California State Parks
Pullman Ditch Culvert Replacement
Biological Report

Project and Property Description

California State Parks proposes to replace a failed culvert system and repair the Coastal Trail and the access road to Roosevelt Beach, a portion of Half Moon Bay State Beach. This project is necessary to allow continued flow through this channel, to restore vehicle access to the parking lot and restroom facility at Roosevelt Beach, and to avoid future damage to the Coastal Trail.

The culvert system to be replaced is within the Pullman Ditch, an artificial, earth-lined drainage that is fed by Caltrans culverts under Highway 1. The Caltrans culvert system collects run off from an approximately 140-acre drainage area on the eastern side of Highway 1. The input to Pullman Ditch includes drainage from agricultural fields, greenhouses, and the paved highway. The project area is on State Parks property approximately 300 feet northeast of the channel outlet on the beach. The project area is adjacent to the Coastal Trail and is used for public recreation and open space.

The proposed project is within a coastal bluff area impacted by previous road construction, agriculture, and other activities. The area is a low marine terrace, with soil composed of alluvial deposits from sedimentary rocks and other sources. The topography is fairly flat, sloping gently toward the ocean.

The proposed project will be within a previously developed area. The majority of land disturbance will be under the Coastal Trail, the access road to Roosevelt Beach, and the median between the two paved routes. Within the Pullman Ditch channel, the project includes a rebuilt concrete headwall on the upstream side of the culvert and a retaining wall and energy dissipation structures on the downstream side. The project will also include reconstruction of a portion of the roadway and repair of the Coastal Trail. A drawing of the project design superimposed upon an aerial photo is attached as Appendix A.

Figure 1: Project Location

Methodology

California State Parks environmental scientists have surveyed the project area several times over the course of planning for this project. Environmental scientists made repeated visits to the project area from 2020 to early 2022 and noted all species present within the area likely to be impacted by the proposed project. The entire project area was covered by a walking survey in August 2021 to characterize potential project impacts and determine the presence of sensitive species and habitats. An additional field check was conducted in January 2022 to look at the understory when leaves were off the deciduous trees and shrubs on the downstream side of the culvert.

A number of biological reports have been prepared for projects in and near the Pullman Ditch. In 2018, City of Half Moon Bay planning staff reviewed these reports and prepared a summary memo and a chart listing report conclusions. Copies of these documents are attached in Appendix B. The area of the proposed project was included within the study area for some of those biological reports, including the recent report prepared by WRA, Inc. for the Dunes at Half Moon Bay Project (WRA, 2018). These reports are a source of background information about the area and the potential sensitive resources, and are incorporated here by reference. State Parks environmental scientists reviewed those reports, and determined that there were not any changes from the survey conditions that would require a reevaluation of their conclusions regarding biological resources within this project area.

State Parks staff prepared an updated list of sensitive species known from the project vicinity in December 2021 based on records in the California Natural Diversity Data Base (CNDDB). There were no additions to the list of potential sensitive species or to the records of sensitive species in the project vicinity since the previous reports. The maps of known occurrences and reviews of potential sensitive species in these earlier reports remain valid, and are incorporated into this study. Field reviews have added occurrences of two sensitive species from the project vicinity. These are described below.

RESULTS

Environmental Setting

The project is on the coastal terrace, within a larger area of previously disturbed coastal scrub.

Pullman Ditch is an artificial drainage ditch with soil bed and banks that extends from culverts under Highway 1 toward the ocean. Pullman Ditch carries water seasonally depending on runoff from upstream properties and discharges through the existing failed culverts into a channel that flows to the beach. The channel occasionally contains standing water in deeper holes near the downstream outlet of the existing culverts.

Biological Communities

<u>Upland Portion</u>

Vegetation on the upland portion of the project site is a mixture of ruderal vegetation and common coastal scrub species. The first sheet of the Habitat Type map from the City of Half Moon Bay Local Coastal Land Use Plan (Half Moon Bay Plan) (2020) is attached in Appendix C. Within the habitat type

classifications used in the Half Moon Bay Plan, this area is considered Central Coast Scrub. The fine scale vegetation map for San Mateo County (Golden Gate National Parks Conservancy, 2022) has mapped the vegetation as *Baccharis pilularis* Alliance (see Appendix C). In this Alliance the shrub layer is dominated by coyote brush (*Baccharis pilularis*) and other coastal shrubs intermixed with a variety of native and non-native forbes and grasses (California Native Plant Society, 2022). This area meets that definition, recognizing that some areas within this alliance, including the immediate project vicinity, have a high proportion of non-native species between native shrubs.

The Half Moon Bay Plan Habitat Types map (Appendix C) shows a portion of the Pullman Ditch upstream of the culvert as Central Coast Riparian Scrub. Based on field observations, this is not correctly mapped. The area is correctly mapped in the San Mateo fine scale vegetation map (Appendix C) as herbaceous vegetation (part of Californian Ruderal Grassland, Meadow & Scrub Group) and as part of the *Baccharis pilularis* Alliance. A report prepared for the San Mateo County fine scale vegetation mapping effort has more information on the vegetation classifications and mapping units used for the fine-scale map (Sikes, et al., 2021).

Pullman Ditch

The Pullman Ditch is an artificial channel cut within highly disturbed coastal scrub. The upland channel area is characterized by ruderal species include poison hemlock (*Conium maculatum*), mustards (*Hirshfeldia incana* and *Brassica rapa*), wild radish (*Raphanus sativus*), non-native thistles, and annual grasses. Central Coast Scrub species on the upstream side of the project site include Pacific aster (*Symphyotrichum chilense*) and California blackberry (*Rubus ursinus*). The adjacent field contains some additional Coastal Scrub species, including coyote brush (*Baccharis pilularis*), California sage (*Artemisia californica*), and yarrow (*Achillea millefolium*).

The Monterey pines (*Pinus radiata*) previously mapped by other biological surveys as adjacent to Pullman Ditch, including one tree on the outlet side of the culvert, are now dead or dying.

Downstream Portion

The downstream portion of Pullman Ditch appears to have had less impact from previous land use, but also appears to have been previously disturbed. The channel is lined by arroyo willow (*Salix lasiolepis*). Other native species within the project area include California blackberry (*Rubus ursinus*) and California bee plant (*Scrophularis californica*). Invasive species dominate the understory and the vegetation along the channel itself. Common species in the project area include wild radish, mustards, hemlock, and cape ivy (*Delairea oderata*).

Downstream of the project area, the area not covered by willow scrub is dominated by invasive species. The vegetation does include additional native species, such as red elderberry (*Sambucus racemosa*), coyote brush (*Baccharis pilularis*), and Pacific aster. There are a few individuals of bulrush (*Schoenoplectus* sp.) and cattail (*Typha* sp.) near the ocean end of the channel. At the beach end of the channel there is an approximately 200 square foot patch of invasive ice plant (*Carpobrotus edulis*).

The Half Moon Bay Plan Habitat Types map (Appendix C) classifies the area around the Pullman Ditch downstream of the culvert as Central Coast Riparian Scrub. The San Mateo County fine scale vegetation map classified the area as *Salix lasiolepis* Alliance (Golden Gate National Parks Conservancy, 2022). A portion of this map is included in Appendix C. Based on field surveys, this is a correct classification and fits the definition in the Half Moon Bay Plan for Central Coast Riparian Scrub. According to the fine-scale vegetation map, the total area of riparian scrub is 1.3 acres.

Sensitive Biological Communities

Pullman Ditch

Pullman Ditch is considered to be an intermittent stream, characterized by a sandy, unconsolidated bottom. Pullman Ditch has been classified as a non-wetland water, and as such is a sensitive resource (WRA, 2018). Previous studies have concluded that Pullman Ditch is subject to jurisdiction of the Army Corps of Engineers under Section 404 of the Clean Water Act, the Regional Water Quality Control Board, and the California Department of Fish and Wildlife. California State Parks will consult with those agencies and obtain permits and agreements as required.

In a previous case, the California Coastal Commission (CCC) determined that the upstream portion of Pullman Ditch does not contain or support habitat for listed species and does not contain riparian habitat as defined in the Half Moon Bay Local Coastal Plan (WRA, 2018). Accordingly, Pullman Ditch itself is not considered an Environmental Sensitive Habitat Area (ESHA) by the CCC or the Half Moon Bay Plan.

The Half Moon Bay Plan identified the Pullman Ditch on the upstream side of the culvert as a Potential Environmentally Sensitive Habitat Area. A copy of Figure 6.4 from the Half Moon Bay Plan is included in Appendix C. Based on factors discussed below in the section on ESHA, this area should not be classified as ESHA.

Riparian Vegetation – Central Coast Riparian Scrub

The downstream portion of the project area contains riparian vegetation dominated by arroyo willow. This area meets the definition of a riparian community because the overstory is dominated by native riparian species, and can be considered a sensitive habitat area. The understory in most of the downstream area is dominated by exotic species that are not limited to riparian areas.

Central Coast Riparian Scrub can be considered a sensitive plant community because of its limited distribution. Central Coast Riparian scrub can also be considered sensitive habitat based on its potential value for wildlife.

The Half Moon Bay Plan (2020) identified the Central Coast Riparian Scrub on the downstream side of the culvert as a Potential Environmentally Sensitive Habitat Area. A copy of Figure 6.4 showing habitat classifications is included in Appendix C. Based on the factors discussed below in the section on ESHA, this area has the potential to be classified as ESHA, and will continue to be treated as potential ESHA for this analysis.

Special Status Plants

There are no special status plant species know to occur in this portion of Half Moon Bay State Beach, and there are none expected to occur. Appendix D contains a map of special status plant species known from within 5 miles of the project location prepared by WRA, Inc. for The Dunes at Half Moon Bay Biological Resources Evaluation (WRA, 2018).

Perennial Goldfields

Perennial goldfields (*Lasthenia californica* ssp. *macrantha*) occurs within Half Moon Bay State Beach. Perennial goldfields is listed by the California Native Plant Society (CNPS) as Rank 1B.2: Plants rare, threatened, or endangered in California and elsewhere (moderately threatened in California). There are known occurrences of perennial goldfields in other portions of Half Moon Bay State Beach, but not within the project vicinity. The habitat within the project area is not similar to that where perennial goldfields is found, and the plant was not observed during repeated field surveys.

The project area does not contain suitable habitat for any of the other species mapped from the vicinity, and none have been found in field surveys for this project and for previous projects in the area.

Wildlife

No mammals, reptiles or amphibians were observed within the immediate project area during any field surveys. During a winter survey, a stick house presumed to be associated with San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) was found within willow scrub on the south side of Pullman Ditch. This observation is discussed below under Special Status Animals. Other mammals expected to occur in the project vicinity include brush rabbit (*Sylvilagus bachmani*), coyote (*Canis latrans*), raccoon (*Procyon lotor*) and California vole (*Microtus californicus*).

Birds commonly seen in the project vicinity include those found along the ocean and coastal strand and species known from coastal scrub and grassland habitats. The dense willow thicket and intermittent presence of water on the downstream portion of the project area provide potential nesting and foraging habitat for a variety of species. Birds observed in the immediate vicinity of the project include white crowned sparrow, song sparrow, black phoebe, California towhee, and San Francisco common yellowthroat. Other birds expected to occur in the immediate vicinity of the project include common raven, American goldfinch and lesser goldfinch.

No aquatic species have been observed in Pullman Ditch. Flows in the channel are intermittent. There are no fish known from the channel upstream. The channel does not form a sufficient connection to the ocean to allow fish passage to the culvert site.

Special Status Animals

WRA, Inc prepared a map with information from the California Natural Diversity Data Base (CNDDB) of recorded occurrences of special status animal species for The Dunes at Half Moon Bay Biological Resources Evaluation (WRA, 2018). The map is attached in Appendix D. Two species have occurrences

mapped in the vicinity of the Pullman Ditch project: San Francisco (saltmarsh) common yellowthroat and monarch butterfly (overwintering populations). An additional species, California red-legged frog, is known to occur within Half Moon Bay State Beach. The San Francisco dusky-footed woodrat had not previously been recorded from Half Moon Bay State Beach; a stick house associated with this animal was found in a winter survey of the project vicinity.

San Francisco (Saltmarsh) Common Yellowthroat

The San Francisco common yellowthroat (*Geothlypis trichas sinuosa*) was observed in the vicinity of the project during an August 2021 survey. San Francisco common yellowthroat is a US Fish and Wildlife Service (USFWS) Bird of Conservation Concern and a California Department of Fish and Wildlife (CDFW) Species of Special Concern. This subspecies of the common yellowthroat is found in riparian thickets and marshes and ranges along the coast from Marin County to Santa Cruz County (WRA, 2018). The San Francisco common yellowthroat is often found in the margin between moist and upland habitats; the proximity of various habitat types is thought to enhance the overall habitat value of an area. The diet of common yellowthroat in California is almost exclusively animal matter -- mainly insects and spiders (Shuford & Gardali, 2008).

San Francisco common yellowthroat typically nests near open water, but could potentially nest within riparian habitat (WRA, 2018). Yellowthroats build open-cup nests, typically near the ground in grasses, herbaceous vegetation, and some shrubs. Pairs can raise two broods and will renest following nest failure (Shuford & Gardali, 2008).

Monarch Butterfly

The Monarch butterfly (*Danaus plexippus*) is a CDFW Special-Status Invertebrate, and Monarch winter roosts are protected. Monarch butterflies are occasionally observed in the general area, and there have been known overwintering sites in eucalyptus groves at Frenchmans Creek, approximately one mile from the project site. There is no appropriate habitat for Monarch overwintering within the project area.

California Red-Legged Frog

The California red-legged frog (*Rana draytonii*), a federally-listed threatened species and a California Species of Special Concern, has not been observed but has the potential to occur along the Pullman corridor. As determined in earlier studies of Pullman Ditch, it is possible, but unlikely, that California red-legged frog (CRLF) could traverse the project area as part of a pattern of overland dispersal on rainy nights. This portion of Pullman Ditch does not contain breeding habitat for CRLF. The channel does not typically hold water of enough depth for a long enough period to support breeding. Flow in the channel is flashy, and high winter flow would likely remove deposited egg masses.

San Francisco Dusky-footed Woodrat

The San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), is a California species of special concern. According to the Half Moon Bay Plan (2020), San Francisco dusky-footed woodrat are fairly common in riparian vegetation, Central Coast Scrub, and wooded habitats in the eastern portion of the Planning area. A stick house that appears to have been constructed by a San Francisco dusky-footed

woodrat was found within Central Coast Riparian Scrub near the project location during a site survey in January 2021. There are no direct observations of San Francisco dusky-footed woodrat in the area, but it is assumed that the stick house is occupied and that there could be additional stick houses within the riparian scrub.

Other Sensitive Species

There is no evidence of other sensitive species, including the federally endangered San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), from the project vicinity. As presented in earlier biological reports, there is no suitable aquatic habitat for San Francisco garter snake (SFGS) within the project vicinity, and no corridor to allow SFGS to travel between reported SFGS locations and the project area.

Environmental Sensitive Habitat Areas

The Half Moon Bay Plan (2020) defines environmentally sensitive habitat areas (ESHAs) 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 plan lists three types of ESHAs: terrestrial, wetlands, and watercourses. Terrestrial ESHAs may include habitat for special status and unique species. Wetland ESHAs may include perennial and seasonal freshwater marsh. Watercourse ESHAs may include perennial, intermittent, and ephemeral streams and channels with or without riparian vegetation.

The California Coastal Act (Section 30240) limits development within ESHAs to uses dependent on the resource, including nature study and low-intensity public access. Any allowable development must be done in a manner to avoid significant disruption of the habitat values. Any development adjacent to an ESHA must be designed to prevent impacts that would significantly degrade the ESHA, and must be compatible with the biological function of the habitat. The Coastal Act also requires that development adjacent to parks and recreation areas must be designed to prevent impacts on those areas. (City of Half Moon Bay, 2020)

Pullman Ditch

Pullman Ditch is considered an intermittent stream, but has not been classified as an ESHA (WRA, 2018). The Pullman Ditch channel in the project area does not support special species or habitats that are rare or valuable. Pullman Ditch on the upstream side of the culvert has a straight, graded channel within ruderal habitat. The channel does not retain water or support wetlands or riparian vegetation. The channel on the downstream side of the culvert is surrounded by riparian vegetation. Flow from the failed, perched culverts has eroded the channel and created plunge pools that may hold water when there is no flow in the channel. These pools can provide an ephemeral water source that has some potential value for wildlife. Access to this water is limited by the steep, incised banks of the channel.

Pullman Ditch is a highly disturbed artificial channel. The habitat value of the channel is unlikely to be disturbed or degraded by human activities. Aside from the role of Pullman Ditch providing water to support riparian vegetation, Pullman Ditch itself does not appear to have any special role in the ecosystem. Based on this evaluation, this area does not meet the definition of ESHA.

Riparian Vegetation – Central Coast Riparian Scrub

Riparian corridors are considered ESHA where they are found to be rare or especially valuable for their role in an ecosystem, such as contributing to the viability of special status species, and could be easily disturbed or degraded by human activities and development.

Riparian scrub can provide important features for wildlife including food, water, nesting sites, cover, and travel corridors. The riparian scrub on the downstream portion of the Pulman Ditch provides habitat for at least two Species of Special Concern -- the San Francisco common yellowthroat and San Francisco dusky footed woodrat.

Downstream of the culvert, arroyo willow forms the dominant canopy and the understory is dominated by invasive species. Arroyo willow is common along drainages in the vicinity. It easily colonizes moist ditches and has been planted by State Parks in restored channels and in water retention basins in portions of Half Moon Bay State Beach. Arroyo willow scrub is extremely resilient to disturbance, and is able to very quickly regrow and expand into new areas. The habitat is not easily damaged or degraded by human activities unless the area is completely transformed by development.

In this location, the Central Coast Riparian Scrub is not considered especially vulnerable to the impacts of sea level rise. Hazard mapping on the Our Coast Our Future web application projects that it would require over 3 feet of sea level rise for a 100-year flood flow to reach the project vicinity (Point Blue Conservation Science & U.S. Geological Survey, 2022). The projected flow would follow the existing channel, which should not preclude the continued presence of riparian scrub surrounding the channel. A copy of that map is included in Appendix E.

The Central Coast Riparian Scrub, although resilient under most circumstances, has the potential to be classified as ESHA and will continue to be treated as potential ESHA for this project.

Project Impacts

The proposed project will have limited impacts upon the natural resources of the area. Construction will be within an area that has previously been disturbed. The upstream (intake) portion of the culvert is within disturbed ruderal vegetation. The downstream (outlet) portion of the culvert is in an area that has value as riparian habitat. The project description includes measures to avoid impacts to the riparian habitat and sensitive species associated with that habitat.

Impacts to Threatened, Rare, Endangered or Unique Species

San Francisco Common Yellowthroat

The San Francisco common yellowthroat may forage within the riparian vegetation within the project area, and could possibly nest in the vicinity. Nests, if they do occur in this vicinity, would be more likely to be found less than 3 feet from the ground in grasses, herbaceous vegetation, and shrubs. Nesting habitat is not likely to occur within the area to be disturbed by the project. The project may have

temporary impacts to a small (less than 200 square foot) area of arroyo willow thicket, which may be used by San Francisco common yellowthroat for foraging and cover. Impact avoidance measures will include avoiding construction during the nesting season, doing a pre-construction survey for sensitive species, and having a qualified biologist on site during vegetation removal and work in the riparian area. Given the small project footprint and the availability of other suitable habitat within the vicinity, the temporary disturbance from project construction is not expected to have an impact on the species.

California Red-Legged Frog

It is possible that the California red-legged frog (CRLF) may traverse the project area during overland dispersal. The project will not reduce the possibility that CRLF would be able to use this area for that purpose in the future. Impact avoidance measures will include a pre-construction survey, and using a biological monitor with the ability to implement additional avoidance measures if required.

San Francisco Dusky-footed Woodrat

The observed stick house associated with the San Francisco dusky-footed woodrat is approximately 50 feet from the culvert location and is not within the area that will be impacted by the project. No additional stick houses were found in the vicinity. As part of pre-project surveys, a qualified biologist will survey the entire project area for stick houses prior to removing vegetation, and will monitor all vegetation removal to avoid impacts on woodrat houses.

Impacts to Sensitive Habitats

Pulman Ditch

Approximately 150 square feet of the upstream portion and approximately 300 square feet of the downstream portion of Pulman Ditch will be graded for the project. Approximately 200 square feet of the downstream portion of the channel will be covered with a concrete splash pad and new rock energy dissipators. Portions of this downstream area already contain concrete rubble and remnants of the previous culvert structure.

The impact to the Pullman Ditch channel will be minor. The proposed permanent structures are primarily within areas previously disturbed for construction of the failed culvert system. The project includes a small (less than 200 square feet) area of construction in the channel for the energy dissipators. The proposed work will not impair the flow within Pullman Ditch or reduce its habitat value. Increasing the diameter of the culverts, stabilizing the grade of the channel and reducing erosion on the downstream side should improve the habitat and increase the value of the channel as wildlife corridor.

Riparian Vegetation

The project may require removing vegetation from a small (less than 200 square feet) area of arroyo willow thicket. Given the availability of other similar habitat within the vicinity and the rapid re-growth of arroyo willow, the temporary impact from vegetation removal will not have a measurable impact on the natural resource values of this habitat. Impact avoidance measures will include having a qualified biologist on site during vegetation removal and other work in the riparian area. The biologist will direct

vegetation removal and minimize the removal of riparian habitat. It is expected that arroyo willows will be trimmed, but not removed. If any willows are removed, they will be replaced on at least a 3:1 basis.

Impacts to Environmentally Sensitive Habitat Areas

The Central Coast Riparian scrub on the downstream side of the culvert should be treated as potential ESHA. The proposed project involves the repair and replacement of existing facilities. By its very nature, the project requires work in the Pullman Ditch channel and in the adjacent riparian area on the downstream side of the channel. There are no feasible alternatives to avoid work within this potential ESHA. Replacing the failed culverts in Pullman Ditch is required to allow continued use of coastal access facilities at Roosevelt Beach and to avoid damage to the Coastal Trail.

Construction of the project has the potential to directly impact approximately 200 square feet of the channel bottom, banks, and overstory on the downstream side of the culvert. Appendix A includes a map with the project design drawn over an aerial photo that shows the arroyo willow overstory. The project includes measures to avoid and limit direct and indirect impacts to the potential ESHA. Replacing the failed culverts and repairing the access road will not change the use of the area or decrease the value of the habitat. The proposed project will not cause significant direct or cumulative impacts to the ESHA, to the special status species found within the area, or to the biological and hydrological functions of this area.

Impact Avoidance Measures

Construction will follow all standard Best Management Practices to avoid impacts to water quality and biological resources.

The following measures have been incorporated into the project:

- Work will be scheduled to avoid the rainy season, and to avoid times when there is flowing water in Pullman Ditch. The design plans will include methods to re-route flows around the project area in the event that it is not possible to avoid work when there is flowing water.
- Work will be scheduled outside of the bird nesting season. If it is not possible to avoid work during the nesting season, a qualified biologist will survey the area to make sure there are no impacts on nesting birds.
- Before construction, a qualified biologist will survey the area to determine the potential for sensitive species. The biologist will have the authority to halt construction and add additional impact avoidance measures, such as fencing.
- All construction personnel will be trained by a qualified biologist to recognize sensitive species that might occur within the project area and to know how to implement measures to avoid impacts, if necessary.
- A qualified biologist will monitor work within the riparian habitat. Vegetation removal within the riparian habitat will be kept to the minimum required to complete the project. As much as possible, the overstory of arroyo willow will be maintained.
- Areas disturbed by the project will be mulched to limit erosion and replanted with native species. If there is any loss of arroyo willow, these will be replanted on a minimum of 3:1 basis.

CERTIFICATION:
I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.
Date: June 20, 2022 Signed:

Joanne Kerbavaz
Senior Environmental Scientist

Report Preparation
Joanne Kerbavaz, Senior Environmental Scientist, California State Parks
MS, Ecology; AB Environmental Studies and Biology/Politics
Over 30 years experience preparing biological surveys and environmental documents in California, including over 20 years experience within State Parks in San Mateo and Santa Cruz counties.

References

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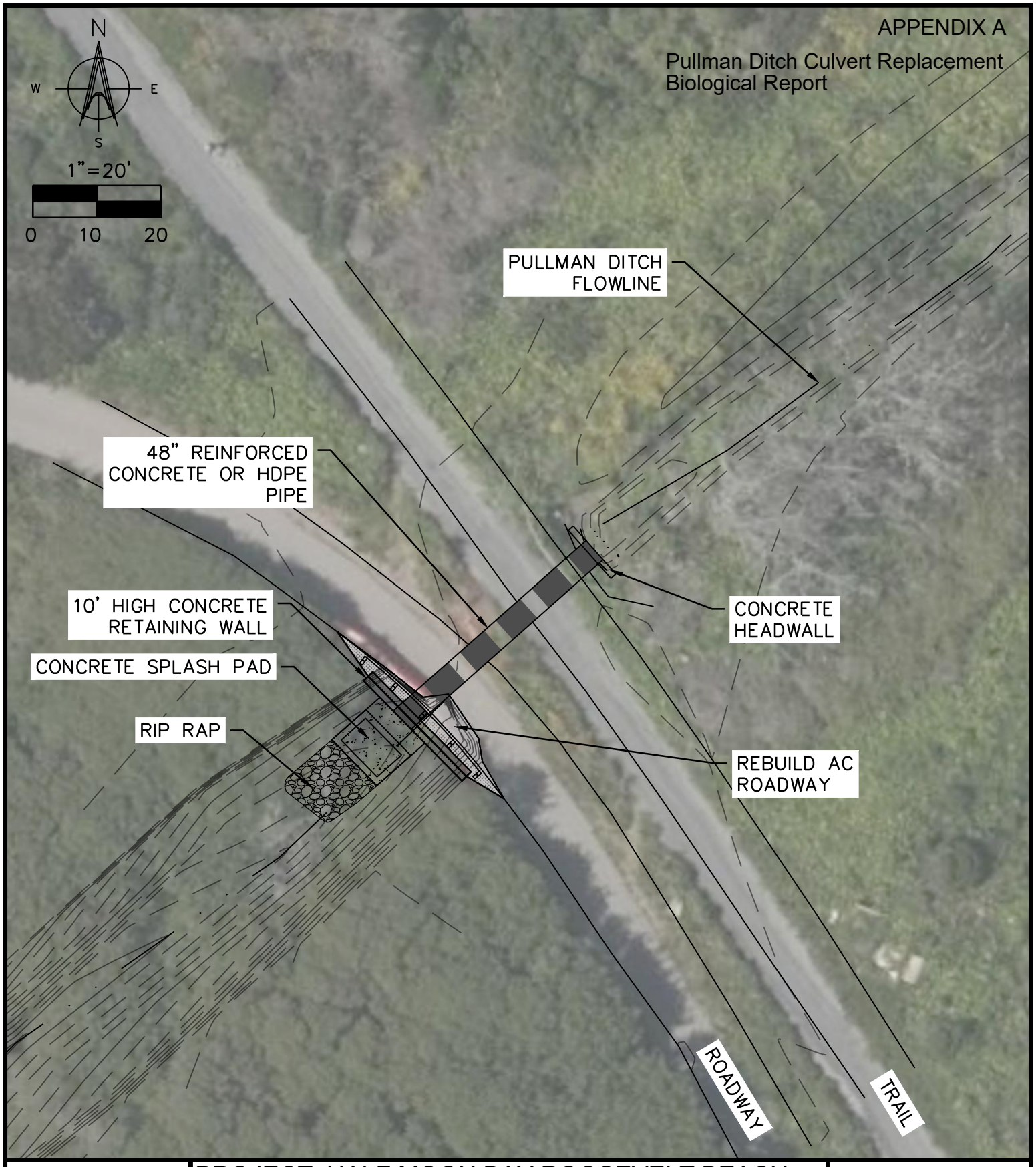
APPENDICES

APPENDIX A: PROJECT DESIGN
APPENDIX B: SUMMARY OF BIOLOGICAL REPORTS FOR PULLMAN DITCH
APPENDIX C: VEGETATION AND HABITAT MAPS
APPENDIX D: MAPS OF SPECIAL STATUS SPECIES
APPENDIX E: SEA LEVEL RISE PROJECTIONS

APPENDIX A: PROJECT DESIGN



CALIFORNIA STATE PARKS SINCE 1864
FACILITIES & DEVELOPMENT DIVISION
One Capitol Mall
Sacramento, CA
95814-3229

PROJECT: HALF MOON BAY ROOSEVELT BEACH - PULLMAN DITCH CULVERT REPLACEMENT

SHEET TITLE: PLAN EXHIBIT

SCALE: 1" = 20'

DATE:08/09/2021

APPENDIX B: SUMMARY OF BIOLOGICAL REPORTS – PULLMAN DITCH

THE CITY OF HALF MOON BAY CALIFORNIA

Community Development Department

Jill Dever Ekas, AICP, Director

Date: March 27, 2018

To: Honorable Chair and Planning Commissioners

From: Scott Phillips, Associate Planner

Subject: Pullman Ditch Biological Report History

In response to the request by the Planning Commission, staff researched the record of projects and their associated biological resource assessments within the vicinity of the Pullman Ditch. The aerial photograph below (Figure 1) indicates the subject property in green and the locations of where biological reports have been conducted in the past. A chart summarizing the biological reports that have been prepared in the vicinity of Pullman Ditch, corresponding to the numbers on Figure 1 is included as Exhibit A.

Pullman Ditch itself is an artificial, earthen-lined drainage ditch that extends from the nursery /greenhouse complex on the east side of Highway 1 towards the ocean. The approximate location of Pullman Ditch is shown in red below in Figure 1. The construction date of Pullman Ditch is unknow but was likely constructed during the time that the greenhouses were being developed. In 2008, Caltrans installed drainage improvements in the form of a box culvert elbow along the western edge of the Highway 1, directing the water outfall from the drainage pipe under the highway directly west.

Biological analysis of Pullman Ditch was initially conducted in 2005 when several property owners along the northern side of the ditch submitted a Coastal Development Permit application for routine maintenance of the portion of the ditch within their property. HT Harvey & Associates prepared a Biological Resource Assessment, a copy of which is included as Exhibit B. The primary conclusion of this report was that no threatened or endangered species are likely to occur on the project site. Comments were received from the US Fire and Wildlife and CA Department of Fish and Wildlife requesting additional information. After receiving the comments, the application was later withdrawn and the maintenance did not take place.

Shortly after this, an application was then submitted for the new residence that is adjacent to the subject property to the north at 2786 Pullman Avenue. A biological resource assessment specific to this project was not recovered from the City's public record. It appears that the 2005 HT Harvey report for ditch maintenance was circulated for comments for the new residence at 2786 Pullman Avenue. It was utilized for this project because it had been completed recently and covered the vicinity of the project site. No comments were received during the 45 day review of the biological report but the project was appealed by the California Coastal Commission due to concerns of potential habitat impacts from the proposal. The Substantial Issue report is included as Exhibit C. Note that this report erroneously references the address of 2788 Pullman Avenue.

The address of 2786 was designated during building permit plan check. The appeal was eventually withdrawn and the final City decision was upheld. A copy of the appeal withdrawal notice is included as Exhibit D.

In 2007, an application was submitted for a new residence and extension of Champs Elysee Boulevard south towards Pullman Ditch. The project is slightly less than 100 feet away from the Pullman Ditch drainage feature, predicating the need for a Biological Resource Assessment to be prepared and circulated for comments. Coastrange Biological prepared the Biological Resource Assessment and no comments were received during the 45-day review. A copy of this report is included as Exhibit E. This report concludes that the likelihood that California Red Legged Frogs would inhabit the site is considered low because the ditch lacks the appropriate habitat. Additionally, the project site is not likely dispersal habitat between Pullman Ditch and potential breeding grounds in the region to the north, northeast, or west, due to the presence of dense residential development within the area. The residence and roadway were subsequently constructed in 2013.

In 2008, a Coastal Development Permit application was submitted by Caltrans for improvements to the ditch along the edge of the western side of Highway 1, within the Caltrans Public-Right-of-Way. Caltrans Environmental Section prepared the Biological Resource Assessment and Garcia and Associated prepared the Wetland Delineation. Similar to the previous HT Harvey report, the Caltrans reports concluded that the Pullman Ditch was not prime habitat for threatened or endangered species. A copy of the Caltrans Biological Reports are included as Exhibit F. No comments were received during the 45-day review.

In 2009, an application was submitted for a new residence at 2806 Alameda Ave. A Biological Resource Evaluation was prepared and circulated for comments. The California Coastal Commission provided comments with concerns that the project did not conform to the riparian buffer requirements. The project was scheduled for a Director Hearing but continued to a date uncertain after receiving several comment letters. The project was eventually withdrawn by the property owner due to inactivity.

In 2010, the land owner on the south side of the ditch (Stoloski) submitted an application for a Coastal Development Permit and Tentative Parcel Map to subdivide the triangular shaped property into 4 lots. WRA prepared a Wetland Delineation and Biological Resource Assessment, a copy of which is included as Exhibit G. The project was appealed to the CCC due to concerns over potential habitat impacts and insufficient public services available to the site. The project was then modified to remove the proposed culvert for Pullman Ditch from the scope of work. No substantial issue was found by the Coastal Commission and the City's decision was upheld.

As to date of this memorandum, one of the Champs Elysee Blvd. cul-de-sacs has been completed and the Pullman Ave. cul-de-sac is under construction. Applications for Coastal Development and Architectural Review have been submitted for new residences on the two newly created Champs Elysee lots. The biological report prepared for the tentative parcel map is currently being updated

to identify any changed biological conditions since 2010 and to identify any potential impacts from the proposed improvements that may not have been covered under the previous report.

In 2014, an application was submitted for a new residence at 2805 Champs Elysee Blvd. The Biological Resources Evaluation was prepared by Coastrange in October of that year and a copy of the document is included as Exhibit H. Comments were received from the California Coastal Commission with concerns about potential habitat impacts and that the project was inconsistent with the riparian buffer requirements of the LCP. A copy of the comment letter is included as Exhibit I. Staff worked with Coastal Commission staff during project review, including review of the complete Chain of Title for the property to verify lot legality. No appeal was filed following the Planning Commission approval of the project. The residence was then constructed in compliance with the mitigation measures associated with the Mitigation, Monitoring and Reporting Program adopted with the project approval.

In late 2016, a preliminary application was submitted for the Surf Beach / Dunes Beach Planned Unit Development. The biological analysis for this project included a study area that encompasses the western portion of the Pullman Ditch. The conclusions within this report are consistent with those found in the previous WRA report. The Surf Beach / Dunes Beach report been included for background reference (Exhibit J).

Applications for Environmental Review were recently submitted for the construction of new residences at 2804 Champs Elysee Blvd and 2806 Alameda Avenue. These sites are identified as #9 and #10 on Figure 1 below. Both of these sites include a portion on Pullman Ditch. Biological analysis and report preparation are currently underway for both of these projects.

This summary and volume of reports regarding Pullman Ditch were provided to the biological consultant preparing the habitat maps for the LCP update.

EXHIBITS

A. Summary of Biological Reports within the vicinity of Pullman Ditch
B. Ditch Maintenance Biological Resource Evaluation, prepared by HT Harvey and Associates, dated November 3, 2005
C. Substantial Issue Report for 2786 Pullman Avenue, dated April 26, 2007
D. Appeal Withdraw Notice 2786 Pullman Avenue
E. New Residence at 2812 Champs Elysee Blvd, prepared by Coastrange Biological, dated September 2007
F. Ditch Maintenance Biological Resource Evaluation and Wetland Delineation, Prepared by CALTRANS & Garcia and Associates (GANDA), dated December 5, 2007 and March 1, 2007
G. Stoloski Report, Prepared by WRA, dated January 2010
H. New Residence at 2805 Champs Elysee Blvd, prepared by Coastrange Biological, dated October 2014
I. Comments received from the California Coastal Commission during the 45-day review on the Biological Resources Assessment for 2805 Champs Elysee Blvd
J. Dunes Beach Hotel / Surf Beach RV Park, Prepared by WRA, dated August 2017

Figure 1 Aerial Photograph with the subject property in green and the locations of previous biological reports are shown in blue.

# of Site on Figure 1	PDP #	ADDRESS	APN	PROJECT	DATE OF REPORTS	TYPE OF REPORT	BIOLOGIST	AGENCY COMMENTS	REPORT CONCLUSIONS
1	PDP-050-05	Pullman Ditch	048-121-160, 048-112-140 AND 048-124-150	Property Owner Ditch Maintenance	11/3/2005	Biological Resource Evaluation	HT Harvey	US Fish and Wildlife Service and CA Depart. Of Fish and Game requested additional information related to SFGS and CRLF.	Not suitable habitat for CRLF and SFGS but presence of CRLF as a uncommon dispersant is possible.
2	PDP-004-06 & PDP-045-08	2786 Pullman Avenue	048-121-090	New Residence				Project appealled to the CCC. No substantial issue determination made once it was discovered that the site is not adjacent to ditch. 1 way funnel fencing added as a requirement.	Not suitable habitat for CRLF and SFGS but presence of CRLF as a uncommon dispersant is possible.
3	PDP-18-07, 32-09 and 64-13	2812 Champs Elysee Blvd	048-112-210	New residence	9/1/2007	Biological Resource Evaluation	Coastrange	no	Not suitable habitat for CRLF and SFGS but presence of CRLF as a uncommon dispersant is possible.
4	PDP-036-08 & A	Caltrans Right of Way	R of W	Ditch Stablization and new outfall elbow in ditch next to highway	12/05/2007 & 3/1/2007	BRE & Wetland Delineation	CALTRANS & Garcia and Associates (GANDA)	no, project appealed to City Council, Planning Commission decision upheld	Not suitable habitat for CRLF and SFGS but presence of CRLF as a uncommon dispersant is possible.
5	PDP-005-09	2806 Alameda Ave	048-111-090	New residence	8/19/2009	Biological Resource Evaluation	WRA	CCC: e-mail received during 45-day with concerns with potential habitat impacts.	Project continued and withdrawn.
6	PDP-009-10	Champs Elysee and Pullman Ave	048-133-030, -140, -050, -060	Stoloski Tentative Parcel Map	1/1/2010	BRE & Wetland Delineation	WRA	CCC: appealed City Council Decision due to potential habitat impacts and insuficient public services. Project was then modified to remove the culvert and City decision was upheld.	Not suitable habitat for CRLF and SFGS but presence of CRLF as a uncommon dispersant is possible.
7	PDP-14-050	2805 Champs Elysee Blvd	048-121-160	New residence	10/1/2014	Biological Resource Evaluation	Coastrange	CCC: letter received during 45-day with concerns with potential habitat impacts and taking analysis	Not suitable habitat for CRLF and SFGS but presence of CRLF as a uncommon dispersant is possible.
8	PDP-15-086	2782 Pullman Ave	048-121-100	Proposed New residence	3/1/2016	Biological Resource Evaluation	Coastrange	Regional Water Quality Control Board: concerned with impacts to trees from the project	Not suitable habitat for CRLF and SFGS but presence of CRLF as a uncommon dispersant is possible.
9	PDP-16-084	100 Young Avenue	multiple	Hotel / RV Park	8/1/2017	BRE & Wetland Delineation	WRA	CCC: comments received during 45-day review	Pullman Ditch identified as not suitable habitat for CRLF and SFGS
10	PDP-17-072	2804 Champs Elysee Blvd	048-112-140	New residence	In preparation	BRE & Wetland Delineation	WRA	Future	In Preparation
11	PDP-17-076	2806 Alameda Ave	048-111-090	New residence	In preparation	BRE & Wetland Delineation	WRA	Future	In Preparation

APPENDIX C: VEGETATION AND HABITAT MAPS

From City of Half Moon Bay
Local Coastal Land Use Plan, 2020

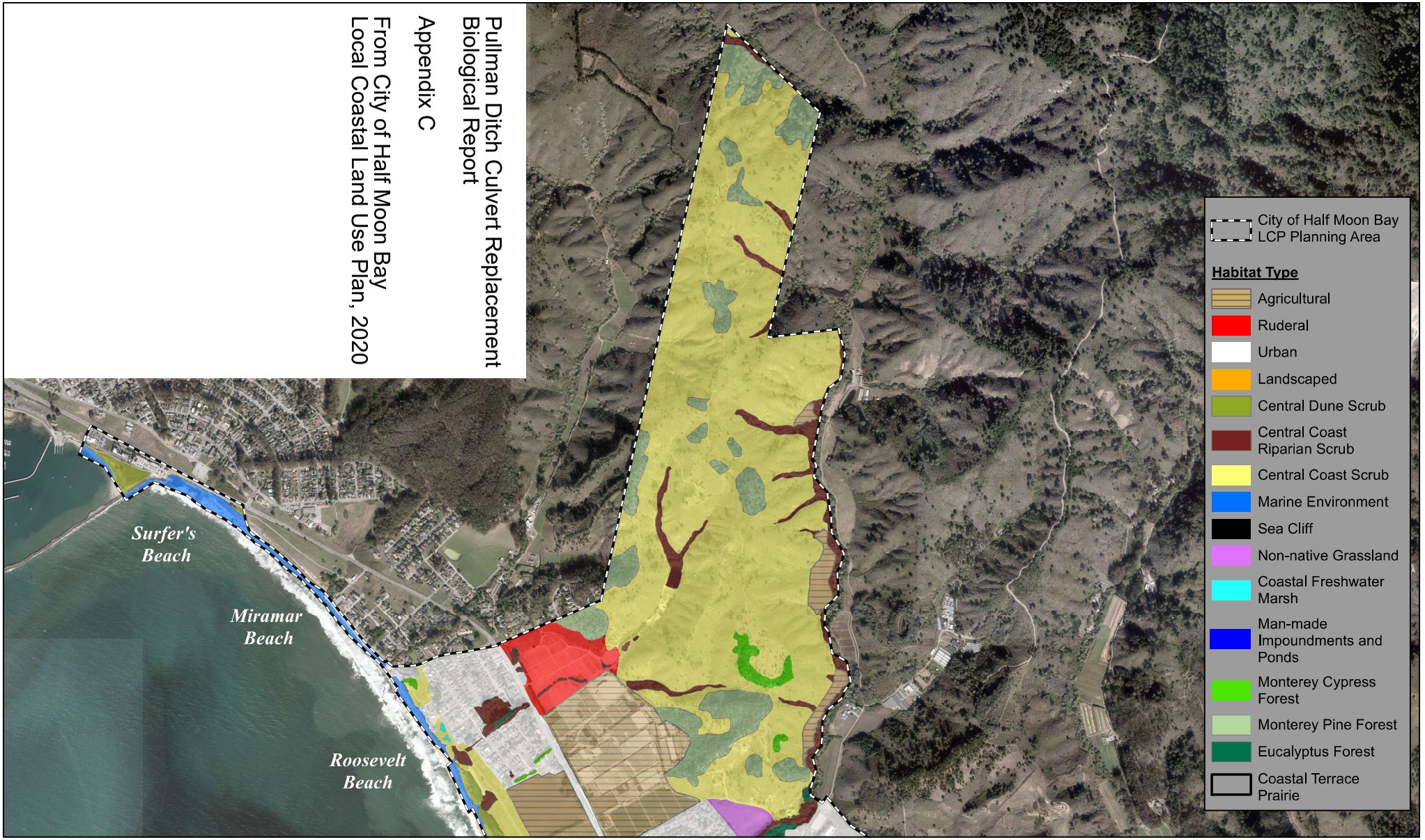


Figure 6-1: Habitat Types in the LCP Planning Area, Sheet 1 of 3

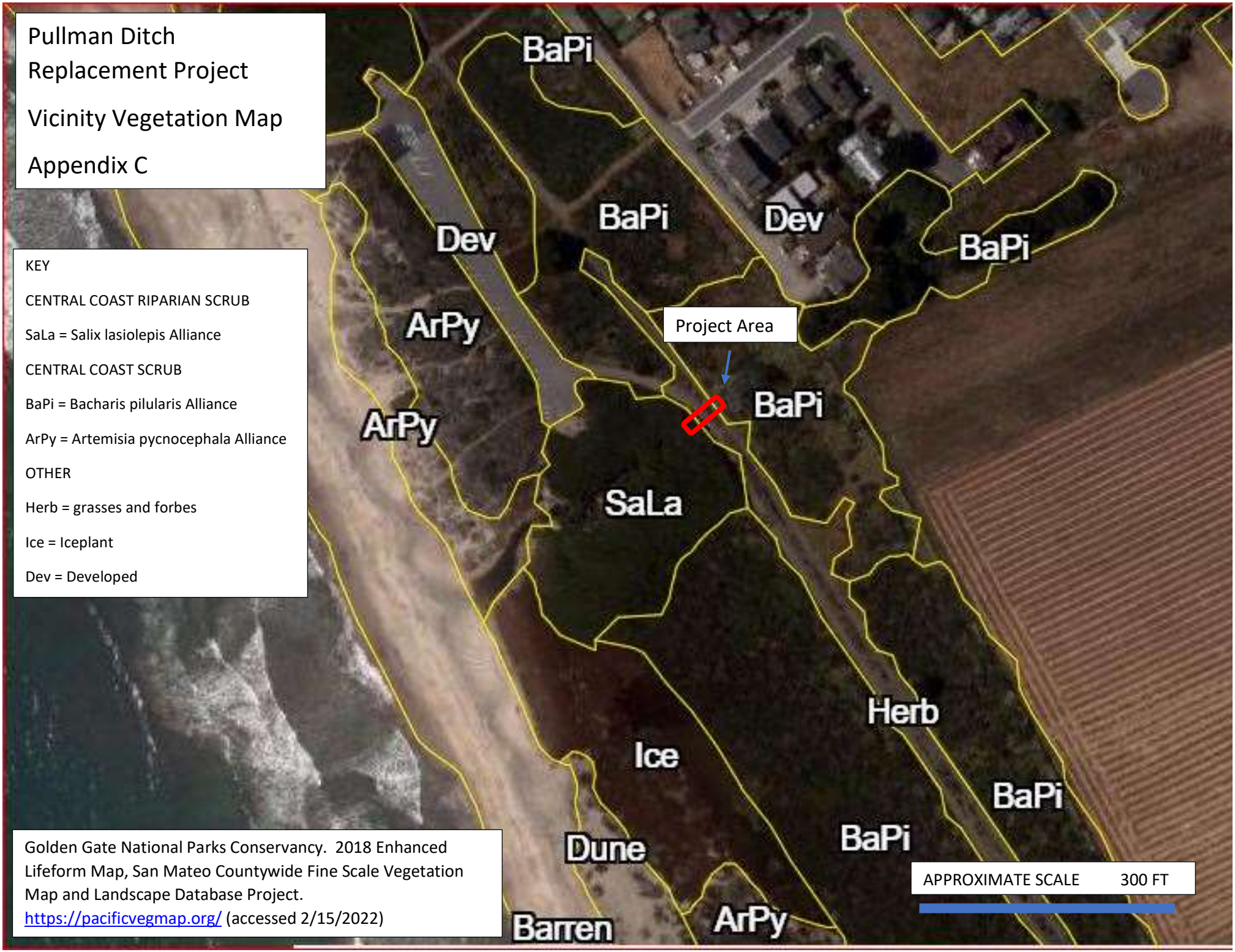
Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

City Council Final October 20, 2020

Pullman Ditch Replacement Project

Vicinity Vegetation Map

Appendix C



KEY

CENTRAL COAST RIPARIAN SCRUB

SaLa = Salix lasiolepis Alliance

CENTRAL COAST SCRUB

BaPi = Bacharis pilularis Alliance

ArPy = Artemisia pycnocephala Alliance

OTHER

Herb = grasses and forbes

Ice = Iceplant

Dev = Developed

APPROXIMATE SCALE 300 FT

Golden Gate National Parks Conservancy. 2018 Enhanced Lifeform Map, San Mateo Countywide Fine Scale Vegetation Map and Landscape Database Project. https://pacificvegmap.org/ (accessed 2/15/2022)

From City of Half Moon Bay
Local Coastal Land Use Plan, 2020

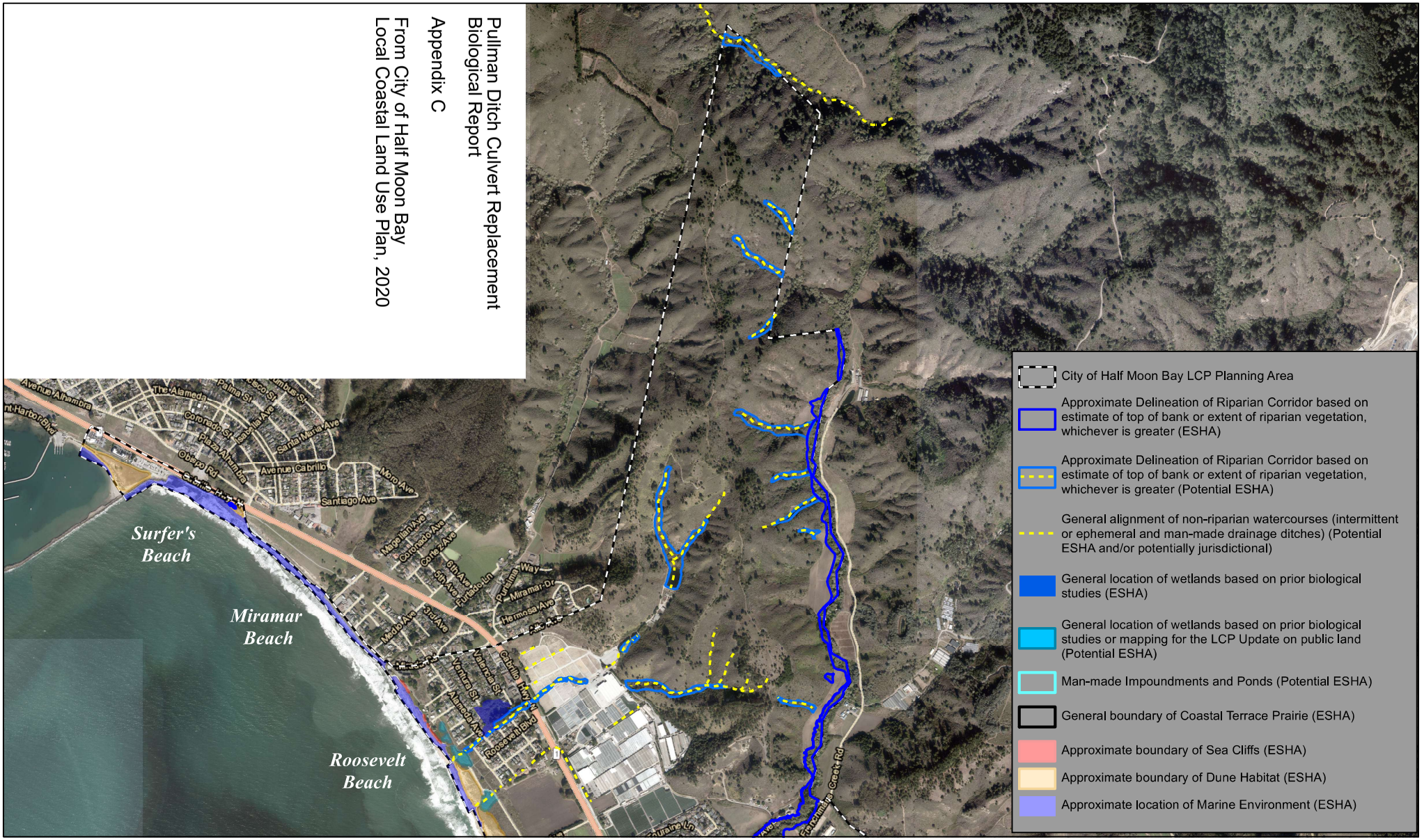


Figure 6-2: Environmentally Sensitive Habitat Areas (Habitat ESHAs), Sheet 1 of 3

N

0 0.25 0.5 1 Miles

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

City Council Final October 20, 2020

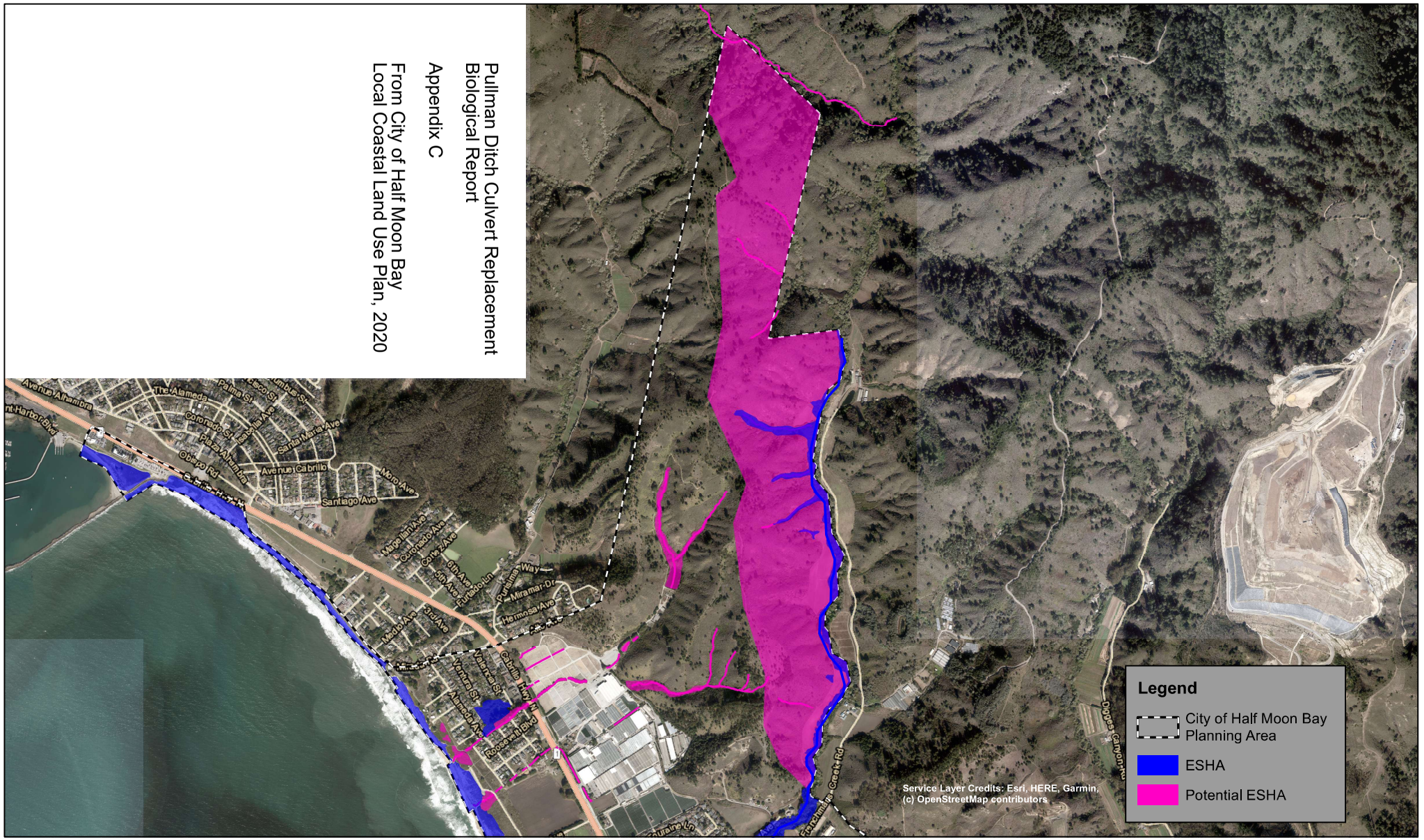


Figure 6-4: Summary of ESHAs and Potential ESHAs, Sheet 1 of 3

0 0.25 0.5 1 Miles

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City Council Final October 20, 2020

APPENDIX D: SPECIAL STATUS SPECIES MAPS

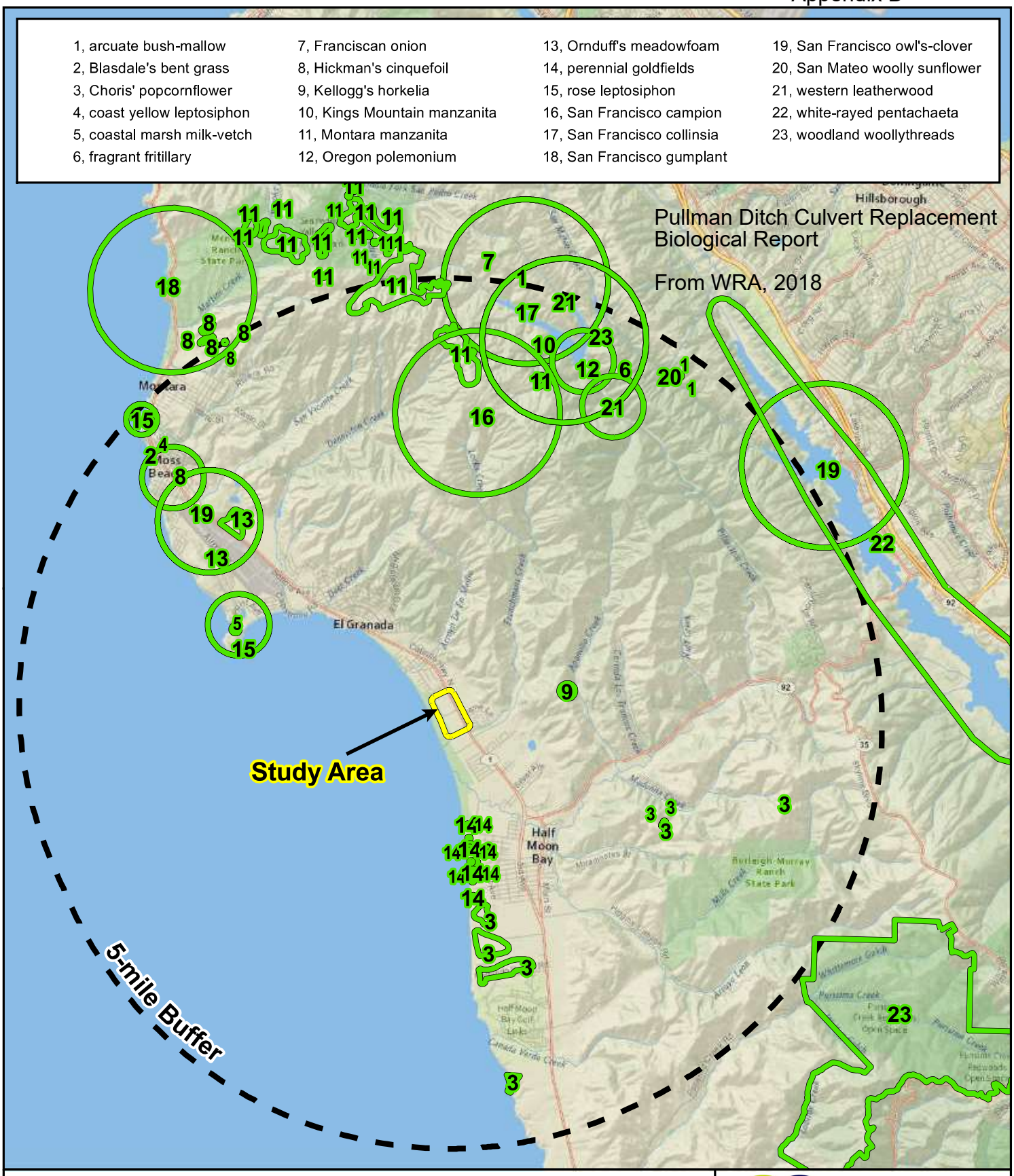

Figure 4. Special-Status Plant Species Documented within 5 Miles of the Study Area

The Dunes at Half Moon Bay
Biological Resources Evaluation
San Mateo County, California

0 0.5 1 2
Miles

ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 5/23/2018
Map Prepared By: smortensen
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA, CNDDB April 2017

Path: L:\Acad 2000 Files\26000\26366\GIS\ArcMap\CNDDB Plants.mxd

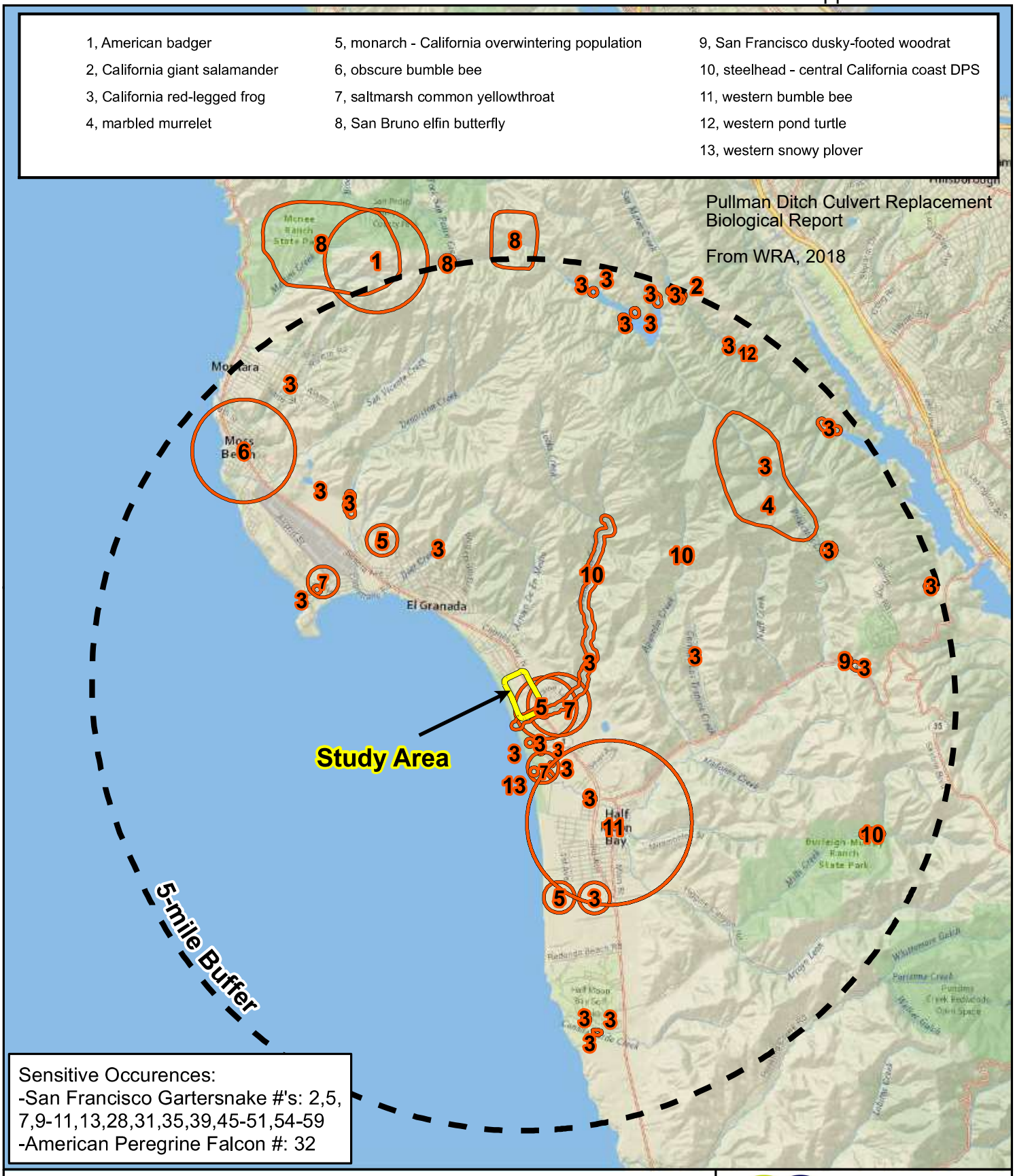

Figure 5. Special-Status Wildlife Species Documented within 5 Miles of the Study Area

The Dunes at Half Moon Bay
Biological Resources Evaluation
San Mateo County, California

0 0.5 1 2
Miles

ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 5/23/2018
Map Prepared By: smortensen
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA, CNDDB April 2017

Path: L:\Acad 2000 Files\26000\26366\GIS\ArcMap\CNDDB Wildlife.mxd

APPENDIX E: SEA LEVEL RISE MAPS

Figure 2-3

Potential Sea Level Rise And Flooding - Reach 1

100 Year Flood + Sea Level Rise

- 0 cm (0.00 ft) SLR
- 25 cm (0.82 ft) SLR
- 50 cm (1.64 ft) SLR
- 91 cm (3.00 ft) SLR
- City of Half Moon Bay
- Planning Area

0 0.05 0.1 0.2 Miles

Data Source: Our Coast Our Future (OCOF) FEMA FIRM (Preliminary 9/14/2015); City of Half Moon Bay, 2014; San Mateo County GIS, 2014; NCI, 2015; Dyett & Bhatia, 2014

SEA LEVEL RISE PROJECTIONS: 100 CM SEA LEVEL RISE AND 100 YEAR STORM

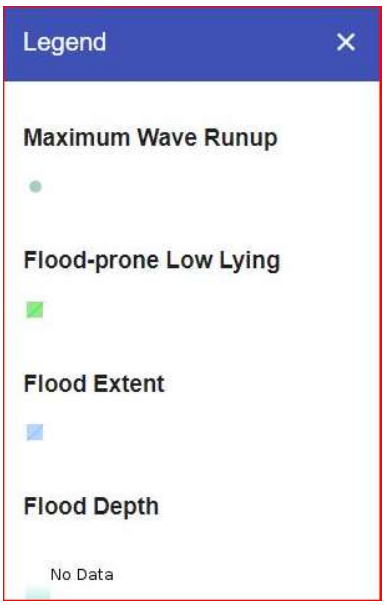

Image and Legend from the Our Coast Our Future web platform (Point Blue Conservation Science and USGS 2022)