared bat has been documented in San Mateo County and suitable habitat for this species is present within the BP Master Plan area. Therefore, this species was considered to have a moderate potential to occur within suitable habitat within the off-street BP Master Plan project areas or adjacent to the on-street BP Master Plan project areas.

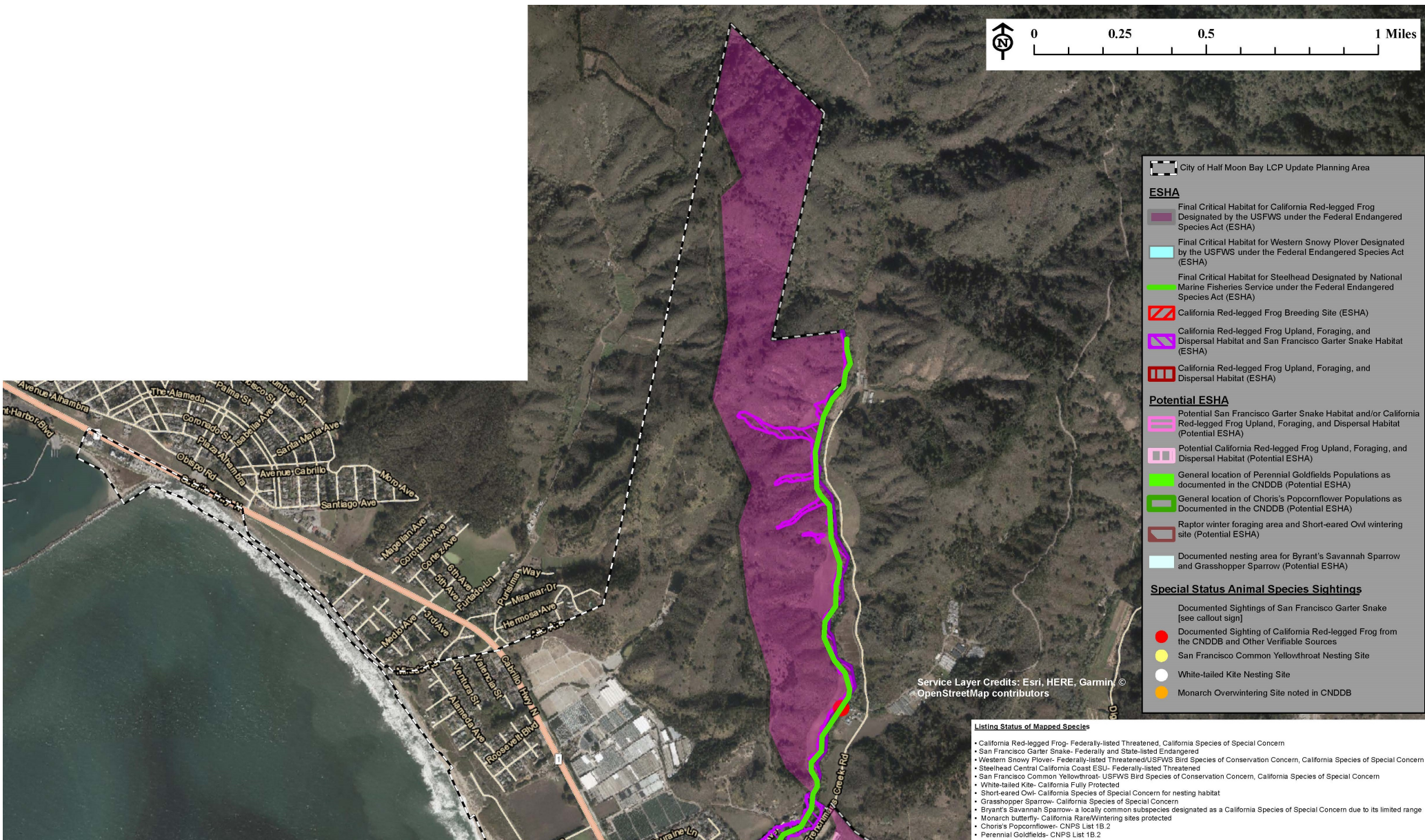
Nesting Birds and Bats

The trees, shrubs, grasses, and other natural and/or manmade landscapes found within the BP Master Plan area are nesting habitat for bird species, including some raptors, such as red-tailed hawk, white-tailed kite, sharp-shinned hawk, great horned owl, and barn owl.

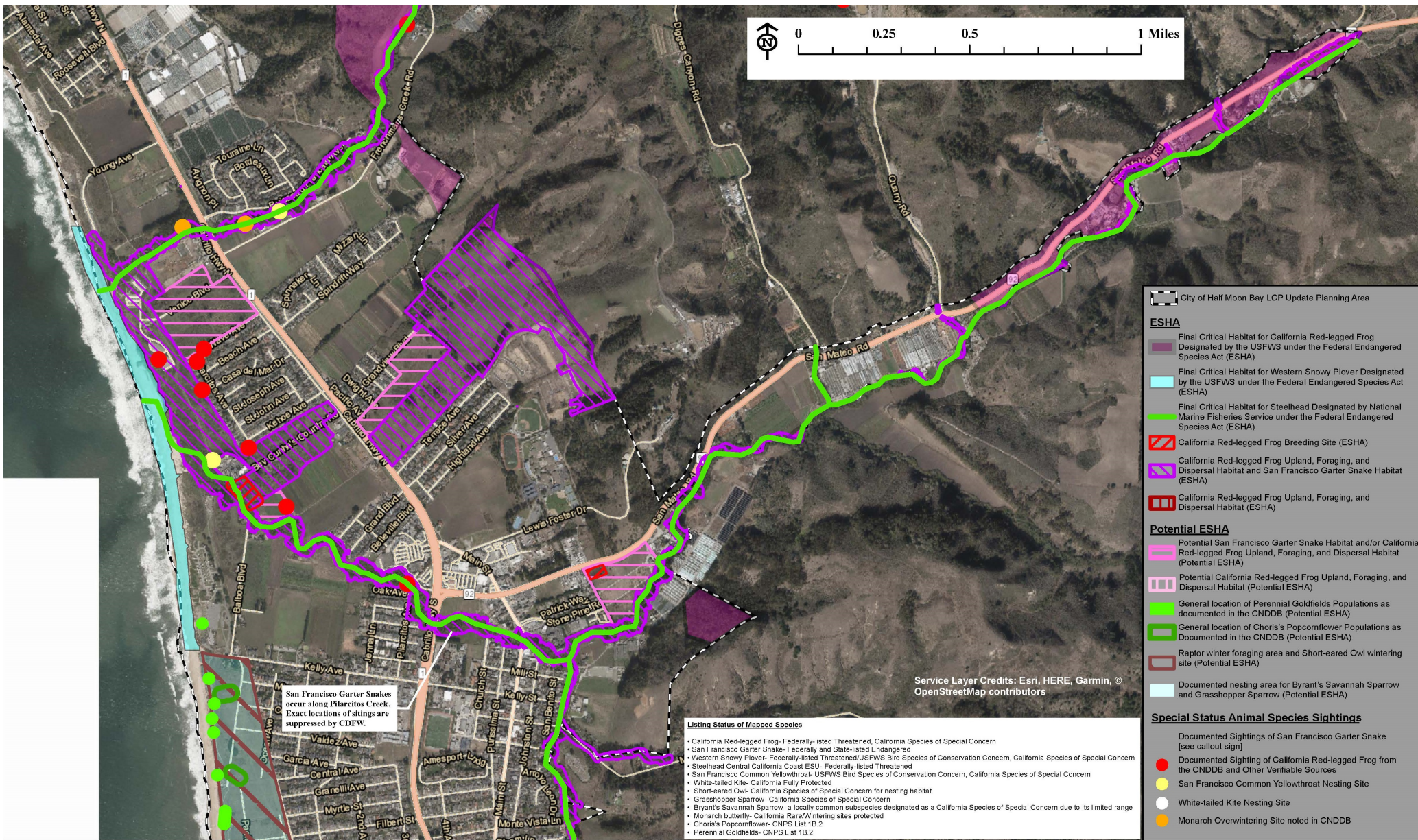
Bats tend to forage and roost near freshwater sources. Some trees and man-made structures within the BP Master Plan area, especially those near the riparian corridors of the City creeks or near other freshwater water sources, provide suitable bat roosting habitat for common bat species, pallid bat, and Townsend's big-eared bat.

Sensitive Habitats and Critical Habitat

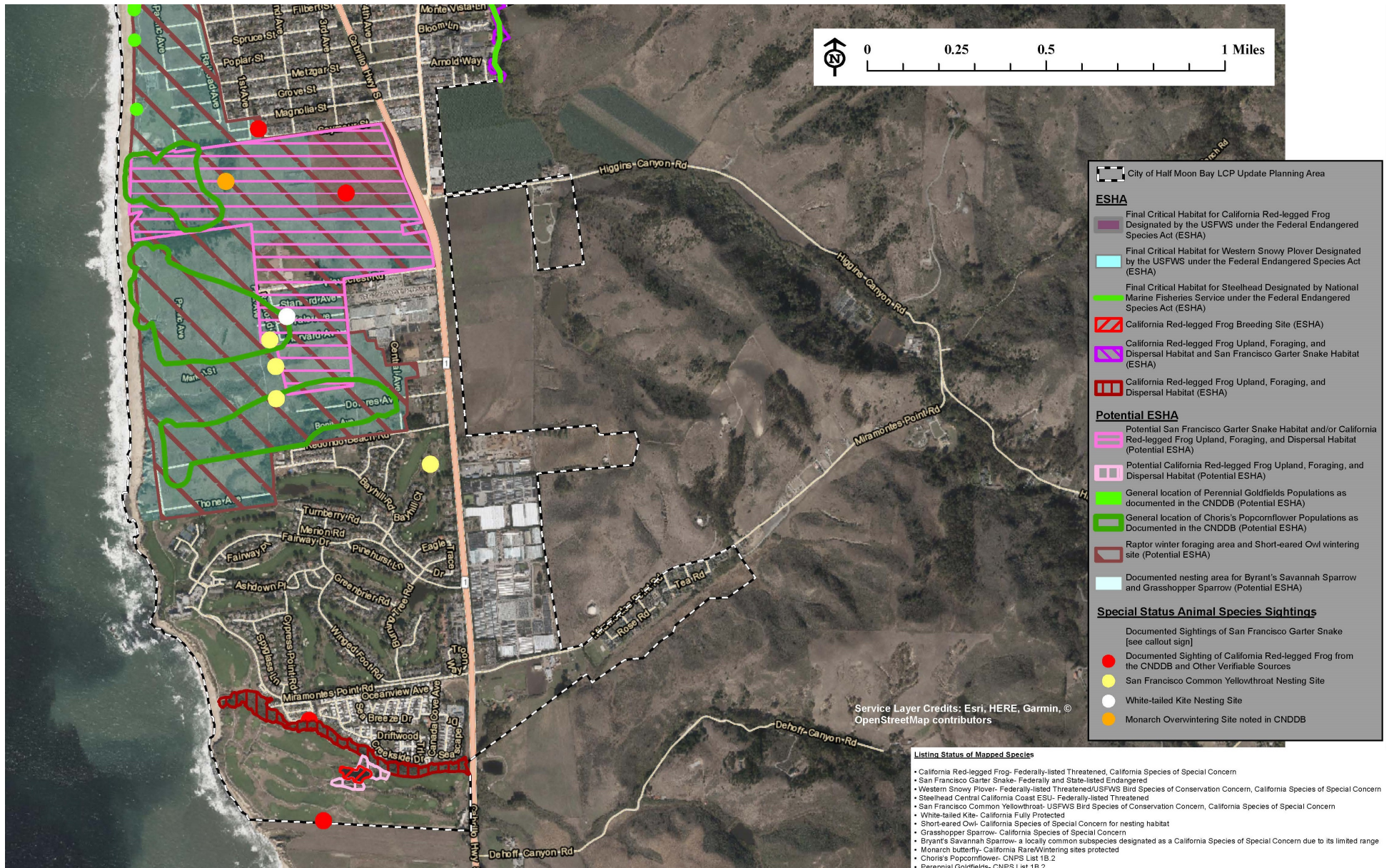
Sensitive natural communities are communities that are especially diverse; regionally uncommon; or of special concern to local, state, and federal agencies. Elimination or substantial degradation of these communities would constitute a significant impact under CEQA. The City contains central coast riparian scrub, wetlands, and coastal and valley freshwater marsh plant communities that are considered sensitive natural communities by the CDFW and other regulatory agencies. In addition, the City contains central coast riparian scrub, coastal scrub, coastal dune, coastal and valley freshwater marsh, and sea cliffs, which are considered ESHA by the CCC and the City through the LCP. Eucalyptus forest, Monterey cypress forest, Monterey pine forest, redwood forest, and non-native grassland are also present in the City and could be considered ESHAs by the CCC if suitable habitat for special-status species is present (e.g., raptor nesting habitat in any tree habitat). The City also contains designated critical habitat for CRLF, central California coast steelhead, and western snowy plover. Sensitive natural communities within the BP Master Plan area are depicted in Figure 3.4-2: Sensitive Natural Communities.



Source: Huffman-Broadway Group



Source: Huffman-Broadway Group



Source: Huffman-Broadway Group

The following sensitive natural communities occur within or adjacent to potential BP Master Plan projects.

- Central coast riparian scrub. Riparian scrub is associated with City creeks and is regulated by CDFW, RWQCB, and CCC. Riparian scrub may also be considered ESHA.
- Eucalyptus Forest. Eucalyptus forests could provide habitat for bats and/or raptors. Raptor nests have been found within eucalyptus stands in the BP Master Plan area in the past. However, the LCP also designates blue gum eucalyptus as an undesirable plant species.
- Monterey Cypress Grove. Monterey cypress groves could provide habitat for bats and/or raptors.
- Monterey Pine Forest. Monterey pine forest could provide habitat for bats and/or raptors.
- Redwood Forest. Redwood forests could provide habitat for bats and/or raptors.
- Sea Cliffs. Sea Cliff habitat is present at along the beaches of the BP Master Plan area, primarily south of Half Moon State Beach. This habitat may also support nesting birds.
- Central Coast Scrub. Central coast scrub habitat may contain special-status wildlife species such as CRLF and SFGS and/or special-status plant species.
- Non-native Grassland. Non-native grassland habitat may contain special-status wildlife species such as CRLF and SFGS and/or special-status plant species.
- Coastal Terrace Prairie. Coastal terrace prairie is considered ESHA in the Draft LUP update. This habitat occurs immediately adjacent to the top of the bluff in the vacant field area west of Railroad Avenue and within Wavecrest.
- Creek. Creek habitat is regulated by USACE, RWQCB, and CDFW. Creek habitat is also considered ESHA. Creek habitat may be designated critical habitat for steelhead.
- Seasonal Wetland. Seasonal wetlands, meeting the USACE definition of wetland and subject to jurisdiction by the USACE, RWQCB, and/or CDFW, are located throughout the BP Master Plan area. CCC jurisdictional wetlands are also located throughout the BP Master Plan area.
- Drainages and Watercourses. Drainages are present along roadways and in other locations throughout the BP Master Plan area and may be subject to regulation by the USACE, RWQCB, and/or CDFW.
- Critical Habitat. Frenchmans Creek and Pilarcitos Creeks are designated as critical habitat for the federally threatened central California coast steelhead DPS.

Species of Local Concern

Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is not a federal or state listed special status species. However, the International Union for Conservation of Nature and Natural Resources has classified the monarch migration and overwintering locations as a “threatened phenomenon” (Wells et al. 1983) and the World Wildlife Fund has classified monarch butterflies as “near threatened”. The majority of Western monarchs overwinter on the California coast from October through March at hundreds of sites from Marin County to San Diego County. There are climax sites, where monarchs persist throughout the winter, or transitional sites, where monarchs cluster only at the beginning of the season and later move to climax sites. There are three

known climax sites of monarch butterflies in Half Moon Bay and the City has identified it as a species of interest to the City (CNND 2019). The three climax sites within the planning area are in eucalyptus groves along the coast; two are along Frenchmans Creek and one in Wavecrest.

The population of monarch butterflies overwintering in California has fallen to the lowest level ever recorded. Surveys done by volunteers with the Western Monarch Thanksgiving Count (2018) found only 28,429 butterflies, an 85.2% decline from 2017—and a 99.4% decline from the number of monarchs in California in the 1980s (Xerces Society 2019). One of the main drivers behind the decline in the monarch population is hypothesized to be the loss of breeding habitat (milkweed) in the continental U.S. due to changing agricultural practices and increased herbicide use (Oberhauser et al. 2001, Hartzler 2010, Pleasants and Oberhauser 2012). An additional driver of population decline may be the loss and degradation climax sites or overwintering habitat.

The Xerces Society has identified the most immediate priority is to ensure monarchs have nectar to fuel their flight and milkweeds plants (not located proximate to overwinter sites) on which they can lay their eggs when they leave the overwintering sites. Of equal importance to ensuring monarchs have flowers for nectaring and laying eggs is protecting their overwintering sites in dense eucalyptus groves. In addition to direct loss, overwintering sites can become unsuitable for monarchs through tree cutting and removal, senescence, tree fall, and/or defoliation due to leaf beetle herbivory (Fallon and Jepsen 2013) or pitch canker (Correll et al. 1991).

A suitable overwintering site is comprised of a grove of trees that produce a favorable microclimate. The microclimate is influenced by landscape-level factors, including nearby trees that surround and provide protection of the grove from wind; and by characteristics of the individual trees in the grove, including canopy height and density, configuration of branches, and type of tree foliage. Monarchs preferentially cluster in groves with relatively low light intensity, low solar radiation, high moisture in the air, and low wind speeds, and where they are protected from freezing temperatures, since they cannot survive prolonged exposure to freezing (Calvert et al. 1983; Leong et al. 1991). In addition, monarchs must have access to water in the form of fog drip or morning dew (Tuskes and Brower 1978). In general, the grove of trees are in an amphitheater formation surrounding a clearing or opening in the canopy.

To protect the monarch's overwintering sites, the groves and surrounding areas should be given adequate protection and management.

Wildlife Movement

Habitat loss, fragmentation, and degradation resulting from land use changes or habitat conversion can alter the use and viability of wildlife movement corridors (i.e., linear habitats that naturally connect and provide passage between two or more otherwise disjunct larger habitats or habitat fragments). In general, studies suggest that habitat corridors provide connectivity for and are used by wildlife and are an important conservation tool (Beier and Noss 1998). Wildlife habitat corridors should fulfill several functions. They should maintain connectivity for daily movement, travel, mate-seeking, and migration; plant propagation; genetic interchange; population movement in response to environmental change or natural disaster; and recolonization of habitats subject to local extirpation (Beier and Loe 1992)

The suitability of a habitat as a wildlife movement corridor is related to, among other factors, the habitat corridor's dimensions (length and width), topography, vegetation, exposure to human influence, and the species in question (Beier and Loe 1992). Species utilize movement corridors in several ways. "Passage species" are those species that use corridors as thru-ways between outlying habitats. The habitat requirements for passage species are generally less than those

for corridor dwellers. Passage species use corridors for brief durations, such as for seasonal migrations or movement within a home range. As such, movement corridors do not necessarily have to meet any of the habitat requirements necessary for a passage species' everyday survival.

Large herbivores, such as deer and elk, and medium-to-large carnivores, such as coyotes, bobcats and mountain lions, are typically passage species. "Corridor dwellers" are those species that have limited dispersal capabilities – a category that includes most plants, insects, reptiles, amphibians, small mammals, birds – and that use corridors for a greater length of time. As such, wildlife movement corridors must fulfill key habitat components specific to a species' life history requirements for them to survive (Beier and Loe 1992).

No mapped habitat connectivity and wildlife migration corridors are known to be present within the BP Master Plan area. The Pacific Ocean is directly adjacent to the BP Master Plan area, which is part of the Pacific flyway and used by many birds during migration. Due to the urban development throughout the BP Master Plan area, it is unlikely that many of the BP Master Plan project areas support major migrations. The California Coastal Trail and other potential trail locations adjacent to the shoreline likely supports feeding, resting, and migration habitat for migrating seabirds and shorebirds due to its proximity to the Pacific Ocean. Many common wildlife species including raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), terrestrial coast garter snake (*Thamnophis elegans terrestris*), and western fence lizard likely use vegetated areas and/or riparian corridors (e.g., Pilarcitos Creek, Frenchmans Creek) within the BP Master Plan area for migration/movement corridors. Special-status species such as steelhead, CRLF, SFGS, San Francisco dusky-footed woodrat, and western pond turtle may also use the creeks within the City and/or their associated riparian corridors for movement and dispersal. Large undeveloped areas with wetlands, grasslands, coastal scrub, and/or drainages are also present throughout the City. Common and special-status species, including birds, mammals, amphibians, and reptiles, may migrate through these undeveloped areas.

Aquatic Features

Most BP Master Plan potential projects would avoid creeks, riparian corridors and wetlands. The alignment of trails and placement of other facilities would be designed to avoid riparian corridors and/or creeks wherever possible; however, the project areas for BP Master Plan recommended projects that cross creeks would be located within riparian corridors and/or creeks (e.g., California Coastal Trail extension, Pilarcitos Creek bridge widening near Oak Avenue Park, and the Naomi Patridge Trail Gap Closure between Heskin and Kelly Avenues). In addition, creeks and riparian corridors may be located adjacent to some of the potential project areas. The Pacific Ocean is also located directly adjacent to the California Coastal Trail extension and other potential BP Master Plan trails along the coastline. Wetlands, as defined by CCC and/or CDFW, USACE, and RWQCB, and drainage ditches and watercourses are dispersed throughout the BP Master Plan area and may be present within and/or directly adjacent to some BP Master Plan projects.

3.4.2 Regulatory Setting

Biological and water resources in California are protected under federal, state, and local laws. The laws that may pertain to the biological and water resources within the project area include the following.

Federal**Federal Endangered Species Act**

The FESA of 1973, as amended, provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under FESA. FESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with the USFWS and NOAA Fisheries, (3) prohibitions against “taking” (i.e., harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species, and (4) provisions for permits that allow incidental “take”. FESA also discusses recovery plans and the designation of critical habitat for listed species. FESA also discusses recovery plans and the designation of critical habitat for listed species.

Both the USFWS and NOAA Fisheries share the responsibility for administration of FESA. Section 7 requires federal agencies, in consultation with, and with the assistance of the USFWS or NOAA Fisheries, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. Non-federal agencies and private entities can seek authorization for take of federally listed species under Section 10 of FESA, which requires the preparation of a Habitat Conservation Plan.

Migratory Bird Treaty Act

The U.S. Migratory Bird Treaty Act (MBTA; 16 USC §§ 703 et seq., Title 50 Code of Federal Regulations [CFR] Part 10) states it is “unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill; attempt to take, capture or kill; possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for , transport or cause to be transported, carry or cause to be carried, or receive for shipment, , carriage, or export any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or in part, of any such bird or any part, nest or egg thereof...” The MBTA does not protect some birds that are non-native or human-introduced or that belong to families that are not covered by any of the conventions implemented by MBTA. The USFWS enforces MBTA. Previously, under MBTA it was illegal to disturb a nest that is in active use, since this could result in killing a bird, destroying a nest, or destroying an egg. In 2017, the USFWS issued a memorandum stating that the MBTA does not prohibit incidental take; therefore, the MBTA is currently limited to purposeful actions, such as hunting and poaching.

Clean Water Act

The Clean Water Act (CWA) is the primary federal law regulating water quality. The implementation of the CWA is the responsibility of the U.S. Environmental Protection Agency (EPA). However, the EPA depends on other agencies, such as the individual states and the U.S. Army Corps of Engineers (USACE), to assist in implementing the CWA. The objective of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Section 404 and 401 of the CWA apply to activities that would impact waters of the U.S. The USACE enforces Section 404 of the CWA and the California State Water Resources Control Board enforces Section 401.

Section 404

As part of its mandate under Section 404 of the CWA, the EPA regulates the discharge of dredged or fill material into “waters of the U.S.”. “Waters of the U.S.” include territorial seas, tidal

waters, and non-tidal waters in addition to wetlands and drainages that support wetland vegetation, exhibit ponding or scouring, show obvious signs of channeling, or have discernible banks and high-water marks. Wetlands are defined as those areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3(b)). The discharge of dredged or fill material into waters of the U.S. is prohibited under the CWA except when it follows Section 404 of the CWA. Enforcement authority for Section 404 was given to the USACE, which it accomplishes under its regulatory branch. The EPA has veto authority over the USACE’s administration of the Section 404 program and may override a USACE decision with respect to permitting.

The USACE has specific guidelines for determining the extent of its jurisdiction. The methods of delineating USACE jurisdiction are defined in the 1987 Wetlands Delineation Manual (Environmental Laboratory 1987), and the Arid West Manual (USACE 2008). The methods of delineating USACE jurisdiction are defined in the manuals and require examination of three parameters (soil, hydrology, and vegetation).

Substantial impacts to waters of the U.S. may require an Individual Permit. Projects that only minimally affect waters of the U.S. may meet the conditions of one of the existing Nationwide Permits, if other conditions of the permit are satisfied. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions.

Section 401

Any applicant for a federal permit to impact waters of the U.S. under Section 404 of the CWA, including Nationwide Permits where pre-construction notification is required, must also provide to the USACE a certification or waiver from the State of California. The “401 Certification” is provided by the State Water Resources Control Board through the local Regional Water Quality Control Board (RWQCB).

The RWQCB issues and enforces permits for discharge of treated water, landfills, storm-water runoff, filling of any surface waters or wetlands, dredging, agricultural activities and wastewater recycling. The RWQCB recommends that the application for a Certification under Section 401 of the Clean Water Act be made at the same time as other applications are provided to other agencies, such as the USACE, USFWS, or NOAA Fisheries. The application to the RWQCB is similar to the pre-construction notification that is required by the USACE. It must include a description of the habitat that is being impacted, a description of how the impact is to be minimized, and proposed mitigation measures with goals, schedules, and performance standards. Mitigation must include a replacement of functions and values, and replacement of wetland at a minimum ratio of 2:1, or twice as many acres of wetlands provided as are removed. The RWQCB looks for mitigation that is on site and in-kind, with functions and values as good as or better than the water-based habitat that is being removed or impacted. A higher mitigation ratio may be required, depending on site conditions and project impacts.

State

California Endangered Species Act

The California Endangered Species Act (CESA; Fish and Game Code 2050 et seq.) generally parallels the federal Endangered Species Act. It establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. Section 2080 of the California Fish and Game Code prohibits the take, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or by the regulations. “Take” is defined in Section 86 of the California Fish and Game Code as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or

kill.” This definition differs from the definition of “take” under FESA, in that it is specific to take of an individual, whereas FESA considers modification of habitat as potentially resulting in take. CESA is administered by CDFW. CESA allows for take incidental to otherwise lawful projects but mandates that State lead agencies consult with the CDFW to ensure that a project would not jeopardize the continued existence of threatened or endangered species.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) was created in 1977 with the intent to preserve, protect, and enhance rare and endangered plants in California (California Fish and Game Code sections 1900 to 1913). The NPPA is administered by CDFW, which has the authority to designate native plants as endangered or rare and to protect them from “take.” CDFW maintains a list of plant species that have been officially classified as endangered, threatened or rare. These special-status plants have special protection under California law.

California Coastal Act

The California Coastal Act of 1976, administered by the CCC, was created to provide long-term protection of California’s 1,100-mile coastline for the benefit of future generations. Integral to the Coastal Act are its policies which provide for protection and expansion of public access to the shoreline and recreational opportunities and resources; protection, enhancement and restoration of environmentally sensitive habitats, including intertidal and nearshore waters, wetlands, bays, estuaries, riparian habitat, certain woodlands and grasslands, streams, lakes and habitat for rare or endangered plants or animals; protection of productive agricultural lands, commercial fisheries and archaeological resources; protection of the scenic beauty of coastal landscapes and seascapes; practical establishment of urban-rural boundaries and directing new housing and other development into areas with adequate services to avoid wasteful urban sprawl and leapfrog development; environmentally sound expansion of existing industrial ports and electricity-generating power plants, as well as for the siting of coastal dependent industrial uses; and protection against loss of life and property from coastal hazards.

All development in the coastal zone and activities that impacts resources in the coastal zone requires a Coastal Development Permit. The California Coastal Act prohibits dredge and fill activities in coastal wetlands, with the exception of low impact allowable uses such as restoration or research. Additionally, no “coastal-dependent development” is permitted in wetlands.

The following are definitions given for specific ecological features that fall within the purview of the California Coastal Act: §30121 defines a wetland as: lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, or fens; Commission Regulation §13577(b) elaborates: wetlands are lands where the water table is at near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuation of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats...; §30107.5 defines an Environmentally Sensitive Habitat Area as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. The Coastal Act does not include a specific definition of riparian habitat; however riparian corridors qualify as environmentally sensitive areas.

Under the Coastal Act, local governments that lie in whole or in part within the Coastal Zone are required to prepare LCPs (Cal. Pub. Res. Code §30500). The entire BP Master Plan area is within the Coastal Zone. LCPs identify the location, type, densities, and other ground rules for future development in the coastal zone. Each LCP includes a land-use plan and its implementing measures. The Coastal Commission helps shape each LCP and then formally reviews them for consistency with Coastal Act standards. Once finalized, coastal permitting authority is transferred to the local government, with the exception of proposed development on the immediate shoreline, which stays with the Commission. In developing an LCP, a local government may choose to recognize specific botanical or wildlife resources as locally rare and that therefore garner protection.

California Fish and Game Code

Non-Game Mammals

Sections 4150-4155 of the California Fish and Game Code protects non-game mammals, including bats. Section 4150 states “A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a nongame mammal. A non-game mammal may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission”. The non-game mammals that may be taken or possessed are primarily those that cause crop or property damage. All bats are classified as a non-game mammal and are protected under California Fish and Game Code.

Nesting Birds

Nesting birds, including raptors, are protected under California Fish and Game Code Section 3503, which reads, “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” In addition, under California Fish and Game Code Section 3503.5, “it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. Passerines and non-passerine land birds are further protected under California Fish and Game Code 3513. As such, CDFW typically recommends surveys for nesting birds that could potentially be directly (e.g., actual removal of trees/vegetation) or indirectly (e.g., noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by CDFW.

California Fish and Game Code Sections 1600-1607

Sections 1600-1607 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration Agreement (LSAA) application be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The LSAA requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. CDFW reviews the proposed actions in the application and, if necessary, prepares an LSAA that includes measures to protect affected fish and wildlife resources.

Fully Protected Species and Species of Special Concern

The classification of California fully protected (CFP) species was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the

species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (§5515 for fish, §5050 for amphibian and reptiles, §3511 for birds, §4700 for mammals) deal with CFP species and state that these species "...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species". "Take" of these species may be authorized for necessary scientific research. This language makes the CFP designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with CFP species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

California species of special concern (CSSC) are broadly defined as animals not currently listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them.

Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique in constituent components, of relatively limited distribution in the region, or of particularly high wildlife value. These communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by the CDFW (i.e., CNDDDB) or the USFWS. The CNDDDB identifies several natural communities as rare, which are given the highest inventory priority (Sawyer et. al. 2009; CDFW 2018).

Local

Half Moon Bay Coastal Resource Conservation Standards

Chapter 18.38 of the Half Moon Bay Zoning Code limits or prohibits urban development within coastal resource areas that would have an adverse impact on sensitive habitat and biological resources in the City. Areas considered to be sensitive habitat include sand dunes, marine habitats, sea cliffs, riparian areas, wetlands (e.g., coastal tidelands, marshes, lakes, ponds), coastal off-shore areas containing breeding and/or nesting sites or used by migratory and resident water-associated birds for resting and feeding, areas used for scientific study and research concerning fish and wildlife and existing gam or wildlife refuges and reserves, habitats containing or supporting unique species or any rare and endangered species defined by the State Fish and Game Commission, rocky intertidal zones, riparian corridors, and coastal scrub community associated with coastal bluffs and gullies. Zoning requirements relevant to the BP Master Plan including the following:

18.38.035 Biological Report. (A) When Required. The community development director shall require the applicant to submit a biological report, prior to development review, prepared by a qualified biologist for any project located in or within one hundred feet of any sensitive habitat area, riparian corridor, bluffs and sea cliff areas, and any wetland.

1. Exception. The development of one single-family dwelling within a designated wild strawberry habitat area and not within any other designated coastal resource area shall not be subject to this requirement.

(B) Report Contents. In addition to meeting the requirements of Section 18.35.030, the biological report shall contain the following components:

1. Mapping of Coastal Resources. The biological report shall describe and map existing wild strawberry habitat on the site, existing sensitive habitats, riparian areas and wetlands located on or within two hundred feet of the project site.
2. Description of Habitat Requirements. (a) For Rare and Endangered Species. A definition of the requirements of rare and endangered organisms, a discussion of animal predation and migration requirements, animal food, water, nesting or denning sites and reproduction, and the plants, life histories and soils, climate, and geographic requirements. (b) For Unique Species. A definition of the requirements of the unique organism; a discussion of animal food, water, nesting or denning sites and reproduction, predation, and migration requirements; and a description of the plants, life histories and soils, climate, and geographic requirements.

(C) Distribution of Report. Any biological report prepared pursuant to this title shall be distributed to the U.S. Fish and Wildlife Service, the Army Corps of Engineers, the California coastal commission, the state Department of Fish and Game, the regional water quality control board, and any other federal or state agency with review authority over wetlands, riparian habitats, or water resources.

1. The biological report shall be transmitted to each agency with a request for comments from each agency with jurisdiction over the affected resource on the adequacy of the report and any suggested mitigation measures deemed appropriate by the agency.
2. Included within the transmittal of the biological report to the various agencies shall be a request for comments to be transmitted to the community development director within forty-five days of receiving the report. (Ord. C-2015-04 §1(part), 2015; 1996 zoning code (part)).

8.38.065 Bluffs and Sea-Cliffs. The following regulations are applicable to the coastal resource areas defined in this title and designated on the city's coastal resource map:

(A) Permitted Uses--Sea-Cliff or Bluff-Face. 1. Where nesting or roosting exists, only education and research activities are permitted. 2. Where nesting or roosting do not exist, the following uses are permitted: a. Education and research activities. b. Limited coastal access, pedestrian paths, and engineered stairways for coastal access. c. Limited recreational rock climbing. d. Road and underground utility construction where no feasible alternative exists. e. Intake or outfall lines, provided that the habitat is not threatened. f. Planting of drought-tolerant coastal vegetation for sea cliff stabilization purposes only.

(B) Prohibited Uses--Sea-Cliff or Bluff Face. 1. Development is prohibited on bluff-faces (except for stairways for public access to the beach). (C) Permitted Priority Uses, Bluffs. 1. Priority shall be given to coastal dependent and related recreational activities and support facilities, except that camping facilities shall be set back one hundred feet from the beach and bluffs and near-shore areas reserved for day use activities. 2. Priority shall be given to recreational uses that do not require extensive alteration of the natural environment, as both public and private development.

(D) Conditionally Permitted Uses. Where no other less environmentally damaging alternatives are available, and when required to serve coastal dependent uses, to protect existing structures, or to protect public beaches in danger from erosion, the following are permitted by use permit with CEQA compliance. 1. Sea walls and cliff retaining structures. 2. Revetments, breakwaters, groins, harbor channels, pipelines, outfalls, and other such construction that may alter natural

shoreline processes. 3. Bluff top structures within fifty-year line of cliff retreat. 4. Buildings within fifty feet of the bluff edge. 5. Grading for development.

(E) Prohibited Uses--Bluffs. Off-road vehicle use shall be prohibited in regional recreational areas as designated on the land use plan map.

(F) Development Standards. In addition to requirements listed in subsection D of this section, the following shall apply: 4. Grading for Development. a. Grading is permitted only when required to establish proper drainage, install minor improvements (e.g., trails), restore eroded areas, or provide permitted access ways. b. Any required or permitted grading must direct water runoff away from the edge of the bluff and prevent damage to the bluff by surface and percolating water. 6. Drought-Tolerant Coastal Vegetation. In the absence of a determination supported by a site-specific survey by a qualified geologist and biologist to the contrary, the following requirements shall apply: a. Vegetation shall be installed within one hundred feet from the bluff or foredune edge and maintained as part of any new development in the area. b. Vegetation shall be capable of enhancing bluff and stability. (1996 zoning code (part)).

8.38.075 Riparian Corridors and Buffer Zones. The riparian corridor and buffer zone is similar to the LCP policies 3-7 to 3-13 below.

18.38.080 Wetlands. (A) Permitted Uses. 1. Education and research. 2. Passive recreation such as bird-watching. 3. Fish and wildlife management activities.

(B) Permitted Uses with Approval of a Use Permit. 1. Commercial mariculture where no alteration of the wetland is necessary. 2. Bridges. 3. Pipelines and storm water runoff facilities. 4. Improvement, repair or maintenance of roadways.

(C) Standards. The riparian corridor standards listed in this chapter shall apply to wetlands.

(D) Wetlands Buffer Zone. The minimum buffer surrounding lakes, ponds, and marshes shall be one hundred feet, measured from the high-water point, except that no buffer is required for manmade ponds and reservoirs used for agriculture.

(E) Permitted Uses within Wetlands Buffer Zones. The riparian buffer zone uses listed in this title shall apply to wetlands buffer zones.

(F) Permitted Uses within Wetlands Buffer Zones, Where No Feasible Alternative Exists. The riparian buffer zone uses listed under this title shall apply to wetlands buffer zones.

(G) Development Standards within Wetlands Buffer Zones. The riparian buffer development standards listed under this title shall apply to wetlands buffer zones. H. Findings for Development within Wetlands Buffer Zones. The following findings shall be supported by the contents of the required biologic report that: 1. There are special circumstances or conditions affecting the property; 2. The project is necessary for the proper design and function of some permitted or existing activity on the property; 3. The project will not be detrimental to the public welfare or injurious to other property in the area in which the project is located; 4. The project will not significantly reduce or adversely impact the sensitive habitat, or there is no feasible alternative which would be less damaging to the environment; 5. The project is in accordance with the purpose of this chapter and with the objectives of the LCP land use plan; and 6. Development on a property, which has its only building site located in the buffer area, maintains a twenty-foot buffer from the outer edge of any wetland.

18.38.085 Habitats for Rare and Endangered Species. (A) Rare and Endangered Species. The potential exists for any of the following rare and endangered species to be found within the county coastal area and therefore within the city. 1. Animals. The San Francisco garter snake, California least tern, California black rail, California brown pelican, San Bruno elfin butterfly, San Francisco tree lupine moth, Guadalupe fur seal, sea otter, California brackish water snail,

globose dune beetle. 2. Plants. Rare plants known in San Mateo County are the Coast rock cress, Davy's bush lupine, Dolores campion, Gairdner's yampah, Hickman's cinquefoil, Montara manzanita, San Francisco wallflower, and Yellow meadow foam (botanical names are listed in the city's LCP/LUP).

(B) Permitted Uses. In the event that a biological report indicates the existence of any of the above species in an area, the following uses are permitted. 1. Education and research. 2. Hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the species or its habitat. 3. Fish and wildlife management to restore damaged habitats and to protect and encourage the survival of rare and endangered species.

(C) Permitted Uses within Critical Habitats. Within the critical habitat as identified by the Federal Office of Endangered Species, permitted uses are those which are deemed compatible by the U.S. Fish and Wildlife Service in accordance with the provisions of the Endangered Species Act of 1973, as amended.

(D) Buffer Zones. The minimum buffer surrounding a habitat of a rare or endangered species shall be fifty feet.

(E) Standards. 1. Animals. Specific requirements for each rare and endangered animal are listed in Chapter 3 of the LUP. 2. Plants. When no feasible alternative exists, development may be permitted on or within fifty feet of any rare plant population, if the site or a significant portion thereof shall be returned to a natural state to enable reestablishment of the plant, or a new site shall be made available for the plant to inhabit and, where feasible, the plant population shall be transplanted to that site.

(F) Habitat Preservation. Rare and endangered species habitats shall be preserved according to the requirements of the specific LCP land use plan policies tailored to each of the identified rare and endangered species and LCP/LUP implementing ordinances.

18.38.090 Habitats for Unique Species. (A) Unique Species. Unique species are those organisms which have scientific or historic value, few indigenous habitats, or some characteristics that draw attention or are locally uncommon. 1. Existing unique animals are: raptors (owls, hawks, eagles and vultures), the red-legged frog, sea mammals (whales, dolphins, seals, and sea lions). 2. Existing unique plants are: the California wild strawberry and Monterey pine.

(B) Permitted Uses. Permitted uses include: 1. Education and research; 2. Hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the species or its habitat; and 3. Fish and wildlife management to the degree specified by existing governmental regulations.

(C) Critical Habitat Preservation. Development, trampling or other destructive activity which would destroy any unique plant species shall be prevented, and plants identified as being valuable shall be successfully transplanted to some other suitable site.

(D) Eradication of Invasive Plants. Pampas grass, weedy thistles, French broom, Scotch broom, and other weedy plants which are identified to be destructively invasive shall be eradicated. 1. On public lands: invasive plants shall be removed from public lands by the appropriate public agencies, to the point feasible. 2. On private lands: the city shall encourage voluntary cooperation of farmers and landowners to remove invasive plants. 3. Plants sold by retail nurseries on the coast: the city shall encourage voluntary cooperation of retail nurseries to prevent the sale of brooms and pampas grass.

(E) Control of Blue Gum Eucalyptus. It is not desirable to encourage wholesale removal of existing stands of blue gums, however: 1. Landowners shall be encouraged to remove blue gum seedlings to prevent the slow, natural spread of the species; and 2. The city shall not allow the

planting of blue gum trees on public lands and shall discourage private landowners from planting blue gums on private property.

Half Moon Bay Local Coastal Program

Chapter 3 of the Half Moon Bay LCP prohibits any land use or development that would have significant adverse impact on sensitive habitat areas. Development in areas adjacent to sensitive habitats shall be sited and designated to prevent impacts that could significantly degrade the sensitive habitats. The LCP defines sensitive habitats as any area in which plant or animal life or their habitats are either rare or especially valuable and any area that meets one of the following criteria:

- Habitats containing or supporting rare and endangered species as defined by the State Fish and Game Commission
- All perennial and intermittent streams and their tributaries
- Coastal tide lands and marshes
- Coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding
- Areas used for scientific study and research concerning fish and wildlife
- Lakes and ponds and adjacent shore habitat
- Existing game and wildlife refuges and reserves
- Sand dunes

Sensitive habitat areas include, but are not limited to, riparian areas, wetlands, sand dunes, and habitats supporting rare, endangered, and unique species.

In Appendix A, the LCP adopts the following definition of a wetland:

“Wetland is an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Such wetlands can include mudflats (barren of vegetation), marshes, and swamps. Such wetlands can be either fresh or saltwater, along streams (riparian), in tidally influenced areas (near the ocean and usually below extreme high water of spring tides), marginal to lakes, ponds, and man-made impoundments. Wetlands do not include areas which in normal rainfall years are permanently submerged (streams, lakes, ponds and impoundments), nor marine or estuarine areas below extreme low water of spring tides, nor vernal wet areas where the soils are not hydric.”

The LCP defines "riparian area" as any area of land bordering a stream or lake, including its banks. It includes land at least up to the highest point (in cross section) of an obvious channel or enclosure of a body of water and extends to the outer edge of appropriate indicator plant species. It defines a riparian corridor as a line determined by the association of plant and animal species normally found near streams, lakes, and other bodies of fresh water: red alder, jaumea, pickleweed, big leaf maple, narrowleaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder. Such a corridor must contain at least a 50 percent cover of some combination of the plants listed.

The LCP includes many measures to protect riparian habitat in Chapter 3 (3-7 to 3-13) and defines a buffer of 50 feet outward from the limit of riparian vegetation along perennial streams (3-11 (a)). Along lakes, ponds, and other wet areas, the LCP extends the buffer zone to 100 feet from the high-water point (3-11(c)).

A list of specific policies from Chapter 3: Environmentally Sensitive Habitat Areas: Marine and Water Resources of the City's LCP relating to the protection of biological resources follows:

3-1 Definition of Sensitive Habitats: Define sensitive habitats as any area in which plant or animal life or their habitats are either rare or especially valuable and as those areas which meet one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tidelands and marshes, (4) coastal and offshore areas containing breeding and/or nesting sites and coastal areas used by migratory and resident water-associated birds for resting and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes. Such areas include riparian marine habitats, sea cliffs, endangered, and unique species.

3-2 Designations of Sensitive Habitats: Designate sensitive habitats as those, including but not limited to, shown on the Habitat Areas and Water Resources Overlay.

3-3 Protection of Sensitive Habitats: (a) Prohibit any land use and/ or development which would have significant adverse impacts on sensitive habitat areas. (b) Development in areas adjacent to sensitive habitats shall be sited and designed to prevent impacts that could significantly degrade the environmentally sensitive habitats. All uses shall be compatible with the maintenance of biologic productivity of such areas.

3-4 Permitted Uses: (a) Permit only resource-dependent or other uses which will not have a significant adverse impact in sensitive habitats. (b) In all sensitive habitats, comply with U. S. Fish and Fish and Game regulations.

3-5 Permit Conditions: (a) Require all applicants to prepare a biological report by a qualified professional to be submitted prior to development review. The report will determine if significant impacts on the sensitive habitats may occur and recommend the most feasible mitigation measures if impacts may occur. The report shall consider both any identified sensitive habitats and areas adjacent. Recommended uses and intensities within the habitat area shall be dependent on such resources and shall be sited and designed to prevent impacts which would significantly degrade areas adjacent to the habitats. The City and the applicant shall jointly develop an appropriate program to evaluate the adequacy of any mitigation measures imposed. (b) When applicable, require as a condition of permit approval the restoration of damaged habitat(s) when, in the judgment of the Planning Director, restoration is partially or wholly feasible.

3-6 Allocation of Public Funds: In setting priorities for allocating limited local, State, or Federal public funds for preservation or restoration, use the following criteria: (1) biological and scientific significance of the habitat, (2) degree of endangerment from development or other activities, and (3) accessibility for educational and scientific uses and vulnerability to overuse.

3-7 Definition of Riparian Corridors: Define riparian corridors by the "limit of riparian vegetation" (i.e., a line determined by the association of plant and animal species normally found near streams, lakes, and other bodies of fresh water: red alder, jaumea, pickleweed, big leaf maple, narrowleaf cattail, arroyo willow, broadleaf cattail, horsetail, creek dogwood, black cottonwood, and box elder). Such a corridor must contain at least a 50 percent cover of some combination of the plants listed.

3-8 Designation of Riparian Corridors: Establish riparian corridors for all perennial and intermittent streams and lakes and other bodies of fresh water in the Coastal Zone. Designate those corridors shown on the Habitat Areas and Water Resources Overlay and any other riparian area as sensitive habitats requiring protection, except for manmade irrigation ponds over 2,500 square feet surface area.

3-9 Permitted Uses in Riparian Corridors: (a) Within corridors, permit only the following uses: (1) education and research, (2) consumptive uses as provided for in the Fish and Game Code and Title 14 of the California Administrative Code, (3) fish and wildlife management activities, (4) trails and scenic overlooks on public land(s), and (5) necessary water supply projects. (b) When no feasible or practicable alternative exists, permit the following uses: (1) stream-dependent aquaculture provided that non-stream-dependent facilities locate outside of corridor, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, (3) bridges when supports are not in significant conflict with corridor resources, (4) pipelines and storm water runoff facilities, (5) improvement, repair or maintenance of roadways or road crossings, (6) agricultural uses, provided no existing riparian vegetation is removed, and no soil is allowed to enter stream channels.

3-10 Performance Standard in Riparian Corridors: Require development permitted in corridors to: (1) minimize removal of vegetation, (2) minimize land exposure during construction and use temporary vegetation or mulching to protect critical areas, (3) minimize erosion, sedimentation, and runoff by appropriately grading and replanting modified areas, (4) use only adapted native or non-invasive exotic plant species when replanting, (5) provide sufficient passage for native and anadromous fish as specified by the State Department of Fish and Game, (6) minimize adverse effects of waste water discharges and entrainment, (7) prevent depletion of groundwater supplies and substantial interference with surface and subsurface water flows, (8) encourage waste water reclamation, (9) maintain natural vegetation buffer areas that protect riparian habitats, and (10) minimize alteration of natural streams.

3-11 Establishment of Buffer Zones: (a) On both sides of riparian corridors, from the limit of riparian vegetation, extend buffer zones 50 feet outward for perennial streams and 30 feet outward for intermittent streams. (b) Where no riparian vegetation exists along both sides of riparian corridors, extend buffer zones 50 feet from the bank edge for perennial streams and 30 feet from the midpoint of intermittent streams. (c) Along lakes, ponds, and other wet areas, extend buffer zones 100 feet from the high-water point, except for man-made ponds and reservoirs used for agricultural purposes for which no buffer zone is designated

3-12 Permitted Uses in Buffer Zones: Within buffer zones, permit only the following uses: (1) uses permitted in riparian corridors, (2) structures on existing legal building sites, set back 20 feet from the limit of riparian vegetation, only if no feasible alternative exists, and only if no other building site on the parcel exists, (3) crop growing and grazing consistent with Policy 3-9, (4) timbering in "streamside corridors" as defined and controlled by State and County regulations for timber harvesting, and (no new parcels shall be created whose only building site is in the buffer area except for parcels created in compliance with Policies 3-3, 3-4, and 3-5 if consistent with existing development in the area and if building sites are set back 20 feet from the limit of riparian vegetation or if no vegetation 20 feet from the bank edge of a perennial and 20 feet from the midpoint of an intermittent stream.

3-13 Performance Standards in Buffer Zone: Require uses permitted in buffer zones to: (1) minimize removal of vegetation, (2) conform to natural topography to minimize erosion potential, (3) make provisions to (i.e. catch basins) to keep runoff and sedimentation from exceeding pre-development levels, (4) replant where appropriate with native and non-invasive exotics, (5) prevent discharge of toxic substances, such as fertilizers and pesticides, into the riparian corridor, (6) remove vegetation in or adjacent to man-made agricultural ponds if the life of the pond is endangered, (7) allow dredging in or adjacent to man-made ponds if the San Mateo County Resource Conservation District certifies that siltation imperils continued use of the pond for agricultural water storage and supply.

3-14 Designation of Sand Dune Habitats: Designate all dune areas as protected sensitive habitats.

3-15 Permitted Uses: In dune areas, permit only the following uses: (1) education and research, and (2) trails.

3-16 Development Standards: (a) Prohibit any activity which alters the profile of an active dune or which results in the disturbance or removal of dune vegetation on active dunes. (b) Control pedestrian traffic in dune areas. (c) Prohibit all non-authorized motor vehicles from dune areas. (d) Post signs informing recreational users not to disturb dunes or their natural vegetation. (e) Where development is permitted, require re-vegetation with appropriate stabilizing species (preferably native) as a condition of permit approval. (f) Prohibit any direct removal or excavation of sand from active dunes. (g) Require development to locate only landward of the most seaward stabilized dune. (h) When no feasible or practical alternative exists, permit underground utilities.

3-17 Restoration of Dunes: (a) Encourage projects by agencies and community groups to assist in the stabilization and restoration of dunes.

3-18 Public Acquisition : Encourage public acquisition of the dune habitat.

3-19 Permitted Uses: (a) Where nesting or roosting exists, permit only education and research activities. (b) Where nesting or roosting do not exist, permit only the following uses: (1) education and research, (2) limited footpaths, (3) limited recreational rock climbing, (4) road and underground utility construction where no feasible alternative exists, and (5) intake or outfall lines provided that the habitat is not threatened.

3-20 Development Standards: (a) Restrict pedestrian traffic in bluff and cliff areas and on faces to a limited number of well-defined trails which avoid seabird nesting and roosting sites. (b) Post signs informing recreational users not to disturb natural vegetation or nesting and roosting sites.

3-21 Designation of Habitat of Rare and Endangered Species: In the event the habitat of a rare and endangered species is found to exist within the City, revise the Habitat Areas and Water Resources Overlay to show the location of such habitat. Any habitat so designated shall be subject to Policies 3-22 through 3-31.

3-22 Permitted Uses: (a) Permit only the following uses: (1) education and research, (2) hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the species or its habitat, and (3) fish and wildlife management to restore damaged habitats and to protect and encourage the survival of rare and endangered species. (b) If the critical habitat has been identified by the Federal Office of Endangered Species, permit only those uses deemed compatible by the U.S. Fish and Wildlife Service in accordance with the provisions of the Endangered Species Act of 1973, as amended.

3-23 Permit Conditions: Require, prior to permit issuance, that a qualified biologist prepare a report which defines the requirements of rare and endangered organisms. At minimum, require the report to discuss: (1) animal food, water, nesting or denning sites and reproduction, predation and migration requirements, (2) plants' life histories and soils, climate, and geographic requirements, (3) a map depicting the locations of plants or animals and/or their habitats, (4) any development must not impact the functional capacity of the habitat, and (5) recommend mitigation if development is permitted within or adjacent to identified habitats.

3-24 Preservation of Critical Habitats: Require preservation of all habitats of rare and endangered species using the policies of this Plan and other implementing ordinances of the City.

3-25 San Francisco garter snake: (a) Prevent any development where there is known to be a riparian location for the San Francisco garter snake with the following exception: (1) existing man-made impoundments smaller than 1/2-acre in surface, and (2) existing man-made impoundments greater than 1/2-acre in surface, providing mitigation measures are taken to prevent disruption of not more than one-half of the snake's known habitat in that location in accordance with recommendations from the State Department of Fish and Game. (b) Require developers to make sufficiently detailed analyses of any construction which could impair the potential or existing migration routes of the San Francisco garter snake. Such analyses will determine appropriate mitigation measures to be taken to provide for appropriate migration corridors.

3-26 San Francisco tree lupine moth: Prevent the loss of any large populations (more than 100 plants in a 1/10-acre area) of tree lupine within 1 mile of the coastline.

3-27 Brackish water snail: (a) Prevent any development which could have a deleterious effect on the California brackish water snail, including any dredging of its known or potential habitat. (b) Encourage the State Department of Parks and Recreation to manage their lands in such a manner as to enhance the habitat for the California brackish water snail.

3-28 Sea otter: Encourage the appropriate agency to protect, monitor, and enhance sea otter habitats. In the development of mariculture facilities, encourage appropriate State and Federal agencies to seek measures to protect them from predation by the sea otter.

3-29 Globose dune beetle: (a) Assess, monitor, and contain the spread of dune grass. (b) Provide roped-off trails for public access to the beach with the explanation of the dune beetle and its surrounding habitat.

3-30 Rare plant search: Encourage a continued search for any rare plants known to have occurred in the San Mateo County Coastal Zone but not recently seen. Such search can be done by various persons or groups concerned with such matters.

3-31 Development standards: Prevent any development on or within 50 feet of any rare plant population. When no feasible alternative exists, permit development if: (1) the site or a significant portion thereof is returned to a natural state to allow for the reestablishment of the plant, or (2) a new site is made available for the plant to inhabit.

3-32 Designation of habitats of unique species: In the event the habitat of a unique species is found to exist within the City, revise the Habitat Areas and Water Resources Overlay to show the location of such habitat. Any habitat so designated shall be subject to Policies 3-33 through 3-36.

3-33 Permitted uses: Permit only the following uses: (1) education and research, (2) hunting, fishing, pedestrian and equestrian trails that have no adverse impact on the species or its habitat, and (3) fish and wildlife management to the degree specified by existing governmental regulations.

3-34 Permit conditions: Require, as a condition of permit approval, that a qualified biologist prepare a report which defines the requirements of a unique organism. At minimum, require the report to discuss: (1) animal food, water, nesting or denning sites and reproduction, predation, and migration requirements, and (2) plants' life histories and soils, climate, and geographic requirements.

3-35 Preservation of habitats: Require preservation of all rare and endangered species habitats using the policies of this Plan and implemented ordinances of the City.

3-36 California wild strawberry: Require any development within 0.5-mile of the coast to mitigate against the destruction of any California wild strawberry in one of the following ways:

1. Prevent any development, trampling, or other destructive activity which would destroy the plant, or
2. After determining specifically if the plants involved are of particular value, successfully transplant them or have them successfully transplanted to some other suitable site. Determination of the importance of the plants can only be made by a professional doing work in strawberry breeding.

4-4 Bluff Protection: In the absence of a determination supported by a site-specific survey by a qualified geologist and biologist to the contrary, within 100 feet from the bluff or foredune edge, drought-tolerant coastal vegetation capable of enhancing bluff and dune stability shall be installed and maintained as a part of any new development. Grading as may be required to establish proper drainage, to install minor improvement (e.g. trails) and to restore eroded areas and to provide permitted accessways shall direct water runoff away from the edge of the bluff or be handled in a manner so as to prevent damage to the bluff by surface and percolating water.

Half Moon Bay Heritage Tree Ordinance

The City of Half Moon Municipal Code contains regulations protecting heritage trees. According to Chapter 7.40 a “heritage tree” means:

- A tree located on public or private property, exclusive of eucalyptus, with a trunk diameter of twelve inches or more, or a circumference of at least thirty-eight inches measured at forty-eight inches above ground level.
- A tree or stand of trees so designated by resolution of the city council based on its finding of special historical, environmental or aesthetic value, including a resolution adopted under former Chapter 12.16 of the City of Half Moon Bay Zoning Code.
- A tree located within the public right-of-way along the entire length of Main Street or along Kelly Avenue between San Benito Street and Highway 1. (Ord. C-2013-02 §1, 2013: Ord. C-2-12 §5, 2012: Ord. C-10-11 §1(part), 2011)

In general, the City’s Heritage Tree Ordinance specifies that removal or pruning more than 1/3 of the branch or root system of a tree falling under the above definition without approval of a tree removal permit by the City Manager or his/her designee, is a violation of the City’s heritage tree ordinance. The permit process and findings are intended to prevent inappropriate pruning or removal of heritage trees. Permit stipulations require replacement of heritage trees on a one-to-one basis with 24-inch box specimens in conformance with ordinance requirements. In addition, any grading, excavation, demolition, or other construction activity that is performed within the dripline of a heritage tree, defined as the diameter of the tree’s canopy formed by branches and/or leaves extending outward from the trunk of the tree, requires submittal of a tree protection plan for review and approval by the City Manager (or his/her designee) prior to issuance of any permit for grading or construction.

3.4.3 Discussion

Section 2.9 of the Project Description presents the types of activities and projects that could be implemented under the BP Master Plan. Future implementation of BP Master Plan development and improvement projects could result in impacts to biological resources during construction and operation of new trails/amenities. While the BP Master Plan identifies specific types of development or improvements contemplated it does not present project level design plans for any specific project.

In the absence of project level information, this section identifies general areas of potential biological resources impacts that could occur from the implementation of the BP Master Plan,

and identifies how existing City policies, programs, and procedures, as well as regulatory standards and programmatic procedures, would reduce or avoid environmental impacts. This impact analysis also presents programmatic mitigation measures that would be applied to future projects to reduce or prevent biological resource impacts.

Many of the BP Master Plan recommendations are minor improvements such as improved signage, adding beacons, installing bike racks in developed areas, creating high visibility crosswalks, striping bike lanes, and improving lighting and would not be expected to result in impacts to biological resources. As each project is planned, the City would evaluate it under CEQA to identify the likelihood that it would result in environmental impacts and would prepare appropriate CEQA documentation for the project.

Would the project:

- 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 Wildlife or U.S. Fish and Wildlife Service?**

Less Than Significant Impact with Mitigation.

Adoption of the BP Master Plan would not automatically approve the construction or implementation of any projects or improvements identified in the BP Master Plan's recommendations. As funding and designs become available, specific special-status species impacts related to projects and improvements identified in the BP Master Plan would be evaluated based on project-specific conditions. A general discussion of how construction-related and operational-related activities associated with the implementation of new projects in the future could impact special-status species, including nesting birds and roosting bats, as follows.

Special-status Plants

On-Street Projects: Special-status plant species would not be impacted by BP Master Plan projects proposed within existing paved roads/right-of-ways (ROWs).

Special-status plant species may occur in habitat directly adjacent to paved roads/ROWs. However, on-street BP Master Plan activities would remain within the footprint of the existing ROW and would not impact adjacent habitat. In addition, Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any development within an existing ROW with sensitive habitat or special-status plant species nearby. The biological report would include a map of special-status plant species and/or habitat for special-status plant species, as well as measures to protect special-status plant species. In addition, Mitigation Measure BIO-1, would be applied to all BP Master Plan construction projects to ensure no impacts occur to special-status plant species adjacent to these projects. The City would also undertake separate planning efforts at each of BP Master Plan projects which would be subject to additional CEQA review once design plans become available. BP Master Plan activities within the existing paved roads/ROWs (i.e., on-street projects) would, therefore, not impact special-status plants.

Off-Street Projects: Special-status plant species may occur in habitat directly adjacent to off-street BP Master Plan projects. Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any project that occurred adjacent to sensitive habitat or with special-status plant species nearby. The biological report would include a map of special-status plant species and/or habitat

for special-status plant species, as well as measures to protect special-status plant species. In addition, Mitigation Measure BIO-1, would be applied to all BP Master Plan construction projects where a biological report identifies sensitive habitat to ensure no impacts occur to special-status plant species adjacent to these projects. The City would also undertake separate planning efforts at each of the BP Master Plan projects which would be subject to additional CEQA review once design plans become available.

Numerous special-status plant species including, but not limited to, Choris' popcorn flower and perennial goldfields, could occur within the non-native grassland, northern coastal scrub, non-native grassland, coastal terrace prairie, disturbed/ruderal, and sea cliff habitat within off-street BP Master Plan project areas. In addition, some BP Master Plan projects may occur within or adjacent to riparian, creek, and/or wetland habitat. The alignment of trails and placement of other facilities would be designed to avoid riparian corridors and/or creeks wherever feasible; however, the project areas for trails that cross creeks would be located within riparian, creek, or wetland habitat (e.g. California Coastal Trail extension, Pilarcitos Creek bridge widening near Oak Avenue Park, and the Naomi Patridge Trail Gap Closure between Heskin and Kelly Avenues). Special-status plant species at these sites could be crushed or trampled by BP Master Plan activities. Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any project that occurred at an off-street BP Master Plan project with sensitive habitat or special-status plant species. The biological report would include a map of special-status plant species and/or habitat for special-status plant species, as well as measures to protect special-status plant species. In addition, Mitigation Measures BIO-1 and BIO-2, would be applied to BP Master Plan construction projects with sensitive natural communities or potential for special-status plant species to reduce potentially significant impacts to special-status plant species.

Mitigation Measures:

Impact BIO-1 and BIO-2: Implementation of BP Master Plan recommendations could result in damage to special-status plant species.

Mitigation Measure BIO-1: Mitigation Measure BIO-1: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to review and implementation of any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, each BP Master Plan project, including on-street and off-street projects, would need to be evaluated to determine if it is within 100 feet of a sensitive habitat and a biological report would be prepared for any project that occurred within 100 feet of a sensitive habitat. These biological reports would include measures to protect sensitive natural communities and special-status plant species.

To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-1 requires that when the biological report identifies that BP Master Plan projects are located in or adjacent to sensitive plant species habitat, a qualified biologist shall work with the City and/or contractor to designate the work area and any staging areas with high-visibility orange construction fencing if deemed applicable by the qualified biologist. Disturbance to vegetation shall be kept to the minimum necessary to complete the project activities.

Effectiveness: This measure would avoid significant impacts to special-status plant species.

Implementation: This measure shall be performed by a qualified biologist or overseen by a qualified biologist.

Timing: Prior to construction.

Monitoring: Not Applicable.

Mitigation Measure BIO-2: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report for any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any off-street project with special-status plant species or sensitive natural communities. The biological report would include measures to protect sensitive natural communities and special-status plant species.

To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-2 requires that, at a minimum, the biological report recommend surveys for special-status plant species be conducted prior to approval of any BP Master Plan project with ground disturbing activities at off-street project locations where suitable habitat for such species is present.

The measure shall require a qualified botanist to conduct focused botanical surveys according to CNPS (CNPS 2001), CDFW (CDFW 2018c), and USFWS (USFWS 2002) at the proper time(s) of year during reported blooming periods when the plants are identifiable. The measure shall also require the qualified botanist to prepare a survey results report for submittal to the City and any other appropriate regulatory agencies (e.g., CDFW). The report shall include, but shall not be limited to, the following: (1) a description of the survey methods; (2) a discussion of the survey results; (3) a map showing the project area and the location of any special-status plants encountered, and (4) recommended measures to avoid impacts to special-status plant species.

A qualified botanist is an individual who possesses the following qualifications: 1) experience conducting floristic field surveys; 2) knowledge of plant taxonomy and plant community ecology; 3) familiarity with the plants of the area, including rare, threatened, and endangered species; and 4) familiarity with the appropriate state and federal statutes related to plants and plant collecting.

Effectiveness: This measure would avoid significant impacts to special-status plant species.

Implementation: A qualified botanist shall perform the survey for special-status plants and shall submit the results to the City.

Timing: The survey results report shall be submitted to the City prior to project approval. The surveys shall be conducted at the proper time(s) of year during reporting blooming periods.

Monitoring: A report presenting the results of the special-status plant survey(s) shall be submitted to the City prior to final project design.

Special-status Reptiles, Amphibians, Birds⁶, and Mammals⁷

On-Street Projects: Special-status animal species would not be impacted by BP Master Plan projects proposed within existing paved roads/right-of-ways (ROWs).

Off-Street Projects: Numerous special-status bird species (e.g., short-eared owl, golden eagle, Swainson's hawk) could occur within the BP Master Plan area and potential project area during the winter. No direct impacts (e.g., injury or mortality) are expected to occur for this species due to BP Master Plan activities. Construction activities would have temporary construction impacts that may affect these species (e.g., through grading or noise). However, many special-status bird species are not protected by local, state, or federal regulations during the winter. In

⁶ Nesting birds, including special-status nesting birds, are discussed in detail below.

⁷ Bats, including special-status bats, are discussed in detail below.

addition, these birds are expected to fly away from the disturbance and utilize habitat away from the construction area. As a result, no substantial impact is expected to occur to wintering bird species.

CRLF, SFGS, WPT, and San Francisco dusky-footed woodrat could occur in riparian corridors within the BP Master Plan area. Any BP Master Plan projects that could occur within riparian areas (e.g., California Coastal Trail extension, Pilarcitos Creek bridge widening near Oak Avenue Park and the Naomi Patridge Trail Gap Closure between Heskin and Kelly Avenues) would adhere to the Zoning Code 8.38.075 and LCP Policies 3-7 to 3-13 to ensure impacts to riparian associated species are minimized.

CRLF and SFGS could be present in or move into the work area during construction activities near seasonal wetlands, watercourses and ditches, non-native grasslands, or other suitable habitat. Direct impacts to CRLF and/or SFGS could occur if individuals of these species travel or migrate into work areas and become trapped or crushed, or if harassment occurs resulting in altered behavioral patterns that impact survival. However, Mitigation Measure BIO-3, would be applied to all construction projects within or adjacent to suitable CRLF and/or SFGS habitat to reduce potentially significant impacts to these species.

Construction activities could result in indirect impacts to CRLF, SFGS, WPT, and steelhead if stormwater carries pollutants or sediment into creeks and associated riparian habitat, as well as into the wetlands and drainages ditches within the BP Master Plan area. However, Mitigation Measure BIO-3, would be applied to all construction projects to reduce potentially significant impacts to these species.

San Francisco dusky-footed woodrat houses can be found within coastal scrub habitat and forested areas, particularly on the inland side of the BP Master Plan area. San Francisco dusky-footed woodrat houses could be destroyed, and individuals could be injured or killed during construction if a woodrat house is present within a BP Master Plan project area. However, Mitigation Measure BIO-3, would be applied to all construction projects to reduce potentially significant impacts to San Francisco dusky-footed woodrat.

Impact BIO-3: Construction activities could result in direct or indirect impacts to special-status animal species found in or adjacent to BP Master Plan projects.

Mitigation Measure BIO-3: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any project that occurred within or adjacent to sensitive habitat, including habitat for special-status animal species. The biological report would include measures to protect any special-status animal species.

To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-3 requires that the following measures be implemented prior to and during construction when the biological report identifies that BP Master Plan projects are within or adjacent to suitable habitat for special-status animal species to avoid harming special-status wildlife species: California red-legged frog (CRLF), San Francisco Garter Snake (SFGS), Western Pond turtle (WPT), and San Francisco dusky-footed woodrat.

All Species

- a) Work Area Delineation. Prior to any construction activities, the work area and any staging areas shall be delineated with wildlife exclusion fencing (see Measure 2 below) and/or high-visibility orange construction fencing.
- b) Worker Environmental Awareness Training. A qualified biologist shall conduct an employee education program prior to any construction. The education program shall consist of a brief presentation to explain biological resources concerns to contractors, their employees, and any other personnel involved in construction of the project. The program shall include, at a minimum, the following: a description of relevant special-status species, nesting birds, and bats along with their habitat needs as they pertain to the project area; a report of the occurrence of these species in the project vicinity, as applicable; an explanation of the status of these species and their protection under the federal and state regulations; a list of measures being taken to reduce potential impacts to natural resources during project construction and implementation; instructions to follow in the case of observing a special-status species on the work site, and a summary of the penalties for violating local, state, and/or federal law regarding special-status species. A fact sheet conveying this information shall be prepared for distribution to the above-mentioned people and anyone else who may enter the project area. Upon completion of training, employees shall sign a form stating that they attended the training and agree to all the conservation and protection measures.
- c) Flagging Sensitive Vegetation. Prior to initiation of any construction activities within the vicinity of sensitive habitat, a qualified biologist shall clearly delineate the sensitive habitat areas.
- d) Pre-construction Survey for Special-Status Species. A qualified biologist shall conduct a pre-construction survey within the construction area for the presence of CRLF, SFGS, WPT, and San Francisco dusky-footed woodrat (within a 50-foot buffer from the project area boundary, if possible). The survey will be conducted immediately prior to the initial onset of construction activities. If any of these, or other special-status, species are found, work will not commence until the appropriate state and/or federal resource agencies are contacted and avoidance and mitigation measures are in place.
- e) Construction Site Sanitation. Food items may attract wildlife into the construction site, which will expose them to construction-related hazards. The construction site shall be maintained in a clean condition. All trash (e.g., food scraps, cans, bottles, containers, wrappers, and other discarded items) will be placed in closed containers and properly disposed of.
- f) Species Discovery. If an animal is found at the work site and is believed to be a protected species, work shall be halted, and a qualified biologist shall be contacted for guidance. Care must be taken not to harm or harass the species. No wildlife species shall be handled and/or removed from the construction area by anyone except agency-approved biologists.

CRLF and SFGS

- g) Wildlife Exclusion Fence. In areas where suitable habitat is present (e.g., creeks, wetlands, watercourses and ditches) and upland habitat (e.g., coastal scrub, non-native grassland), and as identified by the biological report required under Zoning Code 18.35.035, prior to any ground disturbance in the project area, an agency-

- approved temporary wildlife exclusion barrier shall be installed along the limits of disturbance. An agency-approved biologist shall inspect the area prior to installation of the barrier. The barrier shall be designed to allow the California red-legged frog and San Francisco garter snake to leave the impact area and prevent them from entering the impact area, and will remain in place until all development activities have been completed. This barrier shall be inspected daily and maintained and repaired as necessary to ensure that it is functional and is not a hazard to California red-legged frogs or San Francisco garter snakes on the outer side of the barrier. The fence shall be a minimum of three feet in height, buried in the soil at least four inches, and the base backfilled to form a tight seal to discourage CRLF and SFGS from crawling under and entering the work area. If the fence cannot be buried, the base shall be weighed down and sealed with gravel bags.
- h) Silt Fencing. If work will disturb soil or includes digging or trenching, silt fencing shall be installed between any waterbodies (e.g., creeks, watercourses and ditches, wetlands) within or adjacent to BP Master Plan project areas. A silt barrier can be added to the wildlife exclusion fence instead to minimize the amount of fencing installed. During construction, the fence shall be checked every day for damage or breaks before construction activities commence. Any damage to the fence shall be repaired in a timely manner.
 - i) Daily Fence Inspections. While any wildlife exclusion fencing is present in the project area, a qualified biologist shall inspect the area inside of the exclusion fence for CRLF and SFGS every day before construction activities commence. If any special-status species are found, construction activities shall not be allowed to start until the USFWS and/or CDFW are consulted and have approved an appropriate course of action. Such action could include leaving the animal alone to move away on its own or the relocation of the animal to outside of the work area by an agency-approved biologist.
 - j) Wildlife Entrapment. The contractor shall avoid the use of monofilament netting, including its use in temporary and permanent erosion control materials. All holes greater than one-foot deep must be sealed overnight to prevent the entrapment of wildlife. Where holes or trenches cannot be sealed, escape ramps that are no greater than 30 percent slope shall be positioned such that entrapped wildlife will be able to escape. The escape ramps should be at least one-foot wide and covered/fitted with a material that provides traction.
 - k) Daily Species Inspections for Open Trenches or Holes. A qualified biologist and/or contractor trained by a qualified biologist shall inspect any open trenches or holes within BP Master Plan project areas with suitable habitat for CRLF, SFGS, and other special-status species every day before construction activities commence. If any special-status species are found, construction activities will not be allowed to start and the USFWS and CDFW will be consulted on an appropriate course of action.

San Francisco Dusky-Footed Woodrat

- l) San Francisco Dusky-Footed Woodrat. If any San Francisco dusky-footed woodrat houses are found in the project area, they shall be marked in the field with flagging and their location shall be recorded with a Global Positioning System unit. If a San Francisco dusky-footed woodrat house is identified within an area of disturbance, the City shall attempt to preserve the house and maintain an intact dispersal corridor between the house and undisturbed habitat. An adequate dispersal corridor is considered to be a minimum of 50 feet wide and have greater than 70 percent

vegetative cover. Even if such a corridor is infeasible, the City shall avoid physical disturbance to the woodrat house, if feasible. If the woodrat house cannot be avoided, CDFW shall be notified and information regarding the house location(s) and relocation plan shall be provided to the CDFW for review and approval. With approval from CDFW, a qualified biologist shall dismantle and relocate the house material. Prior to the beginning of construction, a qualified biologist shall deconstruct the house by hand. Materials from the house shall be dispersed into adjacent suitable habitat that is outside of the disturbance area. During the deconstruction process the biologist shall attempt to assess if there are juveniles in the house. If immobile juveniles are observed, the deconstruction process shall be discontinued until a time when the biologist believes the juveniles will be fully mobile. A 10-foot wide no-disturbance buffer will be established around the house until the juveniles are mobile. The house may be dismantled once the biologist has determined that adverse impacts on the juveniles would not occur. All disturbances to woodrat houses will be documented in a construction monitoring report and submitted to City.

Effectiveness:	These measures would avoid significant impacts to special-status animal species.
Implementation:	These measures shall be performed by a qualified biologist or overseen by a qualified biologist. The results of the pre-construction survey, documentation of the employee education (hand-out and sign-in sheet), and a record of the daily fence and species inspections shall be submitted to the City. The City and wildlife agencies, as appropriate, shall be notified immediately if a special-status species is discovered during construction.
Timing:	Prior to and during construction activities.
Monitoring:	A qualified biologist shall perform daily inspections of the work site during construction. A record of the daily inspections shall be submitted to the City.

Nesting Birds

All Projects: Nesting birds, including special-status species like loggerhead shrike, grasshopper sparrow, olive-sided flycatcher, Bryant's savannah sparrow, northern harrier, white-tailed kite, and other raptors, protected under California Fish and Game Code are potentially present in the vegetation, buildings, and on the ground within and adjacent to potential BP Master Plan project areas. At this time, specific designs for each BP Master Plan project have not been developed. When design information is complete, the City would review each project for its potential to impact nesting birds. If BP Master Plan activities are started during the nesting bird season (generally February 1 to September 15), injury to individuals or nest abandonment could occur. In addition, noise and increased construction activity could temporarily disturb nesting or foraging activities, potentially resulting in the abandonment of nest sites. However, as part of their standard conditions (Table 2.12-1), the City would conduct a survey for nesting birds no more than five days prior to construction in order to reduce potentially significant impacts to nesting birds.

Roosting Bats

All Projects: Large trees or tree stands and/or bridges, may provide suitable roosting habitat for bat species protected under California Fish and Game Code, including pallid bat and Townsend's big-eared bat. At this time, specific designs for each BP Master Plan project have not been developed. When design information is complete, the City would review each project

for its potential to impact roosting bats. Significant impacts to bat populations could occur if an occupied or perennial (but unoccupied) maternity or colony roost is disturbed or removed. Direct impacts to bats could also occur if BP Master Plan activities result in the disruption or abandonment of nearby active bat roosts. However, as part of their standard conditions (Table 2.12-1), the City would conduct a survey for roosting bats no more than five days prior to construction in order to reduce potentially significant impacts to roosting bats.

Monarch Butterflies

On-Street Projects: Monarch butterflies would not be impacted by BP Master Plan projects proposed within existing paved roads/right-of-ways (ROWs).

Off-Street Projects: Monarch butterflies are known to overwinter in three locations within the BP Master Plan area; two populations are along Frenchmans Creek and the third population is near Wavecrest. The BP Master Plan recommended improvements are near these overwintering sites. If construction of a BP Master Plan project impacts the habitat of an overwintering site or impacts the habitat surrounding a site, monarch butterfly use of the site may be impacted. When design information is complete, the City would review each project near known overwintering populations of monarch butterflies for its potential to impact the eucalyptus groves hosting the butterflies. Significant impacts to overwintering monarchs could occur if trees in the overwintering site are trimmed, thinned, or damaged during project construction; or if surrounding trees are trimmed or removed. The planting of new trees in the overwintering site or around the site could also significantly impact overwintering monarchs by altering existing habitat conditions within the site. The City would design projects in these areas to avoid impacts to the overwintering sites and surrounding habitat. Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any development within 100 feet of any sensitive habitat area. As a result, a biological report would be prepared for any BP Master Plan project within 100 feet of the overwintering eucalyptus groves. The biological report would include a map of the grove, as well as measures to protect it. In addition, Mitigation Measure BIO-1, would be applied to all BP Master Plan construction projects to ensure no impacts occur to sensitive natural communities, including eucalyptus groves adjacent to these projects.

- 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 Wildlife or US 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?**

Less Than Significant Impact With Mitigation (Responses b-c). Sensitive vegetation communities and ESHA, including riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or designated by the USFWS and CDFW occur within the BP Master Plan area.

On-Street Projects: On-street BP Master Plan activities would occur within already developed areas/existing ROWs (e.g., sidewalk improvements, crossing improvements, Class II bike lanes, Class III bike lanes, and Class IV separated bikeways) and would avoid any sensitive natural communities, ESHA, and/or critical habitat.

Sensitive natural communities and wetlands could occur adjacent to on-street BP Master Plan projects. However, on-street BP Master Plan activities would remain within the footprint of the existing ROW and would not impact adjacent habitat. In addition, Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any development within 100

feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any development within an existing ROW with sensitive habitat or special-status plant species nearby. The biological report would include a map of sensitive natural communities, as well as measures to protect sensitive natural communities. In addition, Mitigation Measure BIO-1, would be applied to all BP Master Plan construction projects to ensure no impacts occur to sensitive natural communities adjacent to these projects. The City would also undertake separate planning efforts for BP Master Plan projects which would be subject to additional CEQA review once design plans become available. BP Master Plan activities within the existing paved roads/ROWs (i.e., on-street projects) would, therefore, not directly impact sensitive natural communities.

BP Master Plan projects could indirectly cause the degradation of surface or ground water quality due to erosion and transport of fine sediments downstream of the construction area and unintentional release of contaminants into waters that are outside of the footprint of project. However, Mitigation Measure BIO-4 and standard water quality protection BMPs (Table 2.12-1) would be applied to all construction projects to reduce potentially significant impacts to sensitive natural communities and wetlands from stormwater runoff.

Off-Street Projects: The existing BP Master Plan area contains sensitive natural communities, ESHA, and/or critical habitats as defined by USFWS, CDFW, or the City's LCP and/or Zoning Code. These habitats include, but are not limited to, riparian and creek habitat, seasonal wetlands, CCC wetlands, coastal terrace prairie habitat, as well as sea cliff habitat. In addition, redwood woodland habitat, Monterey cypress groves, Monterey pine woodland, non-native grassland, coastal scrub, and eucalyptus habitat would be considered ESHA if they support special-status plant or animal species, nesting birds, and/or roosting bats.

Off-street BP Master Plan projects that could occur within riparian areas (e.g., California Coastal Trail extension, Pilarcitos Creek bridge widening near Oak Avenue Park, and the Naomi Patridge Trail Gap Closure between Heskin and Kelly Avenues) would adhere to Zoning Code 8.38.075 and Half Moon Bay LCP policies 3-7 to 3-13 and permits from the CDFW, USACE, and/or RWQCB would be obtained, as appropriate. In addition, Mitigation Measure BIO-4 would be applied to all construction projects to reduce potentially significant impacts to sensitive natural communities. As a result, impacts from potential projects in riparian areas would be less-than significant.

Future development of the projects envisioned in the BP Master Plan would be planned according to adopted City policies and standards and should avoid impacts to sensitive natural vegetation communities. However, alteration of sensitive natural vegetation communities could occur when undeveloped land is converted to new uses. The City would adhere to Zoning Code 18.35.035, which requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, each project along with a 100-foot buffer would be evaluated for sensitive natural communities and a biological report would be prepared and sensitive habitat would be mapped for any project that occurred within 100 feet of a sensitive natural community to ensure impacts to sensitive natural communities are minimized. In addition, Mitigation Measure BIO-4 would be applied to all construction projects to reduce potentially significant impacts to sensitive natural communities.

Future development of the projects envisioned in the BP Master Plan could have indirect impacts on City creeks and associated riparian habitat, seasonal wetlands, watercourses and ditches, as well as other waterbodies downstream of potential off-street trail project locations. Specifically, construction activities could indirectly cause the degradation of surface or ground water quality due to erosion and transport of fine sediments downstream of the construction

area and unintentional release of contaminants into waters that are outside of the footprint of the project. However, Mitigation Measure BIO-4 and standard water quality protection BMPs (Table 2.12-1) would be applied to all construction projects to reduce potentially significant impacts to sensitive natural communities and wetlands from stormwater runoff.

Impact BIO-4: BP Master Plan projects could inadvertently lead to the loss of sensitive vegetation communities.

Mitigation Measure BIO-4: Any BP Master Plan project shall be designed to avoid sensitive vegetation communities (e.g., ESHA), to the greatest extent feasible. Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. The biological report would include a map of sensitive natural communities and measures to protect sensitive natural communities.

If, despite avoidance measures, the project results in any loss of sensitive vegetation communities or the loss of habitat quality, compensatory mitigation shall be required at the minimum ratios required by the California Coastal Commission (10:1 for native tree replacement, 4:1 for wetlands, 3:1 for riparian and other specified habitats, and 2:1 for coastal sage scrub not occupied by listed species), or more if required by other regulatory agencies, by means of restoration (e.g., removing non-native plants and planting native vegetation) in similar habitat adjacent to the project (i.e., area of disturbance). The City shall prepare a Restoration and Monitoring Plan for any loss of sensitive vegetation communities. The Restoration and Monitoring Plan shall be made available to the public for review for a period of at least 30 days prior to Plan implementation. The Plan shall describe the methods and practices to be employed, and include, at a minimum, the following:

- A clear statement of the goals of the restoration for all habitat types;
- Designation of a qualified biologist as the Restoration or Mitigation Manager responsible for all phases of the restoration;
- Identification of the parties responsible for the Plan implementation;
- A specific grading plan, if the topography must be altered;
- A specific erosion control plan, if soil or other substrate will be disturbed during restoration;
- A weed eradication plan designed to eradicate existing weeds and control future invasion by exotic species;
- A planting plan based on the natural habitat type;
- An irrigation plan that describes the method and timing of watering and ensures removal of watering infrastructure by the end of the monitoring period;
- A monitoring plan with performance goals/success criteria, assessment methods, and a schedule; and
- Feasible contingency measures if success criteria are not met within the established timeframe.

Effectiveness: This measure would avoid significant impacts on sensitive vegetation communities.

Implementation: A Restoration and Monitoring Plan shall be prepared for any sensitive vegetation community impacts. The Restoration and Monitoring Plan shall be submitted to the City for review and

approval and made available to the public for a review period of at least 30 days prior to the Plan implementation.

Timing: During and following construction.

Monitoring: Any restoration and monitoring work shall be documented and submitted to the City. Monitoring shall be continued until the success criteria identified in the Restoration and Monitoring Plan are met.

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?

Less Than Significant Impact.

All Projects: The majority of the area where BP Master Plan projects would be constructed is urbanized and developed. The developed and urbanized portions of the BP Master Plan area do not generally support wildlife movement corridors or wildlife nursery sites.

Some off-street BP Master Plan projects are located in more open areas where wildlife may migrate through (e.g., sea cliff areas, coastal terrace prairie, non-native grassland, coastal scrub). However, existing bicycle and/or pedestrian routes already exist in the vicinity of these areas and implementation of the BP Master Plan would not substantially interfere with the movement of wildlife species.

BP Master Plan activities would have temporary construction impacts that may affect wildlife movement (e.g., through grading or noise), but are not expected to result in permanent barriers to wildlife movement. Therefore, BP Master Plan activities would not significantly impact wildlife movement.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (including the County Heritage and Significant Tree Ordinances)?

Less Than Significant Impact.

All Projects: As part of the design and planning process for each BP Master Plan project, the City would have to comply with the policies of the LCP, Chapter 18.38 of the Zoning Code, and the Heritage Tree Ordinance. Implementation of the BP Master Plan would be designed, constructed and maintained in a manner consistent with all relevant City regulations. The City would review potential BP Master Plan projects to ensure their conformance with adopted City policy and regulations intended to prevent significant impact to sensitive biological resources. Therefore, the project would not conflict with local policies. In addition, the Standard Conditions and Mitigation Measures presented in this IS/MND are consistent with the City's General Plan and LCP policies and ensure that special-status wildlife and vegetation, sensitive vegetation communities, and aquatic resources are protected.

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?

No Impact.

All Projects: The BP Master Plan area is not within an area covered by an HCP or NCCP. The BP Master Plan would, therefore, have no impacts on an HCP or NCCP.

3.4.4 References

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3.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.5.1 Environmental Setting

The City of Half Moon Bay is an area of high sensitivity for the presence of archaeological, cultural, and historic resources. The Half Moon Bay region has a long, documented prehistory and history and is an important piece in the development of Central California. The City acknowledges that the protection and identification of its known and unknown cultural resources is of utmost importance for future planning needs.

Prehistoric

The area encompassed by the City is a region historically occupied by the tribelets of the Costanoan linguistic group. Descendants of Costanoan speakers prefer to be called by the name of the tribelet from which they are descended. When their heritage is mixed, or the specifics have been lost over generations, they prefer the use of a native term, Ohlone, rather than the European-imposed term Costanoan ("coastal dwellers"). The Ohlone-speaking peoples lived in tribelets or nations that were dialect distinct from each other, autonomous, and territorially separated from each other. Each tribelet consisted of one or more permanent villages, with various seasonal temporary encampments located throughout their territory for the gathering of raw material resources, hunting, and fishing. The Ohlone lived in extended family units in domed dwellings constructed from tule, grass, wild alfalfa, and ferns. The subsistence practices included the consumption of plant resources such as acorns, buckeyes, and seeds that were supplemented with the hunting of elk, deer, grizzly bear, mountain lions, sea lions, whales, and waterfowl. The Ohlone peoples practiced controlled burning on an annual basis throughout their territory as a form of land management to insure plant and animal yields for the coming year.

Historic

The first Europeans to reach the San Francisco area were Spanish explorers in 1769 as part of the Portolá expedition. In 1774, the de Anza expedition had set out to convert the Native American tribes to Christianity, resulting in the establishment of (among others) Mission San Francisco de Asis (Mission Dolores) (founded in 1776) and Mission Santa Clara de Asis (founded in 1777). The area was initially used by the Mission San Francisco de Asis as grazing areas for cattle, oxen and horses, and an agricultural settlement began to form in this area.

During the Mexican rule of California (1822 through 1848), large tracts of land were issued to private individuals, usually cattle ranchers and hide and tallow traders. The current City of Half Moon Bay straddles two of these land grants. To the north of Pilarcitos Creek was the Rancho

Corral de Tierra, given to José Tiburcio Vásquez in 1839. To the south of the creek, where the original site of Half Moon Bay was located, was Rancho Miramontes, given to Juan Jose Candelario Miramontes in about 1841. The Miramontez family established Rancho San Benito on the southern bank of the arroyo. They built an adobe residence in present-day Half Moon Bay, which was said to have remained standing into the 1900s (Half Moon Bay, 2017).

The community was originally called San Benito and later “Spanishtown,” in part because of the influence of its founding Hispanic families. It was first platted in 1863. By the mid-late 1800s, stores, churches, and at least one saloon had been built. Half Moon Bay is considered the first town in San Mateo County, founded in 1840. The area was remote compared to other population centers; agriculture was the main source of local commerce. In the History of San Mateo County, California, Half Moon Bay was described as “one of the finest agricultural districts of [the] county, located upon what was formerly one of the largest and prettiest streams of the county”. The developing port was renamed in honor of the bay’s unique form in 1874 and a United States Post Office was established (as “Halfmoon” Bay). By 1905, the spelling was revised to the current three-word combination of Half Moon Bay.

Modern History

The arrival of the Ocean Shore Railway in 1908 brought a gradual growth to the settlement, although the railroad ceased to run in 1920, due to financial difficulties and the rising popularity of the motorcar. The year 1920 also brought renown to Half Moon Bay with the introduction of Prohibition. The alcohol smugglers, or ‘rum runners’, utilized the hidden coves and dense fog that frequently surrounded the area to serve roadhouses and inns with illegal alcohol. A number of these establishments are still in existence as restaurants today.

It was not until the postwar (1950s) economic boom, that Half Moon Bay began to significantly grow in size, leading to its incorporation in 1959. The following year, in 1960, the City’s population was 1,957. By 2010, the population had grown to 11,324, with a 2018 estimate of 12,697.

Archaeological Resources

There are 15 documented prehistoric and historic period archaeological resources in the BP Master Plan area, including prehistoric shell middens and lithic scatters, historic debris scatters, and historic structural remnant (City of Half Moon Bay, 2018).

The LCLUP: Cultural Resources Draft Element October 2018 Planning Commission Working Draft describes the following archaeological sites that are known to exist within the City’s BP Master Plan area and vicinity include:

- Shell middens and shell mounds are characterized by concentrations of marine shells that were harvested and processed for consumption.
- Lithic debris and tool scatters are characterized by the presence of tool stone manufacturing waste flakes, core fragments, and formed flaked stone tools such as projectile points, knives, and scrapers.
- Habitation sites are characterized by long-term, extended use, with various activity areas, which may include evidence of food processing, tool manufacturing, and ceremonial events.
- Temporary campsites are generally limited use sites may contain evidence of food manufacturing or tool production.

- Historic examples of the types of archaeological sites that are known to exist within the BP Master Plan area include ranching, dairy, and whaling facilities structures and remnants.

Historic Resources

Historic resources consist of resources in the built environment, including standing buildings and structures, roads, fences, water conveyance features, and bridges, which are greater than fifty years in age. There are 51 documented built environment resources in Half Moon Bay. Given the historical development and importance of the region, it can be assumed that many of the historic-era (i.e. greater than 50 years) buildings and structures within the City may in fact be considered historical resources or historic properties (City of Half Moon Bay, 2018).

Half Moon Bay's historic resources are especially important in the context of the Coastal Zone. Resources are predominately associated with historic era farms or the town's first buildings clustered around what is today Downtown Main Street. The City's historic resource inventory is not comprehensive. It has been assembled over time as individual and groupings of structures were evaluated. Many structures have been identified as potentially eligible for resource listing, at least at the local level, but have not been evaluated. Also, there are no designated historic districts in Half Moon Bay, even though there are several clusters of structures that may be eligible for district designation is so far as they collectively represent a significant time in the town's history or authentically retain historic architectural integrity. Half Moon Bay's historic resources include numerous properties on or eligible for the National Register of Historic Places (NRHP) and/or California Register of Historical Resources (CRHR). Many more are locally eligible. The Main Street Bridge was the City's most recent National Register listing (City of Half Moon Bay, 2017).

Cultural Resources in BP Master Plan Area

The BP Master Plan project area encompasses the entire City of Half Moon Bay. There are 66 cultural resources on record with the Northwest Information Center (NWIC). Of these, 15 are archaeological in nature. The Office of Historic Preservation's (OHP) Historic Property Data (HPD) system records over 150 properties within City limits. The discrepancy between the HPD and the NWIC appears to be the result of some properties not formally recorded and; therefore, not included in the NWIC. Both existing and proposed bike and pedestrian paths pass adjacent to existing historic resources and properties on the HPD and those recorded by the NWIC. No resource would be physically changed or altered by implementation of the BP Master Plan.

3.5.2 Regulatory Setting

Federal, state, and local laws and regulations governing cultural resources exist to protect cultural, historic, and paleontological resources from damage and destruction. Violation of these laws and regulations would constitute a significant impact to cultural and paleontological resources. The laws and policies that pertain to the cultural resources potentially present on the BP Master Plan area or are affected by potential projects are discussed below.

Federal

National Historic Preservation Act

Significant archaeological and built environment resources are protected by the National Historic Preservation Act (NHPA). The National Register is an inventory of the United States' historic resources and is maintained by the National Park Service. The inventory includes buildings, structures, objects, sites, districts, and archeological resources meeting the following criteria as specified in the Code of Federal Regulations

The criteria for determining whether a property is eligible for listing in the NRHP are found in Title 36 of the Code of Federal Regulations, Section 60.4 and are reproduced below:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

- a. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- b. That are associated with the lives of persons significant in our past; or
- c. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinctions; or
- d. That have yielded, or may be likely to yield, information important in prehistory or history.

For a property to qualify for the NRHP, it must meet at least one of the above National Register Criteria for Evaluation by being associated with an important context and retaining historic integrity of those features necessary to convey its significance.

State

Coastal Act Policy – 30244 Archaeological or Paleontological Resources

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required. In August 2018, the Coastal Commission adopted a comprehensive tribal consultation policy. The new policy, along with the Coastal Commission's LCP update guidance, emphasizes the importance of consultation with Native American tribes, consistent with other state law and the California Natural Resources Agency tribal consultation policy.

California Environmental Quality Act

Pursuant to CEQA, a historical resource is a resource listed in, or eligible for listing in, the CRHR. In addition, resources included in a local register of historic resources or identified as significant in a local survey conducted in accordance with state guidelines are also considered historic resources under CEQA, unless a preponderance of the facts demonstrates otherwise. Per CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude a Lead Agency, as defined by CEQA, from determining that the resource may be a historic resource as defined in California Public Resources Code (PRC) Section 5024.1. CEQA applies to archaeological resources when (1) the archaeological resource satisfies the definition of a historical resource or (2) the archaeological resource satisfies the definition of a "unique archaeological resource." A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

1. The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
2. The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.

3. The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person. (Public Resources Code, Section 21083.2)

Under CEQA, if an archeological site is not a historical resource but meets the definition of a “unique archeological resource,” impacts to the resource should be avoided or fully mitigated.

California Register of Historical Resources

The OHP administers CRHR, which was established in 1992 through amendments to the Public Resources Code, as an authoritative guide 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 from substantial adverse change. The CRHR includes resources that have been formally determined eligible for, or listed in, the NRHP, State Historical Landmark Number 770 or higher, Points of Historical Interest recommended for listing by the State Historical Resources Commission, resources nominated for listing and determined eligible in accordance with criteria and procedures adopted by the State Historical Resources Commission, and resources and districts designated as city or county landmarks when the designation criteria are consistent with CRHR criteria. To be eligible for the CRHR, a resource must:

- a. Be associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural history of California or the United States; or
- b. Be associated with the lives of persons important to local, California or national history; or
- c. Embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that possess high artistic values; or
- d. That have yielded, or may be likely to yield, information important to the prehistory or history of the local area, California or the nation.

A resource must also be at least 50 years old and must possess several of the seven aspects of integrity to be eligible for listing in the NRHP and/or the CRHR. Integrity is defined as “...the authenticity of an historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance” (OHP 2006). The seven levels of integrity are location, design, setting, materials, workmanship, feeling, and association. Resources that are listed in the NRHP are automatically eligible for the CRHR (PRC §5024.1(c)).

Both NRHP and CRHR evaluations must be made within an appropriate historic context. A historic context includes three components: a time period, place, and event. A historic context is developed through one or more research themes to help identify the resources’ significance at the local, state, or national level. A resources’ integrity is based on its ability to convey its significance through data requirements. Data requirements can best be described as evidence found within the archaeological record that conveys the resources’ historical significance. If the appropriate data requirements are lacking, the resource arguably lacks significance and is therefore not an eligible resource.

California Senate Bill 18 and Assembly Bill 52

State planning law requires cities and counties to consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Places. Senate Bill (SB) 18 requires cities and counties to contact and consult with California Native American tribes prior to amending or adopting any general plan or specific plan or designating land as open space. For purposes of consultation with tribes, the Native American Heritage

Commission (NAHC) maintains a list of California Native American Tribes with whom local governments must consult. Assembly Bill (AB) 52 furthers SB 18 and provides for consideration of tribal cultural values. Tribal cultural values may include a site feature, place, cultural landscape, sacred place or object. The cultural value must be either on or eligible for the CRHR; or treated as a tribal cultural value pursuant to the discretion of the city or county

Health and Safety Code, Sections 7050 and 7052

Health and Safety Code Section 7050.5 declares that, in the event of the discovery of human remains outside a dedicated cemetery, all ground disturbances must cease, and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Public Resources Code Section 5097.5

Public Resources Code Section 5097.5 states, "it is illegal for any person to knowingly and willfully excavate or remove, destroy, injure, or deface cultural resources." Furthermore, the crime is a misdemeanor punishable by a fine not to exceed \$10,000 and/or county jail time for up to one year. In addition to a fine and/or jail time, the court can order restitution, and restitution will be granted of the commercial and archaeological value of the property.

Penal Code Section 622.5

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Local

City of Half Moon Bay Local Coastal Program - 1996

The City's LUP section from 1996, based on background information from 1979, outlines policies relating to the protection and identification of archaeological and paleontological Resources. It discusses the overall heightened sensitivity of the Half Moon Bay region and provides policies that include archaeological study prior to issuance of a grading permit for certain projects. Archaeological surveys are required for;

- projects of one acre or more within archaeologically sensitive zones, and
- municipal improvement projects, and general protection of archaeological resources where feasible.

The section also notes that no known paleontological resources of significance occur within Half Moon Bay.

City of Half Moon Bay Municipal Code / Historic Resources Preservation

Chapter 14.39 of the City's Municipal Code sets forth that the City should provide for the protection, preservation, enhancement and perpetuation of those buildings, structures, objects and areas of historic, architectural and engineering significance which contribute to the cultural heritage of the City and integrate the preservation of historic resources into public and private land use management and development processes. The code establishes that the Planning Commission shall have the power and duty to, among other things, conduct a comprehensive survey of properties within the boundaries of the City to establish an official inventory of historic resources, and would be updated periodically as needed.

City of Half Moon Bay Municipal Code / Title 18

Title 18 (Zoning) of the City of Half Moon Bay Municipal Code contains the several provisions regarding the identification, treatment and protection of archaeological and historical resources including Chapter 18.38 Coastal Resources Protection and Chapter 18.39 Historic Resources Preservation.

Chapter 18.38 Coastal Resources Protection requires the community development director to prepare and maintain maps of all designated coastal resource areas within the City including:

Archaeological Resource Areas. Any area shown in the Half Moon Bay LUP map of potential archeological resources as potentially containing archaeological resources. Specific areas are:

1. The coastal strip where exploitable resources occurred;
2. All major creek shores, such as Pilarcitos, Arroyo Leon, and Frenchmans Creek;
3. All minor inland water courses, including historic or prehistoric springs, streams or marshes;
4. The foothill strip above the over two-hundred-foot elevation;
5. Areas of prehistoric site evidence and pertinent historic places such as cemeteries, houses and buildings; and
6. Isolated hills and knolls. (Ord. C-2015-04 §1(part), 2015; 1996 zoning code (part)).

Archeological reports shall be required as set forth in Sections 18.38.040. The report shall be prepared by a qualified professional selected by the City in accordance with established city procedures. Unless otherwise specified herein, all required archaeological reports shall be performed by a consultant selected by the City and paid for by the applicant and reports shall be reviewed by the City for consistency with Title 18 and CEQA requirements. Reports shall be completed to the satisfaction of the community development director prior to the determination that a required development permit application is considered complete. These require site evaluation, reporting, and implementation of mitigation, as necessary, to protect buried cultural and historic resources.

3.5.3 Discussion

Would the project:

- a) **Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?**

Less Than Significant Impact.

All Projects: Implementation of the BP Master Plan recommended projects/improvements would not directly impact listed historic structures and historical resources. Many on-street and off-street trail projects would be adjacent to or located in the vicinity of listed historical resources, particularly in the historic downtown area of the City. The types of on-street projects anticipated under the BP Master Plan (e.g., various pedestrian safety improvements, striping of bike lanes, signage) would not adversely impact a historical resource. In addition, it is unlikely that any off-street trail projects would adversely impact historic resources because most features would be at or near the ground surface and would not change the surrounding land uses or character of the environment surrounding the historical resource; however, because the BP Master Plan does not present project level design plans for any specific improvement or project, impacts to historical resources are not known at this time.

By following both CEQA and local regulations as outlined in the Regulatory Setting above, impacts to listed resources from a BP Master Plan project would be less than significant. All future projects with potential impacts to listed historical resources would require separate analysis under CEQA. Implementation of projects and improvements identified in the BP Master Plan would include design measures to such an effect, safeguarding historic resources.

Any structure or significant feature within the City that is approaching 50 years old or over would have to be considered under CEQA to have the potential of being classified as a historical resource. The design, typology, historic significance and construction of the resource would have to be analyzed for eligibility for listing in the CRHR, NRHP, or be included in a local historical register by the City. By following local and state regulations and ordinances listed in Regulatory Setting above, and then applying them to any structure that would be affected by the proposed BP Master Plan, other unlisted resources potentially eligible for listing would also be protected.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact.

On-Street Projects: Sub-surface archaeological resources are generally found beneath modern topsoil layers and in undisturbed (native) soils. On-street projects/improvements along existing roadways would primarily consist of above ground improvements (e.g., painting road markings, removing sidewalk obstructions, placing above ground planters to separate trails from roadways). Any below ground soil disturbance would be minimal and located in already disturbed ground directly on or adjacent to an existing paved roadway. The City does not keep a list of known archaeological sites within its boundaries. Because all on-street projects are expected to be located in previously disturbed areas and to have a relatively shallow zone of soil disturbance, and are not expected to disturb native soil layers, there would be no impact to known or unknown archaeological resources from on-street improvement projects.

Off-Street Projects: Improvements to existing off-street trails and creation of new off-street trail segments are anticipated to be primarily on undeveloped corridors of land. New off-street trails in undeveloped land could result in discovery of a new archaeological resource. Although the BP Master Plan design guidelines do not specify the depths of excavation needed for the construction of new off-street trails, it is anticipated that excavation depth is to occur exclusively in previously disturbed topsoil where it is unlikely to discover archaeological resources. However, the construction of new off-street trail segments has the potential to disturb unknown archaeological resources.

The City will plan, design, construct, and maintain new off-street trail segments in accordance with adopted City policy including the General Plan policies, LCPLUP, Municipal Code Chapters 18.38, and CEQA requirements. Chapter 18.38 requires the preparation of an archaeological resource report for projects in areas of high likelihood of containing archaeological resources. The City would also have to comply with CEQA requirements protecting archaeological resources for each trail project. In addition, Best Management Practices (BMPs) presented in the standard conditions of approval table (Table 2.12-1) in the Project Description would ensure that in the event of archaeological discovery, resources would be adequately safeguarded. Implementation of adopted City policy and regulations would reduce the potential impacts to unknown archaeological resources to less than significant.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact.

All Projects: There are no known cemeteries or burial grounds that would be impacted by any new on-street improvements or construction of new off-street trails or improvements to existing trails. The boundaries of existing cemeteries are clearly defined and BP Master Plan projects would not disturb ground within a cemetery or burial ground. The City would adhere to existing codes and regulations as BP Master Plan projects are implemented, which would minimize impacts to unanticipated human remains. Table 2.12-1: City of Half Moon Bay Standard Procedures and Conditions of Approval in Project Description lists standard conditions of approval the City would impose on BP Master Plan projects. The measure requires that, pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California, the City impose a condition on projects in the event of the discovery of human remains during construction. It requires that no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains be conducted. The measure further requires that the County Coroner be notified and determine whether the remains are Native American. If the Coroner determines the remains are Native American and are not subject to his authority, he would notify the California Native American Heritage Commission who would attempt to identify descendants of the deceased Native American(s). With the implementation of the standard condition of approval, impacts to human remains would be less than significant.

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3.6 ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.6.1 Environmental Setting

Energy consumption is closely tied to the issues of air quality and GHG emissions, as the burning of fossil fuels and natural gas for energy has a negative impact on both, and petroleum and natural gas currently supply most of the energy consumed in California.

In 2017, total electricity use in San Mateo County was 4,368 million kilowatt hours (kWh), including 2,805 million kWh of consumption for non-residential land uses (CEC 2019a). Natural gas consumption was 211 million therms in 2017, including 94 million therms from residential uses (CEC 2019b).

Energy conservation refers to efforts made to reduce energy consumption to preserve resources for the future and reduce pollution. It may involve diversifying energy sources to include renewable energy, such as solar power, wind power, wave power, geothermal power, and tidal power, as well as the adoption of technologies that improve energy efficiency and adoption of green building practices. Energy conservation can be achieved through increases in efficiency in conjunction with decreased energy consumption and/or reduced consumption from conventional energy sources.

3.6.2 Regulatory Setting

Since increased energy efficiency is so closely tied to the State's efforts to reduce GHG emissions and address global climate change, the regulations, policies, and action plans aimed at reducing GHG emissions also promote increased energy efficiency and the transition to renewable energy sources. The U.S. EPA and the State of California address climate change through numerous pieces of legislation, regulations, planning, policy-making, education, and implementation programs aimed at reducing energy consumption and the production of GHG.

As described in Chapter 2, the proposed BP Master plan would not involve the development of facilities that include energy intensive equipment or operations. While there are numerous regulations that govern GHG emissions reductions through increased energy efficiency, the following regulatory setting description focuses only on regulations that: 1) provide the appropriate context for the proposed BP Master Plan potential energy use; and 2) may directly or indirectly govern or influence the amount of energy used to develop and operate the proposed improvements and facilities. For example, the BP Master Plan would not result in permanently occupied buildings and thus the State building code requirements pertaining to energy efficiency are not discussed below. See the Environmental and Regulatory Setting discussion in Section 3.8, Greenhouse Gas Emissions, for a description of the key regulations related to global climate change, energy efficiency, and GHG emission reductions.

CARB Low Carbon Fuel Standard Regulation (LCFSR)

CARB initially approved the LCFS regulation in 2009, identifying it as one of the nine discrete early action measures in its original 2008 Scoping Plan to reduce California's GHG emissions. Originally, the LCFS regulation required at least a 10% percent reduction in the carbon intensity of California's transportation fuels by 2020 (compared to a 2010 baseline). On September 27, 2018, CARB approved changes to the LCFS regulation that require a 20% reduction in carbon intensity by 2030. These regulatory changes exceed the assumption in CARB's 2017 Climate Change Scoping Plan, which targeted an 18% reduction in transportation fuel carbon intensity by 2030 as one of the primary measures for achieving the state's GHG 2030 target.

Half Moon Bay Municipal Code

Chapter 14.50 of the City's Municipal Code, Requirement for Construction and Demolition Waste Recycling, is intended to ensure maximum diversion of construction and demolition waste generated by new construction or remodeling projects within the City. Section 14.50.030 requires a contractor, prior to obtaining a building permit from the City for any project valued at more than five thousand dollars, to assess the project for the types and quantities of materials that are anticipated to be feasible for on-site process or recycling / reuse and to develop a waste management plan with procedures that will be used to ensure maximum diversion of waste is achieved.

3.6.3 Discussion

Would the project:

- a) **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**
- b) **Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

Less Than Significant Impact (Responses to a) and b)).

All Project Types: The BP Master Plan proposes improvements to the existing bicycle and pedestrian circulation network to provide alternative modes of transportation and to better connect currently disconnected portions of the City. The construction of these bicycle and pedestrian improvements would require the use of construction equipment and generate construction-related vehicle trips that would combust fuel, primarily diesel and gasoline. The use of this fuel energy is necessary to complete bicycle and pedestrian improvements and is not wasteful. In addition, as shown in Table 2.12-1, the City has included BMPs to reduce fuel use in small equipment, idling, and waste hauling activities. Furthermore, the energy used to construct the bicycle and pedestrian facilities would support non-vehicular travel within the City by providing a safe, efficient bicycle and pedestrian network.

Certain new facilities such as new pedestrian signals, lights, etc. would consume electricity and a small, incremental increase in City fuel use may result from maintenance activities on new facilities; however, the BP Master Plan is anticipated to reduce vehicle trips and, therefore, fuel use, in the City over the long-term, which may result in a net beneficial effect on energy consumption. For these reasons, the BP Master Plan would not constitute a significant impact for demand on fuel, electricity, or natural gas energy resources and would not result in the wasteful, inefficient, or unnecessary use of these resources. Furthermore, the proposed project involves construction and development of bicycle and pedestrian facilities. These activities would not conflict with or obstruct any state or local plan for renewable energy or energy

efficiency because no such plan applies to these types of facilities, and the proposed facilities would not interfere with the installation of any renewable energy system.

3.6.4 References

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3.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
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? <i>Note: Refer to Division of Mines and Geology Special Publication 42.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.7.1 Environmental Setting

Regional Geology

The BP Master Plan area is in the San Francisco Bay Region within the Coast Range Geomorphic Province. According to the City's Existing Conditions, Trends, and Opportunities Assessment Report (Existing Conditions Report; Dyett & Bhatia 2014), the City is primarily underlain by a broad, gently sloping marine terrace consisting of poorly consolidated shallow marine sands, silts, and gravels resting on top of an ancient wave-cut bedrock platform (City

2000). Most soils are derived from alluvial sources. The geology of Half Moon Bay is defined, to a large extent, by the sea, seismic faults, and wetlands and watercourses.

Elevations within the BP Master Plan area range from a high of approximately 1,100 feet above mean sea level in the hills on the northeastern end of the BP Master Plan area to sea level along the shore. The BP Master Plan area generally slopes downward in a westerly direction towards the Pacific Ocean. Prominent geologic features include hills east of Frenchmans Creek and the associated creek basin, Pilarcitos Creek, Arroyo Leon, and the shoreline including the steep cliffs.

Erosion

There are different sources of risks related to erosion along the coast and within the interior of the BP Master Plan area. Along the coast, sources of erosion are related to waves acting upon the steep bluff features, as well as creek formed erosion at coastal runoffs; while in the interior of the BP Master Plan area, sources of erosion include surface runoff and land disturbance caused by agriculture or development. Soils are generally considered to have low to moderate erosion potential, except for the coastal bluffs where evidence of substantive erosion has been documented along the shoreline, including bluff erosion along much of the shoreline as well as along the City's creek banks, drainages, and other watercourses.

The State Parks Department is anticipating realigning a span of the Coastal Trail between Mirada Road and Alcatraz Avenue farther away from the eroding bluff top edge. Similarly, the City is planning for the retreat of the Coastal Trail between Kelly Avenue and Poplar Street as part of the Poplar Gateways project, which will be subject to project-level environmental review. Unimproved areas of the trail in North Wavecrest are also at risk of bluff erosion. The Coastal Trail may also be at risk of erosion caused by undercut culverts, such as at the Kehoe and Pullman watercourses, and by channel outflows, such as at the end of Kelly Avenue (City 2018).

Landslides

The City planning area is mapped with localized landslide hazards in areas including the hills rising out of the Frenchmans Creek valley; the hills north and south of Highway 92 along the eastern edge of the project area; and the hills east of the Rice Trucking Soil farm in the southern portion of the City (City 2018). In addition to the degree of hillside slope, the potential for landslides is also influenced by soil moisture content, vegetative cover, and the physical characteristics of the underlying geologic formations. Landslide potential is generally considered low for much of the BP Master Plan area, except in those portions of the area adjacent to hillsides, coastal bluffs, and shorelines.

Subsidence

Subsidence occurs where water, gas, or other material is removed from the intergranular spaces of soil layers, resulting in compaction of soils. In extreme circumstances, this phenomenon can cause severe lowering of the soil surface, damaging overlying structures and causing risks to life. Subsidence is most common in areas underlain by loose, compressible clay rich soils, where water or oil is withdrawn in excessive amounts. Subsidence may also occur within artificial fill areas, as the underlying materials compact over time. The potential for subsidence in the BP Master Plan area is considered low.

Seismicity

The whole BP Master Plan area is in an area of high seismicity, with active faults associated with the San Andreas Fault system. There are several significant faults that could be the source of a seismic event in the BP Master Plan area. The closest faults to the site are the San Gregorio Fault off the coast of Half Moon Bay, the San Andreas Fault, which follows the ridge of

the coastal mountains east of the BP Master Plan area, the Denniston Creek Fault, which is located north of the BP Master Plan area, and the Seal Cove Fault, which is also located off the coast of Half Moon Bay. The San Gregorio Fault, which is located south of the BP Master Plan area, is considered active, with a potential earthquake magnitude of seven or greater.

Significant earthquakes have occurred in the vicinity of the BP Master Plan area and strong to violent ground-shaking can be expected due to a future major earthquake on one of the active faults in the region. An event of sufficient magnitude could damage even strong, modern buildings in the area. Ground-shaking associated with an event along the San Andreas or San Gregorio Fault systems would have severe effects on the BP Master Plan area. The Working Group on California Earthquake Probabilities has estimated that there is a 72 percent chance that a magnitude 6.7 or greater earthquake will occur in the San Francisco Bay Area within 30 years from 2014 (Field 2014 and WGCEP 2015). The probability of a 6.7 magnitude or greater earthquake occurring along the San Andreas Fault was estimated to be 6.4 percent within 30 years from 2014 (Field 2014 and WGCEP 2015).

Ground Failure

Ground failure in the event of seismic activity may take the form of settlement, surface rupture, liquefaction, or slope failure (landslides). Seismic settlement is the displacement of surface geologic structures associated with a seismic event.

- **Settlement:** Settlement can cause unexpected changes in grade, interrupt utilities, and damage structures. The potential for seismic settlement has not been mapped for the BP Master Plan area.
- **Surface Rupture:** Rupture occurs when movement on a fault breaks through to the surface. Areas overlying active faults are among those areas at risk of rupture during a seismic event. There are no known faults that go through the BP Master Plan area and, therefore, rupture is considered to be a low risk hazard.
- **Liquefaction:** Liquefaction is the condition by which saturated soils lose cohesion during seismic events and settle, lose stability or amplify the effects of ground-shaking. Liquefaction is most associated with alluvium and other young soil types with high sand content. The potential for liquefaction in the BP Master Plan area is mapped as low to very high, depending on location (Dyett & Bhatia 2014). Areas of very high hazard exist along the shoreline sand beaches within the BP Master Plan area. Other areas of high hazard include the areas surrounding the Frenchmans Creek, Pilarcitos Creek, and Arroyo Leon watersheds. Areas of low to moderate hazard comprise of most of the BP Master Plan area.
- **Slope failure:** Slope failures, or landslides, may occur as a result of seismic activity. Groundshaking from an earthquake may exacerbate existing slope instability.

Paleontological Resources

No paleontological resources of known significance have been identified in Half Moon Bay and they are extremely limited throughout the San Mateo County Coastal Zone (City of Half Moon Bay, 2018).

3.7.2 Regulatory Setting

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. This state law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The law requires the State Geologist establish regulatory zones (known as Earthquake Fault Zones⁸) around surface traces of active faults and issue appropriate maps accordingly. These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones identified in the maps. There are no Alquist-Priolo Earthquake Fault Zones within the BP Master Plan area.

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. The act directs the U.S. Department of Conservation to identify and map areas prone to the earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground shaking. The Act requires site-specific geotechnical investigations to identify potential seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy within the Zones of Required Investigation.

California Building Code

The 2016 California Building Code (CBC) is codified in the California Code of Regulations (CCR) as Title 24, Part 2 and became effective January 1, 2017. The CBC is administered by the California Building Standards Commission but enforced by California cities and counties. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures and certain equipment within its jurisdiction.

The CBC contains necessary California amendments, which are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-10. ASCE 7-10 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads for inclusion into building codes. The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC values range from A (very small seismic vulnerability) to E/F (very high seismic vulnerability and near a major fault). Once a project is categorized according to SDC, design specifications can be determined. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures, throughout California.

⁸ "Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.

California Coastal Act

The California Coastal Act provides specific standards for the consideration and approval of alterations to the natural shoreline, including revetments, seawalls, and similar methods employed to reduce bluff and shoreline erosion. Generally, the California Coastal Act and California Coastal Commission (CCC) discourage alteration to the natural shoreline unless it is “required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when deemed to eliminate or mitigate adverse impacts on local shoreline sand supply.”

Local

Half Moon Bay General Plan Safety Element - 1991

Cities and counties in the state of California must adopt General Plans which regulate physical development. Geologic hazards for Half Moon Bay are addressed in the Safety Element of the General Plan. The 1991 General Plan Safety Element policies relevant to the proposed project address ground failure and soil stability in the event of an earthquake and generally require identification and mitigation of seismic hazards through engineering and building design standards. Specific relevant policies include the following:

Ground Failure and Earthquake

1. Continue to adopt updated editions of the Uniform Building Code, published by the International Congress of Building Officials.
3. Continue ensuring that other appropriate State regulations regarding the identification and mitigation of seismic hazards are implemented.
4. Continue to require that adequate soils, geologic, and structural evaluation reports are prepared when deemed appropriate by the Building Official. All reports submitted to the City for review shall be prepared by registered soils engineers, engineering geologists, and/or structural engineers.
5. Require that measures identified in any soils, geotechnics, and/or any structural reports to adequately mitigate liquefaction be imposed as conditions of project approval.
8. Geological reports, building plans, and environmental impact reports prepared for major construction projects (i.e., all critical facilities or uses with large human occupancies in recognized or suspected hazard areas) shall be prepared by registered engineering geologists and structural engineers and reviewed by the City Engineer.

Soil Stability

1. Ensure that all appropriate City and State regulations regarding the identification and mitigation of geologic hazards are implemented.
2. Continue to require that adequate soils, geologic, and structural evaluation reports are prepared when deemed appropriate by the Building Official. All such reports submitted to the City for review shall be prepared by registered soils engineers, engineering geologists, and/or structural engineers.
3. Require that measures identified in any soils, geologic, geotechnics, and/or any structural reports to adequately mitigate hazards to be imposed as conditions of project approval, to the extent feasible.
6. Geological reports, building plans, and environmental impact reports prepared for major construction projects (i.e., all critical facilities or uses with large human occupancies in

recognized or suspected hazard areas) shall be prepared by registered engineering geologists and structural engineers and reviewed by the City Engineer.

7. Soils and geologic reports for hillside construction shall be prepared for all new development in areas exceeding 20 percent slope and reviewed for adequacy by the appropriate City staff or consultants selected by the City at the applicant's expense.
9. New critical facilities, structures involving high occupancies, and public facilities should not be sited in areas of high damage susceptibility. Where such location is deemed essential to the public welfare, these structures will be sited, designed, and constructed with due consideration of the potential for damage due to ground deformation, seismically triggered subsidence, and landslide.

City of Half Moon Bay Local Coastal Program Land Use Plan - 1996

The entire City, including the BP Master Plan area, is within the California Coastal Zone, and the City's LUP (1996) provides policies and programs which address conformity with the California Coastal Act, along with other land use goals. The policies relevant to the BP Master Plan in this document related to geology, soils, and seismicity follow:

Policy 4-4: In the absence of a determination supported by a site-specific survey by a qualified geologist and biologist to the contrary, within 100 feet from the bluff or foredune edge, drought-tolerant coastal vegetation capable of enhancing bluff and dune stability shall be installed and maintained as a part of any new development. Grading as may be required to establish proper drainage, to install minor improvement (e.g. trails) and to restore eroded areas and to provide permitted accessways shall direct water runoff away from the edge of the bluff or be handled in a manner so as to prevent damage to the bluff by surface and percolating water.

Policy 4-6: Applications for grading and building permits and applications for subdivisions shall be reviewed for adjacency to, threats from, and impacts on geologic hazards arising from seismic events, tsunami run-up, landslides, flooding, or other geologic hazards such as expansive soils and subsidence areas. In areas of known geologic hazards, as indicated on the Geologic Hazards Map, a geologic report shall be required. Mitigation measures shall be required where necessary.

Policy 4-9: All development shall be designed and constructed to prevent increases in runoff that would erode natural drainage courses. Flows from graded areas shall be kept to an absolute minimum, not exceeding the normal rate of erosion and runoff from that of the undeveloped land. Storm water outfalls, gutters, and conduit discharge shall be dissipated.

City of Half Moon Bay Municipal Code

The Zoning Ordinance and similar tools provide specific standards which regulate the development of land uses, structures, and infrastructure within the community. These Codes and Ordinance are required to be consistent with the General Plan. The City Municipal Code includes standards which address geology, soils, seismicity, and associated hazards. Relevant chapters of the Municipal Code are summarized below:

Chapter 18.37.035 Upland Slope Standards: Prohibits grading that significantly alters natural terrain. Places slope limits and contour boundaries for the Dykstra Ranch, Carter Hill and Nurserymen's Exchange planned unit development areas.

Chapter 18.38 Coastal Resource Conservation Standards: (1) Defines bluffs, cliffs sea-cliffs and sand dunes as Sensitive Habitat Areas (2) Outlines restrictions for development on bluff tops and bluff faces (3) States that a geological report is required for shoreline structures, for any structure to be built within one hundred feet of the bluff edge, any sea wall or cliff-retaining structure, and projects which involve substantial alteration of waterways, and for any

development in areas of known geologic hazards, including but not limited to those indicated on the LUP geologic hazards map or in any area known to contain expansive soils or to be subject to subsidence. (4) Geological report contents are to include an evaluation of the proposed development's adjacency to, threats from, and impacts on geologic hazards arising from seismic events, and from any other hazardous event or situation potentially affecting the particular parcel(s) on which the development is proposed, e.g., flooding, tsunami run-up, landslides, or other geologic conditions such as expansive soils and subsidence areas. The evaluation shall recommend mitigation measures to ensure the elimination or reduction of identified hazards, including, as appropriate to location or project specifics, measures to minimize erosion problems during and after construction and to ensure that development will not contribute to flood hazards.

Chapter 18.40 Local Coastal Program Public Access: Outlines bluff top public access development including a condition to include a mechanism that will cause the access way to be adjusted inland as the bluff edge recedes due to natural erosion.

3.7.3 Discussion:

Consistent with California Building Industry Association v. Bay Area Air Quality Management District case (CBIA v. BAAQMD 2015), the impact discussion presented below focuses on the BP Master Plan's effect on geology and soils rather than the effect of geologic hazards and site conditions upon the proposed infrastructure projects. During the design phase of a BP Master Plan project the City will evaluate the location of the project for potential geologic hazards and incorporate appropriate design and avoidance measures to eliminate any impacts of geologic hazards on the proposed improvements. The BP Master Plan is evaluated to determine whether it would create or exacerbate soil or geologic conditions identified in each of the significance threshold criteria below.

Would the project:

- 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 significant evidence of a known fault?**

No Impact.

All Projects: The BP Master Plan would not expose people or structures to rupture of a known earthquake fault. The City is not within an Alquist-Priolo Fault Zone. The nearest fault line is the Seal Cove Fault, which is located less than 0.5 mile off the coast of Half Moon Bay.

- ii) **Strong seismic ground shaking?**

Less Than Significant Impact.

All Projects: The BP Master Plan area is located in the San Francisco Bay Area which is considered one of the most seismically active regions in the United States. Significant earthquakes have occurred in this area and strong to violent ground-shaking in the BP Master Plan area can be expected due to a major earthquake along one of the faults in the region. The City would adhere to policies related to protections extended to people and property from ground-shaking, such as the CBC and City Municipal Code, as described above in the Regulatory Setting to protect BP Master Plan projects from damage due to seismic events.

The proposed BP Master Plan would be unlikely to have an impact on or exacerbate existing geological conditions. For most projects proposed under the BP Master Plan, earth moving

activity is generally anticipated to be minimal and would have a less than significant impact under CEQA. BP Master Plan projects that would not have geological impacts include, but are not limited to, pedestrian improvements in the urban environment, installation of signs, lighting, bollards, painting/stripping road/trails, upgrading paved road surfaces, etc.

Some individual BP Master Plan trail projects; however, could have the potential to exacerbate existing geological conditions depending on the exact trail alignment proposed. These include but are not limited to trails located setback from and parallel to coastal bluffs, or trails located on steep slopes. These projects would require separate environmental review pursuant to CEQA prior to their approval. All BP Master Plan projects would be designed according to appropriate CBC standards (if appropriate), City General Plan and LCP policies, City Municipal Code requirements, BP Master Plan Design Guidelines, and commonly accepted engineering practices.

As a result, the BP Master Plan would have a less than significant impact related to seismic ground-shaking.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact.

Liquefaction occurs when loose, saturated sandy soils lose strength and flow like a liquid during earthquake shaking. Ground settlement often accompanies liquefaction. Areas of low to moderate liquefaction hazard comprise most of the City. Areas of very high liquefaction hazard exist along the shoreline within the BP Master Plan area. Other areas of high hazard include the areas surrounding Frenchman's Creek, Pilarcitos Creek, and Arroyo Leon watersheds.

On-Street Projects: On-street BP Master Plan projects may be located in high or very high liquefaction hazard zones. However, as with the rest of the City's built environment, the improvements would be designed and construction according to CBC and City requirements for the specific geologic conditions the project would be located in. In addition, on-street BP Master Plan projects would not exacerbate ground failure, including liquefaction, because they would be located within a paved roadway and would not disturb or would only minimally disturb soils.

Off-Street Projects: A number of off-street trails are located in or proposed to be located in or near high or very high hazard zones, such as along Frenchman's Creek and coastal bluffs. Projects in areas of potential geologic hazard would require separate environmental review pursuant to City Municipal Code and CEQA requirements prior to their approval. As part of the environmental review, Chapter 18.38 of the City Municipal Code would require a geological report be prepared for any structures built within one hundred feet of the bluff edge and any projects which involve substantial alteration of waterways, and for any development in areas of known geologic hazard, including but not limited to those indicated on the LUP geologic hazards map or in any area known to contain expansive soils or to be subject to subsidence. As a result, the BP Master Plan would have a less than significant impact related to ground failure and liquefaction.

iv) Landslides?

Less Than Significant Impact.

On-Street Projects: On-street trail projects recommended by the BP Master Plan would primarily be located in the flatter portions of the City and are not within a landslide hazard zone as shown in the LCPLUP Coastal Hazards Element (City. 2018). On-street trail projects are located within existing paved roadways and; therefore, would not create new landslide impacts. Therefore, the proposed on-street improvement projects would have no impact on existing landslide hazards within the City.

Off-Street Projects: The City has localized landslide hazards. These areas include the Frenchmans Creek valley area; the hills north and south of Highway 92 (along the eastern edge of the City); the coastal hills in the southeastern portion of the City; and the cliff bluffs in the southwestern portion of the City. There is an existing bicycle path (i.e., California Coastal Trail) in the southwestern portion of the City. Improvements along this bicycle path or any other planned BP Master Plan project in an area susceptible to landslides could exacerbate landslide issues. However, any significant grading or earth moving activities for BP Master Plan projects in landslide hazard areas would necessitate review under Chapter 18.38 of the City Municipal Code and additional analysis under CEQA. This process would result in design and mitigation measures that would render landslide hazards to the new project to an acceptable level. As a result, the BP Master Plan projects would have a less than significant on landslides.

b) Result in significant soil erosion or the loss of topsoil?

Less Than Significant Impact.

All Projects: Exposed soils could be subject to erosion during construction and grading activities that are proposed under the BP Master Plan. In addition, BP Master Plan trail projects could include grading or new impervious surfaces (e.g., sidewalk extensions) that could result in soil disturbance, alter drainage patterns, and/or cause erosion. Many impacts, especially related to erosion and soil disturbance, would be temporary during construction. Construction of projects in areas susceptible to erosion would comply with City standard conditions of approval (See Table 2-11 in Project Description) and would implement BMPs to protect water quality and prevent sedimentation during specific project construction activities. Projects involving disturbance of more than one acre would also be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which requires BMPs to protect water quality and an Erosion and Sediment Control Plan. In addition, projects that create or replace 10,000 square feet or more of impervious surface area would be subject to Provision C.3 of the Municipal Regional Stormwater Permit (MRP) and would have to include appropriate source control, site design, and storm water treatment measures for low impact development. With implementation of existing regulations and codes, BP Master Plan projects would have a less than significant impacts on soil erosion and 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?

Less Than Significant Impact.

All Projects: See response to question a) iv) for a response to impacts related to landslides.

See response to question a) iii) for a response to impacts related to liquefaction or collapse.

As noted above, there are unstable soils underlying some parts of the City. Many of the projects proposed under the BP Master Plan would have little physical impact or would occur in already developed areas (e.g., on-street improvements); therefore, those projects would have no impact to unstable geological units or soils. If off-street trail projects require invasive ground moving activities in higher landslide, lateral spreading, subsidence, or liquefaction risk areas that could potentially exacerbate existing geologic conditions, then a geologic report would be prepared in accordance with Chapter 18.38 of the City Municipal Code and the project would undergo additional CEQA documentation. As a result, this impact is less than significant.

- d) Be located on expansive soil, as noted in the 2010 California Building Code, creating substantial direct or indirect risks to life or property?**

Less Than Significant Impact.

All Projects: Expansive soils contain shrink-swell clays that are capable of absorbing water. As these clays absorb water, they increase in volume, and these changes in volume are capable of exerting enough force on buildings and other structures to damage foundations and basement walls. Damage from expansive soils also occurs when the soils dry out and contract, causing subsidence and earth fissuring.

No citywide geotechnical report has been conducted for existing and proposed BP Master Plan improvements; therefore, it is not known if there are expansive soils underlying areas of proposed construction and improvements.

Structures proposed by the BP Master Plan would be generally minor in scope and would be designed to meet City Municipal Code requirements, and the CBC (if relevant). For the development of buildings or structures proposed under the BP Master Plan which would have the potential for substantial risk to life or property, such as bicycle shops, then a geologic report would be prepared in accordance with Chapter 18.38 of the City Municipal Code with recommended mitigation or avoidance measures, and the project would undergo. By following existing codes and regulations, impacts from expansive soils on BP Master Plan projects would be less than significant.

- 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?**

No Impact.

All Projects: No alternative waste water disposal or septic tank systems are proposed as part of the BP Master Plan.

- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Less Than Significant Impact.

CEQA does not provide a definition for a “unique geologic feature”, nor is there state-wide codification regarding “unique geologic features”. Prominent geologic features within the City include the hills east of Frenchmans Creek and the associated creek basin, Pilarcitos Creek, Arroyo Leon, and the shoreline including the steep cliff bluffs. The City has not formally recognized any geologic features as unique. Depending on the criteria used, the bluffs have potential to be considered unique geologic features by the City. Commonly used criteria for unique geologic features include the following:

- a. Is the best example of its kind locally or regionally;
- b. Embodies the distinctive characteristics of a geologic principle that is exclusive locally or regionally;
- c. Provides a key piece of geologic information important in geology or geologic history;
- d. Is a “type locality” of a formation;
- e. Is a geologic formation that is exclusive locally or regionally;
- f. Contains a mineral that is not known to occur elsewhere in the County; or
- g. Is used repeatedly as a teaching tool.

Projects proposed under the BP Master Plan would be reviewed for potential environmental impacts to unique geological resources, especially those in and around the bluffs or creek channels. Those projects with potential to impact unique geologic features, including any structure within 100 feet of a bluff edge, would be required to prepare a geologic report under Municipal Code 18.35.045.

On-Street Projects: Paleontological resources are found primarily in sedimentary geological layers. Depths of layers in which fossils can be discovered vary from the current ground surface to thousands of feet underground. No known unique paleontological features occur within the City (City of Half Moon Bay, 2017) and on-street projects are all anticipated to occur in previously disturbed topsoil. In addition, there are no notable geological features in or near proposed new on-street trail projects. As a result, there would be no impacts from on-street improvement projects on unique paleontological resources or geologic features.

Off-Street Projects: Although unique paleontological resources, have not been discovered within the City, previous unique discoveries have been made along the Bay Area coastline, and non-unique paleontological resources are known to exist in the City. Excavation activities during off-street trail projects in and around the coastal bluffs may encounter sedimentary bedrock, due to natural erosion of the topsoil. It is within this geological stratum, that there is the greatest chance of discovering fossilized remains, and paleontological resources. It is unlikely, although possible, that paleontological resources may be discovered during excavation work where sedimentary bedrock is exposed. The City would screen all future BP Master Plan projects for unique paleontological resources and those determined to have potential impacts would require separate analysis under CEQA. Subsequent CEQA review of those projects may require the implementation of mitigation measures to safeguard paleontological resources. As a result, impacts from off-street trail projects to unique paleontological resources would be less than significant.

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3.8 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.8.1 Environmental Setting

Gases that trap heat in the atmosphere and affect regulation of the Earth's temperature are known as greenhouse gases (GHGs). GHGs that contribute to climate regulation are a different type of pollutant than criteria or hazardous air pollutants because climate regulation is global in scale, both in terms of causes and effects. Some GHGs are emitted to the atmosphere naturally by biological and geological processes, such as evaporation (water vapor), aerobic respiration (carbon dioxide or CO₂), and off-gassing from low oxygen environments including swamps or exposed permafrost (methane or CH₄); however, GHG emissions from human activities, such as fuel combustion (CO₂) and refrigerants (hydrofluorocarbons), are primarily responsible for the significant contribution to overall GHG concentrations in the atmosphere, climate regulation, and global climate change.

Transportation activities including vehicle trips are a significant source of GHG emissions and account for approximately 39.4% and 34.3% of the most recent State, and SFBAAB GHG emissions inventories (BAAQMD 2015; CARB 2018a) and San Mateo County 2015). The City of Half Moon Bay has not completed a climate action plan as of 2018 but has begun laying the groundwork for such an effort. As of 2015, City-wide GHG emissions from energy, transportation, solid waste, wastewater treatment, and water use activities are estimated to be 70,936 metric tons of CO₂ equivalents, or MTCO₂e. The transportation sector accounted for 31,366 MTCO₂e (44%) of the City's 2015 GHG emissions inventory. (San Mateo County 2015).

The current bicycle and pedestrian network in the City cause the generation of a minimal amount of GHG emissions through maintenance activities and electricity use by signals. Existing maintenance activities and the emissions associated with them would continue to occur regardless of whether the BP Master Plan is approved or not and would not constitute a change to the physical environment.

3.8.2 Regulatory Setting

State

AB 32 and Related Executive and Legislative Actions

In June 2005, Governor Arnold Schwarzenegger issued Executive Order S-3-05. This order established the State's GHG emission targets for 2010 (reduce GHG emissions to 2000 levels), 2020 (reduce GHG emissions to 1990 levels), and 2050 (reduce GHG emissions to 80 percent below 1990 levels), created the Climate Action Team and directed the Secretary of the California Environmental Protection Agency to coordinate efforts with meeting the GHG targets with the heads of other state agencies.

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Climate Solutions Act of 2006. AB 32 establishes the caps on statewide GHG emissions proclaimed in Executive Order S-3-05 and set December 31, 2020 as the date for achieving GHG reduction levels. In order to effectively implement the emissions cap, AB 32 also directed CARB to establish a mandatory reporting system to track and monitor GHG emissions from large stationary sources, prepare a Scoping Plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

In September 2016, Governor Edmund G. Brown signed sign Senate Bill (SB) 32 and AB 197 on September 8, 2016. SB 32 made the GHG reduction target to reduce GHG emissions by 40 percent below 1990 levels by 2030 a requirement, as opposed to a goal. AB 197 gives the Legislature additional authority over CARB to ensure the most successful strategies for lowering emissions are implemented, and requires CARB to, “protect the state’s most impacted and disadvantaged communities ...[and] consider the social costs of the emissions of greenhouse gases.”

SB 375 Sustainable Communities and Climate Protection Act

SB 375 went into effect in January 2009. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce greenhouse gas emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California’s 18 regional Metropolitan Planning Organizations (MPOs). In 2010, CARB adopted GHG reduction targets for the San Francisco Bay region. The targets were set as 7% and 15% reduction in per capita passenger vehicle GHG reductions by 2020 and 2035 (relative to 2005). The regional strategy for achieving VMT goals mandated under SB 375 is presented in Plan Bay Area 2040. In March 2018, CARB established new regional GHG reduction targets for the San Francisco Bay region (CARB, 2018b). The new targets are 10% reduction in per capita passenger vehicle GHG reductions by 2020 and a 19% reduction by 2035 (relative to 2005).

CARB Scoping Plan

The CARB Scoping Plan is the State’s comprehensive plan for identifying how the State will reach its GHG reduction targets established by AB 32 and SB 32. CARB has prepared several iterations of the Scoping Plan. CARB adopted its initial Scoping Plan in 2008, prepared its first update to the Scoping Plan in 2014, and prepared its second update to the Scoping Plan in 2017. Per AB 32, CARB is required to update the Scoping Plan every five years.

CARB’s current 2017 Climate Change Scoping Plan was adopted on December 14, 2017. The primary objective of the 2017 Climate Change Scoping Plan is to identify the measures needed to achieve the State’s GHG reduction target for 2030 (to reduce emissions by 40 percent below 1990 levels; CARB, 2017a). To achieve this GHG reduction target, the 2017 Climate Change Scoping Plan includes a recommended plan-level efficiency threshold of six metric tons or less per capita by 2030 and no more than two metric tons by 2050. The major elements of the 2017 Climate Change Scoping Plan include, but are not limited to:

- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030);
- Implementation of SB 350, which expands the Renewable Portfolio Standard (RPS) to 50 percent and doubles energy efficiency savings by 2030;
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks;

- Continued implementation of SB 375;

Bay Area Air Quality Management District

As described in Section 3.3.2, the BAAQMD's 2017 Clean Air Plan is a comprehensive, multi-pollutant plan intended to reduce criteria air pollutant concentrations and public exposure to TACs, as well reduce GHG emissions. A key goal of the BAAQMD's 2017 Clean Air Plan is to reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, consistent with GHG reduction targets adopted by the State.

3.8.3 Discussion

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Less Than Significant Impact.

All Projects: Vehicles that use gasoline, diesel, or natural gas for fuel are known as mobile sources, which emit (among other pollutants) CO₂, the largest GHG constituent found in the atmosphere. As described above, mobile source transportation emissions are a significant contributor to GHG emissions in the City, SFBAAB, and State.

The BAAQMD has not established thresholds of significance for construction GHG emissions; however, lead agencies often elect to use the BAAQMD's recommended operations threshold of 1,100 MTCO₂e for land use projects. As discussed under "3.3 Air Quality," the BAAQMD has developed screening criteria based on the size of a project to determine whether detailed modeling to estimate GHG emissions is necessary. However, the BAAQMD does not have established screening criteria for construction emissions from the development of pedestrian and bicycle facilities (Table 3-1 of the BAAQMD *CEQA Air Quality Guidelines*).

Although subsequent construction of projects and improvements identified in the BP Master Plan would generate GHG emissions from fuel combustion in construction equipment and construction related vehicle trips, the level of GHG emissions generated by these projects are not anticipated to be substantial because the construction of linear bicycle and pedestrian facilities, as well as the other improvements identified in the BP Master Plan, are not anticipated to require substantial, prolonged use of heavy equipment operations or hauling activities in levels that could exceed BAAQMD GHG thresholds for land use projects for several reasons. First, as shown in Table 2.12-1, the City has included BMPs to reduce fuel use and potential GHG emissions generated by small equipment, idling, and waste hauling and landfilling activities. Second, most BP Master Plan projects would cease to emit GHG emission upon completion of construction activities; however, once constructed, the BP Master Plan projects would support non-vehicular travel in the City for years to come. While certain new facilities such as new pedestrian signals, lights, etc. would consume electricity (and thereby generate GHG emissions) and a small, incremental increase in City fuel use may result from maintenance activities at new facilities, the BP Master Plan is anticipated to result in an overall reduction vehicle trips, vehicle miles travelled, and fuel use in the City over the long-term. Potential GHG emissions from maintenance activities are anticipated to be minor because the number of facilities requiring maintenance is relatively small and potential maintenance activities are not anticipated to not require large numbers of vehicles or equipment (e.g., the City anticipated maintenance would be handled by existing staff and equipment). For these reasons, the BP Master Plan would not generate GHG emissions that would have a significant impact on the environment.

For these reasons, the proposed BP Master Plan would not generate GHG emissions that would have a significant impact on the environment.

b) Conflict with an applicable, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact.

All Projects: Many of the projects/improvements identified in the BP Master Plan are minor in nature, and would not have a substantial impact on local, regional, and global GHG emissions, nor conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

CARB Scoping Plan. As discussed under Section 3.8.2, the 2017 Climate Change Scoping Plan is CARB's primary document used to ensure State GHG reduction goals are met. The plan identifies an increasing need for coordination among State, regional, and local governments to achieve the GHG emissions reductions that can be gained from local land use planning and decisions. The major elements of the 2017 Climate Change Scoping Plan, which is designed to achieve the State's 2030 GHG reduction goal, are listed in Section 3.6.2. Nearly all of the specific measures identified in the 2017 Climate Change Scoping Plan would be implemented at the state level, with CARB and/or another state or regional agency having the primary responsibility for achieving required GHG reductions. These include programs like the State's Mobile Source Strategy, LCFS, and Sustainable Freight Action Plan, which are likely to reduce tailpipe GHG emissions from construction equipment and vehicle trips associated with the construction of potential BP Master Plan projects without any action by the City. The proposed BP Master Plan, therefore, would not have the potential to directly conflict with any of the specific measure identified in the 2017 Climate Change Scoping Plan.

BAAQMD 2017 Scoping Plan. As discussed in Section 3.3 the BAAQMD has developed *CEQA Air Quality Guidelines*, which indicate that for a proposed project to be consistent with the BAAQMD CAP, the project must:

1. Support the primary goals of the CAP – Reduce GHG emissions and protect the climate;
2. Include applicable control measures from the CAP; and
3. Not disrupt or hinder implementation of any CAP control measures.

As described above, the BP Master Plan is anticipated to result in an overall reduction vehicle trips, vehicle miles travelled, and fuel use in the City over the long-term and would not generate GHG emissions that would have a significant impact on the environment. In addition, as described in more detail in Section 3.3.3, the proposed BP Master Plan would not disrupt, delay, or otherwise hinder any BAAQMD rulemaking processes or grant or information-sharing programs operated by the BAAQMD or other regional agencies through which many of the 2017 Clean Air Plan's control measures are implemented. Finally, as shown in Table 3.3-2, the City has incorporated BMPs as standard conditions of approval that are consistent with the 2017 Clean Air Plan's control measures that are relevant to BP Master Plan projects. For these reasons, the proposed project would not conflict with or obstruct implementation of the BAAQMD 2017 Clean Air Plan.

3.8.4 References

Bay Area Air Quality Management District (BAAQMD) 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. San Francisco, CA. January 2015.

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California Air Resources Board 2017. *2017 Climate Change Scoping Plan*. Sacramento, CA. December 2017.

_____. 2018a. California Greenhouse Gas Emission by Scoping Plan Category (2018 Edition: 2000 to 2016). Sacramento, CA. June 22, 2018.

_____. 2018b. SB 375 Regional Greenhouse Gas Emissions Reduction Targets. Adopted March 22, 2018. <<https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>>.

San Mateo County. 2015. "RICAPS Half Moon Bay Greenhouse Gas Emissions Summary Column Chart." Accessed February 5 2019.
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3.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.9.1 Environmental Setting

The BP Master Plan recommends many improvements, as listed in the Project Description, to the City's pedestrian and bicycle network. Hazardous materials refer generally to hazardous substances that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment. Hazardous materials are used in products (e.g., household cleaners, industrial solvents, paint, pesticides) and in the manufacturing of products (e.g., electronics, newspapers, plastic products). Hazardous materials can include petroleum, natural gas, synthetic gas, acutely toxic chemicals, and other toxic chemicals that are used in agriculture, industrial uses, businesses, hospitals, and households.

The term "hazardous materials," as used in this chapter, includes all materials defined in the California Health and Safety Code (H&SC): 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 unified program agency has a

reasonable basis for believing it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (State of California).

The following information is summarized from the General Plan and Local Coastal Land Use Plan First Public Draft Safety Element, November 2016.

Hazardous materials are commonly found throughout the BP Master Plan area in households, businesses, construction sites, and agricultural operations. Areas at a higher risk of a hazardous materials discharge include those near major roadways used to transport hazardous materials, including Highway 1 and Highway 92. Caltrans does not restrict hazardous materials transport on either of these highways. In general, risk of discharge from existing land uses is considered low, because there are not major industries in Half Moon Bay that use hazardous materials; although agricultural operations routinely use hazardous and toxic substances. However, current and past uses of herbicides, pesticides, and motor vehicle fuels on agricultural lands can lead to soil and groundwater contamination.

California Government Code Section 65962.5 requires CalEPA to compile, maintain, and update specified lists of hazardous materials release sites in California. CEQA Guidelines (California Public Resource Code Section 2102.6) require the lead agency to consult the lists compiled pursuant to Government Code Section 65962.5 to determine whether a proposed project is listed on the California Department of Toxic Substances Control (DTSC) EnviroStor Database and the State Water Resources Control Board (SWRCB) Geo Track databases. Both DTSC and SWRCB databases were accessed on November 29, 2018 for listed contamination sites in the City of Half Moon Bay. The majority of sites identified in this search are closed, meaning that they have met cleanup criteria. Only two DTSC-identified Leaking Underground Storage Tank (LUST) sites within 500 feet of a BP Master Plan recommendation remained open at the time this CEQA document was prepared, and there were no active SWRCB-identified sites.

The first active case accessed on November 29, 2018 is a LUST site owned by Caltrans with gasoline as its contaminant of concern. It is located at 2203 South Cabrillo Highway. The other active case is located at the site of a private residence on Poplar Street; its contaminants of concern is heating oil/fuel oil.

In addition, there are three sites in and around Half Moon Bay that are of special concern to the community. These include the closed Half Moon Bay Landfill, the Half Moon Bay Oilfield located outside of city limits, and a remediated private landfill within the Public Facilities PUD immediately east of Pilarcitos Creek near the Sewer Authority Mid-Coastside treatment plant. These are described in the Plan Half Moon Bay Draft Safety Element. Only the closed Half Moon Bay Landfill site and the remediated private landfill are in immediate proximity to existing or proposed bicycle or pedestrian trails. The Coastal Trail between Poplar Street and the Seymore drainage, near Poplar Beach, is adjacent to the closed Half Moon Bay Landfill. The closed private landfill within the Public Facilities PUD is in close proximity to the proposed Pilarcitos Creek Trail.

Otherwise, there are no active or closed contamination sites on or immediately adjacent to both existing and recommended pedestrian and bicycle trails in the BP Master Plan.

3.9.2 Regulatory Setting

Hazardous materials and wastes can pose a significant actual or potential hazard to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Many federal, State, and local programs that regulate the use, storage, and disposal of hazardous materials and hazardous waste are in place to prevent these unwanted

consequences. These regulatory programs are designed to reduce the danger that hazardous substances may pose to people and businesses under normal daily circumstances and as a result of emergencies and disasters.

Federal

United States Environmental Protection Agency

The Environmental Protection Agency (EPA) is the primary federal agency that regulates hazardous materials and waste. In general, the EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. The agency is responsible for researching and setting national standards for a variety of environmental programs and delegates to states and Native American tribes the responsibility for issuing permits and for monitoring and enforcing compliance. EPA programs promote handling hazardous wastes safely, cleaning up contaminated land, and reducing waste volumes through such strategies as recycling. California falls under the jurisdiction of EPA Region 9. Under the authority of Resource Conservation and Recovery Act (RCRA), and in cooperation with State and tribal partners, the EPA Region 9 Waste Management and Superfund Divisions manage programs for site environmental assessment and cleanup, hazardous and solid waste management, and underground storage tanks.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) oversees administration of the Occupational Safety and Health Act, which requires: specific training for hazardous materials handlers; provision of information to employees who may be exposed to hazardous materials; and acquisition of material safety data sheets (MSDS) from materials manufacturers. Material safety data sheets describe the risks, as well as proper handling and procedures, related to particular hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

State

California Environmental Protection Agency

California Environmental Protection Agency (CalEPA) was created in 1991 by Governor Executive Order W-5-91. Several State regulatory boards, departments, and offices were placed under the CalEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources. Among those responsible for hazardous materials and waste management are the DTSC, Department of Pesticide Regulation, and Office of Environmental Health Hazard Assessment (OEHHA). CalEPA also oversees the unified hazardous waste and hazardous materials management regulatory program

(Unified Program), which consolidates, coordinates, and makes consistent the following six programs:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- Underground Storage Tank Program
- Aboveground Petroleum Storage Tank Act
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Inventory Statements
- CalARP

California Department of Toxic Substances Control

The California DTSC, which is a department of CalEPA, is authorized to carry out the federal RCRA hazardous waste program in California to protect people from exposure to hazardous wastes. The department regulates hazardous waste, cleans up existing contamination, and looks for ways to control and reduce the hazardous waste produced in California, primarily under the authority of RCRA and in accordance with the California Hazardous Waste Control Law (California H&SC Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (Title 22, California Code of Regulations (CCR), Divisions 4 and 4.5). Permitting, inspection, compliance, and corrective action programs ensure that people who manage hazardous waste follow federal and State requirements and other laws that affect hazardous waste specific to handling, storage, disposal, treatment, reduction, cleanup, and emergency planning.

State Water Resources Control Board

The San Francisco Bay Regional Water Quality Control Board (RWQCB) is authorized by the State Water Resources Control Board (SWRCB) to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the San Francisco RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the State is threatened and to require remediation actions, if necessary.

California Division of Occupational Safety and Health

Like OSHA at the federal level, the California Division of Occupational Safety and Health (Cal OSHA) is the responsible State-level agency for ensuring workplace safety. Cal OSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. In the event that a site is contaminated, a Site Safety Plan must be crafted and implemented to protect the safety of workers. Site Safety Plans establish policies, practices, and procedures to prevent the exposure of workers and members of the public to hazardous materials originating from the contaminated site or building.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California. CAL FIRE ranks fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat and moderate, high, and very high fire threat. Additionally, CAL FIRE produced a 2010 Strategic Fire Plan for California that contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. CAL FIRE's Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Health and Safety Code

California H&SC, Division 20, Chapter 6.95, and Title 19 of the California Code of Regulations, Section 2729, set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on site. A business which uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

California Building Code

The State of California provides a minimum standard for building design through Title 24 of the California Code of Regulations (CCR), also known as the California Building Standards) Code. The 2013 California Building Code (CBC), is Part 2 of Title 24. The 2013 CBC is based on the

2012 International Building Code but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC Typical fire safety requirements of the CBC include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and particular types of construction.

California Fire Code

The California Fire Code (CFC) is Part 9 of Title 24. Updated every three years, the CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, fire hydrant locations and distribution, and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas. The Coastside Fire Protection District provides fire protection services for the City and nearby unincorporated areas and, as such, implements and enforces the CFC in Half Moon Bay.

Asbestos-Containing Materials (ACM) Regulations

State-level agencies, in conjunction with the federal EPA and OSHA, regulate removal, abatement, and transport procedures for asbestos-containing materials (ACM). Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, State, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos.

Polychlorinated Biphenyls

The United States EPA prohibited the use of polychlorinated biphenyls (PCBs) in the majority of new electrical equipment starting in 1979 and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and the handling of those PCBs are regulated by the provisions of the Toxic Substances Control Act (TSCA), United States Code Title 15, Section 2601 et seq. Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal. Likewise, the State of California regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste. These regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for non-liquids, RWQCBs may exercise discretion over the classification of such wastes.

Lead-Based Paint

Cal OSHA's Lead in Construction Standard is contained in Title 8 CCR, Section 1532.1. The regulations address all of the following areas: permissible exposure limits (PELs); exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection (MRP); employee information, training, and certification; signage; record keeping; monitoring; and agency notification. The Childhood Lead Poisoning Prevention Acts (CLPPA) of 1986 and 1989 with Subsequent Legislative Revisions (California H&SC, Division 106, Sections 124125 to 124165) declared childhood lead exposure as the most significant childhood environmental health problem in the state. The CLPPA established the Childhood Lead Poisoning Prevention Program and

instructed it to continue to take steps necessary to reduce the incidence of childhood lead exposure in California.

Local Regulations

San Mateo County Household Hazardous Waste Program

San Mateo County established the Household Hazardous Waste (HHW) Program in response to solid waste diversion goals mandated by AB 939. The HHW Program mission statement is to educate residents and conditionally-exempt small quantity generators regarding household or business-related hazardous waste, and to provide safe opportunities for reducing, reusing, recycling, and/or disposal of their hazardous wastes. The County and all 20 cities in the county agreed to develop a regional HHW Element.

Hazardous Waste Programs in place include:

- Primary Permanent HHW Collection Facility - The primary permanent facility at Tower Road in San Mateo is currently operating with weekly collections as a full-service, centrally located collection facility owned and operated by the County.
- Satellite HHW Collections - Currently, two satellite HHW collection facilities are open for monthly collections at the solid waste facilities: Blue Line Transfer Station in South San Francisco, and Recology of the Coast in Pacifica. A third satellite is planned for Redwood City.
- Temporary HHW Collections - Currently, annual temporary collections rotate in Half Moon Bay, Redwood City, Menlo Park, Daly City, La Honda, and Portola Valley.
- Very Small Quantity Generator Program - Collections are currently held for qualified Very Small Quantity Generators twice a month at the Tower Road Facility.
- Product Reuse/Give-Away Program - All collected materials received via collections are assessed for reuse, per the Program's Re-use QA/QC Guidelines. All reusable materials are diverted to the Give-Away Program Warehouse, which is open to the public twice a month, for free pick-up of the materials.
- Latex Paint Recycling Program - Currently, four latex paint drop-offs are located at solid waste facilities: Blue Line Transfer Station in South San Francisco, Recology of the Coast in Pacifica, Recology San Bruno in San Bruno, and South Bay Recycling/Recology San Mateo County in San Carlos. All latex non-reusable latex paint is sent for recycling to Visions Recycling, Inc.

City of Half Moon Bay General Plan Safety Element - 1991

The City's 1991 Safety Element is currently being revised as part of the Plan Half Moon Bay General Plan update effort. The City is ensuring the updated Safety Element is consistent with the Coastside Emergency Operations Plan produced by San Mateo County, City of Half Moon Bay, CalFire, and the Coastside Fire Protection District. The plan describes and identifies the agencies, jurisdictions, and actions during a response to an emergency, the role of the Coastside Emergency Operations Center, and the coordination that occurs between the Operations Center and other agencies/jurisdictions.

The updated Safety Element will also be integrated with the San Mateo County Local Hazard Mitigation Plan (LHMP) and the Half Moon Bay annex to the LHMP.

The City's currently adopted 1991 Safety Element contains policies related to hazardous materials management, proper use, storage, transportation, handling and disposal of hazardous substances, to land use policies to protect sensitive land uses for exposure to hazardous

substances, to the preparation and maintenance of the City's Hazardous Incident Response Plan.

Coastside Fire Protection District

The Coastside Fire Protection District (CFPD) provides fire protection services to the City, neighboring communities and surrounding San Mateo County areas, a territory covering approximately 50 square miles along the San Mateo County coast. CFPD receives the same wildland fire training as Cal Fire employees and is therefore well prepared to prevent and suppress wildland fire. CFPD also conducts routine inspections of properties within or near VHFSZs, especially ensuring that defensible space is provided around structures and that access for emergency response vehicles and critical fire breaks are maintained. The CFPD participates in the drafting and implementation of the Coastside Emergency Operations Plan outlining emergency responses. CFPD inspects facilities which have a hazardous waste storage or use permit and would be a first responding agency in the event of a hazardous materials discharge/spill.

3.9.3 Discussion

Would the project:

- 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?**

Less than Significant Impact. (Response a-b).

All Projects: Implementation of the BP Master Plan and construction of associated project features could require the use of small amounts of paints for restriping paths, thinners, solvents, paving materials, or vehicle fuels and fluids; however, the use of these chemicals does not present a significant hazard to the public or the environment because of the small quantities involved and the City's adherence to federal, state, and local regulations pertaining to the use, transport, and storage of hazardous materials. Furthermore, the implementation of the BP Master Plan would not create a significant hazard from the disposal of these materials because the City or its contractors already are required to dispose of hazardous materials according to regulations.

There is a potential that land used for agricultural purposes in the past, may contain long-lasting soil contamination from herbicides, pesticides, and other agricultural chemicals as these chemicals persist in the soil for extended periods of time. Presence of these chemicals in the soil could present a potential hazard to workers or the public should disturbance of subsurface soils occur.

As required by numerous regulations listed in the Regulatory Setting discussion, the City of Half Moon Bay must evaluate whether any construction or routine maintenance project would have the potential to disturb soils that may be contaminated by past agricultural uses. The City currently employs a process for evaluating the need to investigate soil conditions before beginning subsurface work (utility trenching, digging, grading, excavation, etc.) by reviewing project plans and available information of soil conditions. If the City determines the need to further investigate soil conditions, it would prepare a Phase I and possibly a Phase II Environmental Site Assessment or conduct soil sampling/testing. If contamination is detected, the City would prepare a Site Safety Plan (per CalOSHA requirements) and address any remediation requirements with appropriate state regulatory agencies (DTSC, RWQCB). The City

will continue this practice for new BP Master Plan projects and will assess site soil conditions whenever considering use of a new site for a bicycle or pedestrian trail.

Therefore, the implementation of the BP Master Plan would have a less than significant impact.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or hazardous waste within one-quarter mile of an existing or proposed school?**

Less than Significant Impact.

All Projects: Some of the BP Master Plan recommendations would occur within one-quarter mile of a public school. Schools located within one-quarter mile of BP Master Plan recommendations include HMB High School, Seacrest School, Hatch Elementary School, Pilarcitos Alternative High School, and Cunha Intermediate School. The types of chemicals used in the network's routine maintenance would not pose a hazard to the school population because of the low level of toxicity (vehicle fuels, fluids, paints, etc.) and because of the small quantities in use and the City's compliance with relevant regulations. There are numerous regulations in place for the safe management of such materials that the City must comply with. The BP Master Plan policies do not affect existing materials handling and storage practices, therefore there would be no change from existing conditions. The City's pedestrian and bicycle facilities do not produce hazardous emissions or handle hazardous or acutely hazardous materials, substances, or hazardous waste. Therefore, the project would not emit hazardous emissions or handle hazardous materials 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 a result, would it create a significant hazard to the public or the environment?**

Less than Significant Impact.

All Projects: The Hazardous Waste and Substances Site List, also known as the Cortese List, is a planning document used by the State of California and its various local agencies including the Department of Toxic Substances (DTSC), to comply with CEQA requirements in providing information about the location of hazardous materials release site. Government Code Section 65962.5 requires CalEPA to develop at least annually an updated Cortese List (DTSC 2007). As described in the Setting discussion above, there are two active remediation sites in the City, but BP Master Plan facilities are not proposed near them. Table 2-11 in Project Description presents a Standard Condition of Approval measure requiring the City to screen for proximity to active remediation site and for projects where past agricultural uses could have contaminated the soil. The implementation of the proposed BP Master Plan would have a less than significant impact to the public or environment from exposure to hazardous materials contamination.

- 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?**

Less Than Significant Impact.

All Projects: The closest airport to the site is the Half Moon Bay Airport, located approximately six miles northwest of Half Moon Bay. The BP Master Plan area is not located within the Airport Land Use Compatibility Plan for the Half Moon Bay Airport (C/CAG, 2014). However, the BP Master Plan area is in San Francisco International Airport's (SFO) Airport Influence Area A (all of San Mateo County). SFO is located approximately 10 miles northeast of the BP Master Plan

area and the area is well outside of the Outer Boundary of Safety Zones of the airport (C/CAG, 2012). Thus, the proposed BP Master Plan would not result in an airport related safety hazard for people residing or working in the BP Master Plan area.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact.

All Projects: Implementation of the BP Master Plan recommendations would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The City of Half Moon Bay is responsible for the management and coordination of emergency response and recovery as part of its role in the Coastsides Emergency Operations Plan (EOP). San Mateo County's Area Office of Emergency Services provides planning, preparedness, public information, training, and federal/state intergovernmental emergency services coordination for the cities and unincorporated areas within the County. Implementation of the BP Master Plan would not change site access or circulation and would not impact the flow or functioning of City streets and thus would not affect an 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?

Less Than Significant Impact.

All Projects: See discussion of wildland fire hazard in Section 3.20. Wildfire Hazard, below. One BP Master Plan recommended Class I trail portion and a recommended spot improvement are in a Very High Fire Severity Zone, both located east of Half Moon Bay High School.

The BP Master Plan does not propose the construction of structures. Segments of the future trail system may be located in moderate to very high fire hazard areas, however, these are in close proximity to existing development and fire protection services. Therefore, trail users would not be at risk of being isolated during a fire event.

Adoption of the BP Master Plan would not increase existing fire hazard conditions or further expose people or structures to extreme fire hazard. Any future BP Master Plan projects would require further evaluation under CEQA once design and implementation information become available. Wildlife fire hazard associated with the specific area proposed for new trails or other facilities would be evaluated at that time. Therefore, implementation of the BP Master Plan would not either directly or indirectly create barriers to evacuation plans, adversely impact the system, or expose people or structures to a significant risk of loss, injury or death involving wildland fires.

3.9.4 References

- California Department of Toxic Substances Control (DTSC). 2007. DTSC's Hazardous Waste and Substances Site List- Site Cleanup (Cortese List). Accessed November 29, 2018. http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm
- California Department of Toxic Substances Control (DTSC). 2018. *EnviroStor GeoTracker*. Accessed November 29, 2018. <https://geotracker.waterboards.ca.gov/>
- City/County Association of Governments of San Mateo County (C/CAG), 2014 (September). Airport Land Use Compatibility Plan for the Environs of Half Moon Bay Airport. Prepared by Coffman Associates, Inc.

City/Council Association of Governments of San Mateo County (C/CAG). 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. Redwood City, CA. July 2012.

Half Moon Bay. City of. 2016. General Plan and Local Coastal Land Use Plan First Public Draft Safety Element. November 2016.

Half Moon Bay. City of. 2017. Local Coastal Land Use Plan: Coastal Hazards August 2017 Planning Commission Working Draft. 2017.

State of California. Health and Safety Code. Section 25260.

3.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.10.1 Environmental Setting

The City of Half Moon Bay contains many hydrologic resources including creeks, streams, agricultural ponds, and the Pacific Ocean. This analysis summarizes the environmental and regulatory setting from the Plan Half Moon Bay Existing Conditions Report (SWCA 2014) and the draft Half Moon Bay-Local Coastal Land Use Plan: Chapter 6 Natural Resources Element (City 2018).

Climate

The climate in the City is coastal Mediterranean, with most rain falling in the winter and spring. Fog and cool temperatures are common in the summer. The average annual rainfall in the City is 26 inches. The City also has a low evapotranspiration rate.

Local Watershed

The watershed for the City is the U.S. Geological Survey (USGS) Hydrological Unit Code (HUC) 18050006: San Francisco Coastal South. The City is divided into two sub-watersheds, including Arroyo Leon and Purisima Creek.

Surface Water Features

The BP Master Plan area is crossed by a number of creeks, streams, and lesser drainage features that discharge directly into the Pacific Ocean. Surface water features in the BP Master Plan area are highly seasonal, especially in the smaller drainages. There are five perennial or near perennial surface waters within the BP Master Plan area, including Frenchmans Creek, Pilarcitos Creek, Apanolio Creek, Arroyo Cañada Verde Creek, and Arroyo Leon Creek. Pilarcitos Creek is a 13.5-mile-long perennial stream that flows from the western slopes of the Santa Cruz Mountains through Pilarcitos Canyon and discharges into the Pacific Ocean. The creek drains 30 square miles and has numerous tributaries. Arroyo Leon and Apanolio Creek are tributaries of Pilarcitos Creek. Arroyo Leon is a 6.5-mile-long creek that drains a watershed of approximately 8.6 miles into the Pacific Ocean. Arroyo Cañada Verde Creek is a 2.5-mile-long stream that drains into the Pacific Ocean near Pelican Point. Frenchmans Creek is a 4.4-mile-long stream that flows from the western slopes of the Santa Cruz Mountains draining 6.3 miles of watershed into the Pacific Ocean. In addition, Arroyo de en Medio is an intermittent stream in the BP Master Plan area that typically has consistent flow during the wet season.

Several minor natural and manmade creeks and drainages are also located throughout the BP Master Plan area. These watercourses are typically characterized by intermittent flows resulting primarily from storm events with little or no base flow present for most of the year. These features typically drain either directly or through various conveyances (e.g., pipes, ditches, culverts) to the larger drainage features described above, to intermittent drainage features located within the BP Master Plan area, are isolated and lack additional surficial connection, or discharge directly to the Pacific Ocean.

Groundwater

The BP Master Plan area is underlain by the Half Moon Bay Terrace groundwater basin. The basin occupies a total area of approximately 9,150 acres along the California coast from Martins Beach north to Montara, of which approximately 3,546 acres are within the BP Master Plan area. The basin is made up of several smaller sub-basins. Four sub-basins, including El Granada sub-basin, Arroyo de en Medio sub-basin, Frenchmans Creek sub-basin, and Lower Pilarcitos Creek sub-basin, are located within the BP Master Plan area. The aquifers of these sub-basins are generally composed of shallow, unconfined and semi-confined, marine terrace and alluvial deposits, underlain by the Purisima formation with overlying fine-grained alluvial deposits. The overlying alluvial deposits can create an impermeable cap over the marine terrace aquifers resulting in confined groundwater conditions. The aquifers are generally bound on the east by bedrock and on the west by the Pacific Ocean. Groundwater flows are from east to west, toward the Pacific Ocean, and can be significant. This outflow to the ocean results in large seasonal changes in groundwater levels, as well as a dynamic fresh-salt water interface. Greater groundwater withdrawal, less recharge, and/or drought conditions could move this interface inland.

Rainfall recharge and subsurface flow from drainages are the primary contributors to inflow in the BP Master Plan area. Stream recharge has been indicated as the primary contributor to recharge in the lower lying areas, especially within the El Granada, Arroyo de en Medio, and Frenchmans Creek sub-basins. In areas of higher elevation, direct precipitation is largely responsible for groundwater recharge. Overall, aquifers in the BP Master Plan area have

groundwater surplus during wet years but may have a deficit in dry or prolonged drought periods.

Water Quality

Groundwater quality in the region is variable depending on well location, depth, and development (age and use of well). Typically, groundwater in the region is considered to be of good quality with mineral, chemical, and physical constituents meeting domestic water quality standards. However, groundwater along the coast within the BP Master Plan area is consistently hard and seawater intrusion is a potential concern due to the proximity to the ocean, especially if groundwater withdrawals increase.

Within the BP Master Plan area urban runoff has been found to contribute to significant quantities of suspended solids, heavy metals, petroleum, and other pollutants. Considerable water quality monitoring has occurred within Pilarcitos Creek due to concerns about downstream conditions at Venice Beach. Sampling results indicate that Pilarcitos Creek consistently has high fecal coliform counts relative to similar coastal streams (City 2018). In addition to fecal pollution, high levels of zinc, copper, and nutrients have been recorded in Pilarcitos Creek.

Venice Beach is listed on the State Water Resources Control Board 303(d) list as impaired by coliform bacteria. The 303(d) list, which is prepared pursuant to Chapter 7 Section 303(d) of the federal Clean Water Act, requires states to identify water bodies that are not attaining water quality standards and to establish Total Maximum Daily Loads (TMDLs) for pollutants causing the impairment (non-attainment of water quality standards). The only other 303(d) list water in the BP Master Plan area is Pillar Point Harbor at the far north of the BP Master Plan area.

Flood Hazards

Flood hazards in the BP Master Plan area are typically associated with storms or other events resulting in coastal flooding (e.g., waves or tsunamis). Several creeks and watercourses that pass through the City are also subject to fluvial flooding that can be exacerbated by coastal flooding. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the BP Master Plan area (Numbers 06081C0254F, 06081C0252F, and 06081C0260E) show several portions of the BP Master Plan area mapped within flood hazard zones, including coastal areas, areas along Frenchmans Creek, and portions of Arroyo Leon Creek and Pilarcitos Creek. Specifically, the coastal areas are mapped as Zone V (coastal areas subject to the 100-year flood with additional hazards associated with storm-induced waves; Base Flood Elevations not determined) and Zone VE (coastal areas subject to the 100-year flood with additional hazards associated with storm-induced waves; Base Flood Elevations determined). Frenchmans Creek and portions of Arroyo Leon Creek and Pilarcitos Creek are mapped as Zone A (area subject to the 100-year flood; no Base Flood Elevation determined). The remainder of the City is within Zone X (areas of minimal flood hazard).

Tsunami Inundation

Tsunamis are large waves caused by seismic or landslide events in the ocean floor. Tsunamis can be the result of off-shore earthquakes near the BP Master Plan area coastline or from far distant events. Although tsunamis are more typically generated by subduction faults, such as in Washington and Alaska, local tsunamis can occur from strike-slip faults along the San Andreas fault that runs along the coast in the San Francisco Bay area. Although tsunamis are rare along the west coast of the United States, even small tsunamis have the potential to result in coastal flooding. Tsunami risk within the BP Master Plan area is mapped along the entire Half Moon Bay shoreline. The hazard typically only ranges as far inland as the large bluffs in the BP Master

Plan area along the coastline, but some areas near and north of Pilarcitos Creek are subject to greater risk as far inland as 3,000 linear feet.

Dam Inundation

Dam failure can result in substantial inundation of downstream areas endangering public health, safety, and property, as well as loss of water storage for significant time periods. There are currently no records of dam failure in the San Francisco Bay area. Two dams are located in the vicinity of the BP Master Plan area and have the capacity to endanger lives and property, including Johnston Dam and Pilarcitos Dam. Johnston Dam is relatively small and no inundation data are available for this dam. Pilarcitos Dam failure could inundate areas adjacent to Pilarcitos Creek.

Sea Level Rise

The City has conducted a detailed analysis of sea level rise scenarios, and their impacts on existing development, assets, sensitive resources, and hazards/safety, in cooperation with the CCC and the Ocean Protection Council. Over time, the potential impacts of sea level rise are anticipated to increase the BP Master Plan area's exposure to coastal hazards. Rising sea levels are likely to affect the amount of area in the City at risk of coastal flooding, the rate of erosion along the shoreline and bluffs, and the dynamics relevant to concerns such as tsunami inundation zone and potential saltwater intrusion into riparian systems and groundwater supplies. Loss of shoreline due to rising waters may also threaten the stability of coastal habitats, recreation areas, and public access. More specific information from the analysis of sea level rise scenarios as it relates to flooding, erosion, and tsunamis within the BP Master Plan area is provided below.

Flooding under sea level rise scenarios from a 100-year flood event would mainly impact the BP Master Plan area's beaches with some inundation at the outlets of waterways and drainages that will likely be more pronounced with higher sea levels, particularly the outlet of Pilarcitos Creek. In addition, data from FEMA regarding current conditions shows flood potential along waterways such as Frenchmans Creek that could be exacerbated with higher sea levels. Sea level rise is also anticipated to cause the mouths of creeks within the BP Master Plan area to retreat inland, which will affect habitat and could eventually result in loss of riparian corridor area.

Following preparation of the Sea Level Rise Vulnerability Assessment in 2016, the City conducted an erosion study of the City's span of the California Coastal Trail between Kelly Avenue and the Seymour Ditch. The study indicated that in addition to the future effects of sea level rise, human activities along the trail cause patterns of impaction which affect drainage patterns. New drainage channels created through this inadvertent process are causing bluff erosion at rates higher than anticipated for sea level rise. Therefore, the combined effects of erosion resulting from drainage issues at the top of the bluffs could be compounded by forthcoming effects of sea level rise eroding the base of the bluffs and result in more severe bluff loss.

Though data was not available for tsunami impacts under sea level rise scenarios, it would be expected that a tsunami would impact areas farther inland at higher sea levels.

3.10.2 Regulatory Setting

In addition to CEQA, other federal and state laws apply to the hydrology and water quality impacts of the BP Master Plan. Each of these laws is identified and discussed below.

Federal**Federal Emergency Management Act**

Responsibility for flood protection is distributed among many federal agencies at various levels of government. At the federal level the three primary agencies are the United States (U.S.) Army Corps of Engineers (USACE), the FEMA, and the Bureau of Reclamation. The FEMA creates FIRMs that designate 100-year floodplain zones. The threshold for unacceptable flood risk has traditionally been associated with the “100-year flood”.

Federal Clean Water Act

The Clean Water Act (CWA) is the primary federal legislation governing water quality and forms the basis for several state and local laws throughout the nation. The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Important and applicable sections of the CWA are:

- Section 404 authorizes the USACE to regulate the discharge of dredged or fill material to waters of the U.S., including wetlands. The USACE issues individual site-specific or general (Nationwide) permits for such discharges.
- Sections 303 and 304 provide for water quality standards, criteria, and guidelines. The State implements Section 303 through the State Water Resources Control Board and Regional Water Quality Control Board (RWQCB), as discussed below. Section 304 requires the U.S. Environmental Protection Agency to publish water quality criteria that accurately reflects the latest scientific knowledge on the kind of effects and extent of effects that pollutants in water may have on health and welfare. Section 304 also provides guidance to the State in adopting water quality standards.
- Section 401 requires an applicant for any Federal permit that proposes an activity that may result in a discharge to “waters of the U.S.” to obtain certification from the State that the discharge will comply with other provisions of the CWA. In California, a Water Quality Certification is provided by the State Water Resources Control Board and/or RWQCB.
- Section 402 establishes the National Pollutant Discharge Elimination System (NPDES), which is a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the U.S. The U.S. EPA has granted the State of California primary responsibility for administering and enforcing the provisions of the NPDES. NPDES is the primary Federal program regulating both point- and non-point-source discharges to waters of the U.S. In California, this permit program is administered by the RWQCBs, and is discussed in detail below.

State**Porter-Cologne Water Quality Control Act**

The state’s Porter-Cologne Water Quality Control Act (Porter-Cologne Act), as revised in December 2007 (California Water Code Sections 13000-14290), provides for protection of the quality of all waters of the State of California for use and enjoyment by the people of California. It further provides that all activities that may affect the quality of waters of the state shall be regulated to obtain the highest water quality that is reasonable, considering all demands being made and to be made on those waters. The Porter-Cologne Act also establishes provisions for a statewide program for the control of water quality, recognizing that waters of the State are increasingly influenced by inter-basin water development projects and other statewide considerations, and that factors such as precipitation, topography, population, recreation, agriculture, industry, and economic development vary regionally within the State. The statewide

program for water quality control is, therefore, administered most effectively on a local level with statewide oversight. Within this framework, the Porter-Cologne Act authorizes the State Water Resources Control Board and RWQCBs to oversee the coordination and control of water quality within California.

The Porter-Cologne Act authorizes the State Water Resources Control Board to draft State policies regarding water quality and to issue Waste Discharge Requirements for various types of discharges to State waters. Waters regulated under Porter-Cologne Act, referred to as “waters of the State,” include isolated waters that are not regulated by the USACE. Any person discharging, or proposing to discharge, waste (e.g. dirt) to waters of the State must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

The Porter-Cologne Act requires the State Water Resources Control Board or RWQCB to adopt Basin Plans for the protection of water quality. A Basin Plan must contain the following:

- Identification of beneficial uses of water to be protected,
- Water-quality objectives for the reasonable protection of the beneficial uses, and
- An implementation program for achieving the water-quality objectives.

The Basin Plans also provide the technical basis for taking enforcement actions and evaluating clean-water grant proposals. Basin Plans are updated and reviewed every three years.

State Water Resources Control Board

Created by the California State Legislature in 1967, the State Water Resources Control Board holds authority over water resources allocation and water quality protection within the State. The five-member State Water Resources Control Board allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine RWQCBs. The mission of the State Water Resources Control Board is to “preserve, enhance, and restore the quality of California’s water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.”

California Coastal Act

The California Coastal Act (Coastal Act) governs the decisions made by the California Coastal Commission (CCC) regarding issues such as shoreline public access and recreation, terrestrial and marine habitat protection, water quality, and development within the California Coastal Zone. Development within the Coastal Zone requires a Coastal Development Permit (CDP) from the CCC or from a local government with a CCC-certified LCP. The Coastal Act provides specific standards to achieve its goals including to protect, maintain, and where feasible, enhance and restore the overall quality of the coastal environment and its natural and artificial resources. The City of Half Moon Bay LCP (City 1996), which has been certified by the CCC, contains policies related to hydrology and water quality.

San Francisco Bay RWQCB Municipal Regional Storm Water Permit

The project area is under the jurisdiction of the San Francisco Bay RWQCB. New construction and redevelopment projects are subject to the San Francisco Bay RWQCB’s Municipal Regional Stormwater NPDES Permit (MRP), implemented in October 2009 by Order R2-2009-0074 and revised in November 2011 (NPDES Permit No. CAS612008). Provision C.3 of the MRP requires new development and redevelopment projects that create and/or replace 10,000 square feet or more of impervious surface area to include appropriate source control, site design, and stormwater treatment measures to address both soluble and insoluble stormwater runoff

pollutant discharges and prevent increases in runoff flows. This is generally accomplished through the implementation of low impact development techniques.

Local

San Mateo Countywide Water Pollution Prevention Program

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) was established in 1990 to reduce the pollution carried by stormwater into local creeks, the San Francisco Bay, and the Pacific Ocean. The program is a partnership of the City/County Association of Governments (C/CAG), each incorporated city and town in the county, and the County of San Mateo, which all share a common NPDES permit. The Federal CWA and the California Porter-Cologne Act require that large urban areas discharging stormwater into the San Francisco Bay or the Pacific Ocean have an NPDES permit to prevent harmful pollutants from being dumped or washed by stormwater runoff, into the stormwater system, then discharged into local waterbodies.

Participating agencies (including the City of Half Moon Bay) must meet the provisions of the MRP by ensuring that new development and redevelopment mitigate water quality impacts to stormwater runoff both during the construction and operation of projects. In addition, other provisions of the MRP include construction site control, water quality monitoring program, pollutants of concern control programs, watershed management, illicit discharge detection and elimination, industrial and commercial site controls, municipal operations, and public information/participation. A Hydromodification Plan (HMP) has also been prepared as part of the SMCWPPP that includes requirements to reduce impacts from erosion and water quality degradation by managing project runoff stormwater discharge rates. The City is also currently preparing a Green Infrastructure Plan in conjunction with County requirements.

City Half Moon Bay General Plan Safety Element - 1991

Cities and counties in the state of California must adopt General Plans which regulate physical development. The 1991 City General Plan policies are included in the Safety Element. Policies relevant to hydrology and water quality include:

Tsunamis and Seiches

2. New critical facilities should not be located in areas with the potential to be adversely affected by tsunamis and/or seiches. If a critical facility must be located in a tsunami hazard zone, "tsunami proof" design and construction principles should be incorporated so that it can resist tsunami damage and facilitate evacuation on short notice.

Inundation from Dam Failure

2. Land use considered to be appropriate in areas that are subject to dam inundation hazards shall be consistent with Title 18 of the Half Moon Bay Municipal Code (Zoning Ordinance).

Flood Hazards

6. Adequate mitigation measures should be incorporated into all development proposals in the vicinity of flood hazard areas.
7. Discourage the location of new critical facilities in flood hazard areas.
8. Wherever possible, retain natural floodplains and guide development to areas outside of areas of special flood hazard.
9. When development is proposed in areas of special flood hazards, require habitable areas of a structure to be safely elevated above the base flood elevation and not contribute to the flooding hazard to surrounding structures.

11. Require all proposed new development to provide for development of onsite and downstream off-site mitigation of potential flood hazards and drainage problems and require development fees to fund the required improvements when necessary.

City of Half Moon Bay Local Coastal Program Land Use Plan - 1996

The entire BP Master Plan area is within the California Coastal Zone and the City's LCP has been developed in compliance with the Coastal Act and is guided by the City's LCPLUP. The City of Half Moon Bay's LCPLUP identifies several policies in Chapter 4 Hazards that relate to hydrology and water quality. These include the following:

- Policy 4-5: No development shall be permitted on the bluff face, except for engineered accessways to provide public beach access. Drainage pipes shall be allowed only where no other less environmentally damaging drain system is feasible, and the drain pipes are designed and placed to minimize impacts to the bluff face, toe, and beach. Drainage devices extending over the bluff face shall not be permitted if water can be directed away from the bluff face.
- Policy 4-7: In areas of flooding due to tsunamis or dam failure, no new development shall be permitted unless the applicant or subsequent study demonstrates that the hazard no longer exists or has been or will be reduced or eliminated by improvements which are consistent with the policies of this Plan and that the development will not contribute to flood hazards or require the expenditure of public funds for flood control works. Where not otherwise indicated, the flood hazard zone shall be considered to be a zone defined by the measured distance of 100 feet from the centerline of the creek to both sides of the creek. Non-structural agricultural uses, trails, roads, and parking lots shall be permitted, provided that such uses shall not be permitted within the area of stream corridor. (See Policies in Section 3 on Protection of Sensitive Habitats).
- Policy 4-8: No new permitted development shall cause or contribute to flood hazards.
- Policy 4-9: All development shall be designed and constructed to prevent increases in runoff that would erode natural drainage courses. Flows from graded areas shall be kept to an absolute minimum, not exceeding the normal rate of erosion and runoff from that of the undeveloped land. Storm water outfalls, gutters, and conduit discharge shall be dissipated.

City of Half Moon Bay Municipal Code

Titles 13 (Water and Sewage), 14 (Buildings and Construction), and 18 (Zoning) of the Municipal Code, the Zoning Ordinance, and similar tools provide specific standards which regulate the development of land uses, structures, and infrastructure within the community. These Codes and Ordinances are required to be consistent with the General Plan. The City's Municipal Code is continually updated, most recently in December 2018. Those standards that specifically address hydrology and water quality resources and associated hazards are embodied in the following Chapters of the Municipal Code:

Chapter 13.15 Stormwater Management and Discharge Control

The intent of this code is to protect and enhance the water quality of the City's watercourses, waterbodies, and wetland in a manner pursuant to the CWA. It includes guidelines for the discharge of pollutants, reducing pollutants in stormwater, and controlling illicit discharge and watercourse protection.

Chapter 14.04.020 (D) Grading and Filling of Flood Plain Areas

No grading shall occur, and no fill material shall be placed within 100 feet of the edge of the low flow channel in a flood plain area. Minor grading or filling may be allowed in a flood plain area for agricultural purposes if in the opinion of the City Engineer the grading or fill material will not adversely affect the drainage in the flood plain area.

Chapter 14.34 Flood Damage Prevention

The intent of this chapter to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions and includes guidelines for development that may be affected by or influence flood hazards.

Chapter 18.38 Coastal Resource Conservation Standards

This code establishes coastal resource conservation standards and includes definitions of permitted uses within various coastal resource areas, including, but not limited to, marine habitats, riparian areas, and wetlands. This code also includes buffers and development standards for these areas. The chapter includes standards for the preparation of biological, archeological, and geological reports.

3.10.3 Discussion

Future implementation of the BP Master Plan development and improvement projects could result in short-term hydrology and water quality impacts during construction and longer-term impacts if trail construction alters existing drainage patterns. Once most of the recommended improvements have been constructed and there are opportunities for bicyclists and pedestrians to travel throughout the City and reach the Coastal Trail, the BP Master Plan could have a long-term beneficial impact on hydrology by reducing the number of automobiles traveling within the City, which would ultimately reduce the amount of fluids from automobiles that could be washed into the waterbodies throughout the City.

Any project recommended by the BP Master Plan would be designed and implemented consistent with the LCP, City Municipal Code, and Standard Conditions of Approval presented in Table 2.12-1: City of Half Moon Bay Standard Procedures and Conditions of Approval of this Initial Study. While the BP Master Plan identifies specific types of development and/or improvements contemplated it does not present project level design plans for any of the improvements or projects. In the absence of project level information, this section identifies general areas of potential hydrology and water quality resource impacts that could occur from the implementation of the BP Master Plan, and identifies how existing City policies, programs, and procedures, as well as regulatory standards and programmatic procedures, that would reduce or avoid environmental impacts. Table 2.12-1: City of Half Moon Bay Standard Procedures and Conditions of Approval in Project Description presents Standard Conditions of Approval, including measures to protect water quality and manage storm water runoff from construction sites that would be applied to future projects to reduce or prevent hydrology and water quality impacts.

Adoption of the BP Master Plan would not automatically approve the construction or implementation of any projects or improvements identified in the BP Master Plan's recommendations. As funding and designs become available, specific hydrology and water quality impacts related of BP Master Plan projects would be evaluated based on project-specific conditions. A general discussion of how construction and operational-related activities associated with the implementation of new projects could impact hydrology and water quality follows.

Would the project:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

Less Than Significant Impact.

All Projects: Many BP Master Plan projects would be within the existing road rights-of-way and are already paved, including, but not limited to, sidewalk or other types of pathway improvements, crossing improvements, Class II and III bike lands, and Class IV separated bike lanes. Some projects (e.g., construction of new sidewalks to fill gaps) would increase impervious surfaces at certain locations, which could result in an increase in runoff that impacts water quality.

Implementation of some BP Master Plan projects (e.g., construction of new sidewalks to fill gaps, new Class I bike lanes, trail extensions) could result in projects which cause disturbances to the ground surface from earthwork, including removal of vegetation and trees, grading, and trenching. These activities could potentially increase the amount of sediment runoff from the site that flow into the City's storm drains or natural drainage channels. Increased sediment could negatively impact water quality of runoff flowing from the site.

Construction of bicycle or pedestrian facilities could also involve the use of hazardous materials that are potentially harmful to water quality, such as vehicle fuels, fluids, paints, thinners, and other chemicals. Accidents or improper use of these materials could release contaminants to the environment. Additionally, oil and other petroleum products used to maintain and operate construction equipment could be accidentally released.

The City would implement BMPs to protect water quality and prevent sedimentation during specific project construction activities. Projects involving disturbance of more than one acre would also be required to prepare and implement a SWPPP which requires BMPs to protect water quality and an Erosion and Sediment Control Plan. With implementation of the BMPs, construction of BP Master Plan projects would not violate any water quality standards or waste discharge requirements. In addition, projects that create or replace 10,000 square feet or more of impervious surface area would also be subject to Provision C.3 of the MRP and would have to include appropriate source control, site design, and storm water treatment measures for low impact development.

Implementation of BP Master Plan projects in conformance with existing regulatory requirements for the protection of water resources and water quality would ensure impacts to water resources would be less than significant.

- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

Less Than Significant Impact.

All Projects: The proposed BP Master Plan would not deplete groundwater supplies or interfere with groundwater recharge.

BP Master Plan implementation would include a small increase in impervious surface area (e.g., construction of new sidewalks to fill in gaps), but this increase is not expected to interfere with groundwater recharge in the BP Master Plan area, as the amount of added impervious surface is expected to be small and water is anticipated to drain into soils surrounding the impervious areas.

Dewatering during construction is considered unlikely because of the shallow nature of typical construction activities and depletion and/or significant extraction of groundwater is not anticipated. In addition, dewatering, if necessary, would be conducted in compliance with the RWQCB Waste Discharge Requirement for dewatering, which will identify site-specific requirements for the dewatering operation.

- 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 off-site;**

Less Than Significant Impact (Responses i-ii).

The BP Master Plan proposes bridge improvements and/or crossings (e.g., California Coastal Trail extension, Pilarcitos Creek bridge widening near Oak Avenue Park, and the Naomi Patridge Trail Gap Closure between Heskin and Kelly Avenues) within existing riparian areas. Additionally, the BP Master Plan discusses future recommended studies, some of which include new features at or near creeks including a bridge at Purissima over Pilarcitos Creek and the Pilarcitos Creek trail that would be adjacent to the creek. However, BP Master Plan projects are not proposed within any creek or streambed and any project would be designed and constructed according to USACE, RWQCB, and CDFG permitting requirements that would protect stream channels and water quality. As a result, implementation of the BP Master Plan would not substantially alter any existing streams or rivers.

On-Street Projects: Many BP Master Plan projects will occur within an existing road right-of-way (e.g., sidewalk improvements, crossing improvements, Class II and III bike lanes and Class IV separated bikeways) and are not expected to alter existing drainage patterns or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

Off-Street Projects: Off-street BP Master Plan projects (e.g., construction of new sidewalks to fill gaps, trail extensions) could require grading that could alter drainage patterns and/or temporarily increase the rate or amount of surface runoff and/or erosion or siltation at the site. However, the City would be subject to Waste Discharge Requirements and would implement BMPs to protect water quality and prevent sedimentation during specific project construction activities. Projects involving disturbance of more than one acre would also be required to prepare and implement a SWPPP which requires BMPs to protect water quality and an Erosion and Sediment Control Plan. In addition, projects that create or replace 10,000 square feet or more of impervious surface area would also be subject to Provision C.3 of the MRP and would have to include appropriate source control, site design, and storm water treatment measures for low impact development. With implementation of the BMPs, construction of BP Master Plan projects would not alter the existing drainage pattern and result in substantial erosion, flooding, or siltation on- or off-site.

Off-street BP Master Plan projects would introduce impervious surfaces (e.g., construction of new sidewalks, new bike lanes, other paved areas for repair stations or sign posts). However, these improvements would be surrounded by open pervious areas that would absorb stormwater from these small, scattered impervious surfaces. As a result, impervious surfaces would not increase the rate or amount of surface runoff in a manner that could result in flooding on- or off-site.

Trail construction inland of coastal bluffs in the City (e.g., Coastal Trail Extension) in combination with sea level rise could exacerbate erosion and alter drainage patterns along the

bluff tops. Adoption of the BP Master Plan would not automatically approve the construction or implementation of any projects or improvements identified in the BP Master Plan's recommendations. As funding and designs become available, the City would evaluate erosion associated with sea level rise impacts from projects and improvements identified in the BP Master Plan based on project-specific conditions.

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

Less Than Significant Impact.

All Projects: BP Master Plan projects would not noticeably increase stormwater water runoff in a manner that would exceed the capacity of existing or planned stormwater drainage systems. The small increase to impervious surfaces resulting from BP Master Plan projects would not increase drainage to stormwater facilities, as any new impervious surfaces are anticipated to be completely surrounded by pervious surfaces. As a result, no measurable increase in stormwater runoff would occur with BP Master Plan implementation, and no expansion of existing storm drain facilities is needed to serve the proposed BP Master Plan projects. In addition, implementation of the BP Master Plan is not anticipated to result in substantial sources of polluted runoff. The BP Master Plan would ultimately reduce the number of automobiles driving throughout the city, which would reduce the amount of potential hazardous materials (e.g., fuels, oils) runoff that could enter the City's waterbodies.

iv) Impede or redirect flood flows?

Less Than Significant Impact.

On-Street Projects: Many BP Master Plan projects would occur within an existing road right-of-way (e.g., sidewalk improvements, crossing improvements, Class II and III bike lanes, and Class IV separated bikeways) and would not impede or redirect flood flows.

Off-Street Projects: The parts of the City that are within a 100-year flood zone only include coastal areas, areas along Frenchmans Creek, and portions of Arroyo Leon Creek and Pilarcitos Creek. The BP Master Plan includes recommended studies for a bridge at Pilarcitos Creek and the Pilarcitos Creek Trail which may be located within the 100-year flood zone. If a new off-street project was placed within the 100-year flood zone it would be subject to additional analysis and CEQA review. During this review, flood hazards would be investigated once the location and design features were known to ensure that proposed project did not expose people or structures to significant risk. As a result, adoption of the BP Master Plan would not place people or structures within a 100-year flood hazard area.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact.

All Projects: BP Master Plan projects adjacent to Pilarcitos Creek, including, but not limited to, Eastside Parallel Trail and Naomi Patridge Trail Extension are within the Pilarcitos Dam failure inundation zone. These locations are immediately adjacent to Highway 1, which is an existing roadway. Therefore, conditions on these trails would be similar to existing conditions. Although the BP Master Plan projects would increase bike and pedestrian traffic, they are not expected to substantially increase the overall presence of people within the Pilarcitos Dam failure inundation zone. The BP Master Plan does not propose new facilities within the dam inundation zone. As a result, adoption of the BP Master Plan would not exacerbate the risk of releasing pollutants due to project inundation.

Seiches are waves that oscillate in enclosed water bodies, such as reservoirs, lakes, ponds, swimming pools, or semi-enclosed bodies of water (e.g., San Francisco Bay). Because the BP Master Plan area is far from San Francisco Bay and there are no nearby reservoirs or lakes, it would not be subject to inundation from a seiche and there would not be a risk of releasing pollutants due to project inundation.

On-Street Projects: Many BP Master Plan projects would occur within an existing road right-of-way (e.g., sidewalk improvements, crossing improvements, Class II/III bike lanes, and Class IV separated bikeways) and would not result in new impacts related to a tsunami or mudflows.

Off-Street Projects: Proposed BP Master Plan trails adjacent to the coastline (e.g., California Coastal Trail Extension) are within a mapped tsunami inundation area. Wave run-up heights of greater than 20 feet (which would top the coastal bluffs) are very unlikely in the Bay Area. All BP Master Plan projects would be located along the coastal bluffs or within the City. Therefore, tsunami inundation would not be expected within a BP Master Plan project area. However, any future projects within the tsunami zone would be evaluated for the potential for tsunami inundation.

Mudflows are associated with hilly terrain. The majority of BP Master Plan area is flat or has gentle slopes. Areas along the coast contain cliffs that are subject to erosion/landslides. The California Coastal Trail Extension would be located in an area that could be subject to landslides. Although the BP Master Plan projects would increase bike and pedestrian traffic along the California Coastal Trail, they are not expected to bring in large numbers of people into the BP Master Plan area. In addition, the possibility of a mudflow resulting in the release of pollutants is highly unlikely. Therefore, operations of the BP Master Plan would not exacerbate the risk of releasing pollutants due to mudflow.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact.

All Projects: Implementation of the BP Master Plan would be designed, constructed and maintained in a manner consistent with all relevant City regulations. The City would not propose a BP Master Plan project that would not be consistent with adopted City policy and regulations or which would result in a significant impact to water quality of groundwater resources. Therefore, the project would not conflict with or obstruct implementation of a water quality control plant or sustainable groundwater management plan. In addition, the Standard Conditions (Table 2.12-1: City of Half Moon Bay Standard Procedures and Conditions of Approval) and Mitigation Measures presented in this IS/MND are consistent with the City's General Plan and LCP policies and ensure that aquatic resources are protected.

3.10.4 References

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3.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.11.1 Environmental Setting

This analysis summarizes and draws from the environmental and regulatory setting information for land use contained in the City LCPLUP First Public Review Draft dated April 2016.

The City has a total land area of 6.23 square miles, of which approximately seven percent is protected open space and another 13 percent is parks and recreation, approximately 17 percent is Agriculture, Nurseries and Greenhouses, 18 percent is residential, and 28 percent is vacant or undeveloped. Development in the City consists of an alternating mix of agricultural, open space, and residential uses, with large tracts of land given to plant nursery and greenhouse operations around the edges of the City and along Highway 92. A small area of industrial land uses exists near the northeast corner at the intersection of Highway 92 and Main Street. Figure 3.11-1: reveals land uses by location in Half Moon Bay.

Residential Land Uses

Combined, residential land uses cover 17.3 percent of the City's BP Master Plan area (excluding streets and other rights of way). The dominant residential land use is single-family residential, which makes up 81 percent of the City's residential land and 14 percent of all land. Multi-family residential, townhomes, duplexes, and mobile home parks make up the remainder of residential uses, each covering 1 percent or less of the City. North of Kelly Avenue and in the Arleta Park subdivision, most single-family residential land exists in small pockets surrounded by agricultural fields, vacant land, and open space. In the downtown area, single-family residential development is interspersed with other residential uses as well as non-residential uses. In the southern part of the city, most single-family development is located in the Ocean Colony subdivision.

Commercial and Industrial Land Uses

Commercial land in the City covers 2.5 percent of land in the BP Master Plan area. Commercial and retail uses make up the largest percentage of commercial land use, at 46 percent, the majority of which are located near the junction of Highways 1 and 92. Industrial uses account for 2.2 percent of the City and include general industrial and agriculture-related industrial uses. The larger industrial sites are located closer to the edges of the BP Master Plan area; other agricultural sites line Highway 92 both inside and outside of City limits.

Public and Institutional Land Uses

Public/Institutional uses include schools and educational facilities, public and government uses, and cemeteries, and account for 2.8 percent of the City's area. The largest share of these belongs to schools and educational facilities, located mostly in the center of the city. Other uses are also clustered near the center of the City, near the intersection of Highways 1 and 92. Religious uses occupy 13 acres within the City on sites along Highway 1 and in the downtown area.

Open Space Uses

Recreational uses include the City's beaches and public recreation areas, golf course, and parks. These cover 585 acres (13.7 percent) of the City's area. The majority of these uses are located west of Highway 1. The largest category, beaches and public recreation, makes up 49 percent of all recreational land uses in the BP Master Plan area, and covers 288 acres along the coast. This includes the beaches that line most of the City's western edge, the open spaces of Half Moon Bay State Beach, and the open space surrounding the trails south of Poplar Beach. There are approximately 59 acres of City owned park land within the City, most of which are mini-parks or neighborhood parks less than 5 acres in size. Smith Field, developed with baseball fields, is the City's largest park, covering 29 acres (13.2 acres developed and approximately 16 acres undeveloped). The Johnston House Park, located outside the city limits yet still managed by the City, is 19.52 acres.

Open space constitutes 247 acres (5.8 percent) of land in the City. This category includes dedicated open space lands as well as vacant lots held as open space by conservation trusts. Within the City limits, open space lands are located mostly to the west of Highway 1. Vacant land covers 519 acres (12.2 percent) of land in the BP Master Plan area. Of this, 498 acres are in the City. Much of this land is composed of smaller parcels clustered among residential land uses, though there are several larger parcels east of Highway 1 and north of Highway 92. Concentrations of vacant land can be found at Surf Beach, at Venice Boulevard, west of Arleta Park, at Wavecrest, and north and east of Half Moon Bay High School.

3.11.2 Regulatory Setting

Land use regulations relevant to the impact analysis of each of the environmental disciplines in the Environmental Checklist are presented and discussed in the specific impact analysis section. For example, policies to protect environmentally sensitive habitats are listed in the regulatory setting of Biological Resources section (Section 3.4.2 of this Environmental Checklist), or visual resource policies in the Aesthetics section (3.1.2), etc.

State**The Coastal Act and Local Coastal Programs**

The California Coastal Act (Coastal Act), passed in 1976, seeks to protect and enhance the unique characteristics and resources of the California coast for public, economic, and ecological benefit. It regulates land use and development within the California Coastal Zone, which generally extends from the State's seaward limit of jurisdiction to 1,000 yards inland of the mean high tide line; it may, however, extend farther in significant habitats or recreational areas and less in urbanized areas. Coastal Act policies are focused on the goals of protecting and enhancing the Coastal Zone's environment, conserving its resources, maximizing public access and recreational opportunities within the Coastal Zone in balance with conservation needs and private property rights, ensuring that coastal-dependent and coastal-related development is

prioritized within the Coastal Zone, and ensuring that coordinated planning for mutually beneficial uses is taking place at the state and local levels.

With few exceptions, any new development taking place within the Coastal Zone must obtain a Coastal Development Permit (CDP) from the CCC, or a local government with a certified LCP. An LCP consists of two components. The first is an LUP that establishes a long-range vision for the community and specifies the kinds, locations, and intensities of allowable land uses; applicable resource protection and development policies; and, where necessary, a listing of implementing actions to achieve the vision and implement the objectives of the Coastal Act. The second component is an implementation program, typically a set of zoning and subdivision regulations, that details requirements for the development of individual properties. All of the City's BP Master Plan area is in the Coastal Zone and the City implements a certified LCLUP.

Local

City of Half Moon Bay General Plan Park and Recreation Element – Revised 1995

The existing Half Moon Bay General Plan contains the City's official policies on housing, circulation, and community services. Its policies apply to both public and private properties, and it focuses on the physical form of the City. The General Plan provides the basis for the City's development regulations and the foundation for its capital improvements program.

The General Plan is a legal document that must meet specific State requirements for content. State law establishes the topics that must be addressed, as well as the maps and diagrams the Plan must contain. The General Plan must be comprehensive, long-range, and internally consistent. State law requires that local plans contain seven mandatory sections, or "elements," although the State allows considerable flexibility in how these elements are organized. The required elements consist of: 1) Land Use, 2) Circulation, 3) Housing, 4) Open Space, 5) Conservation, 6) Safety, and 7) Noise. The City's LUP serves as the City's Land Use Element.

Half Moon Bay Local Coastal Land Use Plan - 1996

The City's LCP consists of the LUP and the City's Zoning and Subdivision Ordinance. The current LUP was adopted in 1993 and effectively certified in 1996 and, as the entire City is located within the Coastal Zone, serves as the Land Use Element of the city's General Plan⁹. It seeks to balance the social and economic needs of the City's residents, the needs of the Midcoast region, and the mandates of the Coastal Act.

Each chapter in the LUP contains resource protection and development policies intended to direct the kinds, locations, and intensity of land uses in the City in relation to issues of coastal access and recreation, environmentally sensitive habitats and water resources, hazards, archaeological and paleontological resources, visual resources, agriculture, development, and public works. Some of these policies are applicable to the project. For example, policies in the Coastal Access and Recreation chapter are intended to resolve conflicts between recreational uses and other uses in the course of ensuring adequate and environmentally compatible public access to the coast, as well as to ensure adequate visitor-serving and recreational uses. The policies limit development near public access and recreational areas and establish priority land uses for certain areas of the city, such as coastal-dependent and recreational uses on lands

⁹ The City is in the process of updating its General Plan and LCP, but it is still in the planning stages. The City has published draft sections of the General Plan and LCP but has not adopted any new policies at this point.

along the coast and visitor-serving uses in the downtown area. Specific policies relevant to the BP Master Plan include the following:

- Policy 1-4: Prior to the issuance of any development permit required by this Plan, the City shall make the finding that the development meets the standards set forth in all applicable Land Use Plan policies.
- Access Policy 30210: In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with the public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.
- Recreation Policy 30212: Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources; (2) adequate access exists nearby, or; (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.
- Recreation Policy 30213: Lower cost visitor and recreational facilities and housing opportunities for persons and families of low to moderate income, as defined by Section 50093 of the Health and Safety Code, shall be protected, encouraged, and where feasible, provided. Developments providing public recreational opportunities are preferred.
- Recreation Policy 30221: Ocean front land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.
- Recreational Policy 30222: The use of private lands suitable for visitor-serving commercial recreational facilities shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.
- Recreational Policy 30252.6: The locations and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of on-site recreational facilities to serve the new development.
- Policy 2-2: For all new development along the Shoreline Trail alignment shown on the Access Improvements Map, granting of lateral easements to allow for continuous public access along the shoreline shall be mandatory unless publicly owned blufftop land suitable for trail development intervenes between the development and the bluff edge. All beach seaward of the base of the bluff shall be dedicated. At a minimum, the dedicated

easement shall have a width sufficient to allow an adequate trail and to protect the privacy of any residential structures built near the accessway. Lateral trails along the bluff edge shall be set back at least 10 feet and native vegetation shall be established between the trail and the edge to stabilize the bluff top.

- Policy 2-5: No structure shall be built within 15 feet of an accessway or the boundary of public shoreline recreation area ownership. A greater distance may be required to minimize adverse visual impacts, to protect residential privacy, or to protect public access.
- Policy 2-6: All vertical and lateral public accessways shall have clearly posted signs specifying the public's right to use these areas; signs shall also contain any limitations on the public's right of access and specific uses.
- Policy 2-7: In a zone extending approximately 200 feet inland from the mean high tide line, priority shall be given to coastal-dependent and related recreational activities and support facilities. However, camping facilities should be set back 100 feet from the beach and bluffs and near-shore areas reserved for day use activities. In no case shall recreational improvements, other than accessways, lifeguard facilities, trash containers, and informational signs be located directly on dry, sandy beach.
- Policy 2-8: Recreational uses on ocean front lands that do not require extensive alteration of natural environment shall have priority over recreational uses requiring substantial alterations. This shall apply to both public and private development. Off-road vehicle use shall be prohibited in regional recreation areas, as designated on the Land Use Plan Map.
- Policy 2-9: Development unrelated to on-site recreational activities shall not be permitted in publicly owned recreational areas, with the exception of the State Park administrative and maintenance operations located at Half Moon Bay State Beach.
- Policy 2-11: Encourage Caltrans to improve signs along Highway 1 designating specific access routes as provided for in the Plan. Signs shall also be posted at entrances to the City, informing the public about the recreational resources available in Half Moon Bay, and routes to reach these areas.
- Policy 2-13: Close the northern end of Mirada Road where it intersects with Highway 1 to eliminate blufftop parking and resulting blufftop erosion. The trail as shown on the Access Improvements Map shall not be prohibited and if parking is provided to the adjacent unincorporated area an improved public pedestrian access (ramp or stairs to the beach) would be appropriate.
- Policy 2-14: As a condition of development on the Miramar Beach Development Company property, require the developer to provide: (a) A vertical easement and stairway to replace dirt trails down to the beach, to be dedicated to the State. (b) A lateral easement and pedestrian trail linking Mirada Road with San Andreas Avenue on the ocean side of any development to be dedicated to the State. (c) Adequate landscaping to screen the accessways from development and setbacks from the trails equal to or greater than those permitted for equivalent density development in the Zoning Ordinance.
- Policy 2-16: Designate, sign, and improve Higgins Canyon Road, Miramontes Point Road, beach access route as may be and a new State Park entrance access routes.

- Policy 2-21: The State and the County of San Mateo should construct new paths or stairs down to the beach from the end of the westerly extension of Higgins Canyon Road as designated in Policy 2-16. In conjunction with adjacent new development, encourage the construction of paths or stairs to the beach as shown on the Access Improvements Map.
- Policy 2-22: Provide an improved bluff edge trail designed to improve coastal access and avoid increase in bluff edge runoff from Kelly to Miramontes Point Road as shown on the Access Improvement Map or as determined by the Wavecrest Conservancy Project for the area between Seymour and Redondo Beach Road. Connect the lateral trail to the beach with vertical trails at the end of Kelly, midway between Kelly and Seymour, at the end of Seymour, midway between Seymour and Redondo Beach Road as determined by the Wavecrest Conservancy Project, near the end of Redondo Beach Road, and at the end of Miramontes Point Road.
- Policy 2-24: Use landscaping and signs to separate horse and pedestrian trails. Restrict horseback riding to trails and areas as shown on the Access Improvements Map.
- Policy 2-27: Implement the approved plan for Miramontes Point Road, the new improved parking lot, and the vista point on Miramontes Point, as indicated in the Land Use Plan, continuing on to connect with the Country Club Hotel. Provide for return of the continuous lateral shoreline trail to Highway 1 along Miramontes Point Road to discourage travel through County land south of city limits of Half Moon Bay.

City of Half Moon Bay Zoning Ordinance (Title 18 of the Municipal Code)

The Zoning Ordinance establishes the regulations and development criteria that would guide projects implemented under the BP Master Plan. The main intents of the Ordinance include controlling the City's future growth; preventing excessive population densities and overcrowding; protecting the character and economic stability of all areas within the city; providing adequate light, air, privacy, and access to property; ensuring that demand not exceed capacity for public services; and conserving the City's architectural, historical, cultural, visual, and natural resources. The Ordinance establishes the City's zoning districts and their associated development standards. It also specifies the administrative processes for the permitting of development within the City. The Ordinance codifies the City's one percent annual growth limitation and the conditions for water and sewer allocation. The Ordinance also serves as a part of the LCPIP, setting forth requirements for the protection of coastal resources.

Plan Half Moon Bay, Local Coastal Land Use Plan, Public Draft 2016

The City is currently in the process of updating their General Plan and the LCP. Community input is the foundation of the BP Master Plan vision and goals and the BP Master Plan is consistent with the definitions and standards contained in the new Plan Half Moon Bay.

Half Moon Bay Downtown Specific Plan

The Downtown Specific Plan, adopted in 1995, contains objectives, policies, and programs to guide land use development within the specific plan area, address the area's key issues, and establish conditions for the development of five key underutilized parcels. The Downtown Specific Plan includes the following goals for the specific plan area:

- Expand the availability of parking.
- Ensure its continued visual attractiveness.
- Increase visitor awareness of businesses, community resources and events, and other attractions by creating identifiable gateways at key access points.

- Maintain and enhance landscaping
- Promote the installation of additional signs directing visitors to local stores, services, and sites of interest while avoiding the haphazard proliferation of signage.

The Downtown Specific Plan was designed to support the goals of the LUP with policies intended to improve access to recreational opportunities, cluster commercial uses in the City's commercial core, identify sensitive environmental resources, address the effect of development on visual resources, and address local and visitor traffic conflicts. Some existing pedestrian and bicycle facilities that are within the Downtown Specific Plan area include Class I and II bikeways, bicycle racks, and sidewalks. The Downtown Specific Plan policies relevant to the BP Master Plan include the following:

- Landscaping 4.411: Support and augment the ongoing street tree program initiated and perpetuated by the Main Street Beautification Committee and work with the Committee to develop a Downtown Street Tree Master Plan.
- Landscaping 4.413: Endeavor to preserve heritage trees located within the Specific Plan area.
- Landscaping Programs 4.421: Seek input and participation from the local floricultural industry in designing, installing and maintaining landscaping within the downtown area.
- Landscaping 4.422: Review local tree preservation ordinances for their adequacy in terms of protecting significant trees in the project area.

San Mateo County General Plan

Trails located outside of Half Moon Bay city limits are covered by San Mateo County's General Plan, adopted in 1986, which establishes policies to guide County decision-makers in matters related to land use, development, and resource management.

The County General Plan contains three sets of land use policies to direct the distribution and intensity of future development in the County: The General Land Use Policies chapter establishes guidelines applicable to all land use decisions within the County, while the Urban and Rural Land Use chapters add more specificity for each of the two categories. The PB Master Plan recommends bike parking just outside the northern city limit, near Miramar Beach. This area is considered Rural Lands and are covered under the policies of the Rural Land Use chapter.

Goals and objectives in the General Land Use chapter support the designation of land uses to ensure efficient and cost-effective provision of public infrastructure and services, strengthen local economies, protect natural resources, ensure minimal energy demand and efficient consumption, minimize danger from hazards, manage the cost and efficiency of providing public services, and achieve the development of coherent land use patterns.

Rural Land Use policies seek to concentrate development in urbanized areas to encourage the overall conservation of natural resources and open space. They define objectives for Rural Lands that focus on the protection and enhancement of resources in order to preserve biodiversity, efficiently manage resources, protect scenic quality, provide recreational opportunities, protect public health and safety, minimize environmental damage from development, and promote local employment opportunities.

San Mateo County Zoning Regulations

Outside of Half Moon Bay city limits, the BP Master Plan Area is covered by the San Mateo County Zoning Regulations. The Zoning Regulations are the main regulatory tool used to implement the policies established in the County's General Plan. Its main purposes are to guide and control future growth and development within the county, protect the character and social

and economic stability of the county, protect public health and safety, and prevent overcrowding and congestion through the regulation of land use and built structures. The Regulations consist of a zoning map, which defines the locations of each zoning district, and a zoning code that details the requirements for each district. The PB Master Plan recommends bike parking just outside the northern city limit, near Miramar Beach.

3.11.3 Discussion

Would the project:

a) Physically divide an established community?

No Impact.

All Projects: Many of the recommendations made by the BP Master Plan are smaller improvements and expansions to the existing pedestrian and bicycle network. The improvements are intended to provide pedestrian and bicycle amenities that address current and future demand based on current and anticipated infill development. All recommendations in the BP Master Plan are also intended to facilitate access between various communities, locations, and amenities within the City. Smaller projects, listed in Table 2.11-2, would not change roadway patterns, nor would they construct barriers inhibiting pedestrian or bicycle movement. Larger projects recommended by the BP Master Plan would require further evaluation under CEQA once design and implementation information become available where the project's impact on the established community would be analyzed. Implementation of the BP Master Plan would not physically divide a 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?

Less Than Significant Impact.

All Projects: The BP Master Plan was prepared to be consistent with existing City plans, policies, and regulations, (existing General Plan and Municipal Code, LUP, and the Parks Master Plan) particularly for those having been adopted for the purpose of avoiding or mitigating an environmental effect.

As actual improvements related to the BP Master Plan are proposed, a design and review process would be followed to ensure actions taken to complete the project would not conflict with the land use and zoning designations and applicable City standards. These standards include the Local Coastal Land Use Plan, zoning ordinance, water quality management plans, urban water management plan, air quality plans, and local, state, and federal regulations that protect biological resources, any of the plans specifically listed in the BP Master Plan, and the land use plans presented in the Regulatory Setting discussion of this section. In addition, improvements located in unincorporated San Mateo County, such as a coastal access point at Miramar beach, spot improvement at Alto Avenue and Cabrillo Highway, and a pedestrian study area along Pacific Ridge, will require County approval.

Therefore, impacts of the BP Master Plan with respect to conflicts with applicable plans, policies and regulations would be less than significant. This design process would ensure that the projects carried out under the BP Master Plan would not propose any land use changes that would alter the type or intensity of existing or planned land use for the area or conflict with the existing land use designation for the project area.

Future projects and projects that result from studies recommended by the BP Master Plan would be pursued in a manner that would ensure the project would not be incompatible with adjacent land uses, the character of the surrounding area, or conflict with established uses in

the area. Each project would go through its own planning and design process to ensure consistency with adopted City ordinances, plans and policies, and to ensure potential environmental impacts are identified and addressed. If needed, projects carried out under the BP Master Plan would undergo additional CEQA review to identify and mitigate potential environmental impacts when design plans become available.

The City would implement the BP Master Plan to ensure recommended projects do not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project for the purpose of avoiding or mitigating environmental affect.

3.11.4 References

Dyett & Bhatia, 2014. Plan Half Moon Bay: Existing Conditions, Trends and Opportunities Assessment. Prepared for the City of Half Moon Bay. Revised July 2014.

Half Moon Bay, City of. 1996. Half Moon Bay Local Coastal Land Use Plan.

Martin, Neal and Associates. June 6, 1995. Policies for the Half Moon Bay Downtown Specific Plan. Accessed November 30, 2018 at <https://www.half-moon-bay.ca.us/DocumentCenter/View/675/Downtown-Specific-Plan-1>.

Half Moon Bay, City of, 2015. Half Moon Bay Municipal Code, Title 18 Zoning.

Half Moon Bay, City of. General Plan and Local Coastal Land Use Plan April 2016 Draft. 2016

Half Moon Bay. November 2016. First Public Review Draft General Plan. Accessed November 30, 2018 at <https://www.planhmb.org/reports-and-products.html>.

3.12 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local -general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.12.1 Environmental Setting

The Half Moon Bay General Plan and LCP do not identify any locally or regionally valuable mineral resources within the City.

3.12.2 Discussion

Would the project:

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**
- b) **Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

No Impact. (Responses a-b).

All Projects: Adoption of the BP Master Plan would not create any loss of availability of a known mineral resource of value to the region and residents of the State. Therefore, the BP Master Plan would not result in any adverse impacts to locally important mineral resources.

3.12.3 References

Half Moon Bay, City of. 1991. City of Half Moon Bay General Plan. Adopted October 15, 1991.

3.13 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project result in:</i>				
a) 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 in other applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or 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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13.1 Environmental Setting

Noise may be defined as loud, unpleasant, or unwanted sound. The frequency (pitch), amplitude (intensity or loudness), and duration of noise all contribute to the effect on a listener, or receptor, and whether the receptor perceives the noise as objectionable, disturbing, or annoying.

The Decibel Scale (dB)

The decibel scale (dB) is a unit of measurement that indicates the relative amplitude of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a tenfold increase in acoustic energy, while 20 dBs is 100 times more intense, 30 dBs is 1,000 more intense, and so on. In general, there is a relationship between the subjective noisiness, or loudness of a sound, and its amplitude, or intensity, with each 10 dB increase in sound level perceived as approximately a doubling of loudness.

Sound Characterization

There are several methods of characterizing sound. The most common method is the “A-weighted sound level,” or dBA. This scale gives greater weight to the frequencies of sound to which the human ear is typically most sensitive. Thus, most environmental measurements are reported in dBA, meaning decibels on the A-scale.

Human hearing matches the logarithmic A-weighted scale, so that a sound of 60 dBA is perceived as twice as loud as a sound of 50 dBA. In a quiet environment, an increase of 3 dB is usually perceptible, however, in a complex noise environment such as along a busy street, a noise increase of less than 3 dB is usually not perceptible, and an increase of 5 dB is usually perceptible. Normal human speech is in the range from 50 to 65 dBA. Generally, as environmental noise exceeds 50 dBA, it becomes intrusive and above 65 dBA noise becomes excessive. Nighttime activities, including sleep, are more sensitive to noise and are considered affected over a range of 40 to 55 dBA.

The daytime ambient noise environment transitions to a quieter level in the evening and overnight as typical background sound levels dissipate. Because the sensitivity to noise increases during the evening and at night—excessive noise interferes with the ability to sleep—24-hour descriptors have been developed that incorporate noise penalties added to quiet-time noise events. The Community Noise Equivalent Level, CNEL, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The Day/Night Average Sound Level, DNL or Ldn, is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period. CNEL is commonly used, and in fact, the California Aeronautics Code specifies the use of CNEL as the noise metric for evaluating airport noise impacts.

Noise Sensitive Receptors

Noise-sensitive receptors are land uses where the presence of unwanted sound could adversely affect the use of the land. Examples include residential areas, senior and childcare facilities, schools, and churches. ESHA are also considered if the habitat contains or supports noise-sensitive animal species that would be significantly adversely affected by a change in the noise environment as determined through a biological assessment.

Existing Noise Setting

The noise environment of Half Moon Bay is influenced by the mix of land uses found within the City including residential, commercial, agricultural, and park/open space, as well as major highway corridors and weather conditions. The residential neighborhoods and Downtown Half Moon Bay have noise environments typical of those land uses, although areas close to either Highway 1 or Highway 92 experience high levels of traffic noise. The highway corridors can experience noise levels reaching 70-75 dBA, while primary local roads can experience noise levels of 60-65 dBA (City of Half Moon Bay 2016).

The General Plan and Local Coastal Land Use Plan First Public Draft Noise Element, November 2016, describes noise sources within the City as being comprised of primarily:

- Traffic related noise on Highway 1 and Highway 92, and major local roadways including Main Street and Kelly Avenue
- Flyover aircraft noise from San Francisco International Airport and Half Moon Bay Airport
- Noise from stationary sources such as the area of industrial and commercial uses near the intersection of Highway 92 and North Main Street and those normally associated with and/or secondary to residential development, including rooftop and loading dock equipment, entertainment venues, nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-thrus, air conditioning units, swimming pool pumps, school playgrounds, athletic and music events, and public parks
- Temporary noise sources such as construction noise and agricultural equipment

Noise sources that affect sensitive receptors within the community would include traffic-related noise, industrial uses such as rock crushing; agricultural uses relying on mechanical equipment; and temporary activities generating loud noise such as construction or special events.

Construction is a temporary source of noise for residences and businesses located near construction sites. The highest construction noise levels are normally generated during grading, excavation and pile driving, with lower noise levels occurring during building construction. Large pieces of earth-moving equipment, such as graders, scrapers, and bulldozers, generate maximum noise levels of 85 to 90 dBA at a distance of 50 feet. Typical hourly average construction-generated noise levels are about 80 to 85 dBA at a distance of 50 feet from the site during busy construction periods. Construction activities can elevate noise levels at adjacent

businesses and residences by 15 to 20 dBA or more. Municipal Code, Title 14, Buildings and Construction, Chapter 40, Hours of Construction, establishes performance standards for impulsive noise that it is unlawful for any residential, commercial, and industrial construction work to occur outside of the following hours: Monday through Friday, 7:00 AM to 6:00 PM; Saturdays 8:00 AM to 6:00 PM; and Sundays and holidays 10:00 AM to 6:00 PM.

The existing bicycle and pedestrian facilities are found throughout the City, in or adjacent to all types of land uses, as shown in the tables and figures contained in Chapter 2, Project Description. Bicycle and pedestrian facilities are not considered to be an, intrusive, noticeable source of noise that would impact sensitive receptors. The noises generated by pedestrians and cyclists would be transitory in nature and would primarily consist of human voices, bicycle wheels on pavement, occasional dogs barking, etc., which do not result in loud, sustained increases in noise.

Ground Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. It consists of rapidly fluctuating motions with an average motion of zero.

Vibration has the potential to impact both structures and people. Effects of vibration include perceptible movement of building floors, rattling windows, shaking of items on shelves or walls, and rumbling sounds known as ground-borne noise. In extreme cases, vibration can cause damage to buildings. Humans may be affected physically by vibration's effects on a surrounding structure or room or may be annoyed by vibration that occurs above certain levels (City of Half Moon Bay 2016).

In contrast to airborne noise, ground-borne vibration is not a phenomenon that most people experience every day. Background levels of vibration, usually 50 VdB or lower, are usually well below the threshold of perception for humans, which is typically around 65 VdB. Background levels are usually only of concern when it affects very sensitive manufacturing or research equipment. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Vibration perceptible to humans is not usually significant unless it exceeds 70 VdB. If the vibration level in a residence reaches 85 VdB, most people would be strongly annoyed by the vibration. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads (City of Half Moon Bay 2016).

Existing Vibration Setting

Construction activities and transportation are the most common sources of vibration in Half Moon Bay. There may also be other sources of vibration in the community, as activities involving heavy machinery or the moving of heavy objects can result in vibration.

Transportation-Related Vibration Sources: Transportation-related vibration is typically associated with trains or heavy vehicles traveling rough roads (if a roadway is smooth, vibration from traffic is rarely perceptible). Generally, it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads.

No fixed railroad lines pass through Half Moon Bay, thus transportation-related ground vibration would only occur from heavy truck pass-bys on Highway 1, Highway 92, and occasionally on other major local roadways. The resulting vibration levels at the nearest receivers are normally below the threshold of perception.

Construction-Related Vibration Sources: Construction activities such as demolition, site preparation work, excavation, and foundation work can generate ground-borne vibration at land

uses adjoining construction sites. Impact pile driving has the potential of generating the highest ground vibration levels and is of primary concern to structural damage. Other project construction activities, such as caisson drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) can generate substantial vibration levels in the immediate vicinity. Because of variability in soil conditions, it is extremely difficult to predict with accuracy the magnitude of vibration which might be experienced at a given location or distance from the source.

3.13.2 Regulatory Setting

City of Half Moon Bay General Plan Noise Element - 1991

The City of Half Moon Bay's General Plan Noise Element (1991) is intended to protect public health and welfare by eliminating existing noise problems and by preventing significant degradation of the future acoustic environment. The General Plan sets forth the following policies related to noise and noise control, which may be applicable to the implementation of future Master Plan projects:

- Policy 2.c: The City shall ensure the effective enforcement of City, State and Federal noise levels by all appropriate City divisions.
- Policy 3.a: The City shall establish a new Community Noise Ordinance to mitigate noise conflicts from non-noise sources. The City of Half Moon Bay does not currently have a problem with non-sources of noise (e.g. industrial noise sources). Therefore, it does not seem prudent to adopt a Noise Ordinance aimed at the sources. However, in-fill construction is occurring throughout the City, and this can impact existing residential areas. Therefore, it is proposed to limit construction activities that occur within 500 feet of existing residences to Monday through Friday from 7 A.M. to 7 P.M. only. Construction also should not be allowed on federal holidays.

Exhibit 8 Community Noise Compatibility Matrix sets the maximum acceptable noise level for land use categories found within the City. This figure has been reproduced as City of Half Moon Bay Municipal Code,

City of Half Moon Bay Municipal Code

The City of Half Moon Bay's Municipal Code contains several standards related to noise:

- Title 9, Public Peace, Morals and Welfare, Chapter 23, Noise, specifies no person shall, between the hours of 10:00 PM and 8:00 AM make, cause, suffer or permit to be made any offensive noise (1) which is made within one hundred feet of any building or place regularly used for sleeping purposes, or (2) which disturbs, or would tend to disturb, any person within hearing distance.
- Title 14, Buildings and Construction, Chapter 40, Hours of Construction, establishes performance standards for impulsive noise that it is unlawful for any residential, commercial, and industrial construction work to occur outside of the following hours:
 - Monday - Friday, 7:00 AM to 6:00 PM; Saturdays 8:00 AM to 6:00 PM; and
 - Sundays and holidays 10:00 AM to 6:00 PM.

Land Use Categories	Community Noise Exposure CNEL, dB					
	55	60	65	70	75	80
Residential, Hotels, Motels, Residential Mixed Use						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Office Buildings, Business Commercial and Professional						
Neighborhood Parks and Playgrounds						
Outdoor Sports and Recreation						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Industrial, Manufacturing, Utilities, Agriculture						
<div> <div></div> Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. </div> <div> <div></div> Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. </div> <div> <div></div> Unacceptable: New construction or development should generally not be undertaken. </div>						
Notes: <ol style="list-style-type: none"> Noise levels refer to external ambient noise from permanent land uses. For mixed uses other than residential mixed use, refer to the most noise-sensitive use. 						

Source: Governor's Office of Planning and Research State of California General Plan Guidelines, 2003.

Figure 3.13-1 Noise Compatibility Matrix

3.13.3 Discussion

Would the project result in:

- a) **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 in other applicable local, state, or federal standards?**

Less Than Significant Impact.

All Projects: BP Master Plan improvements are listed by location in the tables presented in Project Description. Most of the improvements would be small in nature and would not require substantial or prolonged heavy equipment operation (lane and crosswalk striping, signage, removal of sidewalk impediments, bike fix it stations, etc.). Any construction operations would be subject to the City's Municipal Code Title 14, Building and Construction noise regulations, as stated previously, and if construction occurs within 500 feet of existing residences, activities must comply with the City's General Plan Policy 3.a, which restrict construction activities to Monday to Friday, 7:00 A.M. to 7:00 P.M. Construction of BP Master Plan improvements would not result in temporary increases in ambient noise in excess of City standards.

The BP Master Plan recommendations are intended to enhance the existing bicycle and pedestrian facilities for both residents and visitors to the City, to encourage alternative modes of transportation, and to connect currently isolated neighborhoods within the City. The BP Master Plan would not propose new activities or facilities that are not already operating in various places throughout the City. The noise generated by use of the bicycle and pedestrian network would be typical noises such as voices and possibly the sound of wheels on pavement. The enhanced network would be compatible with all land use categories and is not anticipated to result in a permanent increase in ambient noise levels in excess of standards established in the City's General Plan or Municipal Code.

- b) **Generation of excessive groundborne vibration or groundborne noise levels?**

No Impact.

All Projects: The potential for groundborne vibration is typically greatest when vibratory or large equipment such as rollers, impact drivers, or bulldozers are in operation. The future implementation of projects and improvements identified in the BP Master Plan would typically be minor in nature and would not require the use of large, heavy-duty construction equipment or impact devices (e.g. pile drivers or earthmovers) that have the potential to create excessive groundborne vibration. In some cases, construction equipment could operate adjacent to or in close proximity (within 50 feet) to sensitive residential and other land uses and buildings and produce groundborne vibration levels that could be perceptible to humans; vibration levels in these instances would not be excessive because any equipment operation near sensitive receptor locations would be short in duration and intermittent (i.e., construction equipment would move along the trail route or throughout the work area) and would be unlikely to result in structural damage to buildings. This impact would be less than significant.

- c) **For a project located within the vicinity of a private airstrip or 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 expose people residing or working in the project area to excessive noise levels?**

No Impact.

All Projects: The closest nearby public airport is the Half Moon Bay Airport, which is a small public airport located on the coast west of Highway 1 approximately four miles north of the City

as measured by Google Earth. The San Carlos Airport is approximately six miles east of the downtown area of the City on the bay side of the Coast Range Mountains. There are no private airports in the vicinity of the City; no impact would occur from private airport facilities.

The BP Master Plan focuses the proposed improvements near the downtown area of the City, with a few facilities further north by the unincorporated portion of the Miramar neighborhood. There are no proposed new improvements near the Half Moon Bay Airport (C/CAG 2014). The BP Master Plan would enhance the City's existing bicycle and pedestrian network and does not propose new development that would expose new people residing or working in the project area to excessive airport related noise levels. Adoption of the BP Master Plan would not have an impact related to airport noise.

3.13.4 References.

City/County Association of Governments of San Mateo County (C/CAG). 2014. *Airport Land Use Compatibility Plan (ALUCP) for the Environs of Half Moon Bay Airport*

City of Half Moon Bay (HMB) 1990. *Noise Element of the General Plan for the City of Half Moon Bay*. Prepared by Fred Greve, P.E. and Christopher P. Bosley from Mestre Greve Associates. Adopted September 4, 1990, Revised January 18, 1991.

----- 2016. *General Plan and Local Coastal Land Use Plan, First Public Draft Noise Element*. November 2016. Draft

3.14 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Induce a 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.14.1 Environmental Setting

The City of Half Moon Bay is located on the Pacific Coast approximately 28 miles south of San Francisco and lies within the westernmost portion of San Mateo County. Half Moon Bay has a population of approximately 12,870 and approximately 5,395 housing units (U.S. Census Bureau, 2017).

3.14.2 Discussion

Would the project:

- 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)?**

No Impact.

All Project Types: No residential development is proposed as part of the BP Master Plan. The implementation of the BP Master Plan, therefore, would not induce substantial population growth either directly or indirectly. While some projects/improvements may increase some additional service jobs, they would not result in a new substantial increase in population growth.

- b) **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

No Impact.

All Project Types: The BP Master Plan serves as a guide to expand, preserve, and enhance the City's bicycle and pedestrian facilities. No residential development is proposed as part of the BP Master Plan, and the BP Master Plan does not propose to demolish any residential units. The implementation of the BP Master Plan, therefore, would not displace any housing or people such that the construction of replacement housing would be necessary.

3.14.3 References

Dyett & Bhatia. 2014. Plan Half Moon Bay: Existing Conditions, Trends and Opportunities Assessment. Prepared for the City of Half Moon Bay. Revised July 2014.

United States Census Bureau. 2017. American Fact Finder: Half Moon Bay city, California. Accessed February 2, 2019. Available at https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml.

United States Census Bureau. 2017. QuickFacts: Half Moon Bay, California. Accessed October 3, 2018. <https://www.census.gov/quickfacts/fact/table/halfmoonbaycitycalifornia/PST045217>.

3.15 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 Environmental Setting

Within the City of Half Moon Bay a number of public services are available to citizens, including police and fire services, park and recreation services, library and cultural arts programs, medical facilities, educational institutions, as well as youth, senior, and childcare services. The following information on the public services offered within the BP Master Plan area is from the Existing Conditions Report (Dyett & Bhatia, 2014) prepared as part of the City's General Plan update planning process.

Fire and Emergency Response Services

The Coastside Fire Protection District (CFPD) provides fire protection services in the City of Half Moon Bay, neighboring communities and surrounding unincorporated areas, a territory covering approximately 50 square miles along the San Mateo County coast and a population of approximately 30,000. CFPD is staffed with 20 paid firefighter positions and 23 volunteer firefighter positions, at three stations. CFPD maintains minimum or target response time standards for fire and emergency service calls. For urban areas, the standard is seven minutes, for rural areas it is 12 minutes, and for remote areas it is 22 minutes (Coastside Fire Protection District).

Police Services

The San Mateo County Sheriff's Office provides law enforcement in Half Moon Bay. The Sheriff's Office Patrol Bureau provides general law enforcement services to unincorporated areas throughout the County in addition to full police services to various cities, including the City of Half Moon Bay. The Sheriff's Office does not maintain service ratio standards. The response time standard is under eight minutes for priority one emergency calls; the Sheriff's Office reports

that average response time for the 2017-2018 fiscal year was 4.53 minutes, well under the standard (SMC 2017).

Schools

Cabrillo Unified School District (CUSD) provides public education in the City of Half Moon Bay and a larger 135-square-mile territory that includes the neighboring communities of Montara, Moss Beach, El Granada, and Miramar. The District has four elementary schools, one intermediate school, one high school, one alternative high school, and an Adult Education program. According to CUSD, the Adult Education program is currently being shifted to the community colleges.

Parks

Currently there are 13 city parks in Half Moon Bay totaling approximately 59.2 acres. There are 247 acres of preserved open space within City limits. This acreage is owned and managed by public and non-profit entities, including the Peninsula Open Space Trust (128 acres), the Coastside Land Trust (71 acres), and the City of Half Moon Bay (42 acres).

Half Moon Bay extends over six miles along the Pacific Ocean. The coast is generally characterized by bluff-backed sandy beaches, with bluffs rising from about two to 80 feet in height, with higher bluffs in the south. About three-quarters (4.5 miles) of the coastline is in public ownership, including nearly the entire coastline from El Granada (Surfers' Beach) to Kelly Avenue (Francis Beach, a part of Half Moon Bay State Beach), as well as Poplar Beach. California State Parks and Beaches owns and manages most of this land, with smaller amounts managed by the City and County.

3.15.2 Regulatory Setting

City of Half Moon Bay's Local Coastal Program Land Use Plan - 1996

The City of Half Moon Bay's LUP identifies one policy in Chapter 9 Development that relates to public services. The policy is:

- Policy 9-12: The amount of public, private, and common open space in a Planned Development shall be specified in the Development Plan. The required amount of common and public open space shall be at least 20% of the gross area. The City shall determine the amount of public open space required for coastal access and recreation and protection of public views, if not specified elsewhere in this Plan.

City of Half Moon Bay General Plan

The City of Half Moon Bay's General Plan addresses public services in both the Parks and Recreation Element (1990, revised 1995) and the Circulation Element (2013). The Parks and Recreation Element is intended to guide the acquisition, development, operation, and maintenance of the City's park and recreation system, which includes the bicycle and pedestrian network, that will adequately serve the needs of Half Moon Bay residents. The General Plan Parks and Recreation Element sets forth the following additional policies related to public recreation and park facilities, which may be applicable to the proposed project:

- **Objective 2:** Develop a bicycle path system in cooperation with the County, State Parks, and CalTrans.
 - **Policies 2.1.1:** Include Class I (separate bike path), Class II (on-street bicycle lane), and Class III bikeways (shared traffic lane with signage) in the overall system.

- *Policies 2.1.2:* Develop and maintain an educational program to promote bicycle use and safety.
- *Policies 2.1.3:* Bicycle trails should provide connections to Main Street, parks, and residential areas.
- *Objective 2.2: Develop recreation trails which link the community and accommodate pedestrians, bicyclists, and, where appropriate, equestrians.*
 - *Policies 2.2.1:* Utilize and improve existing trail systems, by working cooperatively with other agencies.
 - *Policies 2.2.2:* Gain necessary easements and ownership, in order to utilize natural linear features such as riparian corridors, bluff tops, and abandoned rights-of-way.
 - *Policies 2.2.3:* Link local trails with planned County trails.
 - *Policies 2.2.4:* Complete development of the Coastside Recreation Trail in the approximate location shown on the Master Plan Diagram. (Trail location is shown schematically). Trail location should generally be held at least 20 feet back from bluff edge, and should, in most cases, be within 300 feet of the bluff edge.
 - *Policies 2.2.5:* Develop a Foothill Recreation Trail in the approximate location shown on the Master Plan Diagram.
 - *Policies 2.2.6:* Construct a pedestrian/bicycle over- or under-crossing of Highway 1 at Pilarcitos Creek.
 - *Policies 2.2.7:* Construct a pedestrian/bicycle bridge over Pilarcitos Creek at Main Street.
 - *Policies 2.2.8:* Develop linear park pathways along Canada Verde, Pilarcitos, and Frenchmans Creeks to connect the foothill trail and areas east of the highway with the coastal trail and areas west of the highway.
- *Goal 4: Operation and Maintenance:* Develop the necessary organizational staffing and funding mechanisms to assure that all parks, facilities, and open spaces are well-maintained.
- *Objective 4.1:* Ensure adequate revenue for the maintenance of all facilities.
 - *Policies 4.1.2:* Establish a maintenance and operations budget sufficient for the given level of parks development in any given year, to be funded through the General Fund and other potential new sources such as an assessment district.
- *Objective 4.2:* Provide for security and safe use of park facilities.
 - Policies: 4.2.1* Maintain facilities at appropriate levels.

City of Half Moon Bay Parks Master Plan - 2019

The BP Master Plan is intended to be consistent with and complement the Half Moon Bay Parks Master Plan. The City developed the Parks Master Plan concurrently with the BP Master Plan to ensure consistency between the two plans, as well as positive cumulative benefits through coordination of future improvements. The Parks Master Plan is meant to guide the development of programs and facilities to improve City parks and meet community needs. In general terms, in addition to park specific improvements, the Parks Master Plan provides recommendations to:

- Improve quality of life and community character,
- Provide environmental sustainability and conservation,

- Ensure parks are connected and accessible, and
- Provide economic balance and feasibility.

3.15.3 Discussion

Would the project:

- a) **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?**

Less Than Significant Impact. (Responses i and ii).

All Projects: The BP Master Plan does not propose additional residential or other population inducing development that would contribute to the need for the construction of additional facilities to maintain acceptable performance standards for fire protection or police facilities. Some of the projects and actions contemplated in the BP Master Plan are considered small-scale projects that can be implemented if they are found to be Categorical Exempt or not to be a project under CEQA. These projects are listed in Table 2.11-2. Because of their small scale, they would not substantially alter the accessibility or response time of emergency personnel to these sites.

Other developments envisioned in the BP Master Plan would require further analysis under CEQA when project plans become available. This subsequent level of review for projects and improvements would ensure future development would create the demand for additional fire protection or police facilities. Impacts to police or fire department facilities or performance standards would be less than significant.

On-Street Projects: Class II facilities are on-street bike lanes; Class III bike lanes are routes that are shared by cars and bicyclists and are typically designated on roads with lower levels of vehicle traffic. Although roads with a high volume of bicycle traffic have the potential to diminish access or response time of emergency personnel, the anticipated volume of bicycle traffic in Class II/III bike lanes within the City is not anticipated to be so great as to impede emergency vehicles or response times. Therefore, the impact would be less than significant.

Crossing and spot improvements would take place at existing facilities throughout the City. Crossing improvements, listed in Table 2.9-5, include protected intersections, pedestrian hybrid beacons, and activated flashing beacons. Spot improvements, which are specifically listed in Table 2.9-6, include widening a bridge, improving lighting, opening gates for access, and installing raised crosswalks. None of these improvements would adversely alter the accessibility or response time of emergency personnel to these sites.

Off-Street Projects: Class I bikeways are off-street facilities dedicated exclusively for use by bicyclists and pedestrians. Class IV Separated Bikeways are typically on-street bike facilities that are physically separated from vehicle traffic by curbs, planter boxes, bollards, grade separations, parked cars, or other treatments. Because these facilities do not have the potential to obstruct roadways, they would not substantially alter the accessibility or response time of emergency personnel to these sites.

iii) Schools?**No Impact.**

All Projects: The BP Master Plan does not propose new residential or other population-inducing development that would contribute to the need for the construction of additional schools to maintain acceptable performance standards. In turn, the implementation of the BP Master Plan would not result in adverse impacts with respect to schools within the City. No impact would occur.

v) Parks?**Less Than Significant Impact.**

All Projects: Implementation of the BP Master Plan may result in changes to City-owned parks, open spaces, and trails through the construction of new pedestrian and bike paths/trails thereby increasing accessibility and use of local parks. Many of the improvements would be considered an upgrade or enhancement to an existing facility that would facilitate greater safety and access between parks, which was anticipated and coordinated with the Parks Master Plan. Each proposed new pedestrian or bicycle facility would be considered, designed, and constructed consistent with adopted City policy, including but not limited to the Half Moon Bay Local Coastal Land Use Plan, the Municipal Code, the Parks Master Plan, and the BP Master Plan. The City would evaluate projects for potential environmental impacts and the need to conduct additional CEQA review to ensure adverse physical impacts from the construction of additional bicycle and pedestrian facilities would not significantly impact the physical environment. Table 2-11 in Project Description presents Standard Conditions of Approval the City would impose on BP Master Plan projects to avoid or reduce environmental impacts of proposed projects. This Initial Study also has included programmatic mitigation measures that would be applied to all future projects under the BP Master Plan for aesthetics and biology that mitigate potentially significant impacts to those resource areas to less than significant. Therefore, adoption of the BP Master Plan would not result in any significant impacts, including cumulative impacts, with respect to the construction or improvement of parks, recreational facilities, and open space preserves.

v) Other public facilities?**No Impact.**

All Projects: The City has other public facilities such as the San Mateo County Library's Half Moon Bay Branch Library, the only branch on the San Mateo County Coastsides south of Pacifica, and the Ted Adcock Community Center at 535 Kelly Avenue. While these facilities are in the vicinity of the BP Master Plan area, the BP Master Plan does not propose additional residential or other population inducing development that would contribute to the need for the construction of additional library facilities or community centers to maintain acceptable performance standards. Therefore, adoption of the BP Master Plan would not result in any significant impacts, including cumulative impacts, with respect to other public facilities.

3.15.4 References

Dyett & Bhatia, 2014. Plan Half Moon Bay: Existing Conditions, Trends and Opportunities Assessment. Prepared for the City of Half Moon Bay. Revised July 2014.

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3.16 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.16.1 Environmental Setting

The recreational opportunities in Half Moon Bay include City owned parks (plazas/pocket parks, neighborhood parks, a community park (Smith Field), and special use parks), as well as linear trails providing recreation opportunities (Coastal Trail, Naomi Patridge Trail, Pilarcitos Creek Trail), City beaches and open spaces (Railroad Ave., Redondo Beach/Wavecrest Beach, Surfer's Beach), and other community resources include school playing fields and state beaches. Additionally, there are several San Mateo County or State regional open space parks along the San Mateo coast.

Currently, there are 13 city parks in Half Moon Bay totaling approximately 59.2 acres. The largest of the City's parks is Smith Field, which is approximately 13 acres and features five sports fields, horseshoe pits, and a dog park. Frenchmans Creek Park provides amenities along a preserved riparian corridor in the northern part of the City. Mac Dutra and Kitty Fernandez Parks are small plazas in the center and at the edge of Downtown, respectively. Mini parks throughout the City provide tot lots or play structures within the neighborhoods. Ocean View Park at 0.62 acres is the City's most-used neighborhood park. Beaches and coastal bluffs in the City (both City and State owned) also support a variety of recreational uses including swimming, surfing, fishing, clamming, walking, jogging, horseback riding, as well as passive enjoyment.

The Cabrillo Unified School District also owns and maintains a variety of sports and recreational facilities such as tracks, soccer fields, and basketball courts at school sites that are available for use by the public outside of school hours. The City has recreation programs including Little League, Coastside Boys and Girls Club, and summer camp programs at the school sites. The private Half Moon Bay Golf Links spreads across the southern end of the City west of Highway 1. There are 247 acres of preserved open space within Half Moon Bay city limits, concentrated on a large property at Wavecrest, and numerous small parcels in the undeveloped subdivisions west and south of Smith Field (Dyett & Bhatia, 2014).

Several multi-use trails serve pedestrians and bicyclists in Half Moon Bay, including: the California Coastal Trail, which runs along the coastal bluffs from the northern boundary of Half Moon Bay to Seymour Creek; the Naomi Patridge Trail, which runs along the west side of Highway 1 from Redondo Beach Road northward to Rousseau Francois Road, then it crosses the highway and extends northward along the eastern side of the highway; and the Pilarcitos Creek Trail, which functions as an undercrossing for Highway 1 for bicyclists and pedestrians. Existing segments of these multi-use trails are shown in Figure 2.6-1.

The California Coastal Trail is envisioned as a continuous interconnected public trail system along the California coastline. The trail takes many forms, including informal footpaths, paved sidewalks, and separated bicycle paths; it may be located on beaches, bluff edges, hillsides, and within the highway right-of-way. The California Coastal Trail accommodates both pedestrians and bicyclists, wheelchair users, equestrians, and others as opportunities allow. Existing segments of the California Coastal Trail run in a north-south direction west of Highway 1 in Half Moon Bay. The California Coastal Trail currently extends along most of the coastline, with a gap in the North Wavecrest Restoration area between Wavecrest Road and Redondo Beach Road (Half Moon Bay. 2017).

The City of Half Moon Bay has an abundance of coastal recreation opportunities. About three-quarters (4.5 miles) of the City's six-mile coastline is in public ownership, including nearly the entire coastline from El Granada (Surfers Beach) to the south end of Poplar Beach. A total of approximately 283 acres along the Half Moon Bay coastline are in public ownership and available for public recreation.

California State Parks and Beaches owns and manages most of the land at Half Moon Bay State Park and Beach, with smaller amounts managed by the City and County at Poplar Beach and Surfers Beach. Half Moon Bay's beaches and bluffs support a variety of recreational uses including swimming, walking, jogging, fishing, clamming, and horseback riding, as well as passive enjoyment.

In addition to the public coastal recreation described above, there are approximately 631 acres of preserved open space in city limits. This open space includes land on beaches and adjacent to public recreation areas and contributes to Half Moon Bay's coastal recreational environment (Half Mon Bay. 2017).

3.16.2 Regulatory Setting

Half Moon Bay General Plan Parks and Recreation Element - 1995

The Parks and Recreation Element of the City's General Plan, adopted in 1990 and revised in 1995, has the following goals, objectives and policies which are relevant to the project:

- *Goal 2: Trails and Bikeways: Develop a network of pedestrian, bicycle, and equestrian trails to link individual components of the park system.*
- Objective 2.1: Develop a bicycle path system in cooperation with the County, State Parks, and CalTrans.
- Policy 2.1.1: Include Class I (separate bike path), Class II (on-street bicycle lane), and Class III bikeways (shared traffic lane with signage) in the overall system.
- Policy 2.1.3 Bicycle trails should provide connections to Main Street, parks, and residential areas.
- Objective 2.2: Develop recreation trails which link the community and accommodate pedestrians, bicyclists, and, where appropriate, equestrians.
- Policy 2.2.1 Utilize and improve existing trail systems, by working cooperatively with other agencies.
- Policy 2.2.2. Gain necessary easements and ownership, in order to utilize natural linear features such as riparian corridors, bluff tops, and abandoned rights-of-way.
- Policy 2.2.3 Link local trails with planned County trails.
- Policy 2.2.4 Complete development of the Coastside Recreation Trail in the approximate location shown on the Master Plan Diagram. Trail location should generally be held at least 20 feet back from bluff edge, and should, in most cases, be within 300 feet of the bluff edge.

- Policy 2.2.5 Develop a Foothill Recreation Trail in the approximate location shown on the Master Plan Diagram.
- Policy 2.2.6 Construct a pedestrian/bicycle over- or under-crossing of Highway 1 at Pilarcitos Creek.
- Policy 2.2.7 Construct a pedestrian/bicycle bridge over Pilarcitos Creek at Main Street.
- Policy 2.2.8 Develop linear park pathways along Canada Verde, Pilarcitos, and Frenchmans Creeks to connect the foothill trail and areas east of the highway with the coastal trail and areas west of the highway.

Half Moon Bay Land Use Plan - 1996

The Half Moon Bay Land Use Plan (1996) and the Zoning Ordinance together constitute the LCP for the City's coastal zone. The Land Use Plan is the policy component of the LCP; and the Zoning Ordinance, which is the City's LCIP, provides standards and requirements that implement the Land Use Plan. The following policies of the Land Use Plan relate to recreation:

- Policy 2-2: For all new development along the Shoreline Trail alignment shown on the Access Improvements Map, granting of lateral easements to allow for continuous public access along the shoreline shall be mandatory unless publicly owned blufftop land suitable for trail development intervenes between the development and the bluff edge. All beach seaward of the base of the bluff shall be dedicated. At a minimum, the dedicated easement shall have a width sufficient to allow an adequate trail and to protect the privacy of any residential structures built near the accessway.
- Policy 2-6: All vertical and lateral public accessways shall have clearly posted signs specifying the public's right to use these areas; signs shall also contain any limitations on the public's right of access and specific uses.
- Policy 2-11: Encourage Caltrans to improve signs along Highway 1 designate specific access routes as provided for in the Plan. Signs shall also be posted at entrances to the City, informing the public about the recreational resources available in Half Moon Bay, and routes to reach these areas.
- Policy 2-34: Designate land to be reserved for future satisfaction of residents' needs for additional passive and active recreational facilities as indicated on the Half Moon Bay Land Use Plan and Map and begin implementation of the program playfield/community center concept to meet existing needs. Develop the proposed recreational center in phases, with at least 15 acres needed for Phase 1 and a balance for Phase 2.

Half Moon Bay Municipal Code Title 18 Zoning Ordinance

Title 18 of the Half Moon Bay Municipal Code requires the following regulations regarding recreation in open space district zone:

18.12.020 Open space district use regulations.

- A-5 Public Park and Recreation. Permitted uses include public parks and beaches, day visitor parking for shoreline access and recreation, public restrooms, visitor information centers, interpretive centers, access ways such as bicycle, equestrian and pedestrian trails, picnic areas and trash enclosures. Recreational uses that do not require extensive alteration of the natural environment shall be given priority on ocean front lands so long as they do not preclude or otherwise conflict with the priority for coastal dependent uses identified in subsection A-1 of this section. Off-road vehicles are not permitted under any circumstances within any OS district.

- A-9 Public Trail. In the OS-A and OS-P districts, nature walks and interpretive displays, and hiking, biking, and equestrian trails with ancillary parking lots, rest-rooms, benches, drinking fountains, and trash receptacles, are permitted, subject to conformance with the provisions of the resource conservation standards of the land use plan and this title.

Half Moon Bay Parks Master Plan - 2019

The BP Master Plan is intended to be consistent with and complement the Half Moon Bay Parks Master Plan. The City developed the Parks Master Plan concurrently with the BP Master Plan to ensure consistency between the two plans, as well as positive cumulative benefits through coordination of future improvements. The Parks Master Plan is meant to guide the development of programs and facilities to improve City parks and meet community needs. In general terms, in addition to park specific improvements, the Parks Master Plan provides recommendations to:

- Improve quality of life and community character,
- Provide environmental sustainability and conservation,
- Ensure parks are connected and accessible, and
- Provide economic balance and feasibility.

3.16.3 Discussion

The BP Master Plan identifies needs and prioritizes improvements to the City's pedestrian and bicycle facilities and programs. It provides overall guidance for long-term decision making by City staff and priorities for bicycle and pedestrian improvements. The City's existing General Plan is the City's primary policy document, including for trails. The City's General Plan update effort, Plan Half Moon Bay which has prepared draft General Plan element updates and policy revisions will be the guiding planning document once the update process is complete. The Plan Half Moon Bay update includes an analysis and policies for a Healthy Community Element, the Coastal Access and Recreation Element, and the Conservation and Open Space Element. Plan Half Moon Bay is the foundation of the BP Master Plan, and the BP Master Plan was written to be consistent with the definitions and standards contained in that Plan.

The BP Master Plan is consistent with the certified LCP and is protective of coastal resources while also promoting coastal access. It considers residents, workers, and visitors in the range and scope for the City trails and their maintenance. The BP Master Plan also aligns with the development of the City's Parks Master Plan, by discussing needs for connections to parks and outdoor spaces throughout the city.

The BP Master Plan has identified Coastal Access Pedestrian Zones which will enhance pedestrian connections to the coast and the California Coastal Trail, increasing pedestrian access to coastal recreation opportunities. BP Master Plan Design Guidelines for these areas include sidewalks, sidepaths, or shared use pathways.

The proposed bikeway network includes a total of 17.4 miles of new bikeway facilities Figure 2.9-2). It is not meant to accommodate every bicycle trip in the City, but instead provides a backbone of primary routes. Once completed, this network would create more direct routes that are more comfortable and safer for the majority of those bicycling in Half Moon Bay and increase pedestrian and bicycling recreational opportunities. As described in Project Description, the bikeway recommendations include Class I Shared-Use Path recommendations (Table 2.9-1), Class II Bike Lane recommendations (Table 2.9-2), Class III Bike Routes and Bicycle Boulevard recommendations (Table 2.9-3), and Class IV Separated Bikeway recommendations (Table 2.9-4).

Would the project:

- a) **Increase the use of existing neighborhood or regional parks or other recreational facilities such that significant physical deterioration of the facility would occur or be accelerated?**

Less Than Significant Impact.

All Projects: Bicycle and pedestrian paths can serve as both functional and recreational facilities depending on the user. Commuters or shoppers, for example may use bicycle or pedestrian trails to get to their workplace or commercial areas, at the same time a recreational user may be using the trail for enjoyment. For the purposes of CEQA, in this section, the trail improvements and additions will be considered as recreational facilities, in order to analyze the maximum potential impact. Additionally, there are also three 'linear parks' (California Coastal Trail, Naomi Partridge Trail, and Pilarcitos Trail) that were mentioned in the Parks Master Plan, recently approved by the City that have improvements proposed under the BP Master Plan.

With the implementation of the BP Master Plan, it is anticipated that there will be increased use of the trail facilities and potential future 'linear parks' as a direct result of the Plan, given that proposed new trails would link shorter sections of the linear parks to other trails. The BP Master Plan has the aim to improve existing bicycle and pedestrian facilities including accessibility and safety. The result of the BP Master Plan is therefore likely to increase use of existing trails, as well as bring access to areas that previously did not have pedestrian or bicycle access, possibly leading to increased use of existing park facilities throughout the City. The increased use of City parks from implementation of the BP Master Plan is not anticipated to be significant enough to lead to substantial deterioration of parks or recreation facilities.

The Design Guidelines for the BP Master Plan suggest that materials used for constructing new trails and trail improvements should be long lasting and not require frequent repair. Additionally, the Design Guidelines emphasize the need for regular maintenance. By following design and maintenance recommendations made in the Design Guidelines, the implementation of the BP Master Plan would not cause or accelerate substantial deterioration of trails.

- b) **Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

Less Than Significant Impact.

On-Street Projects: As mentioned above, for the purposes of CEQA, the trail improvements and additions will be considered recreational facilities. The creation of additional bike and pedestrian trails as well as improving sidewalks, other pathways and existing bicycle paths and using road markings to delineate a bicycle path in both on and off-street areas would therefore constitute "construction or expansion of recreational facilities," which could have environmental impacts. On-Street improvements designed and constructed in accordance with the BP Master Plan Design Guidelines, adopted City policies and regulations, and the City's Standard Conditions of Approval presented in Table 2.12-1 would likely not have environmental impacts because they would be located in an urban or built environment and require relatively minimal ground disturbing activities.

Off-Street Projects: Off-Street Improvements, primarily Class I Trail segments, could have potential environmental impacts because some segments of proposed trail are located in or adjacent to sensitive habitats or could alter existing drainage patterns. Specific improvements will be defined during the design phase for each project following the standards set forth in the BP Master Plan Bicycle and Pedestrian Design Guidelines. The location and design of all

bicycle facilities, particularly Class I Trails, will take into consideration compatibility with adjacent uses, and the design and location of those proposed near creeks for other ESHA will be guided by LCP and Zoning Code requirements for biological assessment, permitted uses, setbacks, and development standards. Trail segments would be designed, constructed, and maintained in accordance with adopted City policy including the Standard Conditions of Approval presented in Table 2.12-1 in the Project Description. During the investigation and design phase of each project the City would evaluate the project for consistency with all adopted City policies and procedures and whether the project would require additional CEQA review. Because the City would implement BP Master Plan recommendations in a manner consistent with all regulatory policies designed to eliminate or reduce environmental impacts, the adoption and implementation of the BP Master Plan would have a less than significant impact effect on recreational facilities.

3.16.4 References

City of Half Moon Bay, 1996. Half Moon Bay Local Coastal Land Use Plan.

City of Half Moon Bay, 1995. General Plan Parks and Recreation Element. <https://www.half-moon-bay.ca.us/DocumentCenter/View/184/1995-Park-and-Recreation-Element-PDF> Accessed December 10, 2018.

City of Half Moon Bay, 2014. Draft Guiding Principles. Plan Half Moon Bay.

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Half Moon Bay, City of. 2018a. Bicycle and Pedestrian Master Plan: Design Guidelines (Draft).

City of Half Moon Bay 2018b. Title 18 Zoning Ordinance. Half Moon Bay Municipal Code.

Dyett & Bhatia, 2014. Plan Half Moon Bay: Existing Conditions, Trends and Opportunities Assessment. Prepared for the City of Half Moon Bay. Revised July 2014.

3.17 TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.17.1 Environmental Setting

The following traffic and circulation information is summarized from the General Plan and Local Coastal Land Use Plan First Public Draft Circulation Element, November 2016.

Motor Vehicle Circulation

Vehicular travel is the dominant travel mode within Half Moon Bay. Regional access to the City is provided by Highway 1 and Highway 92. Highway 1 and Highway 92 provide regional connections to San Francisco (north), San Mateo (east) and Santa Cruz (south). Highway 1 and Highway 92 are classified as limited access roads in Half Moon Bay. Limited or controlled access highways serve inter-urban, statewide, and interstate travel. Figure 2.3-2 shows the location of Highway 1 and Highway 92, as well as other arterial roads in Half Moon Bay such as Main Street and Kelly Avenue. Arterial streets primarily serve intra-city travel, carrying traffic from collector streets to and from other parts of the city. Collector streets directly or indirectly link local streets with arterials and are designed to primarily serve residential and recreational traffic.

Intra-city Circulation: For the most part, the city's neighborhoods are not connected to each other via residential streets and sidewalks and are accessed primarily from Highway 1. Thus, residents living in immediately adjacent neighborhoods must leave one neighborhood and travel on Highway 1 in order to enter another neighborhood or to reach other major destinations within the City.

Commute Traffic: Roughly 67 percent of Half Moon Bay residents work outside of the City, with 26 percent working outside of the county. These weekday commuters are dependent on Highway 1 and Highway 92, which experience congestion during commute hours, especially when mixed with slower truck traffic. Meanwhile, the main industries within Half Moon Bay are agriculture, tourism, recreation, and services. As discussed in the following points, the recreation and agricultural industries have their own requirements for the highways.

Recreational Traffic: The natural beauty of the region's beaches, marinas, and harbor attract large numbers of visitors during warm days of spring, summer, and fall. This is particularly true

on weekends when the limited roadway network in Half Moon Bay frequently reaches capacity to an even greater extent than weekday peak commute periods. Special events such as the annual Half Moon Bay Art and Pumpkin Festival in October and the Titans of Mavericks surf competition, held during the winter months in Princeton-by-the-Sea about four miles north of Half Moon Bay, also draw very large crowds and high traffic volumes. Coastside events between San Francisco and Santa Cruz, even if outside Half Moon Bay, often result in significant spikes in traffic volume on Highway 1 and Highway 92 through the city. Highway 1 provides the only direct access to such events and Highway 92 provides the most direct route to Highway 1 from the bay side of the San Francisco Peninsula. Half Moon Bay residents have explained that they avoid Highway 1 and Highway 92 during major weekend events and that their mobility is severely impacted during these occurrences.

Truck Traffic: A significant number of large trucks use the same routes as local traffic. Trucks transport agricultural products out of the area to market. Deliveries to the Ox Mountain landfill as well as transport of sand and gravel from the Pilarcitos Quarry, both of which are located off of SR92 east of city limits, further contribute to a significant presence of truck traffic. Commercial and residential properties along both Highway 1 and Highway 92 take direct access from these routes. Trucks that use these routes affect visibility, overall speed, and traffic volume, especially when present in concentrations and overlapping with commute or recreational traffic.

Existing Traffic Volumes and Levels of Service

For the Plan Half Moon Bay effort, roadway segments in Half Moon Bay were analyzed to determine their existing operating conditions. Estimates of level of service (LOS) for key intersections along Highway 1 and Highway 92 are provided in Table 3-3 of the First Public Draft Circulation Element for average weekday and Saturday peak hour conditions based on counts taken in 2012 and 2014. Most intersections operate at LOS D or worse during both AM and PM peak periods, and many intersections operate at LOS F for both peak periods. Table 3-3 also presents a Saturday Mid-Day Peak Hour which shows that 15 of the 24 study intersections operate at a LOS E or F during the mid-day period on Saturdays.

Analysis was conducted on the bicycle- and pedestrian-related collisions in Half Moon Bay to identify trends and areas or corridors that should be targeted for safety improvements. Collision data was gathered from the Transportation Injury Mapping System (TIMS) developed by the Safe Transportation Research and Education Center at the University of California, Berkeley and supplemented by more recent information collected by the County Sheriff. TIMS provides geocoding of collisions with injuries and fatalities from the California Statewide Integrated Traffic Report System (SWITRS). The number of collisions reported to SWITRS is likely an underestimate of the actual number of collisions that take place because some parties do not report minor collisions to law enforcement, particularly collisions not resulting in injury or property damage.

Collisions were analyzed for the ten-year period between 2006 and 2016; the analysis is described in the BP Master Plan. Data for 2012 is not available from the Sheriff's records and not included in this analysis. In that timeframe, there were 23 collisions that involved a pedestrian and 48 that involved a person riding a bicycle.

Table 3.17-1 shows the injuries and fatalities associated with these collisions. One collision involved four pedestrians and two separate collisions involved two bicyclists. There were three collisions with a pedestrian fatality and one with a bicycle fatality, all of which were on a state highway or crossing the state highway (the bicycle fatality was on Filbert Street at Highway 1).

Table 3.17-1: Collision Analysis 2006 to 2016

Ped & Bike Involved Collisions	Pedestrian Injuries	Pedestrian Fatalities	Bicyclist Injuries	Bicyclist Fatalities
71	23	3	48	1

The majority of the collisions occurred on Highway 1 (19 involving a bicycle and seven involving a pedestrian) and Main Street (six involving a bicyclist and three involving a pedestrian) or centered near the downtown Half Moon Bay area. More specifically, the collisions near downtown took place on Kelly Avenue, Main Street, or Purisima Street. Understanding where collisions occur allows agencies to target improvements where they are needed most.

Bicycle Facilities

The City of Half Moon Bay has approximately 11.7 miles of existing bikeways, which include Class I, II, and III Bikeways, as defined below:

Class I bikeways, also known as trails or shared-use paths, are off-street facilities dedicated exclusively to use by bicyclists and pedestrians. Half Moon Bay currently has 9.8 miles of Class I bikeways.

Class II bicycle lanes are striped lanes on roadways that provide for one-way bicycle travel. There are currently 1.6 miles of Class II bicycle lanes in Half Moon Bay.

Bicycle lanes can also be enhanced with a painted buffer added to the side of the lane for a higher perception of safety or with green paint for higher visibility. Buffered bicycle lanes include a painted buffer between the bike lane and an automobile travel lane and/or a parking lane. There are no buffered bicycle lanes in Half Moon Bay currently.

Class III bike routes are streets where the travel lane is shared by drivers and bicyclists. There are 0.3 miles of Class III bike routes in Half Moon Bay.

Bicycle boulevards (or neighborhood greenways) are a type of bicycle route that uses traffic calming, in addition to pavement markings and signage, to create a comfortable bikeway that also reduces speeds and, often, cut through traffic in residential neighborhoods. Half Moon Bay does not currently have any bicycle boulevards.

Class IV separated bikeways, also known as cycle tracks or protected bike lanes, are on-street bike facilities that are separated from vehicle traffic by some sort of physical separation such as curbs, plant boxes, bollards, grade separation, or parked cars. Half Moon Bay does not currently have any Class IV facilities.

The BP Master Plan describes the existing bicycle paths and trails as providing excellent recreational opportunities with the California Coastal Trail and providing some north/south connections with the Naomi Patridge Trail. However, the rest of the existing network is disjointed without safe, comfortable connections to key destinations such as downtown or to the area's schools.

Figure 2.9-2 shows the existing/proposed trail network. The Coastal trail would provide north-south access along the coastal bluff tops while the proposed Naomi Patridge would provide

north-south access east of Highway 1. Connector trails travel in an east-west direction and through the downtown area.

The California Coastal Trail runs north-south along the coast and provides bicycle and pedestrian access to the beach at several locations, including Young Avenue, Venice Boulevard, Francis Beach Campground, Poplar Street, and Redondo Beach Road. Primary existing bike trails through downtown Half Moon Bay are located along the west side of Highway 1, along the lengths of Kelly and Pilarcitos Avenues, and around a cluster of three major intersections that include Highway 1, Main Street, and Highway 92, which is accessed from the south near Pilarcitos Creek. Bike trails also are located in south Half Moon Bay along the coastline south of Redondo Beach Road, as well as along Miramontes Point Road.

Half Moon Bay has several residential “islands” that are only accessible by car. Highway 1 is a particularly significant barrier for the community.

Pedestrian Circulation

The existing pedestrian network in Half Moon Bay consists of major connector streets with mostly complete sidewalks and residential streets with incomplete sidewalks or no sidewalks or other pedestrian pathways. Although a comprehensive sidewalk review was not conducted as part of the BP Master Plan, several roadways that provide key connections to the coast, downtown, schools, or transit were identified through the public engagement process as missing sidewalks or walkways or containing significant sidewalk gaps, including Purissima Street, Kelly Avenue, and Miramontes Street. For low volume residential streets that are not an important part of the overall network, the lack of sidewalks may be acceptable and even desired by the community. For streets that are higher volume or provide a key connection within the overall network, the lack of sidewalks creates a barrier within the network.

Throughout Half Moon Bay there are obstructed sidewalks, sidewalks that are narrow, or areas with gaps in sidewalks. These issues with existing sidewalks create challenges for people in wheelchairs, for people with mobility constraints, or people pushing strollers. This indicates a lack of consistent and appropriate standards for pedestrian accessway design and/or implementation.

Many neighborhoods in Half Moon Bay lack pedestrian connections to other neighborhoods or key destinations such as shopping centers, schools, and downtown. Because of this lack of connection, many residents have to use Highway 1 as their primary connection to key destinations.

Shopping centers in Half Moon Bay do not adequately accommodate pedestrians, even though every person who visits the shopping center is at some point a pedestrian. The shopping centers lack pedestrian connections through parking lots and the walkways in front of buildings are narrow.

Transit Services

Existing fixed route transit services include SamTrans, the regional bus service, DIAL-A-RIDE, a limited and demand-responsive transit service, and RediCoast, which is a paratransit service.

- SamTrans Route 17 - is a coastal community bus that provides service connecting Pacifica, Moss Beach, El Granada, Half Moon Bay, and Pescadero.
- SamTrans Route 294 - is a regional service that connects Half Moon Bay with San Mateo Medical Center, Hillsdale Caltrain Station, Hillsdale Shopping Center, and the College of San Mateo, via Highway 92, with a loop in downtown Half Moon Bay. It

provides a vital link to the Hillsdale Caltrain station in San Mateo and the rest of the Bay Area.

- DIAL-A-RIDE is a limited, demand-responsive transit services are available in Half Moon Bay under certain conditions for eligibility.
- RediCoast is a paratransit service managed by the San Mateo County Transit District. The service is provided under the Americans with Disabilities Act of 1990 (ADA). RediCoast provides curb-to-curb for disabled citizens living between Devil's Slide and the border of Santa Cruz County, including Princeton, Moss Beach, El Granada, Half Moon Bay, and several other coastal communities. Travel outside of these areas is possible through arrangement with respective paratransit providers (e.g. Redi-Wheels for eastern San Mateo County, Outreach for Santa Clara County, etc.).

3.17.2 Regulatory Setting

California Department of Transportation (Caltrans)

Caltrans has jurisdiction over state highway facilities, which includes Half Moon Bay's two backbone roadways and their associated easements: Highway 1 and Highway 92, which limits potential changes desired by the City. The City can propose, fund, and implement changes on the state route only with Caltrans approval. Caltrans requires that a traffic impact study be conducted for a project if it:

- Generates over 100 peak-hour trips on a state highway facility;
- Generates 50 to 100 peak-hour trips on a state highway facility experiencing noticeable delay, approaching unstable traffic flow conditions, (Level of Service C or D conditions);
- Generates 1 to 49 peak-hour trips on a state highway facility experiencing significant delay and unstable traffic flow conditions (Level of Service E or F conditions), or that significantly increases the potential risk for a traffic accident, or that changes local circulation networks that impact a state highway facility. (Caltrans, 2002)

Caltrans also sets a Level of Service Standard C for their facilities, to the extent it is feasible.

Several plans involving Caltrans relate to the BP Master Plan; they include:

- *The California Transportation Plan (CTP) 2040* – is the statewide, long-range transportation plan to meet future mobility needs and reduce greenhouse gas (GHG) emissions. It guides multimodal transportation investments and decisions by all levels of government, the private sector, and stakeholders.
- *California State Bicycle and Pedestrian Plan, Toward an Active California* – bicycle and pedestrian plan for the state. Mainly a policy document, it aims to align Caltrans policies and programs to create a framework to increase safe bicycling and walking in California.
- *Caltrans Strategic Management Plan (SMP)* – provides the strategic direction for Caltrans as an organization. The 2015-2020 SMP identified targets for doubling walking and tripling bicycling in California by 2020.
- *California Complete Streets Policy* – is the foundation of active transportation policy framework, requiring integration of Complete Streets principles in all agency activities since 2008. Caltrans monitors Complete Streets progress through the original Complete Streets Implementation Action Plan released in 2010 and the Complete Streets Implementation Action Plan 2.0, released in 2014.

- *Smart Mobility 2010: A Call to Action for the New Decade (Smart Mobility Framework)* – provides tools and resources to help state and local agencies create a more sustainable transportation system, with policies centered on public health and safety.
- *Caltrans Highway Design Manual (HDM)* – The Highway Design Manual is a living document, allowing addition of new infrastructure concepts, such as the December 2015 Design Information Bulletin that set design standards for Class IV Separated Bikeways. While the manual only explicitly applies to the state highway system, many local agencies refer to it as they design their own roads, bicycle facilities, and sidewalks. The complete streets version of the HDM released in 2012 was intended, in part, to make designers aware of bicycle treatments as they were investigating needs for motorized users.
- *California Manual on Uniform Traffic Control Devices (MUTCD)* – The MUTCD provides uniform standards and specifications for all official traffic control devices in California, including the types of signs allowed. Another pertinent guide includes AB 819 (Bikeway Research, Experimentation, Testing, Evaluation, or Verification Related to Design Criteria), which outlines the procedures for when a bicycle project is planned on a State highway system or used federal funding.
- *Main Street, California: A Guide for Improving Community and Transportation Vitality* - This 2013 document is focused on the design of California State Highways that also serve as the “main street” of a community. The guide provides information from existing Caltrans manuals and policies, as well as national resources, to help communities improve multimodal access, livability and sustainability, while meeting appropriate engineering standards. The guide helps readers find information about standards and procedures described in the Caltrans HDM, the California MUTCD, and the Project Development Procedures Manual.
- *Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians* - The Complete Intersections Guide provides direction on implementing an important aspect of Caltrans' Complete Streets policy, by identifying “actions that will improve safety and mobility for bicyclists and pedestrians at intersections and interchanges.” The Guide is intended primarily for Caltrans planners, engineers, and other highway designers working as generalists or specialists in advising, engineering, or designing for safe travel for all highway users at intersections and interchanges. The reference guide includes a disclaimer that it, “Does not constitute a standard, specification, or regulation. It is not intended to replace the existing [Caltrans] mandatory or advisory standards, nor the exercise of engineering judgment by licensed professionals.”

Plan Bay Area

Plan Bay Area 2040 is the nine-county Bay Area’s Sustainable Communities Strategy, incorporating the Regional Transportation Plan, as required by Senate Bill (SB) 375. Adopted in 2017, Plan Bay Area was developed by ABAG, the Metropolitan Transportation Commission (MTC), the Bay Area Air Quality Management District (BAAQMD), and the Bay Conservation and Development Commission (BCDC) with local and regional partners. It is the Bay Area’s region-wide multi-modal transportation plan for addressing the future transportation needs of the Bay Area as determined by ABAG’s regional growth forecasts. To meet the goals of SB 375,

Plan Bay Area directs more future development in areas that are or will be walkable, bikeable and close to high capacity transit.

Regional Transportation Improvement Program

The Regional Transportation Improvement Program (RTIP) is an implementation program for Plan Bay Area. It is federally mandated and defines the regionally significant transportation projects that are to be funded over the next four years in the Bay Area. The RTIP must include all projects that will receive federal funds and other projects deemed to be regionally significant even if no federal funds are required for their implementation. The projects programmed in the RTIP must be consistent with the RTP. MTC, in cooperation with County Congestion Management Agencies (CMA) and Caltrans, adopts the RTIP.

The Draft 2017 RTIP includes approximately 700 transportation projects and a total of approximately \$6.6 billion in committed federal, state, and local funding over the four-year period through fiscal year 2020. Projects relevant to Half Moon Bay include safety improvements and pedestrian crossings on Highway 1, shoulder widening along SR 92, safe routes to school in San Mateo County, and maintenance and improvements to SamTrans vehicles and facilities.

Connect the Coastsides

Connect the Coastsides is a Comprehensive Transportation Management Plan that evaluates the existing and future development potential of the Midcoast and Half Moon Bay by conducting a land use build-out analysis and an assessment of the current and future transportation system. It includes multi-modal transportation programs and improvements along Highway 1 and 92 to accommodate future transportation needs. The plan also includes land use strategies to reduce the impacts of future development. A draft evaluation of the preferred alternative was released in March 2016.

Connect the Coastsides's proposed pedestrian crossing locations for the coastal area within Half Moon Bay were taken into consideration when developing the project recommendations for the BP Master Plan. However, the Connect the Coastsides improvement concepts for Half Moon Bay are advisory only. The City will determine the approach to implementing improvements for Highways 1 and 92 within the city limits.

San Mateo County Congestion Management Transportation Plan

State law requires that each county develop a Congestion Management Program (CMP) for congested roadways of regional significance to qualify for state transportation funds. CMPs must establish levels-of-service standards for roadways, set transit service standards, develop trip-reduction and travel demand management (TDM) programs, perform land-use impact analyses, formulate capital improvement programs, and monitor conformance in the County with the CMP. The most recent CMP for San Mateo County was adopted in 2015. The existing and any future updates of the CMP will reflect the status of Half Moon Bay's Circulation Element policies and implementation.

The current CMP mainly touches on vehicles and their impacts on the county. However, it does include a measure to ensure that pedestrian and bicycle travel is being incorporated in new transportation improvement projects. It states, "This measure will be accomplished by considering pedestrian and bicycle facilities in the design for all transportation projects in the CMP's Capital Improvement Program. If a new transportation improvement project does not incorporate pedestrian and bicycle travel, it must explain provide justification for such." Additionally, the San Mateo County Transportation Demand Management Agency offers specific

programs for bicycle travel such as helping to cover the costs of installing bicycle parking at a business and conducting free bicycle safety classes for employees.

San Mateo Countywide Transportation Plan

This draft plan, developed by City/County Association of Governments of San Mateo County, is a long-range, comprehensive transportation planning document. It is intended to articulate clear transportation planning goals and objectives to promote consistency and compatibility among all transportation plans and programs within the county. The plan supports an integrated system-wide approach to transportation planning that gives proper consideration to the countywide transportation network as a whole, not just in its constituent parts. It does not contain any specific project recommendations for bicycle or pedestrian infrastructure, but does include a series of goals, policies, and objectives to help achieve a better bicycling and walking environment within the county.

Two goals directly address bicycle and pedestrian travel, although many others encourage the development of a multi-modal transportation system. The “Bicycles” goal is to, “Provide bicyclists viable travel choices and encourage use of healthy, active transportation through a safe, continuous, convenient and comprehensive cycling network that reduces reliance on the automobile for short trips.” The Pedestrian goal is to, “Promote safe, convenient, and attractive pedestrian travel that promotes healthy, active communities while reducing reliance on the automobile for short trips.”

San Mateo County Comprehensive Bicycle and Pedestrian Plan

The San Mateo County Comprehensive Bicycle and Pedestrian Plan (CBPP) completed by the City/County Association of Governments of San Mateo County envisions bicycle and pedestrian networks countywide that will support safe, comfortable, and convenient travel for people who walk or ride a bicycle at all skill levels. The plan sets forth an integrated set of policies to support this vision. The plan also provides detailed maps and tables of proposed bikeway projects to assist local implementing agencies in constructing bikeways. The plan includes existing and proposed facilities within and connecting to Half Moon Bay.

The CBPP presents five goals and a series of policies aimed to develop an interconnected system of safe, convenient and universally accessible bicycle and pedestrian facilities, for both transportation and recreation. The goals are to have:

1. A comprehensive countywide system of facilities for bicyclists and pedestrians;
2. More people riding and walking for transportation and recreation;
3. Improved safety for bicyclists and pedestrians;
4. Complete streets and routine accommodation of bicyclists and pedestrians; and
5. Strong local support for non-motorized transportation.

Pedestrian focus areas are described as areas where jurisdictions may wish to consider land use and development policies that support pedestrian activity. Focus areas include the downtown and around Hatch Elementary School and Half Moon Bay High School. The CBPP breaks down potential improvements by type of focus area. For example, the Highway 1/Coastal Trail/Parallel Trail Improvements focus area states that improvements in this area will generally consist of new walking pathways along Highway 1 and new or enhanced crossing opportunities. The Major Barrier Crossings focus area states that, “As a first step, existing roadway crossings of major barriers should be upgraded to provide improved pedestrian access via wide sidewalks and other improvements. Grade-separated pedestrian and bicycle crossings may be considered where anticipated use will be high and no alternative at-grade option exists... Projects in this focus area will generally consist of pedestrian over- and undercrossings, improvements to at-

grade arterial intersections, and pedestrian-related improvements to interchanges associated with the following: Highway 1... Highway 92... [and] major creeks or waterways.”

Proposed bicycle improvements from the CBPP relevant to Half Moon Bay include a Class I path along Highway 1 and overcrossings at several locations across Highway 1.

City of Half Moon Bay Municipal Code / Vehicles and Traffic

Title 10 (Vehicles and Traffic) of the City’s Municipal Code outlines numerous requirements relating to vehicles and traffic. Policies relating to the project discuss traffic control devices, bicycle and pedestrian regulations, crosswalks, and bicycle parking, all of which have the purpose of increasing traffic safety and relieving traffic congestion in the City.

Title 15 (Signs and Advertising Structures) of the City’s Municipal Code identifies the amount of sign area allowed for businesses and other uses and provides standards for business identification signs, multiple tenant center signs, accessory signs, wayfinding signs, temporary signs, residential signs, and open space/urban reserve signs.

Title 18 (Zoning) of the Municipal Code ensures service demands associated with new development do not exceed the capacity of existing streets, utilities, or other public services. Policies relating to the project discuss bluff and sea-cliff regulations, coastal access ways, bicycle parking

City of Half Moon Bay Local Coastal Program - 1996

The entire City is within the California Coastal Zone, and the City’s LUP (1996) provides policies and programs which address conformity with the Coastal Act, along with other land use goals. There are several policies relevant to the proposed project in this document related to providing public access to the sea and recreation. The policies protect the public’s right to access coastal areas, ensure access is safe, and foster improvements in access and safety for Highway 1, other coastal access roads, parking, and trails. The policies of the LCP that relate to are:

- Policy 10-27. The City will recommend to Caltrans installation of improvements on Highway 1 to improve safety and recreational traffic flow and minimize local and visitor traffic conflicts, including signs and left-turn bays at beach access routes. Request Caltrans undertake the widening of Highway 1 to four lanes within the City.
- Policy 10-30. The City will require that Caltrans, in connection with improvements to Highways 1 and 92 in the City, provide adjacent facilities for bicycles and pedestrians. When the facilities are adjacent to each other, there shall be a physical barrier.
- Policy 10-34. The City will limit access to new development from designated beach access routes, Highways 1 and 92, except where no alternative access is possible, consistent with public safety and enhanced circulation of visitors and residents.
- Policy 10-35. The City shall seek to improve east-west connections between the downtown core and nearby neighborhoods which will alleviate resident traffic on Highway 1 and shall install traffic diverters to achieve a greater separation of local and visitor traffic.
- Policy 10-36. The City will not permit a north-south roadway to be constructed in the regional recreation area but will encourage the phased provision of a trail between Kelly Avenue and Venice Avenue usable for beach management and by horses, bicycles, and pedestrians to improve visitor access to beach facilities, if it is determined that there will be no significant adverse effect on the mouth of Pilarcitos Creek.

Half Moon Bay General Plan Circulation Element - 2013

The Circulation Element (2013) provides a blueprint for accommodating all modes of transportation in the city over a minimum of twenty years. The following policies of this Element apply to Half Moon Bay's bicycle and pedestrian facilities:

- Policy 1-2. Plan and design the network to accommodate traffic due to the build out of the General Plan's land uses and densities, and to the extent practical and feasible, growth beyond the city limits including within the sphere of influence, and recreational, and regional through traffic.
- Policy 1-7. The City shall consider the effects of facilities that impact the City's transportation system network, including those located outside the city limits, whether they are owned and operated by other jurisdictions or privately held.
- Policy 3-1. Work collaboratively with Caltrans to provide safe and enhanced bicycle and pedestrian facilities crossings and along Highway 1 and SR 92.
- Policy 3-2. Promote the development of projects that incorporate all modes of transportation, accommodate all mode users and facilitate balanced mode share use within the context of the community and the roadway facility purpose.
- Policy 3-4. Where appropriate, promote the installation of Intelligent Systems (ITS) infrastructure to advance interoperable traffic signal controller systems, traveler information systems, parking management systems, and bicycle/pedestrian/vehicle detection systems that support all modes of travel on the roadways.
- Policy 3-5. Promote a network that improves connectivity and access to all modes and to local and regional destinations.
- Policy 3-6. Provide programs and funding for maintenance and operations of the roadway network elements including maintenance of pavement and bridge surfaces, maintaining traffic signal operations, restriping of bicycle and pedestrian pavement markings and replacing failing bicycle/pedestrian/vehicle detectors.
- Policy 4-1. Maximize pedestrian and bicycle safety, accessibility, connectivity, and education throughout Half Moon Bay to create neighborhoods where people choose to walk or ride between nearby destinations.
- Policy 4-2. Implement the San Mateo County Comprehensive Bicycle and Pedestrian Plan by maintaining and expanding the bicycle network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer.
- Policy 4-3. Provide bicycle connections to key activity centers within the city such as major employers, downtown, residential neighborhoods, schools, the beach, and transit connections.
- Policy 4-4. Promote cooperation with the County of San Mateo, Caltrans, California State Parks and private land trusts to implement and maintain bicycle and pedestrian connections across jurisdictional lines.
- Policy 4-5. Plan and design new residential and commercial developments in a manner consistent with the San Mateo County Comprehensive Bicycle and Pedestrian Plan and provide enhancements to the bicycle and pedestrian network where possible.
- Policy 4-6. Require new developments to dedicate land as necessary to accommodate pedestrian infrastructure, including sidewalks as required by the adopted City Roadway Cross Sections.

- Policy 4-7. Pursue construction of the Coastal Trail and Pilarcitos Creek Trail as described in the Parks and Recreation Element and on the General Plan Circulation Map.
- Policy 4-8. Encourage pedestrian links between existing and future residential and commercial development.
- Policy 4-9. Consider creation of a new off-street multi-purpose trail serving neighborhoods and destinations east of Highway 1, potentially utilizing the prior Foothill Boulevard alignment. Connect the new Foothill Trail to key destinations such as Half Moon Bay High School.
- Policy 4-10. Consult with Cabrillo Unified School District to develop and implement a Safe Routes to School Program for all public schools. The program shall include projects and activities that promote bicycling and walking to school among students and staff.
- Policy 4-11. Identify and prioritize pedestrian safety improvements at high collision locations.
- Policy 4-12. Consult with SamTrans to provide end-of-trip facilities at high-ridership transit locations within the city.
- Policy 4-13. Pursue national, state, and local grants to improve bicycle and pedestrian infrastructure, encouragement, enforcement, and education efforts. Improvements to infrastructure include bridges along multi-use trails within the city.
- Policy 4-14. Conduct bicycle and pedestrian counts as part of standard traffic counting programs and establish an annual count program to track use of major bicycle and pedestrian facilities, such as the Coastal Trail, Naomi Partridge Trail, and Pilarcitos Creek Trail.
- Policy 6-3. Promote parking standards and programs that serve the City's changing needs for day-to-day uses, special events, and the support of alternative circulation modes.

These policies promote sustainable modes of throughout the City, traffic relief, efficient use of parking spaces, as well as safety for vehicles, bicycles, and pedestrians.

3.17.3 Discussion

Would the project:

- 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(b), which pertains to vehicle miles travelled?**

No impact. (Responses a-b)

All Projects: Implementation of the proposed BP Master Plan is not anticipated to have a significant impact on vehicle miles traveled.

On-street bicycle and pedestrian infrastructure improvements recommended by the BP Master Plan would not conflict with any applicable plan, ordinance, or policy on the performance of the regional circulation system because the recommendations were created to comply with all state and regional circulation and congestion regulations, as well as all regulations and plans that apply to bicycle and pedestrian facilities in the area. Although constructing the recommendations may temporarily affect traffic in the construction vicinity, impacts would be

temporary and less than significant, as the improvements are intended to reduce vehicle traffic and miles traveled in the area. Specifically, the BP Master Plan recommendations are intended to ensure destinations throughout Half Moon Bay are connected via bike, pedestrian, and transit facilities and to ensure that these facilities are activated with amenities and activities to encourage responsible use and promote safety.

Off-street trails would not affect roads or highways in such a way that could lead to conflicts with relevant congestion management programs. Even larger projects identified in the Master Plan, such as new trails, are intended to reduce traffic congestion and vehicle miles traveled throughout the city. Regardless, these projects would undergo additional CEQA review once project plans became available and any traffic impacts associated with the project would be addressed so the project mitigated potentially significant traffic impact. The projects would be designed to be consistent with the City's Municipal Code, as well as the General Plan/LCP policies, and strive to minimize traffic impacts as a whole. Therefore, adoption of the BP Master Plan would not conflict with adopted plans measuring the effectiveness of the circulation system or conflict with a Congestion Management Plan.

c) 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 Impact.

All Projects: The BP Master Plan recommendations are intended to increase safety for pedestrians and bicyclists. Improvements for pedestrian and bicycle facilities would follow the BP Master Plan Design Guidelines so as not increase hazards due to a design feature. Larger projects recommended by the BP Master Plan would undergo a separate design and planning process. The City would design any new trail project consistent with the General Plan, LCP, and Municipal Code, and it would not permit a trail project that could introduce or contribute to any substantial hazards, including erosion, risk of slope failure, or flooding. These projects would undergo separate CEQA review once project plans became available and traffic and circulation impacts associated with the project would be addressed and mitigated as needed. Therefore, adoption and implementation of the BP Master Plan would have a less than significant impact on circulation hazards.

d) Result in inadequate emergency access?

Less Than Significant Impact.

All Projects: The proposed project, which consists of minor improvements to existing bicycle and pedestrian facilities and extensions to existing trails located in developed areas, will not alter the existing roadway system in a manner that would impact emergency access. Some larger trail projects that are part of the BP Master Plan would be located in more remote areas that may not have adequate emergency access. However, these projects will require individual environmental review and evaluation for adequacy of emergency access. Therefore, impacts from the implementation of the BP Master Plan would be less than significant.

3.17.4 References

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3.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
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, or 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:				
i) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.18.1 Environmental Setting

The Native American presence and use of the project area is described in Section 3.5 Cultural Resources. The land surrounding the BP Master Plan area is in the traditional territory of the Ohlone (or Costanoans as they were known by the Spanish).

3.18.2 Regulatory Setting**State****Coastal Act Policy – 30244 Archaeological or Paleontological Resources**

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required. In August 2018, the Coastal Commission adopted a comprehensive tribal consultation policy. The new policy, along with the Coastal Commission's LCP update guidance, emphasizes the importance of consultation with Native American tribes, consistent with other state law and the California Natural Resources Agency tribal consultation policy.

California Environmental Quality Act: Unique Archaeological Resources

A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

1. The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
2. The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains, and it sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

Native American Heritage Commission, Public Resources Code Sections 5097.9 – 5097.991

Section 5097.91 of the Public Resources Code (PRC) established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.9 of the PRC, a state policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites or sacred shrines located on public property. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner. Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

California Native American Graves Protection and Repatriation Act of 2001

Codified in the California Health and Safety Code Sections 8010–8030, the NAGPRA is consistent with the federal NAGPRA. Intended to “provide a seamless and consistent state policy to ensure that all California Indian human remains and cultural items be treated with dignity and respect,” the California NAGPRA also encourages and provides a mechanism for the return of remains and cultural items to lineal descendants. Section 8025 established a Repatriation Oversight Commission to oversee this process. The act also provides a process for non–federally recognized tribes to file claims with agencies and museums for repatriation of human remains and cultural items.

Public Resource Code 21074 – Tribal Cultural Resource Definition

Pursuant to the PRC, a Tribal Cultural Resource (TCR) is:

- A site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources, or included in a local register of historical resources, as defined in subdivision (k) of PRC Section 5020.1.
- A cultural landscape that meets the criteria above is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- 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.
- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Assembly Bill 52

Assembly Bill (AB) 52 specifies that a project that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. AB 52 requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requests in writing to the lead agency, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project. AB 52 specifies examples of mitigation measures that may be considered to avoid or minimize impacts on tribal cultural resources.

Local**City of Half Moon Bay Local Coastal Program - 1996**

The City's LCP section from 1996, based on background information from 1979, outlines policies relating to the protection and identification of archaeological and paleontological Resources, which includes tribal resources. It discusses the overall heightened sensitivity of the Half Moon Bay region and provides policies that include archaeological study prior to issuance of a grading permit for certain projects. Archaeological surveys are required for;

- projects of one acre or more within archaeologically sensitive zones, and
- municipal improvement projects, and general protection of archaeological resources where feasible.

City of Half Moon Bay Municipal Code / Title 18

Title 18 (Zoning) of the City of Half Moon Bay Municipal Code contains the several provisions regarding the identification, treatment, and protection of archaeological and historical resources

including Chapter 18.38 Coastal Resources Protection and Chapter 18.39 Historic Resources Preservation. Title 18 requirements also apply to the protection of tribal resources.

Chapter 18.38 Coastal Resources Protection requires the community development director to prepare and maintain maps of all designated coastal resource areas within the City including:

Archaeological Resource Areas. Any area shown in the Half Moon Bay LUP map of potential archeological resources as potentially containing archaeological resources. Specific areas are:

1. The coastal strip where exploitable resources occurred;
2. All major creek shores, such as Pilarcitos, Arroyo Leon, and Frenchmans Creek;
3. All minor inland water courses, including historic or prehistoric springs, streams or marshes;
4. The foothill strip above the over two-hundred-foot elevation;
5. Areas of prehistoric site evidence and pertinent historic places such as cemeteries, houses and buildings; and
6. Isolated hills and knolls. (Ord. C-2015-04 §1(part), 2015; 1996 zoning code (part)).

In identified Archaeological Resource Areas archeological reports shall be required as set forth in Sections 18.38.040. The report shall be prepared by a qualified professional selected by the City in accordance with established city procedures. Unless otherwise specified herein, all required archaeological reports shall be performed by a consultant selected by the City and paid for by the applicant and reports shall be reviewed by the City for consistency with Title 18 and CEQA requirements. Reports shall be completed to the satisfaction of the Community Development Director prior to the determination that a required development permit application is considered complete. These require site evaluation, reporting, and implementation of mitigation, as necessary, to protect buried cultural and historic resources.

3.18.3 Discussion

Would the project:

- a) **Cause a substantial adverse change in the significance of a tribal cultural resources, 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:**
 - i) **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)?**
 - ii) **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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe?**

Less Than Significant Impact.

All Projects: There exists the potential for some Native American artifacts to not be considered unique archaeological resources under the normal CEQA Guidelines (i.e. if there is not a demonstrable public interest in that information, it does not possess a special and particular

quality such as being the oldest of its type or the best available example of its type, and it is not directly associated with a scientifically recognized important prehistoric event or person). However, it is possible for a lead agency to determine that an artifact is considered significant to a local tribe, which would make it a significant resource under CEQA. Best Management Practices (BMPs) would mean that all Native American tribal finds are to be considered significant until the lead agency has enough evidence to determine an artifact not significant. This ensures that the default assumption is that all Native American artifacts are significant resources under CEQA.

On Street Trails: No Impact. Improvements along existing roadways would primarily consist of above ground improvements, such as painting road markings, ensuring that no obstructions are present, above ground planters to separate trails from roadways, etc. Below ground soil disturbance would be extremely minimal and situated in already disturbed ground on, or adjacent to, existing road development. The City does not keep records of known tribal resources but because the on-street improvements are located in built environments it is assumed that they would not be situated on known, existing, tribal archaeological sites. As all on-street trail improvements are anticipated to not disturb previously undisturbed soils, there would be no impact to known or unknown archaeological resources.

Off Street Trails: Less Than Significant Impact. Construction of new off-road trails are primarily anticipated to be on previously undeveloped corridors of land. The BP Master Plan Design Guidelines recommend Class I trails be 10 feet wide to accommodate moderate use (14' preferred for heavy use), with a minimum two-foot shoulder on both sides of the path, with an additional foot of lateral clearance for the installation of signage or other furnishings. Therefore, Class I trails could be 15 – 17 feet wide and the depth of excavation could be one to several feet deep depending on the soils and drainage requirements. The construction impacts of off-road trails and other improvements is anticipated to be very limited in nature and would not extend down into soil layers where archaeological resources would be more likely to occur.

Off-Street trails and other infrastructure projects would be designed and constructed according the BP Master Plan Guidelines, the City's Municipal Code (Title 18) requirements, General Plan and LCLUP policies. The City would require preparation of an archaeological report if the project is located in a sensitive area. The City would also determine if additional CEQA review would be necessary if the project may have potential environmental impacts. Because all BP Master Plan projects would be designed and constructed according to City policy, the impacts to tribal resources are considered less than significant. In the event of an archaeological discovery, the City would implement the protection measures listed in Table 2-11 in Project Description to ensure resources would be adequately safeguarded.

3.18.4 References

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- Kroeber, A.L. 1976. Handbook of the Indians of California, New York. Dover Publications, Inc.

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National Register of Historic Places, National Park Service 2018, Accessed December 10, 2018. <https://www.nps.gov/nR/index.htm>.

Office of Historic Preservation, California State Parks. 2018. Accessed December 10, 2018. <http://ohp.parks.ca.gov/>.

3.19 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.19.1 Environmental Setting

The following information on the utilities and service systems that serve the BP Master Plan area is summarized from the Existing Conditions Report (Dyett & Bhatia, 2014) prepared as part of the City's General Plan update planning process.

Potable Water

The water distribution system in the project area is owned and operated by the Coastsides County Water District (CCWD), which also serves part of the unincorporated area of San Mateo County, including Princeton-by-the-Sea, the unincorporated northern portion of the Miramar neighborhood, and El Granada. CCWD's water supply sources include Pilarcitos Lake, Upper Crystal Springs Reservoir, Pilarcitos Well Field, and Denniston Creek. The primary water supply is purchased from the San Francisco Public Utilities Commission (SFPUC) (Pilarcitos Lake and Upper Crystal Springs Reservoir).

Wastewater Treatment

Sanitary sewer service is provided to the project area by the City of Half Moon Bay for transporting sewage flows and by Sewer Authority Mid-Coastside (SAM) for treating and disposing the sewage. The City of Half Moon Bay sewer collection system generally has

adequate capacity to serve current levels of flow. The City has initiated a sewer system study to identify existing system deficiencies and prioritize improvements necessary to accommodate peak period flows.

Stormwater Drainage

Stormwater discharge in Half Moon Bay is regulated by the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (MRP), issued by the Regional Water Quality Control Board (RWQCB). The current MRP was adopted in 2009 and covers stormwater discharges from municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara counties, as well as the cities of Fairfield, Suisun City, and Vallejo. NPDES, a provision of the Federal Clean Water Act, requires that each new development project resulting in new or replaced impervious surfaces greater than 10,000 square feet (or 5,000 sf for uncovered parking) prepare a Stormwater Management Plan (SWMP) and one acre or larger also prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWMP presents measures for long-term reduction of stormwater pollutants leaving the site. The SWPPP is a document that outlines plans to control storm water pollution during construction.

All new and redevelopment projects within the City of Half Moon Bay that contain storm drain improvements require approvals by the City Hydrological Review and Hydraulic Design staff. All new and redevelopment projects must also comply with the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), which requires post construction stormwater controls under Provision C.3 of the Municipal Regional stormwater NPDES permit. The City is currently preparing a Green Infrastructure Plan in collaboration with San Mateo County.

Solid Waste and Recycling

Republic Waste Services is Half Moon Bay's franchised municipal waste hauler, providing residential curbside collection of recyclables and organics (yard and food waste), and commercial collection for recyclables. The majority of the City's solid waste is directed to the Corinda Los Trancos Sanitary Landfill (known as Ox Mountain), which is a Class III disposal facility located at 12310 San Mateo Road (State Route 92). The current remaining permitted landfill airspace for refuse and cover is calculated at approximately 20 million cubic yards, as of April 30, 2018. Based upon current waste disposal rates, average density of the waste, and daily cover use at the facility, the estimated closure date for the landfill is 2034 (CalRecycle 2018).

Electric, Gas and Telecommunications Services

The electrical power distribution system within the project area is owned and operated by Pacific Gas & Electric Company (PG&E). This electrical power grid consists of both overhead and underground electrical lines located predominantly in the public street rights-of-way and easements.

The natural gas distribution system within the project area is also owned and operated by PG&E and consists of a pipe network which lies predominantly beneath the traveled roadway in the public street rights-of-way.

The telecommunication distribution system within the project area provides various services such as telephone service, cable TV, etc. The service providers include Comcast, AT&T, and others.

3.19.2 Discussion

Adoption of the BP Master Plan would not automatically authorize specific development or construction of recommended improvements. Before the City implements any recommendations or undertakes any projects presented in the BP Master Plan, a design and planning effort would

be undertaken which would include consideration consistency with a City or service provider policies and procedures as well as of any environmental impacts.

Would the project:

- a) **Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?**

Less Than Significant Impact.

On-Street Projects: On-street projects would not require the use of water (after construction) or generate wastewater. Some On-street construction projects may require temporary stormwater runoff protection measures but would not result in the relocation or construction of new or expanded stormwater drainage facilities. On-street improvements would not require the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities.

Off-Street Projects: It is possible that construction of new trail alignments may require the installation of new drinking fountains and irrigation of revegetated areas which would use potable water, but the BP Master Plan project would not require the construction of new or expanded water or wastewater treatment facilities. The construction of Off-street trail projects may alter existing drainage pattern and would result in a small increase in pervious surfaces. The construction of Off-Street projects would also require temporary stormwater runoff protection measures but would not result in the relocation or construction of new or expanded stormwater drainage facilities. The BP Master Plan Design Guidelines also include implementation approaches that incorporate “green streets” provisions to address stormwater runoff.

- 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?**

No Impact. (Responses b & c)

All Projects: Implementation of the BP Master Plan, which may include limited landscaping irrigation and installing water fountains along certain pedestrian and bicycle paths, could require small amounts of water. Larger future projects presented in the BP Master Plan would undergo their own design and environmental review process which would identify any impacts on available water supply or wastewater treatment plant capacity. Implementation of the BP Master Plan would not exceed wastewater treatment requirements as is expected to be determined by the Sewer Authority Mid-Coastside (SAM), or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project. Furthermore, the 2015 UWMP has determined that the Coastside County Water District’s water supply is adequate to supply the service area in future Normal Year, Single Dry Year, and Multiple Dry Year conditions. This impact would be less than significant.

- 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?**

Less Than Significant Impact.

All Projects: Routine maintenance of new facilities and public use of the trail and crossing improvements recommended by the BP Master Plan would not substantially increase the generation of waste or garbage that would be taken to the landfill. Construction of improvements would generate some waste that may need to be disposed of at a landfill, but the volume of material would not be in excess of state or local standards; nor would it impair solid waste reduction goals.

New segments of the Coastal Trail which link or expand the existing trail system may draw more people to use the trail. This may result in an increase in garbage generated by trail users. The garbage would be collected by the City and disposed of at the Ox Mountain landfill through the normal collection service. The amount of waste generated by trail users would not be in excess of state or local standards and the City would implement recycling where ever possible. Thus, while adoption of the BP Master Plan could potentially increase solid waste generation due to increased uses of bicycle and pedestrian facilities, this impact would be less than significant.

- e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?**

No impact.

All Projects: The City contracts for municipal waste disposal services according all federal, state, and local statutes and regulations related to solid waste. The BP Master Plan is not growth-inducing; rather, its goal is to provide improved bicycle and pedestrian facilities for the existing and projected population of Half Moon Bay and visitors to the coastside. Therefore, implementation of BP Master Plan recommendations would comply with federal, state, and local statutes and regulations as they would not inherently increase solid waste generation. Implementation of future projects and improvements envisioned in the BP Master Plan would be designed to be consistent with all relevant regulations pertaining to solid waste and would undergo their own environmental review. No impact would occur.

3.19.3 References

- CalRecycle. 2018. Application for Solid Waste Facility Permit and Waste Discharge Requirements. Ox Mountain Sanitary Landfill. Accepted August 10, 2018.
- Dyett & Bhatia. 2014. Plan Half Moon Bay: Existing Conditions, Trends and Opportunities Assessment. Prepared for the City of Half Moon Bay. Revised July 2014.
<http://www.planhmb.org/reports-and-products.html>. Accessed October 2018.
- West Yost Associates. September 2016. 2015 Urban Water Management Plan. Prepared for Coastside County Water District.

3.20 WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Is the project located near state responsibility areas or lands classified as high fire hazard severity zones?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
<i>If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:</i>				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.20.1 Environmental Setting

The Wildland-Urban Interface (WUI) is any area where structures and other human developments meet or intermingle with wildland vegetative fuels such as the shrubs, trees, and grasses found growing in Half Moon Bay's hills and canyons. The eastern edges of development within the City are located in the WUI and are thus inherently at risk from wildfires.

The California Department of Forestry and Fire Protection (Cal Fire) maps areas of significant fire hazards in the state. These areas are identified based on weather, terrain, fuels, and other factors. According to Cal Fire, Very High Fire Severity Zones (VHFSZs) are located in the vegetated hills in the north of Half Moon Bay, east of Nurserymen's Exchange and the Frenchmans Creek and Sea Haven neighborhoods, as well as Carter Hill and both sides of Highway 92 as it leaves the City. The VHFSZs in the northern part of the City is generally undeveloped while residential, agriculture and nursery development flank both sides of Highway 92 (See Figure 3.20-1: Fire Hazard Severity Zones).

One BP Master Plan recommended Class I trail portion and a recommended spot improvement are in a Very High Fire Severity Zone, both located east of Half Moon Bay High School.

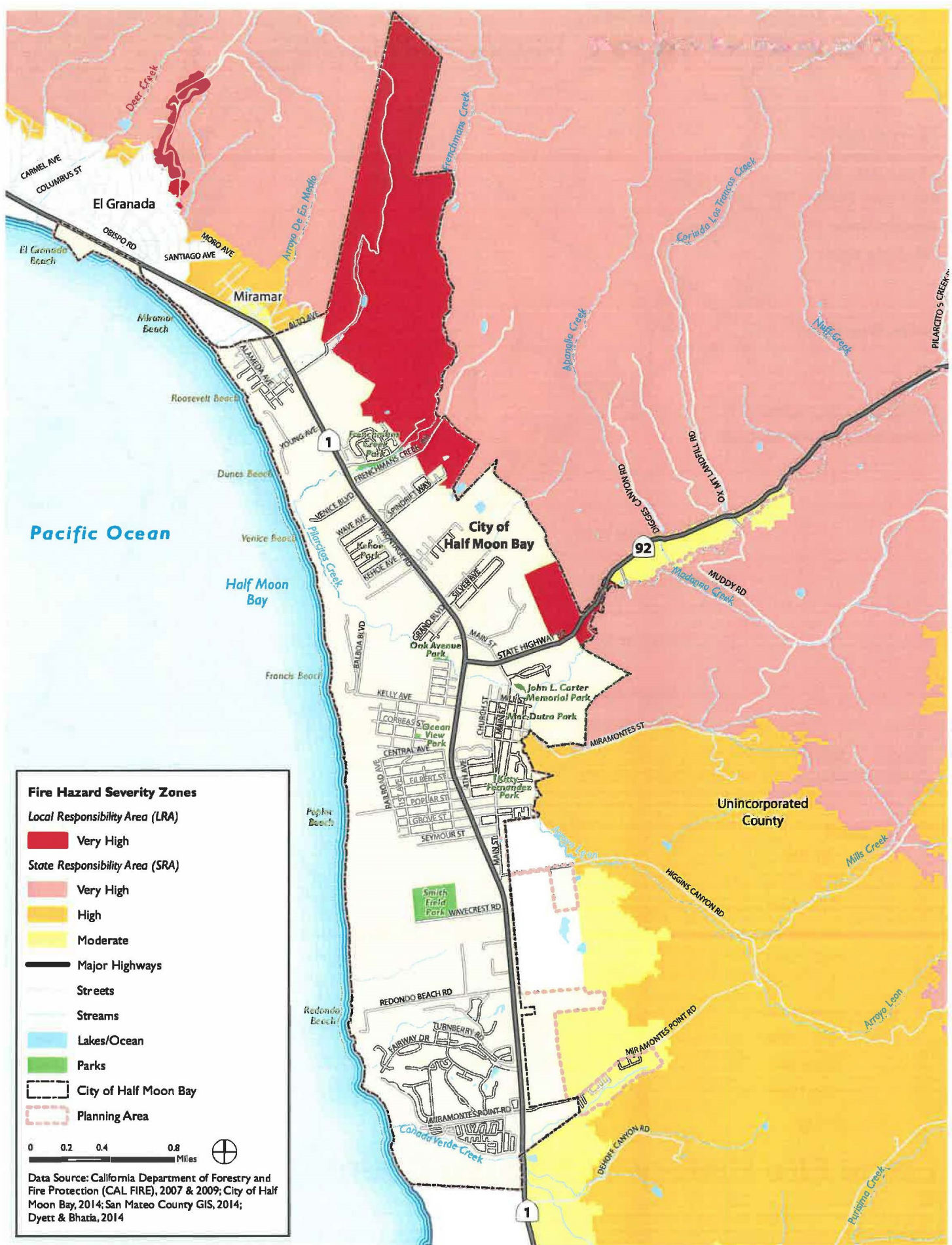


Figure 3.20-1 High Fire Hazard Areas

3.20.2 Regulatory Setting

State

California Department of Forestry and Fire Protection

The Cal Fire has mapped fire threat potential throughout California. Cal Fire ranks fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat and moderate, high, and very high fire threat. Additionally, Cal Fire produced a 2010 Strategic Fire Plan for California that contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. Cal Fire's Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

Cal Fire also designates land as either State or Local Responsibility Area (SRA and LRA) to designate who has financial responsibility for the prevention and suppression of wildfire. The City of Half Moon Bay (which contracts fire protection services to CFPD) has the responsibility for fighting wildland fires within the City limits. All proposed Master Plan recommendations would take place within the City limits.

California Fire Code

The California Fire Code (CFC) is Part 9 of Title 24. Updated every three years, the CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, fire hydrant locations and distribution, and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. The CFPD would implement CFC requirements within Half Moon Bay.

Regional

San Mateo County Office of Emergency Services, Emergency Operations Plan (EOP)

The San Mateo County Office of Emergency Services has adopted an Emergency Operations Plan (EOP), which identifies emergency response programs related to fire and rescue. This Emergency Operations Plan (EOP) established policies and procedures and assigns responsibilities to ensure the effective management of emergency operations within the San Mateo County Operational Area (SMOA). It provides information on the county emergency management structure of how and when the Emergency Operations Center (EOC) staff is activated. Emergency Function 4 (EF 4) of the EOP addresses fire and rescue.

The primary function of EF 4 is to respond to persons or property at risk of harm caused by fire and fire-related accidents during disasters. However, EF 4 may be called on to assist other EFs in response to evacuations, search and rescue, and similar endeavors. The EF 4 document designates Cal Fire San Mateo County as the coordinating and primary agency for fire emergencies. Operational Area California Fire Service and Rescue Emergency Mutual Aid Coordinator (FMC) are listed as supporting agencies.

Coastside Fire Protection District

The Coastside Fire Protection District (CFPD) provides fire protection services to the City of Half Moon Bay, neighboring communities, and surrounding San Mateo County areas, a territory covering approximately 50 square miles along the San Mateo County coast. CFPD receives the same wildland fire training as Cal Fire employees and is therefore well prepared to prevent and suppress wildland fire. CFPD also conducts routine inspections of properties within or near VHFSZs, especially ensuring that defensible space is provided around structures and that access for emergency response vehicles and critical fire breaks are maintained.

Local**City of Half Moon Bay General Plan Safety Element - 1991**

The Safety Element of Half Moon Bay's General Plan (1991) lists policies for fire hazards; however, none of the policies are relevant to the BP Master Plan.

3.20.3 Discussion

Would the project:

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?**

Less Than Significant Impact.

All Projects: Adoption and implementation of the BP Master Plan recommendations would not adversely impact the implementation of an emergency response or emergency evacuation plan. The BP Master Plan recommendations would result in minor improvements to the bicycle and pedestrian trail network and would not result in the construction of structures or assembly of large numbers of people in High or VHFHSZ zones. One BP Master Plan recommended Class I trail portion and a recommended spot improvement are in a Very High Fire Severity Zone, both located east of Half Moon Bay High School. Despite the proximity to the VHFHSZ east of the Half Moon Bay High School, the Class I trail segment is in close proximity to existing development and fire protection services. Therefore, trail users would not be at risk of being isolated during a fire event. Any future BP Master Plan project would require further evaluation CEQA review once design and implementation information become available. Wildfire hazard associated with the specific parcel proposed for the new trail or other facility would be evaluated at that time. Therefore, implementation of the BP Master Plan would not create barriers to evacuation plans, adversely impact the system, or expose people or structures to a significant risk of loss, injury or death involving wildland fires. The impact is less than significant.

- 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?**

No Impact.

All Projects: Coastal San Mateo County primarily experiences northwest winds coming off the ocean which can at times be quite strong and could exacerbate wildfire risks. The BP Master Plan recommendations consist of relatively small improvements to the bicycle and pedestrian infrastructure system within the City, many of which are located in fully urbanized areas. BP Master Plan recommendations would not have any effect on the slope, prevailing winds, or other wildfire-exacerbating conditions as they would not alter the surrounding landscape or involve construction that would exuberate or change wildfire behavior. Because the BP Master Plan is primarily a multi-modal transportation improvement effort, it would not result in new concentrations of people in high fire risk zones that could be exposed to pollutant concentration from wildfire smoke. Therefore, implementation of the BP Master Plan would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; there would be no impact.

- c) Require the installation 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?**

No Impact.

All Projects: Infrastructure improvements recommended by the BP Master Plan would not result in the construction of new structures or facilities that would require defensive or fire protection measures to be constructed (roads, fuel breaks, emergency water sources). Two trail alignments recommended for further study in the Master Plan, located in an undeveloped portion of the city in the northeast foothills and in the eastern-most portion of Pilarcitos Creek near SR-92, are in VHFHSZs. DBP Master Plan improvements would follow design guidelines so as not to exacerbate fire risk due to a design feature and a Class I trail would not require the construction of infrastructure that would exacerbate fire risk or that would result in impacts to the environment. These projects would undergo separate CEQA review once project plans became available and impacts to fire risk associated with the project would be addressed and mitigated as needed. Therefore, adoption and implementation of the BP Master Plan would not have an impact on the installation of infrastructure that may exacerbate fire risk.

- 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?**

Less Than Significant Impact.

On-Street Projects: On-street projects would typically be located in flat, urban areas outside of High and VHFHSZ and would not expose people to risk of downstream flooding or landslides

Off-Road Projects: The VHFHSZ in the northeastern section of the City is located in steep, rugged terrain which could experience flooding, debris flows, and landslides as a result of post-fire slope instability (see Figure 3.20-1). One trail alignment recommended for further study is located in this VHFHSZ east of Half Moon Bay High School. The City will be required to carry out further feasibility and design investigations before that recommendation could become a tangible project. During the feasibility review process the City would need to consider whether a Class I trail in a High or VHFHSZ would require measures to protect it and trail users from slope instability issues caused by wildfire. Therefore, adoption and implementation of the BP Master Plan would have a less than significant impact on fire risk.

3.20.4 References

Coastside Fire Protection District. 2008. Response Area. Accessed January 29, 2019. Available at <http://www.coastsidefire.org/response>.

San Mateo County Office of Emergency Services. 2015. San Mateo Emergency Operations Plan: Basic Plan. May 22.

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Half Moon Bay Coastside Chamber of Commerce & Visitors' Bureau. 2018. Coastside Emergency Action Program. Accessed January 29, 2019. Available at <https://www.visithalfmoonbay.org/biz/coastside-emergency-action-program>.

Half Moon Bay, City of. 1991. Half Moon Bay General Plan: Safety Element. <http://www.half-moon-bay.ca.us/155/General-Plan>.

_____. 2016. General Plan and Local Coastal Land Use Plan First Public Draft Safety Element. November 2016.

Half Moon Bay, City of. 2017. Local Coastal Land Use Plan: Coastal Hazards August 2017 Planning Commission Working Draft. 2017.

_____. 2019. Prepare for Fire/Wildfire. Accessed January 29, 2019. Available at <https://www.half-moon-bay.ca.us/530/Prepare-for-Fire-Wildfire>.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the efforts of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.21.1 Discussion

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

Less Than Significant with Mitigation. The adoption of the BP Master Plan would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. Impacts to all resource areas except light and glare and biology have been found to be less than significant as all BP Master Plan projects would be designed and implemented consistent with the BP Master Plan Design Guidelines, City General Plan and LCLUP policies, and the Municipal Code. Additionally, the City shall impose Standard Conditions of Approval on all BP Master Plan projects as listed in Table 2.13-1 in Project Description. Larger projects with the potential to cause environmental impacts would be reviewed for the need to have subsequent CEQA analysis prepared once project plans are available.

To avoid light and glare impacts from BP Master Plan projects and to protect the coastside dark night skies valued by the City, Mitigation Measure AEST-1 is incorporated into the project. This measure requires the City to prepare a lighting plan for each improvement project that contains

a night lighting element to it. The lighting plan should provide design and illumination requirements of the project and address how the plan reduces any light and glare impacts and protects dark night skies, to the satisfaction of the Community Development Director.

Several special-status species or sensitive habitats occur or have the potential to occur on or near proposed off-street trail alignments (Class I Trails). Mitigation Measures BIO-1 through BIO-4 are in place to reduce the impacts of trail construction on sensitive habitats and Environmental Sensitive Habitat Areas as defined by the LUP to less than significant levels.

Construction of the proposed project could impact unknown cultural and/or tribal resources. The City's adopted General Plan, LUP policies, and Municipal Code Chapter 18 requirements would ensure projects are planned, designed, and constructed in a manner that would avoid impacts on unknown cultural and/or tribal resources. The City shall implement the Standard Conditions of Approval presented in Table 2-11 which ensures proper protocols are followed should a discovery of cultural/tribal resources is made during construction. The adoption and implementation of the BP Master Plan would have a less than significant impact on these resources. As a result, the project would not eliminate important examples of the major periods of California history or prehistory.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the efforts of past projects, the effects of other current projects, and the effects of probable future projects)?**

Less Than Significant. Most of the projects implemented under the BP Master Plan would not contribute to cumulative impacts in connection with past projects nor with the effects of other current projects or probable future projects. As described in the Project Description, many of the projects and improvements are small in nature, limited in scope, and would not contribute to cumulative impacts. Larger projects such as the construction of Class I Trail segments could contribute to cumulative impacts on certain resources such as biological or hydrological resources. Once project-level information is developed, these projects would undergo additional CEQA review and cumulative impacts of these project would be analyzed then.

- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

Less Than Significant. Individual projects carried out under the BP Master Plan would be planned, designed, constructed, and operated in conformance with relevant federal and state regulations, as well as adopted City regulations, policy, and plans. Relevant regulations and policies are described throughout this document and would work to ensure projects would not have substantial adverse effects on humans, either directly or indirectly. For example, Standard Conditions of Approval the City will impose on all BP Master Projects will ensure conformance with BAAQMD air quality regulations and dust emissions won't cause air quality impacts. Conformance with federal, state and local regulations related to air quality, traffic management, and energy use would ensure greenhouse gas emission impacts do not occur. Conformance with the City's Noise Ordinance would ensure construction noise does not cause significant noise impacts. All projects would be designed in conformance with City policy and Chapter 18 of the Zoning Code would not have an aesthetic impact sensitive visual resources or scenic vistas.

The primary goals of the BP Master Plan are to enhance the existing bicycle and pedestrian network so multi-modal transportation is facilitated throughout the City, to connect isolated neighborhoods with key areas of the City, and to increase bicycle and pedestrian access to the

Coastal Trail from the east side of Highway 1. When completed, the improvements recommended in the BP Master Plan will be a benefit to the environment.

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Chapter 4. List of Preparers

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A coastal landscape featuring a paved path that curves through a grassy field. In the background, there is a body of water and distant hills under a cloudy sky. A dark blue rectangular box is overlaid on the right side of the image, containing the title text.

APPENDIX A

MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation, Monitoring and Reporting Program (MMRP) has been prepared pursuant to the CEQA Guidelines, which state:

“When adopting a mitigated negative declaration, the lead agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to mitigate or avoid significant environmental effects” (§15074(d)) and;

“The Lead Agency may choose whether its program will monitor mitigation, report on mitigation, or both. “Reporting” generally consists of a written compliance review that is presented to the decision-making body or authorized staff person. A report may be required at various stages during project implementation or upon completion of the mitigation measure. “Monitoring” is generally an ongoing or periodic process of project oversight. There is often no clear distinction between monitoring and reporting and the program best suited to ensuring compliance in any given instance will usually involve elements of both.” (§15097 (c))

The table beginning on the next page list the impacts, mitigation measures, and timing of the mitigation measure (when the measure will be implemented) related to the Mariner’s Church Expansion Project. All of the mitigation measures listed here will be implemented by the City, the Applicant, or by their appointees.

According to CEQA Guidelines section 15126.4 (a) (2), “Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.” Therefore, all mitigation measures as listed in this MMRP will be adopted by the City of Half Moon Bay Planning Commission when the project is approved.

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Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
AESTHETICS				
Impact AEST-1: Implementation of BP Master Plan recommendations could result in night light and glare impacts and reduce the dark night skies valued within the City.	Mitigation Measure AEST-1 (All Existing and Planned Infrastructure Improvements): To avoid light and glare impacts from BP Master Plan projects and to protect the Coastside dark night skies valued by the City, the City shall require a lighting plan for each improvement project that contains a night lighting element to it. The lighting plan should provide design and illumination requirements of the project and address how the plan reduces any light and glare impacts and protects dark night skies, to the satisfaction of the Community Development Director and/or decision-making body for any associated discretionary permit. The lighting plan shall specify how light will be shielded and contained within the project area to the greatest extent possible.	Implementation: This measure shall be required by the City during project design. Timing: Project design phase.	Monitoring: A lighting plan shall be submitted as part of project design.	Initials: _____ Date: _____
BIOLOGICAL RESOURCES				
Impact BIO-1 and BIO-2: Implementation of BP Master Plan recommendations could result in damage to special-status plant species.	Mitigation Measure BIO-1: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to review and implementation of any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, each BP Master Plan project, including on-street and off-street projects, would need to be evaluated to determine if it is within 100 feet of a sensitive habitat and a biological report would be prepared for any project that occurred within 100 feet of a sensitive habitat. These biological reports would include measures to	Implementation: This measure shall be performed by a qualified biologist or overseen by a qualified biologist. Timing: Prior to construction.	Monitoring: Not Applicable.	Initials: _____ Date: _____

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<p>protect sensitive natural communities and special-status plant species.</p> <p>To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-1 requires that when the biological report identifies that BP Master Plan projects are located in or adjacent to sensitive plant species habitat, a qualified biologist shall work with the City and/or contractor to designate the work area and any staging areas with high-visibility orange construction fencing if deemed applicable by the qualified biologist. Disturbance to vegetation shall be kept to the minimum necessary to complete the project activities.</p>			
	<p>Mitigation Measure BIO-2: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report for any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any off-street project with special-status plant species or sensitive natural communities. The biological report would include measures to protect sensitive natural communities and special-status plant species.</p> <p>To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-2 requires that, at a minimum, the biological report recommend surveys for special-status plant species be conducted prior to approval of any BP Master Plan project with ground disturbing activities at off-street project</p>	<p>Implementation: A qualified botanist shall perform the survey for special-status plants and shall submit the results to the City.</p> <p>Timing: The survey results report shall be submitted to the City prior to project approval. The surveys shall be conducted at the proper time(s) of year during reporting blooming periods.</p>	<p>Monitoring: A report presenting the results of the special-status plant survey(s) shall be submitted to the City prior to final project design.</p>	<p>Initials: _____</p> <p>Date: _____</p>

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<p>locations where suitable habitat for such species is present.</p> <p>The measure shall require a qualified botanist to conduct focused botanical surveys according to CNPS (CNPS 2001), CDFW (CDFW 2018c), and USFWS (USFWS 2002) at the proper time(s) of year during reported blooming periods when the plants are identifiable. The measure shall also require the qualified botanist to prepare a survey results report for submittal to the City and any other appropriate regulatory agencies (e.g., CDFW). The report shall include, but shall not be limited to, the following:</p> <ul style="list-style-type: none"> (1) a description of the survey methods; (2) a discussion of the survey results; (3) a map showing the project area and the location of any special-status plants encountered, and (4) recommended measures to avoid impacts to special-status plant species. <p>A qualified botanist is an individual who possesses the following qualifications:</p> <ul style="list-style-type: none"> 1) experience conducting floristic field surveys; 2) knowledge of plant taxonomy and plant community ecology; 3) familiarity with the plants of the area, including rare, threatened, and endangered species; and 4) familiarity with the appropriate state and federal statutes related to plants and plant collecting. 			

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
<p>Impact BIO-3: Construction activities could result in direct or indirect impacts to special-status animal species found in or adjacent to BP Master Plan projects.</p>	<p>Mitigation Measure BIO-3: Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. As a result, a biological report would be prepared for any project that occurred within or adjacent to sensitive habitat, including habitat for special-status animal species. The biological report would include measures to protect any special-status animal species.</p> <p>To supplement the requirements of Zoning Code 18.35.035, Mitigation Measure BIO-3 requires that the following measures be implemented prior to and during construction when the biological report identifies that BP Master Plan projects are within or adjacent to suitable habitat for special-status animal species to avoid harming special-status wildlife species: California red-legged frog (CRLF), San Francisco Garter Snake (SFGS), Western Pond turtle (WPT), and San Francisco dusky-footed woodrat.</p> <p>All Species</p> <p>a) <u>Work Area Delineation.</u> Prior to any construction activities, the work area and any staging areas shall be delineated with wildlife exclusion fencing (see Measure 2 below) and/or high-visibility orange construction fencing.</p> <p>b) <u>Worker Environmental Awareness Training.</u> A qualified biologist shall conduct an employee education program prior to any construction. The education</p>	<p>Implementation: These measures shall be performed by a qualified biologist or overseen by a qualified biologist. The results of the pre-construction survey, documentation of the employee education (hand-out and sign-in sheet), and a record of the daily fence and species inspections shall be submitted to the City. The City and wildlife agencies, as appropriate, shall be notified immediately if a special-status species is discovered during construction.</p> <p>Timing: Prior to and during construction activities.</p>	<p>Monitoring: A qualified biologist shall perform daily inspections of the work site during construction. A record of the daily inspections shall be submitted to the City.</p>	<p>Initials: _____</p> <p>Date: _____</p>

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<p>program shall consist of a brief presentation to explain biological resources concerns to contractors, their employees, and any other personnel involved in construction of the project. The program shall include, at a minimum, the following: a description of relevant special-status species, nesting birds, and bats along with their habitat needs as they pertain to the project area; a report of the occurrence of these species in the project vicinity, as applicable; an explanation of the status of these species and their protection under the federal and state regulations; a list of measures being taken to reduce potential impacts to natural resources during project construction and implementation; instructions to follow in the case of observing a special-status species on the work site, and a summary of the penalties for violating local, state, and/or federal law regarding special-status species. A fact sheet conveying this information shall be prepared for distribution to the above-mentioned people and anyone else who may enter the project area. Upon completion of training, employees shall sign a form stating that they attended the training and agree to all the conservation and protection measures.</p> <p>c) <u>Flagging Sensitive Vegetation.</u> Prior to initiation of any construction activities within the vicinity of sensitive habitat, a qualified biologist shall clearly delineate the sensitive habitat areas.</p>			

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<p>d) <u>Pre-construction Survey for Special-Status Species</u>. A qualified biologist shall conduct a pre-construction survey within the construction area for the presence of CRLF, SFGS, WPT, and San Francisco dusky-footed woodrat (within a 50-foot buffer from the project area boundary, if possible). The survey will be conducted immediately prior to the initial onset of construction activities. If any of these, or other special-status, species are found, work will not commence until the appropriate state and/or federal resource agencies are contacted and avoidance and mitigation measures are in place.</p> <p>e) <u>Construction Site Sanitation</u>. Food items may attract wildlife into the construction site, which will expose them to construction-related hazards. The construction site shall be maintained in a clean condition. All trash (e.g., food scraps, cans, bottles, containers, wrappers, and other discarded items) will be placed in closed containers and properly disposed of.</p> <p>f) <u>Species Discovery</u>. If an animal is found at the work site and is believed to be a protected species, work shall be halted, and a qualified biologist shall be contacted for guidance. Care must be taken not to harm or harass the species. No wildlife species shall be handled and/or removed from the construction area by anyone except agency-approved biologists.</p>			

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<p>CRLF and SFGS</p> <p>g) <u>Wildlife Exclusion Fence</u>. In areas where suitable habitat is present (e.g., creeks, wetlands, watercourses and ditches) and upland habitat (e.g., coastal scrub, non-native grassland), and as identified by the biological report required under Zoning Code 18.35.035, prior to any ground disturbance in the project area, an agency-approved temporary wildlife exclusion barrier shall be installed along the limits of disturbance. An agency-approved biologist shall inspect the area prior to installation of the barrier. The barrier shall be designed to allow the California red-legged frog and San Francisco garter snake to leave the impact area and prevent them from entering the impact area, and will remain in place until all development activities have been completed. This barrier shall be inspected daily and maintained and repaired as necessary to ensure that it is functional and is not a hazard to California red-legged frogs or San Francisco garter snakes on the outer side of the barrier. The fence shall be a minimum of three feet in height, buried in the soil at least four inches, and the base backfilled to form a tight seal to discourage CRLF and SFGS from crawling under and entering the work area. If the fence cannot be buried, the base shall be weighed down and sealed with gravel bags.</p>			

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<p>h) <u>Silt Fencing</u>. If work will disturb soil or includes digging or trenching, silt fencing shall be installed between any waterbodies (e.g., creeks, watercourses and ditches, wetlands) within or adjacent to BP Master Plan project areas. A silt barrier can be added to the wildlife exclusion fence instead to minimize the amount of fencing installed. During construction, the fence shall be checked every day for damage or breaks before construction activities commence. Any damage to the fence shall be repaired in a timely manner.</p> <p>i) <u>Daily Fence Inspections</u>. While any wildlife exclusion fencing is present in the project area, a qualified biologist shall inspect the area inside of the exclusion fence for CRLF and SFGS every day before construction activities commence. If any special-status species are found, construction activities shall not be allowed to start until the USFWS and/or CDFW are consulted and have approved an appropriate course of action. Such action could include leaving the animal alone to move away on its own or the relocation of the animal to outside of the work area by an agency-approved biologist.</p> <p>j) <u>Wildlife Entrapment</u>. The contractor shall avoid the use of monofilament netting, including its use in temporary and permanent erosion control materials. All holes greater than one-foot deep must be sealed overnight to prevent the entrapment of wildlife. Where holes or</p>			

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<p>trenches cannot be sealed, escape ramps that are no greater than 30 percent slope shall be positioned such that entrapped wildlife will be able to escape. The escape ramps should be at least one-foot wide and covered/fitted with a material that provides traction.</p> <p>k) <u>Daily Species Inspections for Open Trenches or Holes.</u> A qualified biologist and/or contractor trained by a qualified biologist shall inspect any open trenches or holes within BP Master Plan project areas with suitable habitat for CRLF, SFGS, and other special-status species every day before construction activities commence. If any special-status species are found, construction activities will not be allowed to start and the USFWS and CDFW will be consulted on an appropriate course of action.</p> <p>San Francisco Dusky-Footed Woodrat</p> <p>l) <u>San Francisco Dusky-Footed Woodrat.</u> If any San Francisco dusky-footed woodrat houses are found in the project area, they shall be marked in the field with flagging and their location shall be recorded with a Global Positioning System unit. If a San Francisco dusky-footed woodrat house is identified within an area of disturbance, the City shall attempt to preserve the house and maintain an intact dispersal corridor between the house and undisturbed habitat. An adequate dispersal corridor is considered to be a minimum of 50 feet wide and have</p>			

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<p>greater than 70 percent vegetative cover. Even if such a corridor is infeasible, the City shall avoid physical disturbance to the woodrat house, if feasible. If the woodrat house cannot be avoided, CDFW shall be notified and information regarding the house location(s) and relocation plan shall be provided to the CDFW for review and approval. With approval from CDFW, a qualified biologist shall dismantle and relocate the house material. Prior to the beginning of construction, a qualified biologist shall deconstruct the house by hand. Materials from the house shall be dispersed into adjacent suitable habitat that is outside of the disturbance area. During the deconstruction process the biologist shall attempt to assess if there are juveniles in the house. If immobile juveniles are observed, the deconstruction process shall be discontinued until a time when the biologist believes the juveniles will be fully mobile. A 10-foot wide no-disturbance buffer will be established around the house until the juveniles are mobile. The house may be dismantled once the biologist has determined that adverse impacts on the juveniles would not occur. All disturbances to woodrat houses will be documented in a construction monitoring report and submitted to City.</p>			

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
<p>Impact BIO-4: BP Master Plan projects could inadvertently lead to the loss of sensitive vegetation communities.</p>	<p>Mitigation Measure BIO-4: Any BP Master Plan project shall be designed to avoid sensitive vegetation communities (e.g., ESHA), to the greatest extent feasible. Half Moon Bay Zoning Code 18.35.035 requires that a qualified biologist prepare a biological report prior to any project within 100 feet of any sensitive habitat area, riparian corridor, bluffs, sea cliffs, or wetlands. The biological report would include a map of sensitive natural communities and measures to protect sensitive natural communities.</p> <p>If, despite avoidance measures, the project results in any loss of sensitive vegetation communities or the loss of habitat quality, compensatory mitigation shall be required at the minimum ratios required by the California Coastal Commission (10:1 for native tree replacement, 4:1 for wetlands, 3:1 for riparian and other specified habitats, and 2:1 for coastal sage scrub not occupied by listed species), or more if required by other regulatory agencies, by means of restoration (e.g., removing non-native plants and planting native vegetation) in similar habitat adjacent to the project (i.e., area of disturbance). The City shall prepare a Restoration and Monitoring Plan for any loss of sensitive vegetation communities. The Restoration and Monitoring Plan shall be made available to the public for review for a period of at least 30 days prior to Plan implementation. The Plan shall describe the methods and practices to be employed, and include, at a minimum, the following:</p>	<p>Implementation: A Restoration and Monitoring Plan shall be prepared for any sensitive vegetation community impacts. The Restoration and Monitoring Plan shall be submitted to the City for review and approval and made available to the public for a review period of at least 30 days prior to the Plan implementation.</p> <p>Timing: During and following construction.</p>	<p>Monitoring: Any restoration and monitoring work shall be documented and submitted to the City. Monitoring shall be continued until the success criteria identified in the Restoration and Monitoring Plan are met.</p>	<p>Initials: _____</p> <p>Date: _____</p>

Impact	Mitigation Measure	Implementation and Timing	Monitoring Responsibility	Verified Implementation
	<ul style="list-style-type: none"> • A clear statement of the goals of the restoration for all habitat types; • Designation of a qualified biologist as the Restoration or Mitigation Manager responsible for all phases of the restoration; • Identification of the parties responsible for the Plan implementation; • A specific grading plan, if the topography must be altered; • A specific erosion control plan, if soil or other substrate will be disturbed during restoration; • A weed eradication plan designed to eradicate existing weeds and control future invasion by exotic species; • A planting plan based on the natural habitat type; • An irrigation plan that describes the method and timing of watering and ensures removal of watering infrastructure by the end of the monitoring period; • A monitoring plan with performance goals/success criteria, assessment methods, and a schedule; and • Feasible contingency measures if success criteria are not met within the established timeframe. 			

A scenic view of a paved path leading towards a coastal town and mountains under a cloudy sky. The path is made of light-colored concrete and curves gently through a grassy field. To the right of the path is a wooden fence. In the background, a body of water is visible, followed by a small town and then rolling hills or mountains under a grey, overcast sky.

APPENDIX B

HALF MOON BAY BICYCLE & PEDESTRIAN MASTER PLAN PROJECT RECOMMENDATIONS

Appendix D. Project Recommendations

This appendix presents all project recommendations by type including planning-level cost estimates. These costs do not reflect the full range of options that could be considered for implementation. Some projects may cost more due to specific site conditions and other factors not known at this time. Other projects could be implemented using various treatments, including basic methods such as with paint, and therefore cost significantly less; but would not incorporate the types of infrastructure options (pavement, curbs, or landscaping, for example) included in these cost estimates. Some projects could be installed in phases using simple treatments initially with upgrades to more permanent infrastructure later as funding becomes available.

Bicycle Projects

Table D-1: Class I Shared-Use Path Recommendations

Name	Cross Street A	Cross Street B	Mileage	Notes	Cost Estimate
Coastal Trail Extension	S end of Coastal Trail	Redondo Beach Rd	1.18	Gap closure, extend coastal trail	\$1,770,000
Coastal Trail to Wavecrest Rd Connection	Wavecrest Rd	Coastal Trail	0.20	Connect coastal trail to Wavecrest Rd	\$300,000
Eastside Parallel Trail	Frenchmans Creek Rd	Miramontes Point Rd	3.78		\$5,670,000
Eastside Parallel Trail - North	Roosevelt Blvd	City limit	0.26	Extend existing trail on east side of Hwy 1 to northern city limit	\$390,000
HMB High School Trail	Hwy 92	High School	0.32		\$480,000
Hwy 1/Naomi Patridge Gap Closure	Heskin Ave	Kelly Ave	0.26	Sidepath or shared-use path on W side of Hwy 1	\$390,000
Naomi Patridge Trail Extension - North	Rousseau Francais Ave	City limit	0.84	Extend existing Naomi Patridge Trail to northern city limit	\$1,260,000
Naomi Patridge Trail Extension - South	400 ft S of Wavecrest Rd	City limit	1.58	Extend existing Naomi Patridge Trail to southern city limit	\$2,370,000

Name	Cross Street A	Cross Street B	Mileage	Notes	Cost Estimate
Pilarcitos Creek Trail ¹	Coastal Trail	Oak Ave/ Strawflower Shopping Center	0.74	Location TBD	\$1,110,000
Pilarcitos Creek Trail	Naomi Patridge Trail	Hwy 92	1.05		\$1,575,000
Railroad Ave Trail	Kelly Ave	Central Ave	0.36		\$540,000
Railroad Ave Trail Extension	Grove St	Wavecrest Rd	0.54	Location TBD	\$810,000
Seymour St Coastal Trail Spur	Coastal Trail	Seymour St	0.32	Location TBD, study basin (possibly move to Magnolia or RR to protect endangered species)	\$480,000
Wavecrest Rd Coastal Trail Spur	Coastal Trail	Wavecrest Rd	0.29		\$435,000

Table D-2: Class II Bike Lane Recommendations

Name	Cross Street A	Cross Street B	Mileage	Notes	Cost Estimate
Kelly Ave Bike Lanes	Hwy 1	Johnston St	0.32	Bike lanes (short term), separated bikeway (long term)	\$24,000
Main St Bike Lanes	Hwy 92	Main St Bridge	0.11		\$8,300
Main St Buffered Bike Lanes	Hwy 1	Hwy 92	0.24	add buffer to existing bike lanes	\$36,000
Miramontes Point Rd Bike Lanes	Hwy 1	City limit	0.30		\$22,500
Heskin Ave Bike Lanes	Strawflower Shopping Center	Hwy 1	0.44	Class II or III	\$33,000
South Main St Bike Lanes	Spruce St	Higgins Canyon Rd	0.52		\$39,000

¹ If easements are not available, the trail would end at Altona Avenue.

Table D-3: Class III Bike Route and Bike Boulevard Recommendations

Name	Cross Street A	Cross Street B	Mileage	Notes	Cost Estimate
Alsace Lorraine/1st Street Bike Boulevard	Kelly Ave	Poplar St	0.61		\$61,000
Central Ave Bike Route	Railroad Ave	3rd Ave	0.34		\$5,100
Johnston St/Monte Vista Ln Bike Boulevard	Mill St	Main St	0.49	Consider bike boulevard alternate to Main St	\$49,000
Mill St Bike Route	Church St	San Benito St	0.21		\$3,200
Purissima St Bike Boulevard	Mill St	Filbert St	0.47	Consider bike boulevard concept as alternate to Main St	\$47,000
Railroad Ave Bike Route	Central Ave	Poplar St	0.42	Traffic calming	\$6,300
Redondo Beach Rd Bike Route	Coastal Trail	Hwy 1	0.83		\$12,500
Venice Blvd Bike Route	Venice Beach/Coastal Trail	Hwy 1	0.31		\$4,700
Wavecrest Rd Bike Route	Hwy 1	End of Wavecrest Rd	0.50		\$7,500
Young Ave Bike Route	Coastal Trail	Hwy 1	0.20		\$3,000

Table D-4: Class IV Separated Bikeway Recommendations

Name	Cross Street A	Cross Street B	Mileage	Notes	Cost Estimate
Hwy 92 Separated Bikeway	Hwy 1	Main St	0.17	Short-term	\$102,000
Hwy 92 Separated Bikeway	Main St	HMB High School Trail	0.34	Long-term once HMB High School Trail is completed. Study crossing at HMB High School Trail if facility is one-way on both sides of Hwy 92.	\$204,000

Pedestrian Projects

Table D-5: Crossing Recommendations

Name	Cross Street A	Cross Street B	Notes	Cost Estimate
Church St at Kelly Ave Crossing Improvements	Church St	Kelly Ave	Recommended: Traffic calming such as roundabout or curb extensions	\$50,000
Hwy 92/Main St Protected Intersection	Hwy 92	Main St	Study: Protected intersection, make gateway, wayfinding, tie into Hwy 1 Town Blvd concept	\$1,000,000
Poplar St at Main St Crossing Improvements	Poplar St	Main St	Planned: Reconfigure intersection to add ADA access and high visibility crosswalk	\$80,000
Filbert St at Purissima St/Main St Crossing Improvements	Filbert St	Purissima St/Main St	Recommended: Raised intersection, high visibility crosswalks, bulbouts	\$250,000
Hwy 92 at Hwy 1 Crossing Improvements	Hwy 92	Hwy 1	Recommended: High visibility crosswalks; consider protected intersection to improve safe crossings for bike/ped	\$12,000
Kelly Avenue at Hwy 1 Crossing Improvements	Kelly Ave	Hwy 1	Planned: Install High Visibility Crosswalks and Lead Pedestrian Intervals, all legs; consider protected intersection	\$18,000

Table D-6: Pedestrian Access Improvement Recommendations

Name	Cross Street A	Cross Street B	Notes	Cost Estimate
New Leaf Ped Access	Hwy 92	Bus stop	Improve pedestrian access to and through commercial area	\$30,000
Strawflower Shopping Center Ped Access	Main St	Hwy 1	Improve pedestrian access to and through commercial area	\$30,000

Table D-7: Crosswalk Recommendations

Name	Notes	Cost Estimate
Correas St at Main St Crossing Improvements	High visibility crosswalks	\$12,000
Balboa Rd at Coastal Trail	High visibility crosswalk	\$3,000
Johnston St at Miramontes Ave Crossing Improvements	High visibility crosswalks, all legs	\$12,000
Kelly Ave at Main St Crossing Improvements	High visibility crosswalks	\$12,000
Kelly Ave at Pilarcitos Ave Crossing Improvements	High visibility crosswalks, all legs, consider flashing stop signs	\$9,000
Kelly Ave at Purissima St Crossing Improvements	High visibility crosswalks	\$12,000
Lewis Foster Dr at Main St Crossing Improvements	High visibility crosswalks; consider pedestrian hybrid beacon or activated flashing beacon	\$6,000
Mill St at Main St Crossing Improvements	High visibility crosswalks, curb extensions	\$12,000
N Main St at Hwy 1 Crossing Improvements	High visibility crosswalks, all legs	\$12,000
Miramontes St at Main St Crossing Improvements	High visibility crosswalks	\$12,000
Miramontes St at Church St	Add new high visibility crosswalk on east leg	\$3,000
Miramontes Point Rd at Hwy 1 Crossing Improvements	High visibility crosswalks; add new crosswalk on north leg	\$12,000
Poplar St at Hwy 1 Crossing Improvements	High visibility crosswalks	\$12,000

Bicycle and Pedestrian Projects

Table D-8: Potential Locations for Coastal Access Boardwalks

Name	Cross Street A	Cross Street B	Cost Estimate
Beach Ave & Coastal Trail Boardwalk	Beach Ave	Coastal Trail	\$30,000
Roosevelt Blvd & Coastal Trail Boardwalk	Roosevelt Blvd	Coastal Trail	\$30,000
San Pablo Ave & Coastal Trail Boardwalk	San Pablo Ave	Coastal Trail	\$30,000
St John Ave & Coastal Trail Boardwalk	St John Ave	Coastal Trail	\$30,000
Washington Blvd & Coastal Trail Boardwalk	Washington Blvd	Coastal Trail	\$30,000
Wave Ave & Coastal Trail Boardwalk	Wave Ave	Coastal Trail	\$30,000

Table D-9: Pedestrian Hybrid Beacon Recommendations

Name	Cross Street A	Cross Street B	Notes	Cost Estimate
Grandview Blvd & Hwy 1 Beacon	Grandview Blvd	Hwy 1	Study: Pedestrian Hybrid Beacon	\$150,000
Higgins Canyon Rd at Hwy 1 Beacon	Higgins Canyon Rd	Hwy 1	Planned: Pedestrian Hybrid Beacon	\$150,000
Mirada Rd at Hwy 1 Beacon	Mirada Rd	Hwy 1	Study: Pedestrian Hybrid Beacon	\$150,000
Redondo Beach Rd at Hwy 1 Beacon	Redondo Beach Rd	Hwy 1	Study: Pedestrian Hybrid Beacon	\$150,000
Roosevelt Blvd at Hwy 1 Beacon	Roosevelt Blvd	Hwy 1	Study: Pedestrian Hybrid Beacon	\$150,000
Spindrift Way at Hwy 1 Beacon	Spindrift Wy	Hwy 1	Study: Pedestrian Hybrid Beacon; pave a connection between roadway and trail	\$170,000
Terrace Ave at Hwy 1 Beacon	Terrace Ave	Hwy 1	Planned: Pedestrian Hybrid Beacon	\$150,000

Table D-10: Activated Flashing Beacon Recommendations

Name	Cross Street A	Cross Street B	Notes	Cost Estimate
Filbert St at Hwy 1 Beacon	Filbert St	Hwy 1	Study: Pedestrian Hybrid Beacon or Activated Flashing Beacon	\$20,000
Seymour St at Hwy 1 Beacon	Seymour St	Hwy 1	Study: Activated Flashing Beacon	\$20,000

Table D-11: Signage Recommendations

Name	Cross Street A	Cross Street B	Notes	Cost Estimate
Main St Bridge Signage	Main St	100 ft S of Stone Pine Rd	Short term: install signage to warn drivers of bikes/peds on bridge. 100 ft S of Stone Pine Rd	\$400
Main St Bridge Signage	Main St	300 ft S of Stone Pine Rd	Short term: install signage to warn drivers of bikes/peds on bridge. 300 ft S of Stone Pine Rd	\$400

Table D-12: Spot Improvement Recommendations

Name	Cross Street A	Cross Street B	Notes	Cost Estimate
Naomi Patridge Trail & Belleville Blvd Spot Improvements	Naomi Patridge Trail	Belleville Blvd	Install raised crosswalk; replace existing trail stop signs with yield signs	\$90,000
Naomi Patridge Trail & Grand Blvd Spot Improvements	Naomi Patridge Trail	Grand Blvd	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs	\$90,000
Naomi Patridge Trail & Kehoe Ave Spot Improvements	Naomi Patridge Trail	Kehoe Ave	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs	\$90,000
Naomi Patridge Trail & N Frontage Rd Spot Improvements	Naomi Patridge Trail	N Frontage Rd	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs	\$90,000
Naomi Patridge Trail & S Frontage Rd Spot Improvements	Naomi Patridge Trail	S Frontage Rd	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs	\$90,000
Naomi Patridge Trail & Strawflower Shopping Center Spot Improvements	Naomi Patridge Trail	Strawflower Shopping Center	Move crossing behind vehicle stop sign; install raised crosswalk; replace existing trail stop signs with yield signs	\$90,000
Terminus Upper Terrace/High School Connection	Terminus Upper Terrace Ave	High School Grounds	Maintain an opening at Upper Terrace Avenue allowing access to the High School grounds; consider traffic calming to reduce potential speeding issues	\$36,000
Pilarcitos Creek Undercrossing at Hwy 1	Pilarcitos Creek	Hwy 1	Improve lighting, clean up vegetation and debris	\$5,000
Naomi Patridge Trail Bridge	Heskin Ave	Pilarcitos Ave	Add curb cuts for bicycle access from bridge to Heskin Ave	\$10,000
Venice Blvd & Coastal Trail Signage and Crosswalk	Venice Blvd	Coastal Trail	Install stop or yield sign and high-visibility crosswalk on Venice Blvd at Coastal Trail crossing	\$400

Table D-13: Recommended Studies

Name	Cross Street A	Cross Street B	Mileage	Notes
Church St	Kelly Ave	Correas St	0.13	Parking protected bike lane on west side and standard Class II on east side
Main St Complete Street Design	Main St Bridge	Spruce St	0.58	Study to improve bike/ped facilities
Coastal Trail Signage and Realignment	N end of Coastal Trail (Mirada Rd)	Kelly Ave/Seymour St	1.58	Install wayfinding and "share the trail" signage. Shift east due to coastal erosion.
Bridge Connection	Purissima St	Pilarcitos Creek	0.05	Add bridge to connect Purissima St to Naomi Partridge Trail
Eastside Trail Bridge	Frenchmans Creek Rd	Ruisseau Francais Ave	0.10	Bridge on eastside trail crossing Frenchmans Creek
Hwy 1 Study: Town Boulevard Concept	N Main St	S Main St	3.18	Study to improve ped/bike accommodation (wayfinding, lighting, signals, gateways)
Kelly Ave	Coastal Trail	Hwy 1	0.52	Study bike/ped accommodation
Mirada Rd	Magellan Ave	Medio Ave	0.19	One way for better bike/ped accommodation. County Jurisdiction
Poplar St Improvements	Railroad Ave	Main St	0.57	Study improvements to improve bicycle and pedestrian accommodation
Beachwood Path	Beachwood Path N	Beachwood Path S	0.17	Pedestrian-Only Study
Frenchmans Creek Trail	Hwy 1	3,000 ft E of Hwy 1	0.63	Pedestrian-Only Study
Hwy 92/Main St Protected Intersection	Hwy 92	Main St	-	Protected intersection, make gateway, wayfinding, tie into Hwy 1 Town Blvd concept
Vista Walking Trail	Pacific Ridge	Roosevelt Ave	1.71	Pedestrian-Only Path, Location TBD
Wavecrest Rd	1,000 ft W of Hwy 1	Coastal Trail	0.30	Pedestrian-Only Study

A coastal landscape featuring a paved path that curves through a grassy field. In the background, there is a body of water and distant hills under a cloudy sky. A dark blue rectangular box is overlaid on the right side of the image, containing white text.

APPENDIX C

SENSITIVE HABITATS AND SPECIAL-STATUS SPECIES

Table 1. Special-status Plants and Special-status Wildlife Documented Within 5 miles of the BP Master Plan Area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Plants			
San Mateo thorn-mint (<i>Acanthomintha duttonii</i>)	FE SE 1B.1	Serpentine chaparral or valley and foothill grasslands. Elevations from 50-300 meters. Blooms April-June.	Low. San Mateo thorn-mint not been documented as occurring in the BP Master Plan area. None of the proposed off-street BP Master Plan projects are located within this species elevation range.
Blasdale's bent grass (<i>Agrostis blasdalei</i>)	1B.2	Coastal bluff scrub, coastal dunes, or coastal prairie. Elevations from 0-150 meters. Blooms May-July.	Moderate. Blasdale's bent grass as not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within and adjacent to proposed BP Master Plan projects, including projects along the sea cliffs and near Wavecrest Road.
Franciscan onion (<i>Allium peninsulare</i> var. <i>franciscanum</i>)	1B.2	Cismontane woodland and grassland on clay/volcanic soils, often serpentine. Elevations from 52-305 meters. Blooms April-June.	Low. Franciscan onion has not been documented as occurring in the BP Master Plan area. Suitable clay, volcanic soils are not known to be present in the BP Master Plan area. None of the proposed off-street BP Master Plan projects are located within this species elevation range.
Bent-flowered fiddleneck (<i>Amsinkia lunaris</i>)	1B.2	Coastal bluff scrub, cismontane woodland, or valley and foothill grassland. Elevations from 3-500 meters. Blooms March-June.	Moderate. Bent-flowered fiddleneck has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff and grassland habitat in the BP Master Plan area.
Montara manzanita (<i>Arctostaphylos montaraensis</i>)	1B.2	Maritime chaparral or coastal scrub. Elevations from 80-500 meters. Blooms January-March.	Low. Montara manzanita has not been documented as occurring in the BP Master Plan area. None of the proposed off-street BP Master Plan projects are located within this species elevation range.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Kings Mountain manzanita (<i>Arctostaphylos regismontana</i>)	1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest in granitic or sandstone soils. Elevations from 305-730 meters. Blooms December-April.	Low. Kings Mountain manzanita has not been documented as occurring in the BP Master Plan area. None of the proposed off-street BP Master Plan projects are located within this species elevation range.
Coastal marsh milk-vetch (<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>)	1B.2	Coastal dunes, coastal scrub, or marshes and swamps near coastal salt marshes or streamsides. Elevations from 0-30 meters. Blooms April-October.	Moderate. Coastal marsh milk-vetch has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal scrub and wetland habitat in the BP Master Plan area.
Pappose tarplant (<i>Centromadia parryi</i> ssp. <i>parryi</i>)	1B.2	Chaparral, coastal prairie, meadows and seeps, coastal salt marshes and swamps, vernal mesic valley and foothill grasslands. Elevations from 0-420 meters. Blooms May-November.	Moderate. Pappose tarplant has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal prairie, grassland, and wetland habitat in the BP Master Plan area.
San Francisco Bay spineflower (<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>)	1B.2	Sandy soils in coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub. Elevations from 3-215 meters. Blooms April-July (August).	Moderate. San Francisco Bay spineflower has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff, coastal prairie, coastal scrub, and grassland habitat in the BP Master Plan area.
Point Reyes salty bird's beak (<i>Chloropyron maritimum</i> spp. <i>palustre</i>)	1B.2	Usually found in coastal salt marsh with pickleweed and cordgrass at elevations from sea level to 15 meters.	None. Point Reyes salty bird's beak has not been documented as occurring in the BP Master Plan area. No suitable habitat for this species occurs near any proposed BP Master Plan projects.
Franciscan thistle (<i>Cirsium andrewsii</i>)	1B.2	Mesic or serpentine soils in broadleafed upland forests, coastal bluff scrub, coastal prairie, or coastal scrub. Elevations from 0-150 meters. Blooms March-July.	Low. Franciscan thistle has not been documented as occurring in the BP Master Plan area. Suitable mesic or serpentine soils are not known to be present in the BP Master Plan area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Fountain thistle (<i>Cirsium fontinale fontinale</i>)	1B.2	Found in Coastal bluff scrub, broadleafed upland forest, and coastal prairie on ultramafic soils at less than 150 meters in elevation.	Low. Franciscan thistle has not been documented as occurring in the BP Master Plan area. Suitable ultramafic soils are not known to be present in the BP Master Plan area.
San Francisco collinsia (<i>Collinsia multicolor</i>)	1B.2	Closed-cone coniferous forest and coastal scrub, affinity for serpentinite soils. Elevations from 30-250 meters. Blooms February-May.	Low. San Francisco collinsia has not been documented as occurring in the BP Master Plan area. Suitable serpentinite soils are not known to be present in the BP Master Plan area.
Western leatherwood (<i>Dirca occidentalis</i>)	1B.2	Mesic broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, north coast coniferous forest, riparian forest, and riparian woodland. Elevations from 25-425 meters. Blooms January-April.	Moderate. Western leatherwood has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within woodland habitat in the BP Master Plan area. BP Master Plan projects are not currently proposed within riparian woodland areas.
San Mateo woolly sunflower (<i>Eriophyllum latilobum</i>)	FE SE 1B.1	Moist, shaded site on steep grassy or sparsely wooded slopes in cismontane woodland, coastal scrub, or lower montane coniferous forest. Has been reported on serpentinite soils. Elevations from 45-330 meters. Blooms May-June.	Low. San Mateo woolly sunflower has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is not expected to be present in the BP Master Plan area.
California wild strawberry (<i>Fragaria vesca</i>)	LCP	Naturally occurs along the coast in sandy soils on coastal bluffs, cliffs, and road cuts.	High. This species has been documented within suitable habitat throughout the BP Master Plan area. However, only species within 0.5-mile of the coast are considered unique under the City's Local Coastal Program (LCP).
Hillsborough chocolate lily (<i>Fritillaria biflora</i> var. <i>ineziana</i>)	1B.1	Serpentine soils in cismontane woodland or valley and foothill grassland. Blooms March-April.	Low. Hillsborough chocolate lily has not been documented as occurring in the BP Master Plan area and is only known from the Hillsborough area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Marin checker lily (<i>Fritillaria lanceolata</i> var. <i>tristulis</i>)	1B.1	Coastal bluff scrub, coastal prairie, coastal scrub. Elevations 15-150 meters. Blooms February-May.	Moderate. Marin checker lily has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff, coastal prairie, coastal scrub, and grassland habitat in the BP Master Plan area.
Fragrant fritillary (<i>Fritillaria liliacea</i>)	1B.2	Clay, serpentine, usually in grassland, but also in cismontane woodland and coastal scrub. Elevations from 3-410 meters. Blooms February-April.	Low. Fragrant fritillary has not been documented as occurring in the BP Master Plan area. Suitable serpentine soils are not known to be present in the BP Master Plan area.
San Francisco gumplant (<i>Grindelia hirsutula</i> var. <i>maritima</i>)	3.2	Likes serpentine soils in coastal bluff scrub, coastal scrub, or valley and foothill grassland. Elevations from 15-400 meters. Blooms June-September.	Low. San Francisco gumplant has not been documented as occurring in the BP Master Plan area. Suitable serpentine soils are not known to be present in the BP Master Plan area.
Marin western flax (<i>Hesperolinon congestum</i>)	FT ST 1B.1	Serpentine soil in chaparral or valley and foothill grassland. Elevations from 5-370 meters. Blooms from April-July.	Low. Marin western flax has not been documented as occurring in the BP Master Plan area. Suitable serpentine soils are not known to be present in the BP Master Plan area.
Short-leaved evax (<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>)	1B.2	Sandy coastal bluff scrub, coastal dunes, or coastal prairie Elevations from 0-215 meters. Blooms March-June.	Moderate. Short-leaved evax has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff, coastal prairie, and grassland habitat in the BP Master Plan area.
Kellogg's horkelia (<i>Horkelia cuneata</i> var. <i>sericea</i>)	1B.1	Openings with sandy or gravelly soils in closed-cone coniferous forests, coastal chaparral, coastal dunes, or coastal scrub. Elevations from 10-200 meters. Blooms April-September.	Moderate. Kellogg's horkelia has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coniferous forest and coastal scrub habitat in the BP Master Plan area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Point Reyes horkelia (<i>Horkelia marinensis</i>)	1B.2	Sandy soils in coastal dunes, coastal prairie, and coastal scrub. Elevations 5-755 meters. Blooms May-September.	Moderate. Point Reyes horkelia has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal prairie, coastal scrub, and grassland habitat in the BP Master Plan area.
Perennial goldfields (<i>Lasthenia californica</i> var. <i>macrantha</i>)	1B.2	Coastal bluff, coastal dunes, or coastal scrub. Elevations from 5-520 meters. Blooms January-November.	High. Present in the BP Master Plan area. This species occurs along the edge of the coastal bluff habitat, near Wavecrest, and the area west of Railroad Avenue. This species could occur within suitable habitat associated with BP Master Plan projects.
Coast yellow leptosiphon (<i>Leptosiphon croceus</i>)	1B.1	Coastal bluff scrub or coastal prairie. Elevations from 10-150 meters. Blooms April-June.	Moderate. Coast yellow leptosiphon has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff, coastal prairie, and grassland habitat in the BP Master Plan area.
Rose leptosiphon (<i>Leptosiphon rosaceus</i>)	1B.1	Coastal bluff scrub. Elevations from 0-100 meters. Blooms April-July.	Moderate. Rose leptosiphon has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff habitat in the BP Master Plan area.
Crystal Springs lessingia (<i>Lessingia arachnoidea</i>)	1B.2	Serpentine soils in cismontane woodland, coastal scrub, or valley and foothill grassland. Elevations from 60-200 meters. Blooms July-October.	None. Crystal Springs lessingia has not been documented as occurring in the BP Master Plan area. This species is known only from near Crystal Springs Reservoir. None of the proposed off-street BP Master Plan projects are located within this species elevation range.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Coast lily (<i>Lilium maritimum</i>)	1B.1	Broadleafed upland forest, closed-cone coniferous forest, coastal prairie, coastal scrub, freshwater marshes and swamps, and North Coast coniferous forest, sometimes along roadsides. Elevations from 5-475 meters. Blooms May-August.	Moderate. Coast lily has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff, woodland, wetland, coastal prairie, coastal scrub, and grassland habitat in the BP Master Plan area.
Ornduff's meadowfoam (<i>Limnanthes douglasii</i> ssp. <i>ornduffi</i>)	1B.1	Agricultural fields within meadows and seeps. Elevations from 10-20 meters. Blooms November-May.	Low. Ornduff's meadowfoam has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within agricultural field and wetland habitat in the BP Master Plan area; however, this species is believed to be restricted to a single agricultural field within San Mateo County.
Indian Valley bush-mallow (<i>Malacothamnus aboriginum</i>)	1B.2	Rocky, granitic soils in chaparral or cismontane woodland. Elevations from 150-1,700 meters. Blooms April-October.	Low. Indian Valley bush-mallow has not been documented as occurring in the BP Master Plan area. None of the proposed off-street BP Master Plan projects are located within this species elevation range.
Arcuate bush-mallow (<i>Malacothamnus arcuatus</i>)	1B.2	Gravelly alluvium in chaparral and cismontane woodland. Elevation 15-355 meters. Bloom April-September.	Low. Arcuate bush-mallow has not been documented as occurring in the BP Master Plan area. Suitable gravelly alluvium soils are not known to be present in the BP Master Plan area.
Davidson's bush-mallow (<i>Malacothamnus davidsonii</i>)	1B.2	Chaparral, cismontane woodland, coastal scrub, or riparian woodland. Elevations from 185-1,140 meters. Blooms June-January.	Low. Davidson's bush-mallow has not been documented as occurring in the BP Master Plan area. None of the proposed off-street BP Master Plan projects are located within this species elevation range.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Hall's bush-mallow (<i>Malacothamnus hallii</i>)	1B.2	Chaparral or coastal scrub. Elevations from 10-760 meters. Blooms April-October.	Moderate. Hall's bush-mallow has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal scrub habitat in the BP Master Plan area.
Marsh microseris (<i>Microseris paludosa</i>)	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland. Elevations from 5-355 meters. Blooms from April-June (July).	Moderate. Marsh microseris has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within woodland, coastal scrub, and grassland habitat in the BP Master Plan area.
Woodland woollythreads (<i>Monolopia gracilens</i>)	1B.2	Chaparral, valley, and foothill grassland, cismontane woodland, broadleaved upland forest, North Coast coniferous forest. Grassy sites in openings, sandy to rocky soils, often seen on serpentine after burns. Elevations from 100-1,200 meters. Blooms February-July.	Low. Woodland woollythreads has not been documented as occurring in the BP Master Plan area. None of the proposed off-street BP Master Plan projects are located within this species elevation range.
White-rayed pentachaeta (<i>Pentachaeta bellidiflora</i>)	FE SE 1B.1	Cismontane woodland or valley and foothill grasslands, often serpentinite. Elevations from 35-620 meters. Blooms March-May.	Low. White-rayed pentachaeta is only known from west of Redwood City and near the Crystal Springs Reservoir.
Choris' popcornflower (<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>)	1B.2	Moist areas in chaparral, coastal scrub, coastal prairie habitat. Elevations from 0-650 meters. Blooms March-June.	High. Present in the BP Master Plan area. This species occurs within the mix of grassland, scrub, wetlands and coastal prairie at Wavecrest and the area west of Railroad Avenue. This species could occur within suitable habitat associated with BP Master Plan projects.
Monterey Pine (<i>Pinus radiata</i>)	LCP	Closed-cone coniferous forest, cismontane woodland from 25-185 meters. Considered to be native occurrences only at Ano Nuevo, Cambria, the Monterey Peninsula, and Baja, Mexico.	High. Monterey Pines occur throughout the BP Master Plan area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Oregon polemonium (<i>Polemonium carneum</i>)	2.2	Coastal prairie, coastal scrub, or lower montane coniferous forests. Elevations from 0-1,830 meters. Blooms April-September.	Moderate. Oregon polemonium has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal prairie, coastal scrub, and coniferous forest habitat in the BP Master Plan area.
Hickman's cinquefoil (<i>Potentilla hickmanii</i>)	FE SE 1B.1	Coastal bluff scrub, closed-cone coniferous forests, vernal mesic soils in meadows and seeps, or freshwater marshes and swamps. Elevations from 10-149 meters. Blooms April-August.	Low. Hickman's cinquefoil is only known from Pebble Beach in Monterey County and within land owned by the Peninsula Open Space Preserve in San Mateo County.
Chaparral ragwort (<i>Senecio aphanatis</i>)	2B.2	Known from sometimes alkaline cismontane woodland, coastal scrub, and chaparral habitats from 15-800 meters.	Moderate. Chaparral ragwort has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal scrub and woodland habitat in the BP Master Plan area.
San Francisco campion (<i>Silene verecunda</i> ssp. <i>verecunda</i>)	1B.2	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, or valley and foothill grassland. Elevations from 30-645 meters. Blooms February-August.	Moderate. San Francisco campion has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff, coastal prairie, coastal scrub, and grassland habitat in the BP Master Plan area.
Saline clover (<i>Trifolium hydrophilum</i>)	1B.2	Marshes and swamps, alkaline and mesic valley and foothill grasslands, and vernal pools. Elevations from 0-300 meters. Blooms April-June.	Low. Saline clover has not been documented as occurring in the BP Master Plan area. Suitable alkaline or vernal pool type habitat not present in the BP Master Plan area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
San Francisco owl's clover (<i>Triphysaria floribunda</i>)	1B.2	Typically serpentine soils in coastal prairie, coastal scrub, or valley and foothill grassland. Elevations from 10-160 meters. Blooms from April-June.	Low. San Francisco owl's clover has not been documented as occurring in the BP Master Plan area. Suitable serpentine soils are not known to be present in the BP Master Plan area.
Coastal triquetrella (<i>Triquetrella californica</i>)	1B.2	Moss that occurs in coastal bluff scrub and coastal scrub. Elevations from 10-100 meters.	Moderate. Coastal triquetrella has not been documented as occurring in the BP Master Plan area. Suitable habitat for this species is present within coastal bluff and coastal scrub habitat in the BP Master Plan area.
Animals			
Invertebrates			
San Bruno elfin butterfly (<i>Callophrys mossii bayensis</i>)	FE	Occurs only on north-facing slopes within the fog belt where its host plant stonecrop (<i>Sedum spathulifolium</i>) grows. Stonecrop grows in coastal grassland and low scrub on thin, rocky soils.	None. No records of San Bruno elfin butterfly are known from the BP Master Plan area and no suitable habitat is present.
Globose dune beetle (<i>Coelus globosus</i>)	LCP	California coastal dune system in the foredunes, hummocks, and backdunes along the immediate coast.	None. The BP Master Plan projects will not be located in dune habitat.
San Francisco tree lupine moth (<i>Grapholita edwardsiana</i>)	LCP	Grasslands of the San Francisco peninsula. Host plants are species of lupine, including silver lupine (<i>Lupinus albifrons</i>).	Low. This species is not known to occur within Half Moon Bay.
Mission blue butterfly (<i>Plebejus icarioides missionensis</i>)	FE	Occurs in coastal grassland habitat where one or more of three possible host plants occurs: silver lupine, supper lupine (<i>Lupinus formosus</i>), and varicolor lupine (<i>Lupinus variicolor</i>). Nectar plants include Asteraceae flowers that grow in association with lupines.	Low. Not known to occur within the BP Master Plan area. In addition, the BP Master Plan area is not within the known elevation range for this species.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
California brackish water snail (<i>Tyronia imitator</i>)	LCP	Inhabits coastal lagoons, estuaries, and saltmarshes.	None. The BP Master Plan projects will not be located in suitable habitat for this species.
Fish			
Steelhead (Central California coast Distinct Population Segment [DPS]) (<i>Oncorhynchus mykiss irideus</i>)	FT	Deep pools within fast moving streams and shallow water gravel beds for spawning.	Low. Although steelhead are known to occur within the BP Master Plan area, riparian and creek habitat are not located within the proposed BP Master Plan project areas. However, steelhead could occur within creeks adjacent to BP Master Plan projects. Pilarcitos Creek and Frenchmans Creek are historic spawning sites for steelhead. Critical habitat for steelhead is present within Pilarcitos Creek, Frenchmans Creek, Arroyo Leon, and Apanolio Creek within the BP Master Plan area.
Tidewater goby (<i>Eucyclogobius newberryi</i>)	FE CSSC	Found in brackish water habitats, including shallow lagoons and lower stream reaches. Needs fairly still, but not stagnant water and high oxygen levels.	None. Could occur within the BP Master Plan area when tidal lagoons form at the mouth of Pilarcitos Creek; however, this species has never been documented within the BP Master Plan area and no BP Master Plan projects are proposed along the shoreline where this species would occur.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Amphibians			
California red-legged frog (<i>Rana draytonii</i>)	FT CSSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	High. California red-legged frogs are known to occur within suitable aquatic and upland habitat throughout the BP Master Plan area, including the City Golf Links, the City Corporation Yard, the Caltrans mitigation site, Pilarcitos Creek, Frenchmans Creek, Arroyo Canada Verde, Wavecrest, and the Casa Del Mar neighborhood. This species could occur within or adjacent to a proposed BP Master Plan project.
Santa Cruz black salamander (<i>Aneides niger</i>)	CSSC	Mixed deciduous and coniferous woodlands and coastal grasslands. Adults are found under rocks, talus, and damp woody debris.	None. No observations within the BP Master Plan area. Nearest occurrence of this species is at Huddart Park in Woodside.
California giant salamander (<i>Dicamptodon ensatus</i>)	CSSC	Occurs in wet coastal forests in or near cold permanent and semi-permanent streams and seepages.	Low. California giant salamanders have not been documented in the BP Master Plan area. Riparian and creek habitat, where this species would occur, are not located within the proposed BP Master Plan project areas. However, this species could occur within creeks adjacent to BP Master Plan projects.
Reptiles			
Western pond turtle (<i>Emys marmorata</i>)	CSSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Needs basking sites (sandy banks and grassy open fields) and suitable upland habitat.	Moderate. No known records for western pond turtle occur within the BP Master Plan area, but suitable habitat is present within the wetlands, creeks, and drainage ditches.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
San Francisco garter snake (<i>Thamnophis sirtalis tetrataenia</i>)	FE CE CFP	Vicinity of freshwater marshes, ponds, and slow-moving streams in San Mateo County and extreme Northern Santa Cruz County.	Moderate. The only known sightings of San Francisco gartersnake within the BP Master Plan area was near the mouth of Pilarcitos Creek in 1990 and along Pilarcitos Creek near downtown in 2004. Suitable dispersal habitat for this species occurs in the BP Master Plan area including near Wavecrest, Beachwood, and Pacific Ridge.
Birds: Raptors			
Short-eared Owl (<i>Asio flammeus</i>)	CSSC	Occurs in open habitat such as grasslands, wet meadows, and marshes. Requires tall, herbaceous vegetation for nesting and daytime refuge.	High (Wintering/Migration), Low (Nesting). A population of up to five short-eared owl individuals winters annually at Wavecrest and the area west of Railroad Avenue.
Golden eagle (<i>Aquila chrysaetos</i>)	CFP	Frequents rolling foothills, mountain areas, sage-juniper flats, and desert.	Moderate (Wintering/Migration), Low (Nesting). Golden eagle is occasionally found in the BP Master Plan area in the winter, including near Wavecrest.
Western burrowing owl (<i>Athene cunicularia</i>)	CSSC	Found in open, dry annual or perennial grasslands, deserts, and other low growing vegetation. Subterranean nester, dependent on burrowing mammals, especially the California ground squirrel (<i>Otospermophilus beecheyi</i>).	Low (Wintering), None (Nesting). Western burrowing owls are not known to breed in coastal San Mateo County. This species is occasionally found during the winter along the ocean bluffs in Half Moon Bay, at Wavecrest, and at Half Moon Bay State Beach.
Swainson's Hawk (<i>Buteo Swainsoni</i>)	CT	Breeds in stands with few trees in juniper-sage flats, riparian corridors, and oak savannah. Requires suitable adjacent foraging areas such as grasslands or agricultural fields.	Moderate (Wintering/Migration), None (Nesting). Swainson's hawks are occasionally found at Wavecrest in the winter and fall migration. An individual observed in the winter of 1998-1999 was the first bird known to overwinter in this area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Northern harrier (<i>Circus cyaneus</i>)	CSSC	Grasslands, meadows, marshes, seasonal and agricultural wetlands. Nests on the ground in shrubby vegetation, usually at marsh edges.	High (Nesting, Wintering/Migration). Northern harrier is known to nest within the BP Master Plan area and regularly occurs in the BP Master Plan area in the winter. Could occur within or adjacent to a proposed BP Master Plan project area.
White-tailed kite (<i>Elanus leucurus</i>)	CFP	Low foothills and valleys with oaks; riparian areas, marshes near open grasslands for forage.	High (Nesting, Wintering/Migration). White-tailed kite is known to breed at Wavecrest south of Smith Field Park and may breed near Miramontes Point. This species also occurs regularly during the winter. This species is likely to occur within or adjacent to a proposed BP Master Plan area.
American peregrine falcon (<i>Falco peregrinus anatum</i>)	CFP	Riparian areas, wetlands, lakes. Nests on cliffs or man-made structures.	High (Wintering/Migration), Low (Nesting). American peregrine falcon nests at Devils Slide, which is north of the BP Master Plan Area. This species is occasionally found foraging in the BP Master Plan area and winters in the area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Birds: Shorebirds/Waterbirds/Rails			
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	FT CSSC	Nests in old growth forests with large trees and multiple canopy layers. In California, nests are typically found in coast redwoods and Douglas fir forests near the ocean.	None (Nesting, Wintering/Migration). Marbled murrelet is not known to nest within the BP Master Plan area and no suitable nesting habitat is present. This species is seen offshore during the winter/migration, but is not expected to occur within or adjacent to a proposed BP Master Plan project area.
Western snowy plover (<i>Charadrius nivosus nivosus</i>)	FT CSSC	Sandy beaches, salt pond levees, and shores of large alkali lakes.	None (Nesting, Wintering/Migration). Western snowy plover is known to nest at Half Moon Bay State Beach, which is also designated as critical habitat. This species also winters on beaches in the area. However, BP Master Plan projects are not proposed on the beaches and the closest BP Master Plan project would be the California Coastal Trail extension which is located on the sea cliff habitat approximately 6, 700 feet south of Half Moon State Beach.
California brown pelican (<i>Pelecanus occidentalis californicus</i>)	FP	Found in estuarine, marine subtidal, and marine pelagic waters. Important habitat for pelicans during the nonbreeding season includes roosting and resting areas, such as offshore rocks, islands, sandbars, breakwaters, and pilings. Suitable areas need to be free of disturbance. This species rests temporarily on the water or isolated rocks, but roosting requires a dry location near food and a buffer from predators and humans.	None (Nesting), Low (Wintering/Migration). California brown pelican is common in near shore ocean waters in the City and forms large roosts during the summer on the Pillar Point Harbor breakwaters. This species is not expected to occur within or adjacent to a proposed BP Master Plan project area.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Birds: Passerines			
Loggerhead shrike (<i>Lanius ludovicianus</i>)	CSSC	Prefers grassland or other primarily open habitat, with shrubs for nesting and perching/impaling prey.	Moderate (Nesting, Wintering/Migration). Loggerhead shrike has likely breeds just south of the BP Master Plan area. Suitable habitat for breeding is present in the BP Master Plan area. Small numbers of this species occur in the BP Master Plan area in winter and during migration.
Saltmarsh common yellowthroat (<i>Geothlypis trichas sinuosa</i>)	CSSC	Resident of the San Francisco Bay region, in fresh and saltwater marshes.	Low (Nesting, Winter/Migration). Breeding by saltmarsh common yellowthroat has been confirmed in the mitigation wetlands near the sewage treatment plant, along Frenchmans Creek, at the mouth of Pilarcitos Creek, in riparian corridors at Wavecrest, and on the Half Moon Bay Golf Course (Old Course). Riparian and creek habitat, where this species would occur, are not located within the proposed BP Master Plan project areas. However, this species could occur within creeks adjacent to BP Master Plan projects.
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	CSSC	Prefers moderately open grasslands and prairies with patchy bare ground. Avoids grassland with extensive shrub cover. Ground-nesting bird.	Moderate (Nesting), None (Wintering/Migration). This species breeds in various spots in the BP Master Plan area. Nesting has been documented in grasslands at the Johnston House, at Wavecrest, and in the coastal prairie between Kelly and Poplar Avenue.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Olive-sided flycatcher (<i>Contopus cooperi</i>)	CSSC	Uncommon to common, summer resident in a wide variety of forest and woodland habitats below 2,800 meters. Requires large, tall trees, usually conifers, for nesting and roosting sites.	Moderate (Nesting), None (Wintering). Olive-sided flycatcher is a common nesting species in the BP Master Plan area in areas with taller trees, particularly on the inland side of the BP Master Plan area where taller eucalyptus and Monterey cypress occur.
Bryant's savannah sparrow (<i>Passerculus sandwichensis alaudinus</i>)	CSSC	Occurs primarily in coastal areas. Found year-round in low-elevation, tidally influenced habitat, specifically pickleweed (<i>Salicornia</i> spp.) dominated saltmarshes, and in grasslands and ruderal areas.	Moderate (Nesting), None (Wintering). Bryant's savannah sparrow is a common species in the BP Master Plan area. A sizeable and important breeding and wintering population has been documented in the BP Master Plan area. The area of highest use is Wavecrest and the area west of Railroad Avenue, generally between Kelly Avenue and Redondo Beach Road. Lower densities of this species exist south of Redondo Beach Road adjacent to the golf course, and some also occur to the north of Kelly Avenue.
Large-billed savannah sparrow (<i>Passerculus sandwichensis rostratus</i>)	CSSC	Breeding habitat limited to open, low salt marsh vegetation, including grasses and pickleweed around the mouth of the Colorado River and adjacent coastlines of the uppermost Gulf of California. Winters along shorelines.	None (Nesting), Low (Wintering/Migration). For at least two winters one or two Large-billed Savannah Sparrows wintered near the City at Pillar Point Harbor. This species may winter on the City beaches, but is not likely to occur within any proposed BP Master Plan project areas.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Purple Martin (<i>Progne subis</i>)	CSSC	Uses a variety of wooded, low elevation habitats. Uses hardwood and hardwood-conifer habitats as well as riparian habitats. Rare and local breeder on the coast and in interior mountain ranges.	Low (Nesting, Wintering/Migration). In 2016, a breeding population of this species was identified approximately four miles from BP Master Plan area along Skyline Boulevard. This species could forage at times near the mouth of Pilarcitos Creek. This species is not likely to occur within or adjacent to any potential BP Master Plan project.
Yellow Warbler (<i>Setophaga petechia</i>)	CSSC	Riparian plant associations in close proximity to water; often in willow thickets.	Low (Nesting, Winter/Migration). Nesting Yellow Warblers have been documented along Pilarcitos Creek in the riparian area behind Safeway and in the riparian area upstream from the Main Street Bridge. Species is common in the BP Master Plan area during fall migration. Riparian and creek habitat, where this species would occur, are not located within the proposed BP Master Plan project areas. However, this species could occur within creeks adjacent to BP Master Plan projects.
Mammals			
Pallid bat (<i>Antrozous pallidus</i>)	CSSC	Found in dry, open habitats including deserts, grasslands, shrublands, woodlands, and forests. Roosts in protected structures and rocky outcrops.	Moderate. Has not been reported from the BP Master Plan area, but suitable habitat is present.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	CSSC	Roosts in caves, mines, and large trees. It forages within woodlands and along stream edges; extremely sensitive to human disturbance.	Moderate. Has not been reported from the BP Master Plan area, but suitable habitat is present.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
Southern sea otter (<i>Enhydra lutris nereis</i>)	FT CFP	Strictly marine otter relying on particularly dense fur to stay afloat/warm. Inhabits nearshore habitat, diving close to the coast for invertebrate prey (sea snails, urchins, abalone, etc.)	None. Found off-shore in the BP Master Plan area. This species is not expected to occur within or adjacent to a proposed BP Master Plan project area.
Western red bat (<i>Lasiurus blossevillii</i>)	CSSC	Roosts in the foliage of trees and is closely associated with riparian habitats.	Low. Has not been reported from the BP Master Plan area. Suitable habitat is present within riparian habitat adjacent to the BP Master Plan area, but not within the BP Master plan area.
San Francisco dusky-footed woodrat (<i>Neotoma fuscipes annectens</i>)	CSSC	Forest and scrub habitats of moderate canopy and moderate dense understory.	Moderate. San Francisco dusky-footed woodrat houses can be found in riparian vegetation, Central Coast Scrub habitat, and in forested areas, particularly on the inland side of the BP Master Plan area where taller eucalyptus and cypress occur.
American badger (<i>Taxidea taxus</i>)	CSSC	Dry, open areas of shrub, forest, and grassland habitats with friable soils. Preys on burrowing rodents, needs sufficient food, and uncultivated ground.	Low. The CNDDDB documents occurrences of American badger in the hills northeast of the City. Suitable habitat within the BP Master Plan area is of low quality due to the urban nature of the City.

Species Name	Listing Status	Habitat Requirements	Potential to Occur in the Potential BP Master Plan Project Areas
<p>Status Key:</p> <p><u>Federal</u> FT – Federal Threatened FE – Federal Endangered</p> <p><u>State</u> ST – State Threatened SE – State Endangered CFP – California Fully-Protected CSSC – California Species of Special Concern LCP – Local Coastal Program Species</p> <p><u>California Native Plant Society (CNPS)</u> Rank 1A – Presumed extinct in California; Rank 1B – Rare, threatened, or endangered in California and elsewhere; Rank 2A – Plants presumed extirpated in California, but more common elsewhere; Rank 2B – Rare, threatened, or endangered in California, but more common elsewhere;</p> <p><i>Additional threat ranks endangerment codes are assigned to each taxon or group as follows:</i> .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat). .2 – Fairly endangered in California (20-80% occurrences threatened). .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).</p> <p>Source: CDFW. 2018. California Natural Diversity Database. CNPS. 2018. Inventory of Rare and Endangered Plants of California. City of Half Moon Bay. 2018. Draft Half Moon Bay Local Coastal Land Use Plan Natural Resources Element.</p>			