
Biological Resource and Groundwater Dependency Analysis of Marina Vernal Ponds

CITY OF MARINA, MONTEREY COUNTY, CALIFORNIA

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LIST OF ACRONYMS AND ABBREVIATIONS

CCH	Consortium of California Herbaria
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
CPMP	Coastal Vernal Pond Management Plan
CRLF	California Red-Legged Frog
CWA	Clean Water Act
CVCMP	Coastal/Vernal Pond Comprehensive Management Plan
ESA	Federal Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
Inventory	CNPS Inventory of Rare and Endangered Plants
LCP	Local Coastal Program
MBTA	Migratory Bird Treaty Act
PPT	Parts Per Thousand
Rank	CNPS Rare Plant Rank
RHA	Rivers and Harbors Act
RWQCB	Regional Water Quality Control Board
SGMA	Sustainable Groundwater Management Act
SWRCB	State Water Resources Control Board
USFWS	U.S. Fish and Wildlife Service
WBWG	Western Bat Working Group
WPT	Western Pond Turtle
WRA	WRA, Inc.

EXECUTIVE SUMMARY

The purpose of this report is to provide an update to The Coastal/Vernal Pond Comprehensive Management Plan (CVCMP), developed in the early 1990s and adopted by the Marina City Council in November 1994, to identify the current hydrologic conditions and biological resources of six ponds within or adjacent to the City of Marina. This report also identifies potential resources, such as sensitive habitat and special-status species that are subject to regulatory constraints to activities that could impact the six ponds. On June 9 and 18, 2020, WRA, Inc. performed an assessment of current hydrologic conditions and biological resources at the six ponds within the City of Marina (Study Area).

WRA observed five aquatic and three upland sensitive biological communities within the Study Area. Six special-status plants were observed within the Study Area, and an additional 26 species have potential to occur within the Study Area. Twelve (12) special-status wildlife species have the potential to occur within the Study Area. In addition, four (4) species not listed in CNDDB were determined to have a moderate potential to occur. Five (5) of the special-status species with potential to occur are birds, which could nest in trees and other vegetation that occurs within the Study Area.

Ponds 2, 3, and 7 now contain pockets of facultative hydrophytic vegetation, not described in the CVCMP, in areas where freshwater runoff from culverts and adjacent paved areas appears to pond against riparian and perennial marsh vegetation. With the exception of increases in the footprint of freshwater seasonal wetland, indicative of urban and road runoff, and riparian willow forest, groundwater-dependent ecosystems within the Study Area remain roughly as described in the CVCMP. The die off of perennial marsh vegetation at two ponds does not appear to be the result of changes in groundwater hydrology, though additional water quality analyses may be needed to confirm.

A high water table was observed within each pond at one or more sample points, and five of the ponds contained open water at the time of the June 2020 site visits, conducted well after the conclusion of the dry season. Willow riparian vegetation, which is dependent upon groundwater, was observed to have either established or increased substantially in footprint at three ponds, and perennial marsh vegetation was generally observed to be in good condition at all six ponds. Despite the recent establishment of pockets of freshwater seasonal wetland, all six ponds assessed in this report are reliant upon groundwater and therefore should be considered groundwater-dependent ecosystems. Perennial marsh vegetation and willow riparian vegetation within all six ponds could be adversely affected by future activities that cause groundwater drawdown.

1.0 INTRODUCTION

On June 9 and 18, 2020, WRA, Inc. (WRA) performed an assessment of biological resources at six ponds located in or adjacent to the City of Marina, Monterey County, California (Figure 1). Location details for each pond are included in Table 1, and depicted in Figure 2. The Study Area consists of wetland habitat associated with each pond and a buffer that extends roughly 50 feet upland from the wetland edge.

The Coastal/Vernal Pond Comprehensive Management Plan ([CVCMP] The Habitat Group 2014) was developed in 1994 to identify guidelines for the preservation, management, and enhancement of Marina's wetland resources (The Habitat Group 2014). The CVCMP identifies the hydrologic conditions, biological resources, and land uses of the seven vernal/coastal ponds within Marina. The CVCMP also identifies specific measures to be conducted at each pond to preserve, protect and enhance sensitive resources. The purpose of this report is to provide an update to the findings of the 1994 CVCMP based on current conditions observed at six of the seven ponds (Pond 6, the Armstrong Ranch Ponds, was not accessible at the time of the site visits). This assessment gathers information necessary to evaluate potential biological resources that could be considered constraints to activities that could influence hydrological influences of each pond.

This report describes the results of the site visits, which assessed the Study Area for the (1) potential to support special-status species; (2) presence of other sensitive biological resources protected by local, state, and federal laws and regulations; and (3) the biological, edaphic, and hydrological indicators of groundwater dependence. Specific findings on the habitat suitability or presence of special-status species or sensitive habitats may require that protocol-level surveys be conducted. This report also contains an evaluation of potential impacts to special-status species and sensitive biological resources that may occur as a result of a possible future development project.

The biological surveys conducted for this analysis do not constitute protocol-level surveys for listed species that may be required for project approval by local, state, or federal agencies. This assessment is based on information available at the time of the study and on site conditions that were observed on the dates of the site visits.

Table 1. Ponds Included in the Study Area; see also Figure 2.

Pond	Location	Current Ownership/Management
Pond 1: Robin Drive Pond	West of Lake Drive	City of Marina
Pond 2: Locke-Paddon Park	Reservation Road and Seaside Avenue	City of Marina
Pond 3a: Marina Landing Pond	Reservation Road and Beach Road, east of Reservation Road	Private/City of Marina
Pond 3b: Marina Landing Pond	Reservation Road and Beach Road, west of Reservation Road	Private/City of Marina
Pond 4: Marina Coast Water District Pond	North of Reservation Road, West of Highway 1	Marina Coast Water District

Pond	Location	Current Ownership/Management
Pond 5: Marina State Beach	South of Reservation Road, West of Highway 1	California Department of Parks and Recreation
Pond 7: Lake Drive Pond	West of Lake Drive	City of Marina

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations and analysis of potential project impacts.

2.1 Sensitive Biological Communities

The California Environmental Quality Act (CEQA) provides protections for particular vegetation types defined as sensitive by the California Department of Fish and Game (CDFW), and aquatic communities protected by laws and regulations administered by the U.S Army Corps of Engineers (Corps), State Water Resources Control Board (SWRCB), and Regional Water Quality Control Boards (RWQCB). The laws and regulations that provide protection for these resources are summarized below.

Sensitive Natural Communities: Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFG 2010, CDFW 2020a) and keeps records of their occurrences in its California Natural Diversity Database (CNDDDB; CDFW 2020a). CNDDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2020) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G).

Waters of the United States, Including Wetlands: The Corps regulates "Waters of the United States" under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as including the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, such as tributaries, lakes and ponds, impoundments of waters of the U.S., and wetlands (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the Corps Wetlands Delineation Manual (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Unvegetated waters including lakes, rivers, and streams may also be subject to Section 404 jurisdiction and are characterized by an ordinary high water mark (OHWM) identified based on field indicators such as the lack of vegetation, sorting of sediments, and other indicators of flowing or standing water. The placement of fill material into Waters of the United States generally requires a permit from the Corps under Section 404 of the CWA.

The Corps also regulates construction in navigable waterways of the U.S. through Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC 403). Section 10 of the RHA requires Corps approval and a permit for excavation or fill, or alteration or modification of the course, location,

condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States. Section 10 requirements apply only to navigable waters themselves, and are not applicable to tributaries, adjacent wetlands, and similar aquatic features not capable of supporting interstate commerce.

Waters of the State, Including Wetlands: The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The SWRCB and nine RWQCBs protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a CWA permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit, but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

Sections 1600-1616 of California Fish and Game Code: Streams and lakes, as habitat for fish and wildlife species, are regulated by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGF). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). The term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). Riparian vegetation has been defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

Environmentally Sensitive Habitat Areas: The California Coastal Act Section 30107.5 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.” Coastal Act Section 30240 protects ESHAs from “significant disruption of habitat values” limits allowable land uses within ESHAs, and requires adjacent uses to be designed to be compatible with habitat benefits provided by ESHAs. The Coastal Act includes wetlands as ESHAs, but does not specifically define every vegetation community defined as an ESHA. Instead, the California Coastal Commission (CCC) often delegates the responsibility for administering the California Coastal Act to local municipalities through the approval of Local Coastal Programs (LCPs). Many LCPs provide more specific lists of communities that are considered ESHAs.

City of Marina Local Coastal Land Use Plan:

The City of Marina has an approved LCP that consists of a Local Coastal Land Use Plan and a Local Coastal Implementation Plan (City of Marina 2013a, 2013b). Under the California Coastal Act, the City of Marina manages coastal development within its jurisdictional boundaries, including addressing the challenges presented by coastal hazards like storms, flooding, and erosion, and the CCC is the jurisdictional regulatory agency that oversees these issues below the mean high tide line. Primary and Secondary Habitat, as defined under the City's LCP (City of Marina 2013a), are considered ESHAs that are designated protected areas within the Coastal Zone. Primary Habitat includes:

- habitat for all identified plant and animal species which are rare, endangered or threatened, or are necessary for the survival of an endangered species;
- vernal ponds and their associated wetland vegetation; and
- all native dune vegetation, where such vegetation is extensive enough to perform the special role of stabilizing Marina's natural sand dune formations.

Secondary Habitat is defined as other areas that have an especially valuable role in an ecosystem for sensitive plant or animal life, as determined by a qualified biologist approved by the City of Marina.

City of Marina General Plan:

The City of Marina's General Plan (City of Marina 2010) specifies open space policies to ensure retention of land with significant natural resource values (Policy 2.3.3) and include habitat reserves and other open space for the protection of important habitat and scenic areas (Policy 2.7.1). Habitat reserve and open space include coastal strand and dune areas adjacent to Monterey Bay and wetlands, which provide habitat for rare, threatened and endangered wildlife and plant species.

The City of Marina's General Plan recognizes that future water demands will require changes in the management of water resources in the area, and water conservation and water reclamation and reuse will constitute major components of future water management efforts. The policies and programs of the General Plan are designed to promote both water conservation and the use of recycled water to protect water quality and to ensure that the demand of future community development does not exceed the capacity to provide water in an environmentally acceptable way (Policy 3.42).

Ponds 1, 2, 3, and 7 are within the boundaries of the City of Marina.

Monterey County General Plan:

The Monterey County General Plan (County of Monterey 2010) applies to land use and resource management decisions in the unincorporated areas east of the City of Marina. Similar to the City General Plan, the County General Plan contains goals and policies related to the conservation of listed species and critical habitat; and avoidance, minimization, and mitigation of significant impacts to biological resources. The Monterey County General Plan requires that decisions regarding groundwater management, well permitting, and projects that may affect groundwater resources should consider effects of those projects and approvals on groundwater-dependent ecosystems and provide mitigation for potential adverse effects. In addition, the County General Plan prescribes specific policies and goals intended to protect riparian and wetland habitat, such as an assessment of impacts on adjacent wells and instream flows for new high-capacity wells

where there may be a potential to affect existing adjacent domestic or water system wells adversely or in-stream flows necessary to support riparian vegetation, wetlands, fish, and other aquatic life [PS-3.4].

Ponds 4 and 5 fall under the Monterey County General Plan.

Marina Groundwater Sustainability Agency Groundwater Sustainability Plan

The Sustainable Groundwater Management Act (SGMA) requires Groundwater Sustainability Agencies (GSAs) to prepare Groundwater Sustainability Plans (GSPs) to achieve sustainable groundwater conditions in medium and high priority groundwater basins and subbasins designated by the California Department of Water Resources. The City of Marina GSA (MGSA) covers an area north of the urban growth center, in an area with a land use designation of Habitat Preserve and Other Open Space (MGSA 2020). The GSP Regulations include specific requirements to identify and consider Groundwater-Dependent Ecosystems (23 CCR § 354.16(g)) when determining whether groundwater conditions are having potential effects on beneficial uses and users. GSAs must also assess whether sustainable management criteria may cause adverse impacts to beneficial uses, which include environmental uses, such as plants and wildlife (MGSA 2020).

2.2 Special-Status Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These Acts afford protection to both listed and proposed species. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, USFWS Birds of Conservation Concern, and CDFW special-status invertebrates are all considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under CEQA.

In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under this legislation, destroying active nests, eggs, and young is illegal. Bat species designated as “High Priority” by the Western Bat Working Group (WBWG) qualify for legal protection under Section 15380(d) of the CEQA Guidelines.

Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory; CNPS 2020a) with a CNPS Rare Plant Rank (Rank) of 1, 2, or 3 are also considered special-status plant species and must be considered under CEQA. A description of the Ranks is provided below in Table 2.

Table 2. Description of CNPS Ranks and Threat Codes

CNPS Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere

Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

Critical Habitat

Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

3.0 METHODS

On June 9 and 18, 2020, the Study Area was traversed on foot to determine (1) which plant communities are present within the Study Area, (2) if existing conditions provided suitable habitat for any special-status plant or wildlife species, (3) if sensitive habitats are present, and (4) if current hydrology has substantially changed since the CVCMP was published in 1994. Ponds 1, 3, and 4 were visited on June 9, 2020, and Ponds 2, 5, and 7 were visited on June 18, 2020. For the purpose of the discussion of results, Pond 3 was subdivided into Pond 3a (east of Reservation Road) and Pond 3b (west of Reservation Road) (Figure 5-3). The Study Area was defined to include wetland habitat associated with each pond, and a buffer from the edge of wetland vegetation extending 50 feet into the upland. However, the site visits focused mainly on wetland habitat, and the buffer was cursorily examined for ability to support special-status plant or wildlife species and general conditions that might affect wetland and water quality. Plant nomenclature follows the Jepson Flora Project (Jepson eFlora 2020), except where noted. For cases in which regulatory agencies, CNPS, or other entities base rarity on older taxonomic treatments, precedence was given to the treatment used by those entities.

3.1 Biological Communities

Prior to the site visit, aerial imagery (Google Earth 2020); the National Wetlands Inventory (NWI; USFWS 2020a); the CVCMP (The Habitat Group 2014); and a recent assessment of groundwater-dependent ecosystems within the City of Marina ([Technical Memorandum]; Formation Environmental 2020) were reviewed to determine if any plant communities and/or aquatic features were present or had the potential to be present in the Study Area. Where possible, biological communities were classified based on existing descriptions from the CVCMP.

If not previously described, wetland communities were classified based on the descriptions used by the NWI. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

3.1.1 Non-sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations and ordinances. These communities may, however, provide suitable habitat for some special-status plant or wildlife species and are identified or described in Section 4.1.1 below.

3.1.2 Sensitive Biological Communities

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Applicable laws and ordinances are discussed above in Section 2.0.

The Study Area was inspected for streams and riparian vegetation that may be regulated as Waters of the State by RWQCB Section 401 of the CWA and/or by CDFW under Sections 1600-1616 of the CFGC. The Study Area was not formally assessed for the presence of waters of the State or waters of the U.S. including wetlands, and non-wetland waters using the methods described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Identification of wetlands focused primarily on updating the boundary of wetlands identified in the 1994 CVCMP based on the extent of hydrophytic vegetation and indicators of wetland hydrology.

3.1.3 Groundwater-Dependent Ecosystems

Each pond within the Study Area was assessed for potential changes in hydrology since the CVCMP was published, and for indicators of its potential groundwater-dependent ecosystem status. Prior to site visits, the CVCMP (The Habitat Group 2014) and the Technical Memorandum (Formation Environmental 2020) were evaluated to determine baseline hydrology conditions. During the site visit, hydrology inputs to each pond were assessed, and each pond was classified as predominantly precipitation- or groundwater-dependent, based on observed potential hydrological inputs, plant species composition and general hydrophytic vegetation condition, water salinity, and depth of soil saturation and roots within the soil profile. Additionally, the condition of the buffer around each pond was assessed for potential impacts to wetland and water quality. Four to five photopoints were established at each pond to serve as reference points for any potential future changes to wetland hydrology and/or vegetation.

Salinity

Salinity and temperature readings were taken at each pond location using a handheld YSI unit. Salinity readings were recorded in parts per thousand (PPT) and temperature was recorded in degrees Celsius. The YSI probe was left in water for a minimum of 20 seconds for each reading to ensure accuracy. Four salinity readings were taken at Ponds 2, 3, 3a, 4, and 7. Due to its larger size, five readings were taken at Pond 1 for increased accuracy. No open water was present at Pond 5, however a single salinity reading was taken in the location of an excavated soil pit, where water had pooled. Salinity readings were taken in association with benchmark photo points, providing approximate sample locations (Figure 5).

Water Table

One to two soil pits were dug to a depth of approximately 14 inches at each pond. When more than one wetland habitat type was present, a sample pit was excavated in each wetland habitat type. Pits were preferentially dug in areas with perennial hydrophytic vegetation, and were dug at the upland edge of the wetland habitat whenever possible. The soil profile, including soil matrix color, texture, redoximorphic concentrations, and plant species present were characterized at each pit location. Within the soil pit, depth to saturation, water table, and the depth to the end of the root zone were recorded.

3.2 Special-Status Species

3.2.1 Literature Review

Potential occurrence of special-status species in the Study Area was evaluated by first determining which special-status species occur in the vicinity of the Study Area through a literature and database search. Database searches for known occurrences of special-status species focused on the Marina, Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels U.S. Geological Survey 7.5-minute quadrangle maps. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the Study Area:

- CNDDB records (CDFW 2020a)
- USFWS Information for Planning and Consultation database (USFWS 2020b)
- CNPS Inventory records (CNPS 2020a)
- Consortium of California Herbaria records (CCH 2020)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication "Amphibians and Reptile Species of Special Concern in California" (Jennings 1994)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)

3.2.2 Site Assessment

A site visit was made to the Study Area to search for suitable habitats for special-status species. Habitat conditions observed at the site were used to evaluate the potential for presence of special-status species based on these searches and the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Area was then evaluated according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.

The site assessment is intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity to determine its potential to occur in the Study Area. The site visit does not constitute protocol-level surveys and is not sufficient to conclude the absence of a species. In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists with experience working with the species and habitats.

If a special-status species was observed during the site visit, its presence was recorded, and it is discussed below in Section 4.2. For some species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described below in Section 4.2.

4.0 RESULTS

Vernal ponds included within the Study Area are situated within the coastal plain of Monterey Bay, within 1 mile of the Pacific Ocean, and approximately 2 miles east of the Salinas River. The elevation of the ponds ranges between approximately 0 and 5 feet above mean sea level, while the surrounding dune deposits reach elevations over 100 feet above mean sea level. The ponds lay within highly permeable Quaternary sand dune deposits, which contain the Dune Sands Aquifer, the predominant aquifer in the Marina area (The Habitat Group 1994, Formation Environmental 2020). Surrounding land uses vary between ponds, but include paved roads and Highway 1; housing and commercial developments; and managed lands such as the Marina Dunes Preserve, Marina State Beach, and Locke-Paddon Park. Adjacent habitat types to the east include coastal dunes, coastal scrub, and the Pacific Ocean. Adjacent habitat types to the north, south, and west include a matrix of ruderal grassland, ornamental plantings, and developed and landscaped areas.

Recent hydrogeological research performed during preparation of the Groundwater Sustainability Plan for the MGSA, reached the following conclusions regarding the hydrogeological connection of the Marina vernal ponds with the underlying aquifers:

Groundwater occurs at depth beneath the tall, active dunes at the coast, but as noted in Section 2, can be relatively shallow further inland and beneath hollows and depressions, such as where the coastal wetland GDEs discussed in this memorandum are located. While it has been asserted that the vernal ponds near the City are supplied by the lateral inflow of perched groundwater on low permeability layers in the Quaternary dune sands, these layers have not been confirmed to be present or continuous at all of the pond locations (The Habitat Group 1994; Balance Hydrologics 2012), and the groundwater elevations, pond elevations, and conditions noted above are not consistent with perched aquifers that are isolated from an underlying aquifer system. Rather, the available data indicate that these areas are underlain with a continuous saturated zone that extends through the Dune Sand Aquifer to the GDEs (Formation Environmental 2020).

Ponds within the Study Area are believed to be remnants of historic marshes that occurred within the Salinas River floodplain and were subsequently covered by encroaching coastal sand dunes (The Habitat Group 1994). No tidal fluctuation in pond levels has been observed (The Habitat Group 1994). Groundwater in this area is generally shallow, and an assessment conducted by Formation Environmental (2020) interpreted the depth to groundwater near the Armstrong Ranch Pond Complex (Pond 6) to be approximately 2 to 5 feet. In that study, the ponds occurred where groundwater levels were close or intersected the ground surface. The wetlands assessed by WRA occur in a similar setting, and include ponds whose water surface elevations have been measured from 0.5 to 5 feet above mean sea level, similar to the groundwater table elevations in the Dune Sand Aquifer (Formation Environmental 2020).

The ponds experienced some physical modification through the early to mid-20th century by grading and filling (The Habitat Group 1994). In the 1950s through early 1980s, substantial modifications occurred with construction of Highway 1 in 1976, as well as the construction residential subdivisions (The Habitat Group 1994). Hydrologic modifications included paving over dune areas with impervious road and roof surfaces; runoff from some areas was piped and discharged directly to several of the ponds (Ponds 1, 2, 3, and 7; The Habitat Group 1994). Additionally, portions of Ponds 1 and 4 and associated wetlands were filled during this time (The Habitat Group 1994). In 1988, Pond 2 was developed as a Park, and groundwater was discharged into it to raise its summer level to 4.5 feet above mean sea level (The Habitat Group 1994). In 1993, Pond 3 was modified as part of the Marina Landing Shopping Center development (The Habitat Group 1994). A review of recent aerial imagery (Google Earth 2020) shows that the approximate footprint and surrounding land uses of each pond has remained relatively unchanged since 1998 (no aerial imagery was available between 1994 and 1998).

4.1 Biological Communities

Table 3 summarizes the area of each biological community observed in the Study Area. Sensitive aquatic biological communities associated with the ponds include coastal freshwater marsh, coastal saltwater marsh, willow riparian forest, freshwater seasonal wetland, and open water. Sensitive upland biological communities include coastal dune scrub, California blackberry scrub, and rose scrub. Non-sensitive upland biological communities include non-native grassland, non-native vegetation, native landscaping, and coyote brush. Upland biological communities occurred within the 50-foot upland buffer and therefore were not included in mapping efforts and area calculations, which focused on the within pond habitats directly related to pond hydrology. Descriptions for each biological community are included in sections 4.1.1 and 4.1.2. Wetland communities within the Study Area are shown in Figure 5.

Table 3. Summary of Biological Communities in the Study Area

Community Type	Area (Acres) by Pond*						Total Area (Acres)
	1	2	3	4	5	7	
Upland							
Non-Sensitive							
Non-Native Grassland	-	X	X	-	-	-	N/A
Non-Native Vegetation	X	X	X	X	X	X	N/A
Native Landscaping	-	X	X	-	-	-	N/A
Coyote Brush Scrub	X	X	-	-	-	X	N/A
Sensitive							
Coastal Dune Scrub	X	-	X	X	X	X	N/A
Rose Scrub	-	-	-	-	X	-	N/A
California Blackberry Scrub	-	X	-	-	-	-	N/A
Aquatic							
Coastal Freshwater Marsh	-	8.17	0.56	-	-	1.61	10.34
Coastal Saltwater Marsh	4.58	-	-	0.33	0.38	-	5.29
Willow Riparian Forest	0.01	2.60	1.27	-	-	-	3.88
Freshwater Seasonal Wetland	-	0.40	0.02	-	-	0.01	0.43
Open Water	1.03	1.83	0.32	1.00	-	0.47	4.65
Total Area (Acres)	5.62	13	2.17	1.33	0.38	2.09	24.59

*Only wetlands, waters, and riparian areas were the focus of mapping activities and area calculations. Biological communities encountered in the upland buffer are characterized as either present ("X") or absent ("-") at each pond, with no calculation of area

4.1.1 Upland Biological Communities

Non-Native Grassland

Non-native grassland is associated with Ponds 2 and 3. Non-native grassland surrounding wetland vegetation is dominated by non-native annual grasses, such as slim oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*), and forbs, such as Canada horseweed (*Erigeron canadensis*), prickly lettuce (*Lactuca serriola*), prostrate knotweed (*Polygonum aviculare*), and common plantain (*Plantago major*). At Pond 2, non-native grassland

occurs in and near the vicinity of the picnic area near the intersection of Reservation Road and Seaside Avenue. Mixed grassland community installed in the upland areas around Pond 3 in 1993 and 1994 appears to have converted to non-native grassland, although some beardless wild rye (*Elymus triticoides*) is still present.

Non-Native Vegetation

Non-native vegetation is present within the upland buffers surrounding each pond. This community consists of woody and herbaceous non-native vegetation that has been planted or naturally established in previously disturbed areas. Canopy species include acacia (*Acacia* sp.), blue gum (*Eucalyptus globulus*), Monterey cypress (*Hesperocyparis macrocarpa*), and Monterey pine (*Pinus radiata*). The understory consists of non-native herbaceous species, such as short-podded mustard (*Hirschfeldia incana*), wild radish (*Raphanus sativus*), and iceplant (*Carpobrotus chilensis*, *C. edulis*). Monotypic iceplant mats were observed at Ponds 1, 3, and 4; these iceplant mats appear to have increased in footprint since 1994 and are beginning to encroach upon coastal dune scrub at Ponds 1 and 4.

Native Landscaping

Areas surrounding Ponds 2 and 3 have been planted with native species. Linear segments along Reservation Road (Pond 2) and Beach Road (Pond 3) have been planted with native scrub species, including coyote brush (*Baccharis pilularis*), mock heather (*Ericameria ericoides*), and coastal bush lupine (*Lupinus arboreus*). The southeastern edge of Pond 2 has been planted with native plants, dominated by coast live oak (*Quercus agrifolia*), California blackberry (*Rubus ursinus*), field sedge (*Carex praegracilis*), and Brewer's rush (*Juncus breweri*). This community appears to have been relatively stable in footprint and species composition since 1994.

Coyote Brush Scrub

Small pockets of upland areas surrounding Ponds 1, 2, and 7 are dominated coyote brush scrub, sometimes co-dominant with California blackberry. This community appears to have been relatively stable since 1994.

Coastal Dune Scrub

This community occurs on the backs of dune slopes surrounding Ponds 4 and 5, and is also associated with portions of Ponds 1, 3, and 7. The vegetation of the coastal dune scrub community is characterized by low-growing shrubs and herbs, including false iceplant (*Conicosia pugioniformis*), sand lettuce (*Dudleya caespitosa*), mock heather, coast buckwheat (*Eriogonum latifolium*), sea cliff buckwheat (*Eriogonum parvifolium*), lizard tail (*Eriophyllum staechadifolium*), and iceplant. Coastal dune scrub within the Study Area is similar in footprint and species composition as described in 1994 (The Habitat Group, although monotypic iceplant mats are expanding in size at Ponds 1 and 4. Areas mapped as coastal dune scrub are considered an ESHA under the Coastal Act, and are also covered by the City of Marina (Ponds 1, 3, and 7) and Monterey County (Ponds 4 and 5) General Plans. This habitat would be considered sensitive under CEQA.

California Blackberry Scrub

Pond 2 contains a small pocket of monotypic California blackberry scrub, as described in 1994 (The Habitat Group). California blackberry (*Rubus ursinus* Shrubland Alliance) is ranked as S3 and is therefore considered sensitive under CEQA.

Rose Scrub

The upland buffer surrounding Pond 5 is dominated by dense California rose (*Rosa californica*) with interspersed coyote brush and California blackberry. Rose scrub (*Rosa californica* Shrubland Alliance) is ranked as S3 and are therefore considered sensitive under CEQA.

4.1.2 Aquatic Biological Communities

Areas mapped as sensitive biological communities below are likely to meet the requirements as a potentially jurisdictional features subject to agency approval under Sections 401 and 404 of the CWA and the Porter-Cologne Water Quality Control Act. Additionally, riparian vegetation may be regulated under Section 1602 of the CFGC.

Coastal Freshwater Marsh

Ponds 2, 3, and 7 contain coastal freshwater marsh around the perimeter of open, unvegetated waters. Coastal freshwater marsh associated with Ponds 2 and 7 remain relatively similar in extent and species composition as described in 1994 (The Habitat Group), and have been successfully established at Pond 3 since that time. The interior of coastal freshwater marsh within the Study Area is dominated by tule (*Schoenoplectus acutus* var. *occidentalis*) and broadleaf cattail (*Typha latifolia*), while the outer edges are dominated by salt marsh baccharis (*Baccharis glutinosa*), Brewer's rush, chairmaker's bulrush (*Schoenoplectus americanus*), and stinging nettle (*Urtica dioica*).

Coastal Saltwater Marsh

Ponds 1, 4, and 5 contain coastal saltwater marsh in roughly the same footprint and with similar species composition as described in 1994 (The Habitat Group). Coastal saltwater marsh occurs along the fringe of open water at Ponds 1 and 4, and throughout the entirety of Pond 5. This community is dominated by herbaceous vegetation and graminoids, including fat hen (*Atriplex prostrata*), saltmarsh bulrush (*Bolboschoenus maritimus* ssp. *paludosus*), alkali heath (*Frankenia salina*), jaumea (*Jaumea carnosa*), Brewer's rush, silver weed cinquefoil (*Potentilla anserina*), and pickleweed (*Salicornia pacifica*). At Pond 5, only the lowest portion of the pond contains dense halophytic vegetation, while the fringe of the feature is dominated by a near monotypic stand of Brewer's rush, interspersed with scattered alkali heath, silver weed cinquefoil, and California blackberry. Within some areas to the north that appear to be receiving increased freshwater runoff (see Section 4.1.3), freshwater herbs and graminoids such as tall cyperus (*Cyperus eragrostis*), curly dock (*Rumex crispus*), and spike rush (*Eleocharis macrostachya*) are beginning to co-dominate with halophytic species.

Less than one acre along the northwestern edge of Pond 1, west of the Robin Drive cul-de-sac, previously mapped as coastal saltwater marsh was reclassified as upland based on the lack of wetland hydrology indicators or hydric soil indicators during the June 2020 site visit. In June of 2020, this area was dominated by field sedge (*Carex praegracilis*), with scattered coyote brush and encroaching ice plant mats.

Willow Riparian Forest

Willow riparian forest was previously only mapped at Pond 2 (The Habitat Group 1994). Willow riparian habitat appears to have increased in footprint at Pond 2. Additionally, the fringes of Ponds 3a and 3b, and a small portion at the eastern end of Pond 1, now contain riparian vegetation dominated by willow. At Pond 1, this biological community consists of a small stand of arroyo willow. Willow riparian forest at Pond 2 is dominated by a dense overstory of arroyo willow (*Salix lasiolepis*) and red willow (*Salix laevigata*), with an understory of California blackberry and stinging nettle. At Pond 3, willow riparian forest is dominated by arroyo willow interspersed with acacia and toyon (*Heteromeles arbutifolia*), with an understory dominated by California blackberry and stinging nettle. These features are dependent upon groundwater associated with each pond.

Freshwater Seasonal Wetland

Freshwater seasonal wetland (NWI Classification PEM: Freshwater Emergent Wetland) was not previously mapped within the Study Area. However, Ponds 2, 3, and 7 now contain pockets of facultative hydrophytic vegetation in areas where freshwater runoff appears to pond against riparian and perennial marsh vegetation. Within the Study Area, seasonal wetlands are dominated by field sedge (*Carex praegracilis*), tall cyperus, western goldenrod (*Euthamia occidentalis*), Italian wild rye (*Festuca perennis*), alkali heath, Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), annual beard grass (*Polypogon monspeliensis*), silver weed cinquefoil, California blackberry, and curly dock, with scattered perennial marsh vegetation such as chairmaker's bulrush.

At Pond 2, freshwater seasonal wetland occurs below a culvert at the northern end of the pond, as well as along the southern and eastern fringes of the pond, where runoff from adjacent paved roads ponds against riparian and marsh vegetation. Freshwater seasonal wetland at Pond 3a occurs at the northern end of the pond, where runoff from Reservation Road appears to pond against riparian vegetation, and at the eastern end of the pond, which appears to receive runoff from an ephemeral upland swale to the east. Freshwater seasonal wetland at Pond 7 is associated with runoff from two culverts on the western side of the pond.

Open Water

Areas of Ponds 1, 2, 3, 4, and 7 that were inundated at the time of the site visit and contained less than 5 percent vegetation were classified as open water.

4.1.3 Groundwater-Dependent Ecosystems

Groundwater-dependent ecosystems within the Study Area include coastal freshwater marsh, coastal saltwater marsh, and willow riparian forest. Aside from apparent increases in freshwater hydrology inputs, and an increase in the footprint of willow riparian forest and coastal freshwater marsh, groundwater-dependent vegetation appears to be in relatively similar condition to conditions described in the CVCMP, as outlined in Section 4.1.2 above. Urban and road runoff appears to impact all six ponds degrees, as identified in the CVCMP, and as evidenced by the appearance of the new freshwater seasonal wetland habitat observed at Ponds 2, 3, and 7 during the June 2020 site visits.

In general, vegetation associated with groundwater-dependent ecosystems were in good condition, although large swaths of tule and broadleaf cattail associated coastal freshwater marsh are beginning to die off along the edges of the western and southern sides of Pond 7 and the

southern edges of Pond 2. Areas with perennial freshwater marsh vegetation die off appear to still have perennial wetland hydrology, as indicated by standing water at the time of the June 2020 site visits, so the die off is likely due to causes other than changes in groundwater (though no additional water quality samples were collected). Upland vegetation adjacent to marsh vegetation die offs at Pond 7 also appear to have died off during the 2020 growing season. Furthermore, healthy tule and broadleaf cattail vegetation appears to have been recently driven over with a motorized vehicle in small portions of Pond 7.

Salinity

Salinity and temperature readings, recorded with the YSI probe, are documented below in Table 4. Ponds 1 and 4 had higher salinity readings, ranging from 15.5 to 30.5 ppt. Ponds 2, 3, and 7 had lower salinity readings, ranging from 0.2 to 0.9 ppt, and groundwater sampled at Pond 5 had an intermediate salinity reading of 4.4 ppt. These findings correspond to what was observed in the CVCMP, which characterizes Ponds 1 and 4 as brackish to hypersaline, Pond 2 as fresh, and Ponds 3 and 7 as fresh to brackish (The Habitat Group 1994). Pond 5 did not have any standing water, and was completely vegetated, during the June 2020 site visit; this finding is consistent with what was documented in the CVCMP (The Habitat Group 2014).

Table 4. Salinity and Temperature Readings

Pond	Salinity (PPT)	Temperature (°C)	Classification
1	16.9	24.5	Brackish to Strongly Brackish
	17.5	24.6	
	17	28.8	
	17	26.5	
	15.5	26.4	
Pond 1 Average	16.78	26.16	
2	0.2	15.7	Fresh
	0.2	21.1	
	0.2	20.5	
	0.2	20.3	
Pond 2 Average	0.2	19.4	
3a	0.6	19.7	Fresh to Slightly Brackish
	0.2	19.7	
	0.2	19.9	
	0.2	21.3	
Pond 3a Average	0.3	20.15	
3b	0.9	29.8	Slightly Brackish
	0.9	17	
	0.9	27.5	
	0.9	18.4	
Pond 3b Average	0.9	23.175	
4	28.6	18.9	Strongly Brackish
	30.5	17.3	
	26	18.7	
	29.9	19.5	
Pond 4 Average	28.75	18.6	
5	4.4	17.6	Brackish
Pond 5 Average	4.4	17.6	

Pond	Salinity (PPT)	Temperature (°C)	Classification
7	0.3	23.8	Fresh
	0.3	30.4	
	0.3	30.8	
	0.3	25.4	
Pond 7 Average	0.3	27.6	

Water Table

The locations of soil pits excavated to assess the water table and root zone depth at each pond are depicted in Figure 5. Soil textures in each of the pits predominantly consisted of sand, with some sandy clay and sandy silt, often with inclusions of decomposing organic matter in the upper horizon of the soil profile. Soils in Pit P3-2 also contained inclusion of small pockets of clay below a depth of 2 inches. Table 5 summarizes the wetland habitat, dominant plant species, depth to saturation, depth to water table, and depth of the root zone at each of the soil pits excavated in June of 2020.

In general, perennial marsh (coastal saltwater and coastal freshwater) contained a high water table within 14 inches of the soil surface, indicating groundwater hydrology. However, the edges of wetland vegetation associated with Ponds 1 and 5 did not contain an observable water table (the water table was at a depth greater than 14 inches), despite the presence of perennial marsh vegetation. Depth to the water table for freshwater seasonal wetland ranged from 12.5 to greater than 14 inches.

Table 5. Summary Soil Pit Data

Pond	Pit ID	Habitat Type	Plant Species	Saturation Depth (inches)	Water Table Depth (inches)	Root Zone Depth (inches)
1	P1-1	Coastal saltwater marsh	Salt marsh bulrush, silver weed cinquefoil	8	10	14
	P1-2	Coastal freshwater marsh	Jaumea, alkali heath	>14	>14	>14
2	P2-1	Coastal freshwater marsh	Tall cyperus, silver weed cinquefoil, annual beard grass	5	8	8
	P2-2	Freshwater seasonal wetland	Arroyo willow, salt grass	11	12.5	10.5
3a	P3a-1	Coastal freshwater marsh	Chairmaker's bulrush, alkali heath, curly dock	5	7.5	5

Pond	Pit ID	Habitat Type	Plant Species	Saturation Depth (inches)	Water Table Depth (inches)	Root Zone Depth (inches)
	P3a-2	Freshwater seasonal wetland	Italian wild rye, Mediterranean barley	8	>14	8
3b	P3b-1	Coastal freshwater marsh	Spike rush, Brewer's rush, annual beard grass, chairmaker's bulrush	6	9.5	6
4	P4-1	Coastal saltwater marsh	Brewer's rush, alkali heath, pickleweed	7	8	10
5	P5-1	Coastal saltwater marsh	Brewer's rush, alkali heath	>14	>14	8
	P5-2	Coastal saltwater marsh	Salt grass, salt marsh bulrush, pickleweed	11.5	13.5	7.5
7	P7-1	Coastal freshwater marsh	Watercress (<i>Nasturtium officinale</i>), fat hen, chairmaker's bulrush, dotted smartweed (<i>Persicaria punctata</i>)	9.5	12	9

4.1.4 Summary Pond Descriptions

The following section summarizes aquatic biological communities and groundwater-dependent ecosystem analyses, briefly described above in Sections 4.1.1 and 4.1.2, in greater detail by pond.

Pond 1

Pond 1 contained open water, with less than 5 percent vegetative cover, at the time of the June 2020 site visit (Figure 5-1). Open water at Pond 1 is surrounded by a fringe of coastal saltwater marsh. The interior of the ring of coastal saltwater marsh at Pond 1 is dominated by pickleweed and perennial graminoids, such as saltmarsh bulrush and tule. The exterior of the ring of coastal salt marsh is dominated by a dense carpet of halophytic forbs, including jaumea and alkali heath. A small stand of arroyo willow occurs in the southeastern corner of Pond 1. Less than one acre along the northwestern edge of Pond 1, west of the Robin Drive cul-de-sac, previously mapped as coastal saltwater marsh was reclassified as upland based on the lack of wetland hydrology indicators or hydric soil indicators during the June 2020 site visit. In June of 2020, this area was

dominated by field sedge (*Carex praegracilis*), with scattered coyote brush and encroaching ice plant mats.

Aquatic vegetation at Pond 1 was generally in good condition at the time of the June 2020 site visit. Salinity measurements at Pond 1 ranged from 15.5 to 17.5 ppt, indicating that salinity at the pond ranges from brackish to strongly brackish. Urban runoff, from paved residential areas and Highway 1, appears to marginally contribute to the hydrology of Pond 1, particularly along the western and southern edges of the pond. Within the interior ring of coastal saltwater marsh vegetation, the water table was observed at a depth of 8 inches; however, within the exterior ring of coastal saltwater marsh vegetation, a high water table was not observed despite the presence of perennial coastal saltwater marsh vegetation. However, the presence of a high water table within the interior ring of coastal saltwater marsh vegetation, along with the presence of open water, several months after the conclusion of the wet season indicates that the hydrology of Pond 1 relies on groundwater; therefore, Pond 1 should be considered a groundwater-dependent ecosystem. Perennial marsh species that dominate coastal saltwater marsh, such as saltmarsh bulrush and tule, and arroyo willow are reliant on a source of year-round water and could be negatively impacted by activities that affect the groundwater table associated with Pond 1.

Pond 2

Pond 2 contained open water, with less than 5 percent vegetative cover, at the time of the June 2020 site visit (Figure 5-2). Open water at Pond 2 is surrounded by coastal freshwater marsh vegetation, dominated by tule and cattail in the interior; and salt marsh baccharis, Brewer's rush, chairmaker's bulrush, and stinging nettle in the exterior. Willow riparian habitat appears to have increased in footprint since the publication of the CVCMP. Willow riparian forest at Pond 2 is dominated by a dense overstory of arroyo and red willow, with an understory of California blackberry and stinging nettle. Freshwater seasonal wetland, not previously described in the CVCMP, occurs below a culvert at the northern end of the pond, as well as along the southern and eastern fringes of the pond, where runoff from adjacent paved roads ponds against riparian and marsh vegetation. Freshwater seasonal wetland surrounding Pond 2 is largely dominated by tall cyperus, annual beard grass, salt grass, and silver weed cinquefoil.

In general, aquatic vegetation associated with Pond 2 was in good condition at the time of the June 2020 site visit, although large swaths of tule and broadleaf cattail associated coastal freshwater marsh are beginning to die off along the southern edges of coastal freshwater marsh vegetation. Areas with perennial freshwater marsh vegetation die off appear to still have perennial wetland hydrology, as indicated by standing water at the time of the June 2020 site visits, so the die off is likely due to causes other than changes in groundwater. Salinity measurements at Pond 2 ranged from 0.2 to 0.6 ppt; therefore Pond 2 can be classified as fresh to slightly brackish. The water table was observed at a depth of 8 inches within coastal freshwater marsh, and at 12.5 inches within the freshwater seasonal wetland habitat. The expansion of willow riparian forest around the edges of Pond 2, high water table within coastal freshwater marsh and freshwater seasonal wetland vegetation, and the presence of open water several months after the conclusion of the wet season all indicate that the hydrology of Pond 2 relies on groundwater; therefore, Pond 2 should be considered a groundwater-dependent ecosystem despite apparent freshwater inputs from culvert runoff. Perennial marsh species that dominate coastal freshwater marsh, such as salt marsh baccharis, chairmaker's bulrush, cattail, and tule, and arroyo and red willow are reliant on a source of year-round water and could be negatively impacted by activities that affect the groundwater table associated with Pond 2.

Pond 3

Pond 3a (Figure 5-3) contained open water, with less than 5 percent vegetative cover, at the time of the June 2020 site visit. Pond 3b (Figure 5-3) also contained standing water at the time of the June 2020 site visit; however, the entirety of the feature contained greater than 5 percent vegetative cover. Both Ponds 3a and 3b contain coastal freshwater marsh vegetation, surrounded by willow riparian forest. Coastal freshwater marsh at Pond 3a is dominated by tule and chairmaker's bulrush; coastal freshwater marsh at Pond 3b is dominated by tule in the interior, and spike rush, Brewer's rush, annual beard grass, and chairmaker's bulrush around the fringes. Willow riparian forest is dominated by arroyo willow interspersed with acacia and toyon (*Heteromeles arbutifolia*), with an understory dominated by California blackberry and stinging nettle. Two small pockets of freshwater seasonal wetland, not described in the CVCMP, were observed at Pond 3a at the northern end of the pond, where runoff from Reservation Road appears to pond against riparian vegetation, and at the eastern end of the pond, which appears to receive runoff from an ephemeral upland swale to the east. Freshwater seasonal wetland was dominated by Italian wild rye, Mediterranean barley, curly dock, tall cyperus, and silver weed cinquefoil.

Aquatic vegetation associated with Ponds 3a and 3b were in good condition at the time of the June 2020 site visit. A deep erosional rill was observed on the eastern edge of Pond 3b in willow riparian forest, associated with runoff from Reservation Road. Both Ponds 3a and 3b appear to receive runoff from Reservation Road and culverts, as well as from an ephemeral upland swale east of Pond 3a. Salinity measurements at Pond 3a ranged from 0.2 to 0.6 ppt, classifying it as fresh to slightly brackish. Pond 3b remained stable at 0.9 ppt, classifying it as slightly brackish. The water table in coastal freshwater marsh vegetation was observed at a depth of 7.5 inches at Pond 3a, and 9.5 inches at Pond 3b. A high water table was not observed in freshwater seasonal wetland vegetation at Pond 3a; however, saturation was observed at a depth of 8 inches. The successful establishment of perennial marsh and willow riparian vegetation since the publication of the CVCMP, high water table within coastal freshwater marsh and freshwater seasonal wetland vegetation, and the presence of open water several months after the conclusion of the wet season all indicate that the hydrology of Ponds 3a and 3b rely on groundwater; therefore, Ponds 3a and 3b should be considered groundwater-dependent ecosystems despite apparent freshwater inputs from runoff. Perennial marsh species that dominate coastal freshwater marsh, such as tule, chairmaker's bulrush, and spike rush, and arroyo willow are reliant on a source of year-round water and could be negatively impacted by activities that affect the groundwater table associated with Pond 3.

Pond 4

Pond 4 contained open water, with less than 5 percent vegetative cover, at the time of the June 2020 site visit (Figure 5-4). Open water at Pond 4 is surrounded by a fringe of coastal saltwater marsh, within roughly the same footprint described in the CVCMP, dominated by alkali heath and pickleweed with stands of dense Brewer's rush.

In general, aquatic vegetation associated with Pond 4 was in good condition at the time of the June 2020 site visit, although monotypic iceplant mats in upland areas are beginning to encroach upon coastal saltwater marsh vegetation. Pond 4 appears to receive minimal urban runoff from surrounding areas, with the exception of a culvert observed at the northern end of the pond. Salinity measurements at Pond 4 ranged from 26 to 30.5 ppm, classifying it as strongly brackish. The water table was observed in coastal saltwater marsh vegetation at a depth of 8 inches. The presence of a high water table within coastal saltwater marsh vegetation, and the presence of open water several months after the conclusion of the wet season, indicate that the hydrology of Pond 4 relies on groundwater; therefore, Pond 4 should be considered a groundwater-dependent

ecosystem. Perennial marsh species that dominate coastal saltwater marsh, such as pickleweed, are reliant on a source of year-round water and could be negatively impacted by activities that affect the groundwater table associated with Pond 4.

Pond 5

Pond 5 contains coastal saltwater marsh in roughly the same footprint and with similar species composition as described in the CVCMP (Figure 5-5). Only the lowest portion of the pond contains dense halophytic vegetation, dominated by alkali heath, pickleweed, and saltmarsh bulrush, while the fringe of the feature is dominated by a near monotypic stand of Brewer's rush, interspersed with scattered alkali heath, silver weed cinquefoil, and California blackberry. Within some areas to the north that appear to be receiving increased freshwater runoff, freshwater herbs and graminoids, such as tall cyperus, curly dock, and spike rush, are beginning to co-dominate with halophytic species.

Aquatic vegetation associated with Pond 5 was in good condition at the time of the June 2020 site visit. A culvert located at the southern end of Pond 5 appears to convey significant seasonal flows to the pond, as evidenced by a wrack line and dense dried algal matting emanating from the culvert into coastal saltwater marsh vegetation. Water appears to flow and pond at the lowest point of the feature, located in the northern portion of the pond, where dense halophytic vegetation occurs. The water table was observed at a depth of 13.5 inches at this portion of Pond 5; groundwater sampled from this soil pit had a salinity of 4.4 ppt, classifying it as brackish. Although Pond 5 appears to receive significant input from culvert runoff, the presence of a high water table several months after the conclusion of the wet season indicates that the hydrology of Pond 5 relies on groundwater to some extent; therefore, Pond 5 should be considered a groundwater-dependent ecosystem. Perennial marsh species that dominate coastal saltwater marsh, such as pickleweed and spike rush, are reliant on a source of year-round water and could be negatively impacted by activities that affect the groundwater table associated with Pond 5. However, seasonal flows from the culvert to the south of the feature may offset any effects of a drawdown of groundwater.

Pond 7

Pond 7 contained open water, with less than 5 percent vegetative cover, at the time of the June 2020 site visit (Figure 5-1). Open water at Pond 7 is surrounded by coastal freshwater marsh vegetation, dominated by tule and cattail in the interior; and chairmaker's bulrush, curly dock, tall cyperus, and dotted smartweed along the outer fringes. Two small pockets of newly-observed freshwater seasonal wetland, dominated by curly dock and annual beard grass, were observed in the northern and southern portions of the pond, apparently sustained by culvert runoff.

Aquatic vegetation at Pond 7 was generally in good condition at the time of the June 2020 site visit, although large swaths of tule and cattails were beginning to die off along the edges of the western and southern sides of the pond. Areas with perennial freshwater marsh vegetation die off appear to still have perennial wetland hydrology, as indicated by standing water at the time of the June 2020 site visits, so the die off is likely due to causes other than changes in groundwater (though no additional water quality samples were collected). Upland vegetation adjacent to marsh vegetation die offs also appear to have died off during the 2020 growing season. Furthermore, healthy tule and broadleaf cattail vegetation appears to have been recently driven over with a motorized vehicle in small portions coastal saltwater marsh.

Salinity measurements at Pond 7 remained stable at 0.3 ppt, indicating that it is a freshwater pond. Urban runoff from culverts appears to contribute to the hydrology of Pond 7 (Figure 5-1).

Within the coastal freshwater marsh habitat, the water table was observed at a depth of 12 inches. The presence of a high water table within coastal freshwater marsh vegetation, along with the presence of open water several months after the conclusion of the wet season, indicates that the hydrology of Pond 7 relies on groundwater; therefore, Pond 7 should be considered a groundwater-dependent ecosystem despite apparent freshwater inputs from culvert runoff. Perennial marsh species that dominate coastal freshwater marsh, such as tule, cattail, and chairmaker's bulrush, are reliant on a source of year-round water and could be negatively impacted by activities that affect the groundwater table associated with Pond 7.

4.2 Special-Status Species

A list of plant and wildlife species observed during the June 2020 site visits is included in Appendix B. A list of special-status species documented to occur in the vicinity of the Study Area is included in Appendix C.

4.2.1 Plants

Based upon a review of the resources and databases given in Section 3.2.1, 74 special-status plant species have been documented in the vicinity of the Study Area (Appendix C). Figure 3 depicts special-status species documented in the CNDDDB within a 5-mile radius of the Study Area. The Study Area is unlikely or has no potential to support 42 of these species for the following reasons:

- Hydrologic conditions (e.g., vernal pool, riverine) necessary to support the special-status plant species are not present in the Study Area;
- Edaphic (soil) conditions (e.g., serpentine, clay) necessary to support the special-status plant species are not present in the Study Area;
- Associated vegetation communities (e.g., north coast coniferous forest, closed cone coniferous forest) necessary to support the special-status plant species are not present in the Study Area;
- The Study Area is outside the known elevation range of the special-status plant species, which typically occurs further inland; and
- Historic occurrences of the special-status species are presumed to be extirpated from the vicinity due to habitat conversion and disturbance.

Of the remaining 32 special-status plant species, 19 were identified as having potential to occur within the Study Area in 1994 (The Habitat Group); one of the species identified in 1994 (large-flowered linanthus, *Linanthus grandiflorus*), is no longer considered special-status. The remaining 33 special-status plant species with potential to occur within the Project Area have either been listed as special-status, or have new occurrences documented in the vicinity of the Study Area, since 1994.

All but two special-status plant species, South Coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*) and saline clover (*Trifolium hydrophilum*) are solely associated with coastal dune and coastal dune scrub habitat found in upland areas surrounding Ponds 1, 3, 4, and 5. As the quality of coastal dune within the Study Area with the potential to support special-status plant species is relatively unchanged since 1994, all 32 special-status plant species still have potential to occur within the Study Area. These special-status plant species, and their potential to occur within the Study Area, are summarized in Table 6. Six of these special-status plant species, which have been observed in the vicinity of the Study Area, are described in greater detail below.

Table 6. Special-Status Plant Species with Potential to Occur within the Study Area

Scientific Name	Common Name	Status	Potential Habitat	Potential for Occurrence
<i>Allium hickmanii</i>	Hickman's onion	Rank 1B.2	Coastal dune scrub	Moderate
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	Rank 1B.2	Coastal dune scrub	Moderate
<i>Arctostaphylos pajaricensis</i>	Pajaro manzanita	Rank 1B.1	Coastal dune scrub	Moderate
<i>Arctostaphylos pumila</i>	sandmat manzanita	Rank 1B.2	Coastal dune scrub	High
<i>Astragalus nuttallii</i> var. <i>nuttallii</i>	ocean bluff milk-vetch	Rank 4.2	Coastal dune scrub	Moderate
<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch	Federal Endangered, State Endangered, Rank 1B.1	Coastal dune scrub	Moderate
<i>Castilleja ambigua</i> var. <i>insalutata</i>	pink Johnny-nip	Rank 1B.1	Coastal dune scrub	Moderate
<i>Castilleja latifolia</i>	Monterey Coast paintbrush	Rank 4.3	Coastal dune scrub	High
<i>Ceanothus rigidus</i>	Monterey ceanothus	Rank 4.2	Coastal dune scrub	Present
<i>Chorizanthe minutiflora</i>	Fort Ord spineflower	Rank 1B.2	Coastal dune scrub	Moderate
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	Federal Threatened, Rank 1B.2	Coastal dune scrub	Present
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	Federal Endangered, Rank 1B.1	Coastal dune scrub	High
<i>Clarkia lewisii</i>	Lewis' clarkia	Rank 4.3	Coastal dune scrub	Moderate
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	State Endangered, Rank 1B.1	Coastal dune scrub	Moderate
<i>Corethrogyne leucophylla</i>	branching beach aster	Rank 3.2	Coastal dune scrub	Present

Scientific Name	Common Name	Status	Potential Habitat	Potential for Occurrence
<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur	Rank 1B.2	Coastal dune scrub	Moderate
<i>Eriastrum virgatum</i>	virgate eriastrum	Rank 4.3	Coastal dune scrub	Moderate
<i>Ericameria fasciculata</i>	Eastwood's goldenbush	Rank 1B.1	Coastal dune scrub	Moderate
<i>Erysimum ammophilum</i>	sand-loving wallflower	Rank 1B.2	Coastal dune scrub	Present
<i>Erysimum menziesii</i>	Menzies' wallflower	Federal Endangered, State Endangered, Rank 1B.1	Coastal dune scrub	Moderate
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	Federal Endangered, State Threatened, Rank 1B.2	Coastal dune scrub	Present
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	Rank 1B.1	Coastal dune scrub	High
<i>Horkelia marinensis</i>	Point Reyes horkelia	Rank 1B.2	Coastal dune scrub	Moderate
<i>Layia carnosa</i>	beach layia	Federal Endangered, State Endangered, Rank 1B.1	Coastal dune scrub	Moderate
<i>Lupinus tidestromii</i>	Tidestrom's lupine	Federal Endangered, State Endangered, Rank 1B.1	Coastal dune scrub	Moderate
<i>Meconella oregana</i>	Oregon meconella	Rank 1B.1	Coastal dune scrub	Moderate
<i>Mondardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	Rank 1B.2	Coastal dune scrub	Moderate
<i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	south coast branching phacelia	Rank 3.2	Coastal dune scrub, coastal saltwater marsh	Present*

Scientific Name	Common Name	Status	Potential Habitat	Potential for Occurrence
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower	Rank 1B.2	Coastal dune scrub	Moderate
<i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>	Hickman's popcornflower	Rank 4.2	Coastal dune scrub	Moderate
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	Rank 1B.2	Coastal dune scrub	High
<i>Trifolium hydrophilum</i>	saline clover	Rank 1B.2	Coastal freshwater marsh	Moderate

*Assumed present but may require verification from a botanist with taxonomic expertise; see discussion below.

Monterey ceanothus (*Ceanothus rigidus*). Rank 4.2. Present (Pond 7). Monterey ceanothus is an evergreen shrub in the buckhorn family (Rhamnaceae) that blooms from February to June, but is typically identifiable by vegetative structures throughout the year. It typically occurs on sand dunes, coastal strand, and sandy bluff habitats at elevations ranging from 0 to 605 feet (CDFW 2020a, CNPS 2020a). Monterey ceanothus was observed in coastal dune scrub in 2014 (The Habitat Group). This species was not observed during the June 2020 site visit; however, this site visit focused primarily on aquatic habitat. Since coastal dune scrub habitat that could support this species is still present and of similar quality, this species should still be considered present at Ponds 1 and 7, with high potential to occur at Ponds 4 and 5, and moderate potential to occur at Pond 3, in coastal dune scrub habitat.

Monterey spineflower (*Chorizanthe pungens* var. *pungens*). Federal Threatened, Rank 1B.2. Present (Ponds 4, 5). Monterey spineflower is an annual forb in the buckwheat family (Polygonaceae) that blooms from April to August. It typically occurs on sandy terraces and bluffs or in loose sand at elevations ranging from 5 to 985 feet (CDFW 2020a, CNPS 2020a). Monterey spineflower was observed at Ponds 4 and 5 in 1994 (The Habitat Group), and at Pond 4 during the June 9, 2020 site visit. Positively identified Monterey spineflower at Pond 4 in June 2020 had already senesced, and therefore could also have been present but not identified at Pond 5. This species should be considered present at Ponds 4 and 5, with moderate potential to occur at Ponds 1, 3 and 7 in coastal dune scrub habitat.

Branching beach aster (*Corethrogyne leucophylla*). Rank 3.2. Present (Ponds 4, 5). Branching beach aster is a perennial herb in the sunflower family (Asteraceae) that blooms May, July through October, and December. It typically occurs in closed-cone coniferous forest and coastal dunes at elevations ranging from 5 to 195 feet (CNPS 2020a). Branching beach aster was observed at Ponds 4 and 5 in 1994 (The Habitat Group), but was not observed during the June 2020 site visits. However, these site visits occurred outside the bloom period for this species, which may have been present but not identifiable. Branching beach aster should be considered present at Ponds 4 and 5, with moderate potential to occur at Ponds 1, 3, and 7 in coastal dune scrub habitat.

Sand-loving wallflower (*Erysimum ammophilum*). Rank 1B.2. Present (Ponds 4, 5). Sand-loving wallflower is a perennial herb in the mustard family (Brassicaceae) that blooms from February to June. It typically occurs in maritime chaparral, coastal dunes, and coastal scrub habitat in sandy openings at elevations ranging from 0 to 195 feet (CDFW 2020a, CNPS 2020a). Sand-loving wallflower was observed at Ponds 4 and 5 in 1994 (The Habitat Group), but was not

observed during the June 2020 site visits. However, these site visits occurred at the end of the bloom period for this species, which may have been present but not identifiable. Sand-loving wallflower should be considered present at Ponds 4 and 5, with moderate potential to occur at Ponds 1, 3 and 7 in coastal dune scrub habitat.

Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*). Federal Endangered, State Threatened, Rank 1B.2. Present (Pond 5). Monterey gilia is an annual forb in the phlox family (Polemoniaceae) that blooms from April to June. It typically occurs in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub habitat in sandy openings in bare wind-sheltered areas, at elevations ranging from 0 to 260 feet (CDFW 2020a, CNPS 2020a). Monterey gilia was observed at Ponds 4 and 5 in 1994 (The Habitat Group), but was not observed during the June 2020 site visits. However, these site visits occurred at the end of the bloom period for this species, which may have been present but not identifiable. Monterey gilia should be considered present at Pond 5, with high potential to occur at Pond 4 and moderate potential to occur at Ponds 1, 3 and 7, in coastal dune scrub habitat.

South Coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*). Rank 3.2. Assumed Present (Pond 4). South coast branching phacelia is a perennial herb in the forget-me-not family (Boraginaceae) that blooms March through August. It typically occurs at sandy, sometimes rocky sites in chaparral, coastal dune, coastal scrub, and coastal saltwater marsh habitat at elevations ranging from 15 to 985 feet. This variety is not currently recognized by the Jepson eFlora (2020), but has been designated as rare by the CNPS. Furthermore, characters distinguishing between varieties of *P. ramosissima* do not work most of the time (CNPS 2020a), and South Coast branching phacelia may require positive identification from a botanist with localized and/or taxonomic expertise. *P. ramosissima* was observed at Ponds 4 and 5 in 1994 (The Habitat Group), prior to the inclusion of South Coast branching phacelia in the CNPS Inventory. *P. ramosissima* was also observed during the June 2020 site visit at Pond 4, and high quality suitable habitat for the species was also observed at Pond 5. Therefore, South Coast branching phacelia should be assumed present at Ponds 4 and 5, with high potential to occur in coastal dune scrub and coastal saltwater marsh habitat associated with Ponds 2, 3, and 7.

4.2.2 Wildlife

Forty-three (43) special-status wildlife species have been documented in the CNDDDB within the Marina, Monterey, Moss Landing, Prunedale, Salinas, Seaside, and Spreckels U.S. Geological Survey 7.5-minute quadrangle maps (Figure 4). Of these documented species, 12 have potential to be present based on the habitat within each of the ponds. The table below identifies which species have potential to occur in each of the surveyed ponds. In addition, special-status bird species not listed in CNDDDB have a moderate potential to occur in the area. No special-status species were directly observed within the Study Area during the site assessment, but those with potential to occur are discussed below.

Table 7. Special-Status Wildlife Species with Potential to Occur within the Study Area

Pond	Special Status Wildlife Species With Potential to Occur
1	Loggerhead Shrike, Monterey Ornate Shrew, Smith's Blue Butterfly California Legless Lizard, Coast Horned Lizard

Pond	Special Status Wildlife Species With Potential to Occur
2	California Red-Legged Frog, Smith's Blue Butterfly, California Legless Lizard, Western Pond Turtle, Peregrine Falcon, Loggerhead Shrike, Yellow Warbler, Tricolored Blackbird, Nuttall's Woodpecker
3a	Peregrine Falcon, Tricolored Blackbird, Western Pond Turtle, Loggerhead Shrike, Monterey Ornate Shrew, Yellow Warbler
3b	Peregrine Falcon, Western Pond Turtle, Loggerhead Shrike, Monterey Ornate Shrew, Yellow Warbler
4	Smith's Blue Butterfly, California Legless Lizard, Coast Horned Lizard, Peregrine Falcon, Loggerhead Shrike, Monterey Ornate Shrew
5	Smith's Blue Butterfly, Western Spadefoot Toad, Coast Horned Lizard, Peregrine Falcon, Loggerhead Shrike, California Legless Lizard
7	Peregrine Falcon, Tricolored Blackbird, Coast Horned Lizard, Loggerhead Shrike

Species with Potential to Occur Within the Study Area

California red-legged frog (*Rana draytonii*), Federal Threatened Species, CDFW Species of Special Concern. The California red-legged frog (CRLF) is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. California red-legged frogs estivate (period of inactivity) during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds.

CRLF has potential to occur in Pond 2, due to the availability of still ponded freshwater, dense riparian vegetation including willow and tule stands, and suitable upland habitat along the western edge of Pond 2.

Coast horned lizard (*Phrynosoma blainvillii*), CDFW Species of Special Concern. The coast horned lizard is a medium-sized lizard with a compressed body and short tail. It is solitary and feeds primarily on harvester ants. Activity patterns are strongly influenced by external temperatures and it hibernates during the winter. Suitable habitat for this species is restricted to southern California and northern Baja California, and includes coastal sage scrub, chaparral, grassland, coniferous forest, oak woodland, riparian, and the margins of higher elevation desert

where it is restricted to juniper-desert chaparral. Within these habitats it seeks areas with loose, fine soils, open spaces, and an abundance of native insects, especially harvester ants. Major threats to the species include habitat loss, off-highway vehicles, livestock grazing, and the introduction of Argentine ants.

Coast horned lizard has potential to occur in Ponds 1, 4, 5 and 7. The margins and upland areas surrounding each of these ponds contains suitable loose soils and prey resources for this species.

Loggerhead shrike (*Lanius ludovicianus*), CDFW Species of Special Concern, USFWS Bird of Conservation Concern. The loggerhead shrike is a year-round resident and winter visitor in lowlands and foothills throughout California. This species is associated with open country with short vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. Although they are songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation, and barbed wire fences. Nests in trees and large shrubs; nests are usually placed three to ten feet off the ground (Shuford and Gardali 2008).

Loggerhead shrike has potential to occur in Ponds 1, 2, 3a, 3b, 4, 5 and 7. These ponds all contain adjacent open habitat with short vegetation suitable for foraging by loggerhead shrike. Additionally, these ponds are surrounded by development with utility lines and other manmade structures that could serve as perches.

Monterey Ornate Shrew (*Sorex ornatus salaries*), CDFW Species of Special Concern. This species is found in riparian, wetland and upland areas in the vicinity of the Salinas River delta. The species prefers moist microhabitats, and feeds on insects and other invertebrates found under logs, rocks, and litter. It is typically found in oak woodlands.

Monterey ornate shrew has potential to occur in Ponds 1, 3 and 4. The dense vegetation and trees on the north side of Pond 4 could provide suitable habitat for this species. Additionally, the similarly dense stand of trees and downed limbs along the east side of Pond 1 could provide suitable habitat for this species.

Nuttall's woodpecker (*Picoides nuttallii*). USFWS Bird of Conservation Concern. Nuttall's Woodpecker is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates.

Nuttall's woodpecker has potential to occur in the upland habitats to the east of Pond 2. Mixed woodlands and larger oak trees have potential to provide suitable foraging and nesting habitat for this species.

California legless lizard (*Anniella pulchra*), CDFW Species of Special Concern. California legless lizard has a spotty distribution ranging from the Coast Ranges in Contra Costa County, California, south to Mexico. This burrowing species is associated with sandy or loose organic soils or areas where there is abundant leaf litter and cover. It often frequents sparsely vegetated areas of beaches, dune habitats, chaparral, pine-oak woodland, stream sides or desert washes. Legless lizards are often found under surface objects that lie barely covered in loose soil, such as logs, rocks, boards and wood rat nests. Because legless lizards are dependent on loose soil and soil moisture; their habitat can be greatly degraded by urbanization, agriculture and non-

native vegetation. The primary source of food for this species is spiders and insects including termites, small lepidopterans, beetles, and insect larvae (Stebbins 2003).

Legless lizard has potential to occur in Ponds 1, 2, 4, 5 and 7. All ponds contain suitable sandy and loose soils, with areas of leaf litter and other cover.

American peregrine falcon (*Falco peregrinus anatum*); Federal Delisted, State Delisted, CDFW Fully Protected, USFWS Bird of Conservation Concern. This large falcon occurs as a generally uncommon resident as well as a winter visitor and migrant throughout much of California. Occupied habitat (both breeding and non-breeding) is highly variable, but this species is typically associated with open areas and/or bodies of water. Nesting typically occurs on the ledges of steep cliffs, or on man-made structures with ledges above sheer faces such as bridges and the tops of buildings (White et. al 2002). The peregrine falcon preys upon a wide variety of animals, mostly birds; on the Pacific coast, waterbirds (e.g., waterfowl, shorebirds and seabirds) are especially favored (White et. al 2002). This species forages over wide areas, even during the breeding season.

American peregrine falcon has the potential to occur in Ponds 2, 3a, 3b, 4, 5, and 7. Associated manmade structures surrounding these ponds have potential to serve as nesting habitat for this species, and surrounding habitat provide suitable foraging for waterfowl and shorebirds to act as prey for this species.

Smith's Blue Butterfly (*Euphilotes enoptes smithi*) Federal Endangered. This species is most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz counties. The hostplants for this species include both coast and sea cliff buckwheat, which are utilized as both larval and adult host plants.

This species has potential to occur in areas surrounding Ponds 1, 2, 4, and 5. The hostplant for this species was observed on the perimeter of each of these ponds.

Tricolored blackbird (*Agelaius tricolor*); State Candidate (Endangered), CDFW Species of Special Concern, USFWS Bird of Conservation Concern. The tricolored blackbird is a locally common resident in the Central Valley and along coastal California. Most tricolored blackbirds reside in the Central Valley March through August, then moving into the Sacramento-San Joaquin Delta and east to Merced County and coastal locations during winter (Meese et al. 2014). This species breeds adjacent to fresh water, preferring emergent wetlands with tall, dense cattails or tules, thickets of willow or blackberry, and/or tall herbs. Flooded agricultural fields with dense vegetation are also used (Shuford and Gardali 2008). This species is highly colonial; nesting habitat must be large enough to support a minimum of 30 pairs, and colonies are commonly substantially larger (up to thousands of pairs). The tricolored blackbird often intermingles with other blackbird species during the non-breeding season. Individuals typically forage up to 5.6 miles (9 kilometers) from their colonies although in most cases only a small part of the area within this range provides suitable foraging (Hamilton and Meese 2006).

Tricolored blackbird has potential to occur in Ponds 2, 3a, and 7. These ponds contained suitable emergent wetland vegetation, including tall cattails and tules, willow thickets and stands of blackberry.

Western pond turtle (*Actinemys marmorata*), CDFW Species of Special Concern. The western pond turtle (WPT) is the only native freshwater turtle in California. This turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-

Cascade crest and Transverse Ranges. WPT inhabits annual and perennial aquatic habitats, such as coastal lagoons, lakes, ponds, marshes, rivers, and streams from sea level to 5,500 feet in elevation. Pond turtles also occupies man-made habitats such as stock ponds, wastewater storage, percolation ponds, canals, and reservoirs. This species requires low-flowing or stagnant freshwater aquatic habitat with suitable basking structures, including rocks, logs, algal mats, mud banks, and sand. Warm, shallow, nutrient-rich waters are ideal as they support prey items, which include aquatic invertebrates and occasionally fish, carrion, and vegetation. Turtles require suitable aquatic habitat for most of the year; however, WPT often occupies creeks, rivers, and coastal lagoons that become seasonally unsuitable. To escape periods of high water flow, high salinity, or prolonged dry conditions, WPT may move upstream and/or take refuge in vegetated, upland habitat for up to four months (Rathbun et al. 2002). Although upland habitat is utilized for refuging and nesting, this species preferentially utilizes aquatic and riparian corridors for movement and dispersal.

WPT nests from late April through July. This species requires open, dry upland habitat with friable soils for nesting and prefer to nest on unshaded slopes within 15 to 330 feet of suitable aquatic habitat (Rathbun et al. 1992). Females venture from water for several hours in the late afternoon or evening during the nesting season to excavate a nest, lay eggs, and bury the eggs to incubate and protect them. Nests are well-concealed, though native mammals are occasionally able to locate and predate upon eggs. Hatchlings generally emerge in late fall but may overwinter in the nest and emerge in early spring of the following year.

WPT has potential to occur in Ponds 2, 3a, and 3b. Each of these ponds contained suitable freshwater aquatic habitat and upland nesting habitat.

Western spadefoot (*Spea hammondi*), CDFW Species of Special Concern. The western spadefoot ranges throughout the Central Valley and adjacent foothills. Suitable habitat consists of open areas with sandy or gravelly soils, and includes grassland, scrubland, woodland, washes, and alluvial fans. This species spends most of the year underground in burrows and similar refugia, and often constructs its own burrows. Breeding occurs in shallow, temporary pools formed by heavy winter rains; at least four weeks of continuous inundation are required for successful larval metamorphosis.

Western spadefoot has potential to occur in Pond 5. This pond contained gravelly soils, and did not contain open water at the time of the site visit, indicating that it likely retains water only after winter rains and dries during the summer and fall months, preventing the establishment of predators that would preclude breeding by this species.

(Brewster's) Yellow warbler (*Setophaga petechia brewsteri*), CDFW Species of Special Concern, USFWS Bird of Conservation Concern. The yellow warbler is a neotropical migrant bird that is widespread in North America, but has declined throughout much of its California breeding range. The Brewster's (*brewsteri*) subspecies is a summer resident and represents the vast majority of yellow warblers that breed in California. West of the Central Valley, typical yellow warbler breeding habitat consists of dense riparian vegetation along watercourses, including wet meadows, with willow growth especially being favored (Shuford and Gardali 2008). Insects comprise the majority of the diet.

Yellow warbler has potential to occur in Pond 2, 3a, and 3b. These ponds contained suitable dense riparian vegetation, including stands of willow.

Critical Habitat

There is no designated critical habitat within the Study Area. Western snowy plover critical habitat is located approximately 0.15 miles west of Pond 4, and California red-legged frog critical habitat is located approximately 9 miles south of the Study Area.

5.0 SUMMARY

Sensitive aquatic biological communities associated with the Marina vernal ponds include coastal freshwater marsh, coastal saltwater marsh, willow riparian forest, freshwater seasonal wetland, coastal dune scrub, rose scrub, and open water. Sensitive upland biological communities, associated with the buffers around the ponds, include coastal dune scrub, California blackberry scrub, and rose scrub. Non-sensitive upland biological communities, also associated with the buffers around the ponds, include non-native grassland, non-native vegetation, native landscaping, and coyote brush scrub.

Of the 74 statewide special-status plant species known to occur in the vicinity of the Study Area, six were assumed to be present, and an additional 26 were determined to have high or moderate potential to occur, within the Study Area, primarily in upland coastal dune habitat. Of the 43 special-status wildlife species known to occur in the vicinity of the Study Area, 12 have the potential to occur. In addition, four species not listed in CNDDB were determined to have a moderate potential to occur. Five of the special-status species with potential to occur are birds which could nest in trees and other vegetation that occurs within the Study Area.

Ponds 2, 3, and 7 now contain pockets of facultative hydrophytic vegetation, not described in the CVCMP, in areas where freshwater runoff from culverts and adjacent paved areas appears to pond against riparian and perennial marsh vegetation. With the exception of increases in the footprint of freshwater seasonal wetland, indicative of urban and road runoff, and riparian willow forest, groundwater-dependent ecosystems within the Study Area remain roughly as described in 1994 (The Habitat Group). The die off of perennial marsh vegetation at Ponds 2 and 7 does not appear to be related to changes in groundwater hydrology.

A high water table was observed at each pond at one or more sample points, and all ponds excluding Ponds 3b and 5 contained open water at the time of the June 2020 site visits, conducted well after the conclusion of the dry season. Willow riparian vegetation, which is dependent upon groundwater, was observed to have either established or increased substantially in footprint at Ponds 1, 2, and 3, and perennial marsh vegetation, which requires a year-round water source, was generally observed to be in good condition at all six ponds. Despite the recent establishment of pockets of freshwater seasonal wetland, all six ponds assessed in this report are reliant upon groundwater and should therefore be considered groundwater-dependent ecosystems. Perennial marsh vegetation and willow riparian vegetation at all six ponds could therefore be adversely affected by future activities that cause groundwater drawdown.

6.0 REFERENCES

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**Appendix A –
Figures**

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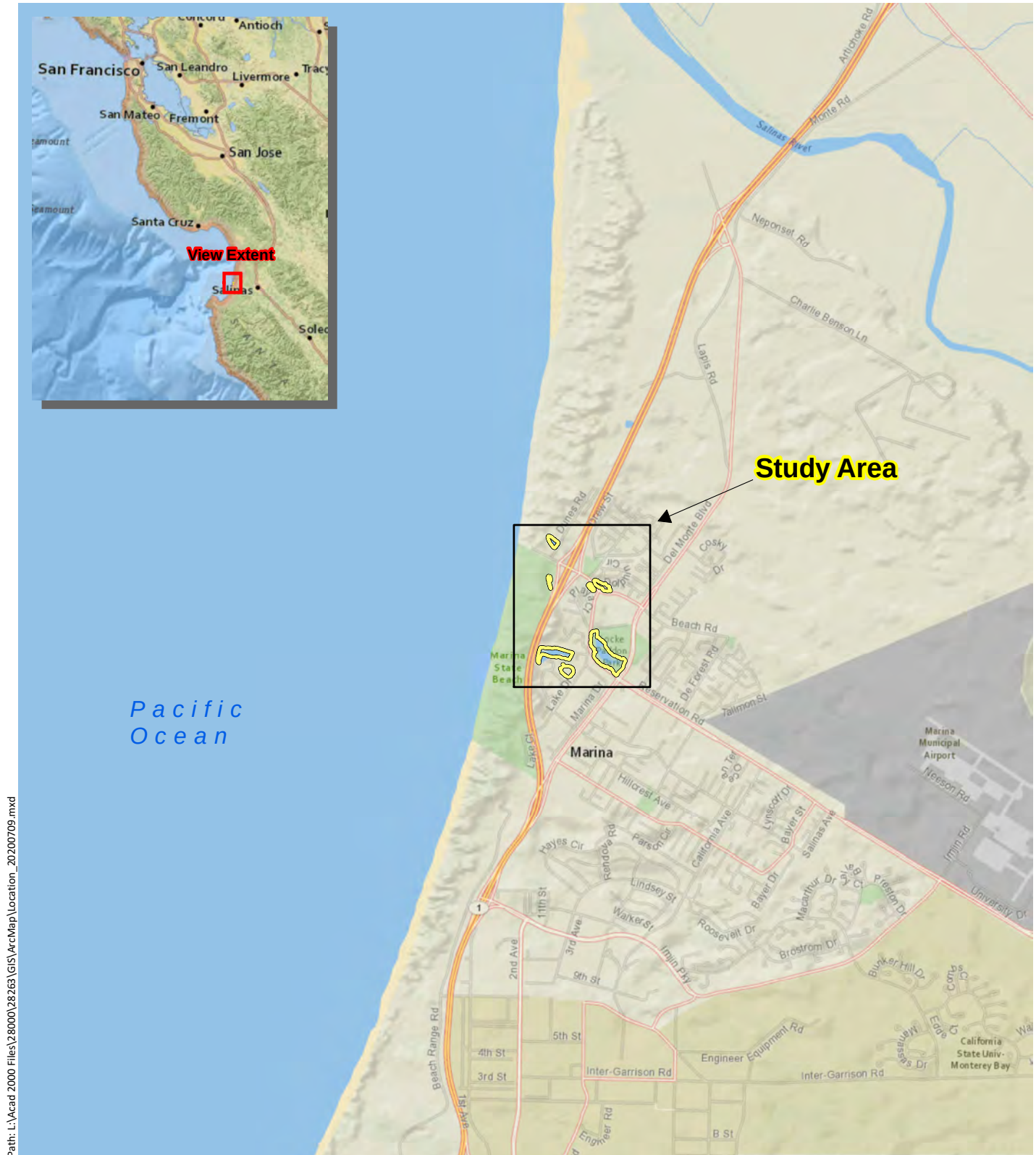


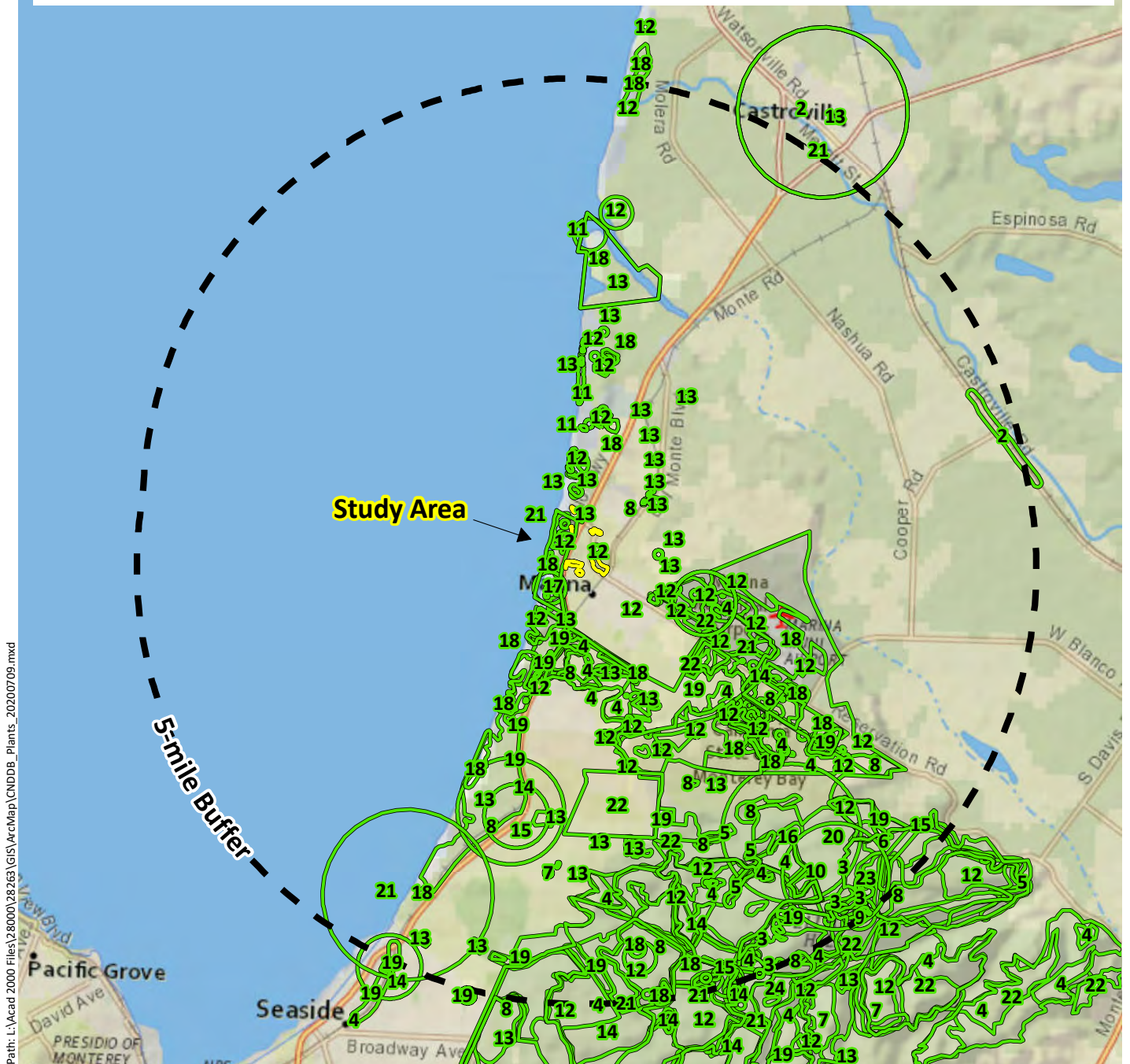
Figure 1. Study Area Regional Location Map



Sources: NAIP 2018 Aerial Imagery, WRA | Prepared By: mweidenbach, 7/20/2020

Figure 2. Pond Overview

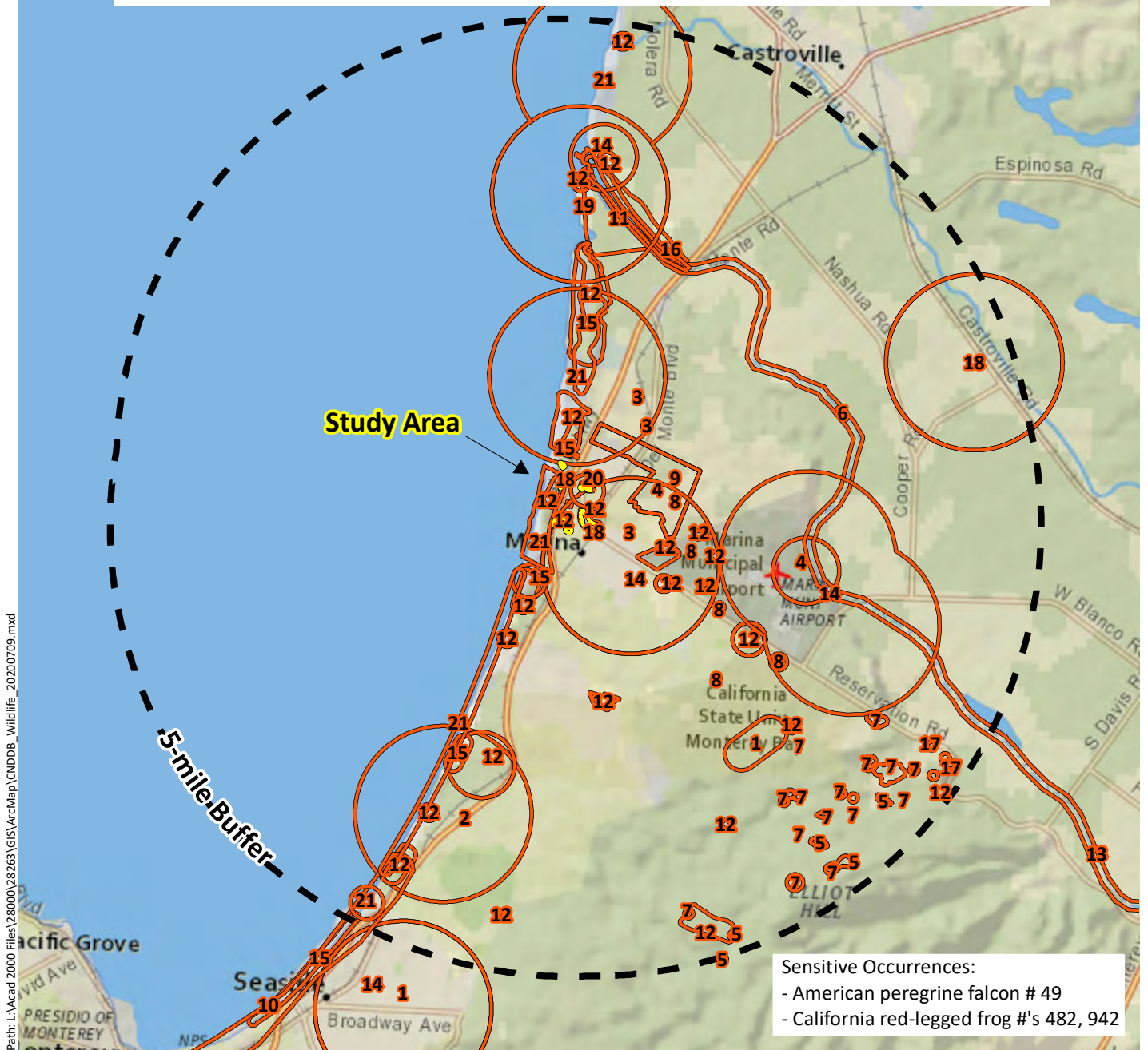
- | | | | | |
|----------------------------|-----------------------|--------------------------------------|----------------------------|----------------------------|
| 1. Choris' popcornflower | 6. Hickman's onion | 11. Menzies' wallflower | 16. pink Johnny-nip | 21. seaside bird's-beak |
| 2. Congdon's tarplant | 7. Hooker's manzanita | 12. Monterey gilia | 17. Point Reyes horkelia | 22. Toro manzanita |
| 3. Contra Costa goldfields | 8. Kellogg's horkelia | 13. Monterey spineflower | 18. sand-loving wallflower | 23. vernal pool bent grass |
| 4. Eastwood's goldenbush | 9. legenere | 14. northern curly-leaved monardella | 19. sandmat manzanita | 24. Yadon's rein orchid |
| 5. Fort Ord spineflower | 10. marsh microseris | 15. Pajaro manzanita | 20. Santa Cruz clover | |



Sources: National Geographic, CNDDB July 2020, WRA | Prepared By: mweidenbach, 7/20/2020

Figure 3. Special-Status Plant Species Documented within 5 Miles of the Study Area

- | | | | |
|-------------------------------|--|------------------------------|--------------------------|
| 1. American badger | 7. California tiger salamander | 13. Pajaro/Salinas hitch | 19. western bumble bee |
| 2. bank swallow | 8. coast horned lizard | 14. Salinas harvest mouse | 20. western pond turtle |
| 3. burrowing owl | 9. ferruginous hawk | 15. Smith's blue butterfly | 21. western snowy plover |
| 4. California horned lark | 10. globose dune beetle | 16. tidewater goby | |
| 5. California linderiella | 11. Monterey shrew | 17. Townsend's big-eared bat | |
| 6. California red-legged frog | 12. northern California legless lizard | 18. tricolored blackbird | |



Sources: National Geographic, CNDDB July 2020, WRA | Prepared By: mweidenbach, 7/13/2020

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

Marina Wetland Assessment
 Marina, Monterey County, California

0 1 2
 Miles

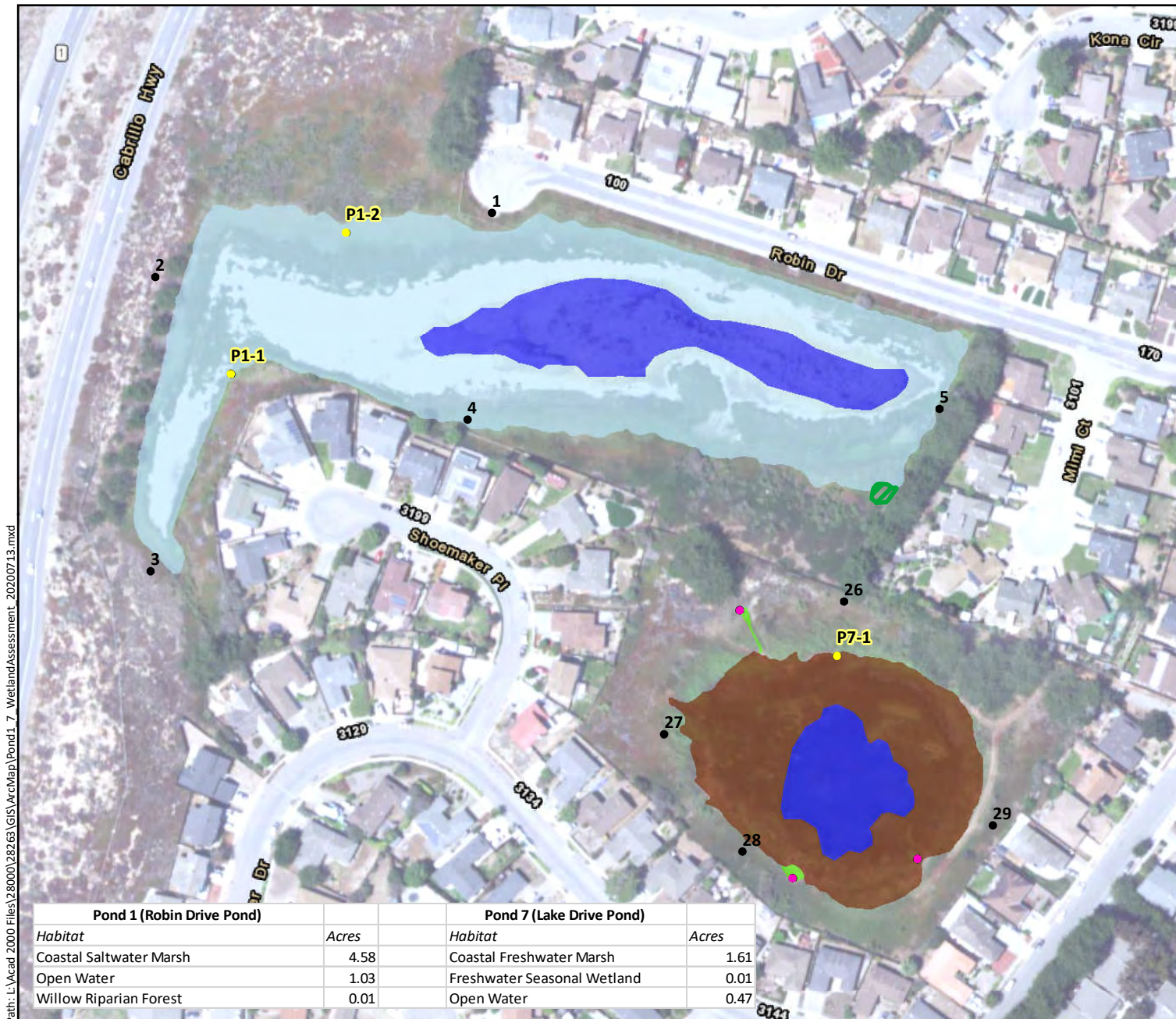


Wetland Habitat Assessment

Pond 1 (Robin Drive Pond) and Pond 7 (Lake Drive Pond)

Figure 5-1

Marina Wetland Assessment
Marina, Monterey County, California



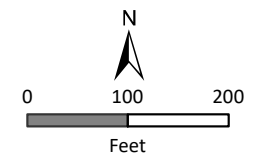
- Soil Sample Point
- Photo Point
- Culvert

Wetlands and Waters

- Coastal Freshwater Marsh (10.34 acres)
- Coastal Saltwater Marsh (5.30 acres)
- Freshwater Seasonal Wetland (0.43 acres)
- Open Water (4.65 acres)

Riparian

- Willow Riparian Forest (3.88 acres)



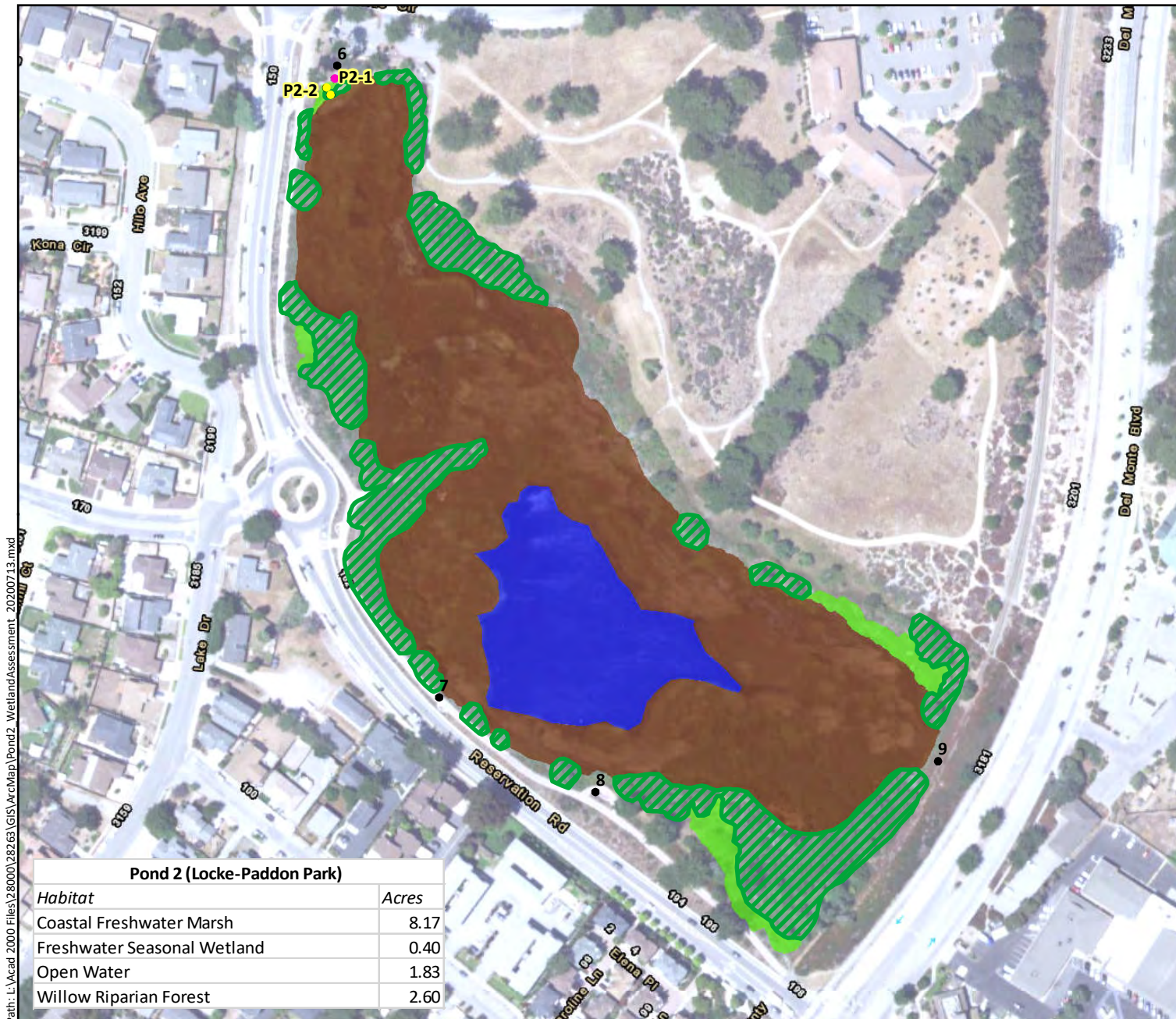
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Sources: NAIP 2018 Aerial Imagery, WRA | Prepared By: mweidenbach, 7/20/2020

Wetland Habitat Assessment Pond 2 (Locke-Paddon Park)

Figure 5-2

Marina Wetland Assessment
Marina, Monterey County, California



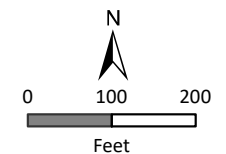
- Soil Sample Point
- Photo Point
- Culvert

Wetlands and Waters

- Coastal Freshwater Marsh (10.34 acres)
- Coastal Saltwater Marsh (5.30 acres)
- Freshwater Seasonal Wetland (0.43 acres)
- Open Water (4.65 acres)

Riparian

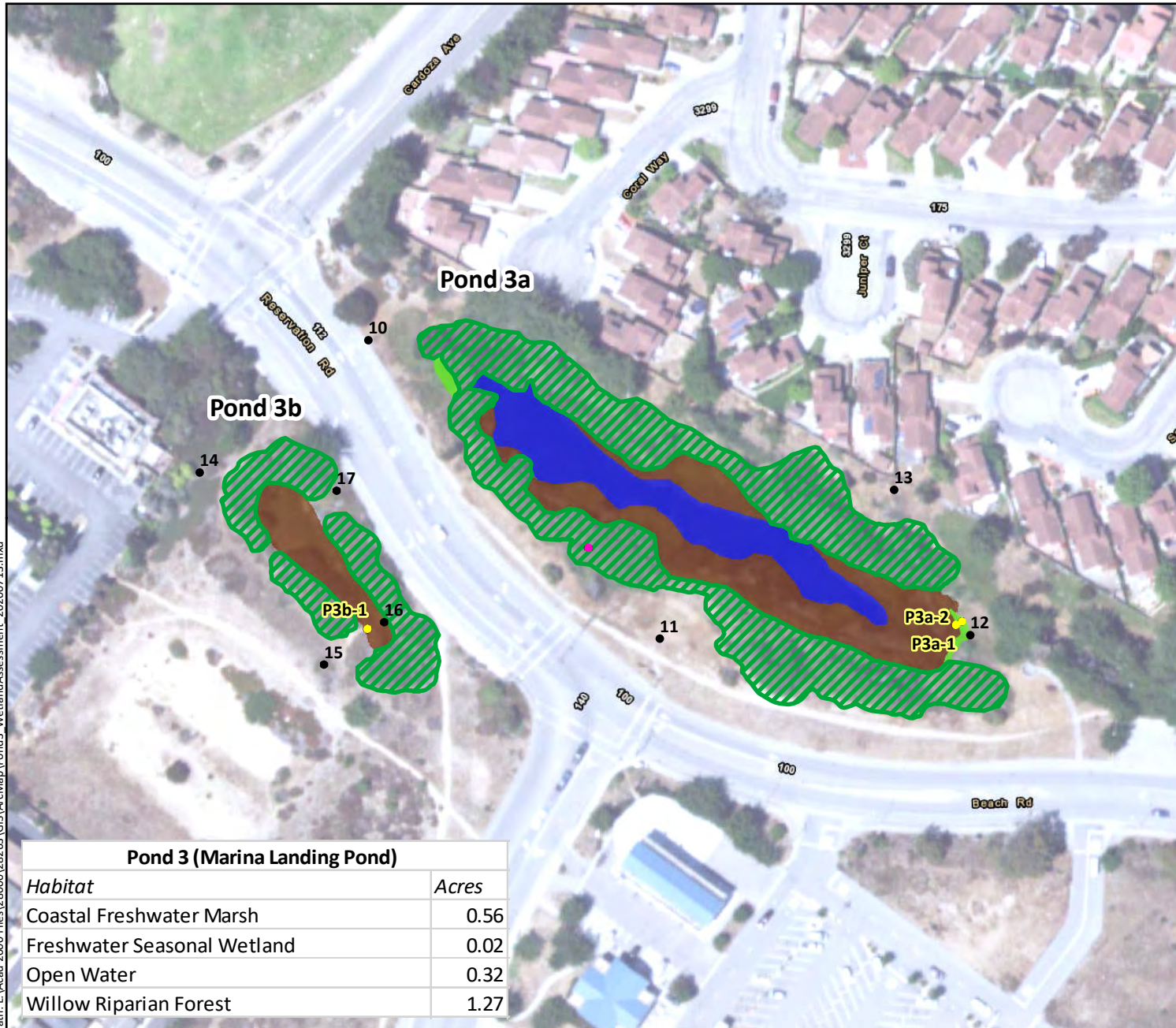
- Willow Riparian Forest (3.88 acres)



Wetland Habitat Assessment Pond 3 (Marina Landing Pond)

Figure 5-3

Marina Wetland Assessment
Marina, Monterey County, California



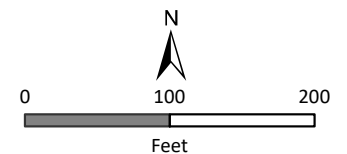
- Soil Sample Point
- Photo Point
- Culvert

Wetlands and Waters

- Coastal Freshwater Marsh (10.34 acres)
- Coastal Saltwater Marsh (5.30 acres)
- Freshwater Seasonal Wetland (0.43 acres)
- Open Water (4.65 acres)

Riparian

- Willow Riparian Forest (3.88 acres)



Wetland Habitat Assessment

Pond 4 (Marina Coast Water District Pond)

Figure 5-4

Marina Wetland Assessment
Marina, Monterey County, California



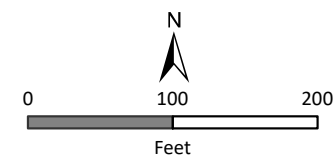
- Soil Sample Point
- Photo Point
- Culvert

Wetlands and Waters

- Coastal Freshwater Marsh (10.34 acres)
- Coastal Saltwater Marsh (5.30 acres)
- Freshwater Seasonal Wetland (0.43 acres)
- Open Water (4.65 acres)

Riparian

- Willow Riparian Forest (3.88 acres)



Pond 4 (Marina Coast Water District Pond)	
Habitat	Acres
Coastal Saltwater Marsh	0.33
Open Water	1.00

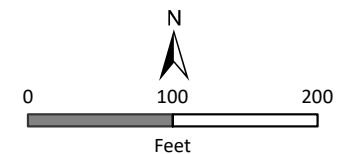
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Sources: NAIP 2018 Aerial Imagery, WRA | Prepared By: mweidenbach, 7/20/2020

Wetland Habitat Assessment Pond 5 (Marina State Beach Pond)

Figure 5-5

Marina Wetland Assessment
Marina, Monterey County, California



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Sources: NAIP 2018 Aerial Imagery, WRA | Prepared By: mweidenbach, 7/20/2020

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**Appendix B –
Observed Plant and Wildlife Species within the Study Area**

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Appendix B-1. List of Plant Species Observed within the Study Area. Ponds 1, 3, and 4 were visited on June 9, 2020; Ponds 2, 5, and 7 were visited on June 18, 2020.

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status ³	Pond Number					
							1	2	3	4	5	7
<i>Abronia umbellata</i>	Beach sand verbena	native	perennial herb	-	-	-					X	
<i>Acacia</i> sp.	Acacia	non-native	tree	-	-	-			X			
<i>Achillea millefolium</i>	Yarrow	native	perennial herb	-	-	FACU		X		X		
<i>Alisma</i> sp.	Water plantain	-	perennial herb	-	-	-						X
<i>Artemisia californica</i>	Coastal sage brush	native	shrub	-	-	-	X	X		X	X	
<i>Atriplex prostrata</i>	Fat-hen	non-native	annual herb	-	-	FACW	X		X			X
<i>Avena barbata</i>	Slim oat	non-native (invasive)	annual, perennial grass	-	Moderate	-	X	X	X			
<i>Baccharis glutinosa</i>	Salt marsh baccharis	native	perennial herb	-	-	FACW	X	X	X	X		X
<i>Baccharis pilularis</i>	Coyote brush	native	shrub	-	-	-	X	X	X	X	X	X
<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	Saltmarsh bulrush	native	perennial grasslike herb	-	-	OBL	X			X	X	X
<i>Bromus diandrus</i>	Ripgut brome	non-native (invasive)	annual grass	-	Moderate	-	X	X	X	X		X
<i>Bromus hordeaceus</i>	Soft chess	non-native (invasive)	annual grass	-	Limited	FACU			X			
<i>Cardionema ramosissimum</i>	Sand mat	native	perennial herb	-	-	-				X		
<i>Carex barbarae</i>	Valley sedge	native	perennial grasslike herb	-	-	FAC		X				
<i>Carex praegracilis</i>	Field sedge	native	perennial grasslike herb	-	-	FACW	X	X		X		

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status ³	Pond Number					
							1	2	3	4	5	7
<i>Carpobrotus chilensis</i>	Sea fig	non-native (invasive)	perennial herb	-	Moderate	FACU	X	X	X	X		X
<i>Carpobrotus edulis</i>	Iceplant	non-native (invasive)	perennial herb	-	High	-	X	X	X	X		X
<i>Centaurea melitensis</i>	Tocalote	non-native (invasive)	annual herb	-	Moderate	-		X		X		
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	native	annual herb	FT, Rank 1B.2	-	-				X		
<i>Cirsium vulgare</i>	Bullthistle	non-native (invasive)	perennial herb	-	Moderate	FACU	X	X				X
<i>Conicosia pugioniformis</i>	False ice plant	non-native (invasive)	perennial herb	-	Limited	-				X		
<i>Conium maculatum</i>	Poison hemlock	non-native (invasive)	perennial herb	-	Moderate	FACW		X	X	X		X
<i>Cotula coronopifolia</i>	Brass buttons	non-native (invasive)	perennial herb	-	Limited	OBL						X
<i>Cyperus eragrostis</i>	Tall cyperus	native	perennial grasslike herb	-	-	FACW		X	X		X	X
<i>Delairea odorata</i>	Cape ivy	non-native (invasive)	perennial herb	-	High	-		X	X			
<i>Distichlis spicata</i>	Salt grass	native	perennial grass	-	-	FAC	X	X	X	X	X	
<i>Dudleya caespitosa</i>	Sand lettuce	native	perennial herb	-	-	-				X		
<i>Echium candicans</i>	Pride of madeira	non-native (invasive)	shrub	-	Limited	-		X				
<i>Ehrharta erecta</i>	Upright veldt grass	non-native (invasive)	perennial grass	-	Moderate	-	X		X			
<i>Eleocharis macrostachya</i>	Spike rush	native	perennial grasslike herb	-	-	OBL			X			
<i>Elymus triticoides</i>	Beardless wild rye	native	perennial grass	-	-	FAC	X	X	X			

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status ³	Pond Number					
							1	2	3	4	5	7
<i>Epilobium ciliatum</i>	Slender willow herb	native	perennial herb	-	-	FACW	X		X	X		
<i>Ericameria ericoides</i>	Mock heather	native	shrub	-	-	-						
<i>Erigeron canadensis</i>	Canada horseweed	native	annual herb	-	-	FACU		X				
<i>Eriogonum fasciculatum</i>	California buckwheat	native	shrub	-	-	-			X			
<i>Eriogonum latifolium</i>	Coast buckwheat	native	perennial herb	-	-	-				X	X	
<i>Eriogonum parvifolium</i>	Sea cliff buckwheat	native	shrub	-	-	-		X				
<i>Eriophyllum staechadifolium</i>	Lizard tail	native	perennial herb	-	-	-		X		X		
<i>Erodium cicutarium</i>	Red stemmed filaree	non-native (invasive)	annual herb	-	Limited	-				X		
<i>Eschscholzia californica</i>	California poppy	native	annual, perennial herb	-	-	-			X			
<i>Eucalyptus globulus</i>	Blue gum	non-native (invasive)	tree	-	Limited	-				X		
<i>Euphorbia</i> sp.	Spurge	-	-	-	-	-	X					
<i>Euthamia occidentalis</i>	Western goldenrod	native	perennial herb	-	-	FACW		X			X	
<i>Festuca myuros</i>	Rattail sixweeks grass	non-native (invasive)	annual grass	-	Moderate	FACU		X		X		
<i>Festuca perennis</i>	Italian rye grass	non-native (invasive)	annual, perennial grass	-	Moderate	FAC		X	X			
<i>Foeniculum vulgare</i>	Fennel	non-native (invasive)	perennial herb	-	High	-	X	X				
<i>Frangula californica</i>	California coffeeberry	native	shrub	-	-	-			X			
<i>Frankenia salina</i>	Alkali heath	native	perennial herb	-	-	FACW	X	X	X	X	X	X
<i>Fumaria</i> sp.	Fumitory	-	-	-	-	-						X

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status ³	Pond Number					
							1	2	3	4	5	7
<i>Genista monspessulana</i>	French broom	non-native (invasive)	shrub	-	High	-		X				
<i>Geranium dissectum</i>	Wild geranium	non-native (invasive)	annual herb	-	Limited	-						X
<i>Hedera helix</i>	English ivy	non-native (invasive)	vine, shrub	-	High	FACU		X				
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	Seaside heliotrope	native	perennial herb	-	-	FACU	X				X	
<i>Helminthotheca echioides</i>	Bristly ox-tongue	non-native (invasive)	annual, perennial herb	-	Limited	FAC		X				X
<i>Hesperocyparis macrocarpa</i>	Monterey cypress	native	tree	Rank 1B.2	-	-	X	X	X	X	X	X
<i>Heteromeles arbutifolia</i>	Toyon	native	shrub	-	-	-			X			
<i>Heterotheca grandiflora</i>	Telegraph weed	native	annual, perennial herb	-	-	-	X	X	X			
<i>Hirschfeldia incana</i>	Short-podded mustard	non-native (invasive)	perennial herb	-	Moderate	-				X	X	
<i>Holcus lanatus</i>	Common velvetgrass	non-native (invasive)	perennial grass	-	Moderate	FAC		X	X			X
<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley	non-native (invasive)	annual grass	-	Moderate	FAC			X			
<i>Hordeum murinum</i>	Foxtail barley	non-native (invasive)	annual grass	-	Moderate	FACU		X				
<i>Hydrocotyle</i> sp.	Pennywort	-	-	-	-	-						X
<i>Jaumea carnosa</i>	Marsh jaumea	native	perennial herb	-	-	OBL	X	X				
<i>Juncus breweri</i>	Brewer's rush	native	perennial grasslike herb	-	-	FACW	X	X	X	X	X	X
<i>Juncus bufonius</i>	Common toad rush	native	annual grasslike herb	-	-	FACW						X

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status ³	Pond Number					
							1	2	3	4	5	7
<i>Juncus effusus</i>	Common bog rush	native	perennial grasslike herb	-	-	FACW	X	X	X			
<i>Juncus patens</i>	Common rush	native	perennial grasslike herb	-	-	FACW	X					
<i>Juniperus osteosperma</i>	Utah juniper	native	tree, shrub	-	-	-	X					
<i>Lactuca serriola</i>	Prickly lettuce	non-native	annual herb	-	-	FACU			X			
<i>Lobularia maritima</i>	Sweet alyssum	non-native (invasive)	perennial herb	-	Limited	-		X		X		
<i>Lupinus arboreus</i>	Coastal bush lupine	native	shrub	-	-	-		X	X		X	
<i>Lysimachia arvensis</i>	Scarlet pimpernel	non-native	annual herb	-	-	FAC		X				X
<i>Malva parviflora</i>	Cheeseweed	non-native	annual herb	-	-	-			X			
<i>Medicago polymorpha</i>	Bur clover	non-native (invasive)	annual herb	-	Limited	FACU		X	X			X
<i>Melilotus indicus</i>	Annual yellow sweetclover	non-native	annual herb	-	-	FACU		X	X			
<i>Mimulus</i> sp.	-	-	-	-	-	-		X				
<i>Myoporum laetum</i>	Ngaio tree	non-native (invasive)	tree, shrub	-	Moderate	FACU	X		X			
<i>Nasturtium officinale</i>	Watercress	native	perennial herb (aquatic)	-	-	OBL						X
<i>Persicaria punctata</i>	Dotted smartweed	native	perennial herb	-	-	OBL					X	X
<i>Phacelia ramosissima</i>	Branching phacelia	native	perennial herb	-	-	FACU				X		
<i>Phalaris</i> sp.	-	-	-	-	-	-		X				
<i>Pinus radiata</i>	Monterey pine	native	tree	Rank 1B.1	-	-	X					

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status ³	Pond Number					
							1	2	3	4	5	7
<i>Plantago coronopus</i>	Cut leaf plantain	non-native	annual herb	-	-	FAC						X
<i>Plantago major</i>	Common plantain	non-native	perennial herb	-	-	FAC		X				X
<i>Plantago lanceolata</i>	Ribwort	non-native (invasive)	perennial herb	-	Limited	FAC		X				
<i>Poa annua</i>	Annual blue grass	non-native	annual grass	-	-	FAC						X
<i>Polygonum aviculare</i>	Prostrate knotweed	non-native	annual, perennial herb	-	-	FAC		X				X
<i>Polypogon monspeliensis</i>	Annual beard grass	non-native (invasive)	annual grass	-	Limited	FACW	X	X	X	X	X	X
<i>Portulaca oleracea</i>	Common purslane	non-native	annual herb	-	-	FAC		X				
<i>Potentilla anserina</i>	Silver weed cinquefoil	native	perennial herb	-	-	OBL	X	X	X		X	X
<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	non-native	annual herb	-	-	FAC		X		X		X
<i>Quercus agrifolia</i>	Coast live oak	native	tree	-	-	-		X				
<i>Raphanus sativus</i>	Wild radish	non-native (invasive)	annual, biennial herb	-	Limited	-	X	X	X	X		X
<i>Rosa californica</i>	California wild rose	native	shrub	-	-	FAC				X	X	
<i>Rubus armeniacus</i>	Himalayan blackberry	non-native (invasive)	shrub	-	High	FAC				X		
<i>Rubus ursinus</i>	California blackberry	native	vine, shrub	-	-	FAC		X	X	X	X	X
<i>Rumex crispus</i>	Curly dock	non-native (invasive)	perennial herb	-	Limited	FAC	X	X	X		X	X
<i>Salicornia pacifica</i>	Pickleweed	native	perennial herb	-	-	OBL	X			X	X	
<i>Salix babylonica</i>	Weeping willow	non-native	tree	-	-	FAC		X				
<i>Salix laevigata</i>	Red willow	native	tree	-	-	FACW		X				

Scientific Name	Common Name	Origin	Form	Rarity Status ¹	CAL-IPC Status ²	Wetland Status ³	Pond Number					
							1	2	3	4	5	7
<i>Salix lasiolepis</i>	Arroyo willow	native	tree, shrub	-	-	FACW	X	X	X			X
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry	native	shrub	-	-	FAC		X				
<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	Tule	native	perennial grasslike herb	-	-	OBL		X	X			X
<i>Schoenoplectus americanus</i>	Chairmaker's bulrush	native	perennial grasslike herb	-	-	OBL	X	X	X			X
<i>Solanum americanum</i>	White nightshade	native	annual, perennial herb	-	-	FACU					X	
<i>Solanum umbelliferum</i>	Blue witch	native	shrub	-	-	-					X	
<i>Sonchus arvensis</i>	Perennial sow thistle	non-native	perennial herb	-	-	FACU	X	X		X		X
<i>Sonchus oleraceus</i>	Common sow thistle	non-native	annual herb	-	-	UPL		X	X		X	
<i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	non-native (invasive)	perennial grass	-	Limited	-	X					
<i>Tetragonia tetragonoides</i>	New Zealand spinach	non-native (invasive)	-	-	Limited	-		X	X	X		
<i>Toxicodendron diversilobum</i>	Poison oak	native	vine, shrub	-	-	FACU				X		
<i>Typha latifolia</i>	Broadleaf cattail	native	perennial herb (aquatic)	-	-	OBL	X	X				X
<i>Urtica dioica</i>	Stinging nettle	native	perennial herb	-	-	FAC		X	X			X
<i>Vicia sativa</i>	Spring vetch	non-native	annual herb, vine	-	-	FACU			X			

All species identified using the *Jepson Flora Project* (Jepson eFlora 2020); nomenclature follows Jepson eFlora. Sp.: "species", intended to indicate that the observer was confident in the identity of the genus but uncertain which species.

¹Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2020a)

FE: Federal Endangered

FT: Federal Threatened

SE: State Endangered
 ST: State Threatened
 SR: State Rare
 Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
 Rank 1B: Plants rare, threatened, or endangered in California and elsewhere
 (*Rank 1B: Rare in native stands only)
 Rank 2A: Plants presumed extirpated in California, but more common elsewhere
 Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
 Rank 3: Plants about which we need more information – a review list
 Rank 4: Plants of limited distribution – a watch list

²Invasive Status: California Invasive Plant Inventory (Cal-IPC 2020)

High: Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
 Moderate: Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited-moderate distribution ecologically
 Limited: Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
 Assessed: Assessed by Cal-IPC and determined to not be an existing current threat

³Wetland Status: National List of Plant Species that Occur in Wetlands, Arid West Region (Lichvar et al. 2016)

OBL: Almost always a hydrophyte, rarely in uplands
 FACW: Usually a hydrophyte, but occasionally found in uplands
 FAC: Commonly either a hydrophyte or non-hydrophyte
 FACU: Occasionally a hydrophyte, but usually found in uplands
 UPL: Rarely a hydrophyte, almost always in uplands
 NL: Rarely a hydrophyte, almost always in uplands
 - : No information

**Appendix C –
Special-Special-Status Plant and Wildlife Species Database Search Results for the Study
Area**

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Attachment B-2. List of Wildlife Species Observed within the Study Area. Ponds 1, 3, and 4 were visited on June 9, 2020; Ponds 2, 5, and 7 were visited on June 18, 2020.

Common Name	Scientific Name	Status	Pond Number						
			1	2	3	4	5	7	
Birds									
American crow	<i>Corvus brachyrhynchos</i>	No status	X	X			X	X	
Anna's hummingbird	<i>Calypte anna</i>	No status		X					
Barn swallow	<i>Hirundo rustica</i>	No status	X	X	X				
Black-necked stilt	<i>Himantopus mexicanus</i>	No status	X					X	
Black phoebe	<i>Sayornis nigricans</i>	No status	X		X	X		X	
Bollocks oriole	<i>Icterus bullockii</i>	No status		X					
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	No status		X					
California towhee	<i>Melozone crissalis</i>	No status		X					
American coot	<i>Fulica americana</i>	No status						X	
European starling	<i>Sturnus vulgaris</i>	No status			X	X			
Gull, sp	<i>Larinae sp.</i>	No status	X	X	X	X	X	X	
House sparrow	<i>Passer domesticus</i>	No status				X			
Killdeer	<i>Charadrius vociferus</i>	No status	X						
Mallard	<i>Anas platyrhynchos</i>	No status	X	X	X			X	
Mourning dove	<i>Zenaida macroura</i>	No status		X	X				
Red-tailed hawk	<i>Buteo jamaicensis</i>	No status			X				
Red-winged blackbird	<i>Agelaius phoeniceus</i>	No status		X	X				
Scrub jay	<i>Aphelocoma californica</i>	No status		X					
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	No status		X					
Wrentit	<i>Chamaea fasciata</i>	BCC						X	
Reptiles and Amphibians									
Bullfrog	<i>Lithobates catesbeianus</i>	No status			X				
Coast gartersnake	<i>Thamnophis elegans terrestris</i>	No status	X						
Lizard, sp	<i>Lacertilia, sp.</i>	No status				X			
California tree frog	<i>Pseudacris cadaverina</i>	No status		X				X	
Western fence lizard	<i>Sceloporus occidentalis</i>	No status		X		X	X		
Mammals									
Cat	<i>Felis catus</i>	No status		X					
Ground squirrel	<i>Marmotini</i>	No status		X		X			
Jack rabbit	<i>Lepus</i>	No status				X			
Brush rabbit	<i>Sylvilagus bachmani</i>	No status					X		
Raccoon	<i>Procyon lotor</i>	No status	X						
Rat. sp	<i>Rattus</i>	No status				X			

Common Name	Scientific Name	Status	Pond Number					
			1	2	3	4	5	7
Short-tailed weasel	<i>Mustela erminea</i>	No status				X		
Fish								
Mosquito fish	<i>Gambusia affinis</i>	No status		X	X			X
Invertebrates								
Western bumble bee	<i>Bombus occidentalis</i>	SC				X		
Garden snail	<i>Cornu aspersum</i>	No status			X			
Red-swamp crayfish	<i>Procambarus clarkii</i>	No status	X		X			
Shoulderband snail, sp	<i>Helminthoglypta walkeriana</i>	No status				X		
Silver spotted tiger moth	<i>Lophocampa argentata</i>	No status				X		
Spotted cucumber beetle	<i>Diabrotica undecimpunctata</i>	No status				X		
Striped green sweat bee	<i>Agapostemon viriscens</i>	No status				X		
Yellowfaced bumblebee	<i>Bombus vosnesenskii</i>	No status	X					
Key to status codes: FC Federal Candidate for Listing FE Federal Endangered BGEPA Bald and Golden Eagle Protection Act Species FT Federal Threatened SC (E/T) State Candidate for Listing (Endangered/Threatened) SE State Endangered SFP State Fully Protected Animal SR State Rare SSC State Species of Special Concern ST State Threatened Rank 1A CNPS Rank 1A: Plants presumed extinct in California Rank 1B CNPS Rank 1B: Plants rare, threatened or endangered in California and elsewhere Rank 2A CNPS Rank 2A: Plants presumed extirpated in California, but more common elsewhere Rank 2B CNPS Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere Rank 3 CNPS Rank 3: Plants about which CNPS needs more information (a review list) Rank 4 CNPS Rank 4: Plants of limited distribution (a watch list) WBWG Western Bat Working Group High or Medium-high Priority Species WL CDFW Watch List								

Appendix C. Special-status Species Known to Occur in the Project Area Vicinity. List compiled from the California Department of Fish and Wildlife Natural Diversity Database (CDFW 2020a), U.S. Fish and Wildlife Service Information for Planning and Conservation Database (USFWS 2020b), U.S. Fish and Wildlife Service Threatened and Endangered Species Lists, and California Native Plant Society Electronic Inventory of Rare and Endangered Plants (CNPS 2020a) for the Marina, Monterey, Seaside, Spreckels, Salinas, Prunedale, and Moss Landing USGS 7.5' quadrangles.

SCIENTIFIC NAME	COMMON NAME	STATUS*
PLANTS		
<i>Agrostis lacuna-vernalis</i>	vernal pool bent grass	Rank 1B.1
<i>Allium hickmanii</i>	Hickman's onion	Rank 1B.2
<i>Allium howellii</i> var. <i>howellii</i>	Howell's onion	Rank 4.3
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	Rank 1B.2
<i>Arctostaphylos montereyensis</i>	Toro manzanita	Rank 1B.2
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	Rank 1B.1
<i>Arctostaphylos pumila</i>	sandmat manzanita	Rank 1B.2
<i>Astragalus nuttallii</i> var. <i>nuttallii</i>	ocean bluff milk-vetch	Rank 4.2
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	Rank 1B.2
<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch	FE, SE, Rank 1B.1
<i>Bryoria spiralifera</i>	twisted horsehair lichen	Rank 1B.1
<i>Castilleja ambigua</i> var. <i>insalutata</i>	pink Johnny-nip	Rank 1B.1
<i>Castilleja latifolia</i>	Monterey Coast paintbrush	Rank 4.3
<i>Ceanothus gloriosus</i> var. <i>gloriosus</i>	Point Reyes ceanothus	Rank 4.3
<i>Ceanothus rigidus</i>	Monterey ceanothus	Rank 4.2
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	Rank 1B.1
<i>Chorizanthe douglasii</i>	Douglas' spineflower	Rank 4.3
<i>Chorizanthe minutiflora</i>	Fort Ord spineflower	Rank 1B.2
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	FT, Rank 1B.2
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	FE, Rank 1B.1
<i>Clarkia jolonensis</i>	Jolon clarkia	Rank 1B.2
<i>Clarkia lewisii</i>	Lewis' clarkia	Rank 4.3

SCIENTIFIC NAME	COMMON NAME	STATUS*
<i>Collinsia multicolor</i>	San Francisco collinsia	Rank 1B.2
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	SE, Rank 1B.1
<i>Corethrogyne leucophylla</i>	branching beach aster	Rank 3.2
<i>Cryptantha rattanii</i>	Rattan's cryptantha	Rank 4.3
<i>Delphinium californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur	Rank 1B.2
<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur	Rank 1B.2
<i>Delphinium umbraculorum</i>	umbrella larkspur	Rank 1B.3
<i>Eriastrum virgatum</i>	virgate eriastrum	Rank 4.3
<i>Ericameria fasciculata</i>	Eastwood's goldenbush	Rank 1B.1
<i>Eriogonum elegans</i>	elegant wild buckwheat	Rank 4.3
<i>Eriogonum nortonii</i>	Pinnacles buckwheat	Rank 1B.3
<i>Erysimum ammophilum</i>	sand-loving wallflower	Rank 1B.2
<i>Erysimum menziesii</i>	Menzies' wallflower	FE, SE, Rank 1B.1
<i>Fritillaria liliacea</i>	fragrant fritillary	Rank 1B.2
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	FE, ST, Rank 1B.2
<i>Grindelia hirsutula</i> var. <i>maritima</i>	San Francisco gumplant	Rank 3.2
<i>Hesperocyparis govenia</i>	Gowen cypress	FT, Rank 1B.2
<i>Hesperocyparis macrocarpa</i>	Monterey cypress	Rank 1B.2**
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	FT, SE, Rank 1B.1
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	Rank 1B.1
<i>Horkelia marinensis</i>	Point Reyes horkelia	Rank 1B.2
<i>Iris longipetala</i>	coast iris	Rank 4.2
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE, Rank 1B.1
<i>Layia carnosa</i>	beach layia	FE, SE, Rank 1B.1
<i>Legenere limosa</i>	legenere	Rank 1B.1
<i>Lomatium parvifolium</i>	small-leaved lomatium	Rank 4.2

SCIENTIFIC NAME	COMMON NAME	STATUS*
<i>Lupinus tidestromii</i>	Tidestrom's lupine	FE, SE, Rank 1B.1
<i>Malacothamnus palmeri</i> var. <i>involucratus</i>	Carmel Valley bush-mallow	Rank 1B.2
<i>Malacothamnus palmeri</i> var. <i>palmeri</i>	Santa Lucia bush-mallow	Rank 1B.2
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix	Rank 1B.2
<i>Meconella oregana</i>	Oregon meconella	Rank 1B.1
<i>Micropus amphibolus</i>	Mt. Diablo cottonweed	Rank 3.2
<i>Microseris paludosa</i>	marsh microseris	Rank 1B.2
<i>Mondardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	Rank 1B.2
<i>Monolopia gracilens</i>	woodland woolythreads	Rank 1B.2
<i>Ophioglossum californicum</i>	California adder's-tongue	Rank 4.2
<i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	south coast branching phacelia	Rank 3.2
<i>Pinus radiata</i>	Monterey pine	Rank 1B.1**
<i>Piperia michaelii</i>	Michael's rein orchid	Rank 4.2
<i>Piperia yadonii</i>	Yadon's rein orchid	FE, Rank 1B.1
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower	Rank 1B.2
<i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>	Hickman's popcornflower	Rank 4.2
<i>Potentilla hickmanii</i>	Hickman's cinquefoil	FE, SE, Rank 1B.1
<i>Ramalina thrausta</i>	angel's hair lichen	Rank 2B.1
<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	Rank 4.2
<i>Rosa pinetorum</i>	pine rose	Rank 1B.2
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	Rank 4.2
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	Rank 1B.2
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	Rank 1B.1
<i>Trifolium hydrophilum</i>	saline clover	Rank 1B.2
<i>Trifolium polyodon</i>	Pacific Grove clover	SR, Rank 1B.1
<i>Trifolium trichocalyx</i>	Monterey clover	FE, SE, Rank 1B.1

SCIENTIFIC NAME	COMMON NAME	STATUS*
WILDLIFE		
Mammals		
<i>Enhydra lutris nereis</i>	Southern Sea Otter	FT
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	SSC, WBWG High
<i>Eumetopias jubatus</i>	Steller (=northern) sea-lion	MMPA, FD
<i>Lasiurus cinereus</i>	hoary bat	WBWG Medium
<i>Neotoma macrotis luciana</i>	Monterey dusky-footed woodrat	SSC
<i>Sorex ornatus salarius</i>	Monterey shrew	SSC
<i>Taxidea taxus</i>	American badger	SSC
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	WBWG High, SSC
Birds		
<i>Gymnogyps californianus</i>	California Condor	FE
<i>Vireo bellii pusillus</i>	Least Bell's Vireo	FE, SE
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	FT, SE
<i>Empidonax traillii extimus</i>	Southwestern Willow Flycatcher	FE, SE
<i>Chamaea fasciata</i>	Wrentit	BCC
<i>Pica nuttalli</i>	Yellow-billed Magpie	BCC
<i>Synthliboramphus scrippsi</i>	Scripps's Murrelet	FT, ST, BCC
<i>Charadrius nivosus nivosus</i>	Western Snowy Plover	FT, SSC, BCC, RP
<i>Agelaius tricolor</i>	tricolored blackbird	ST, SSC, BCC, RP
<i>Asio flammeus</i>	short-eared owl	SSC
<i>Athene cunicularia</i>	burrowing owl	SSC, BCC
<i>Buteo regalis</i>	ferruginous hawk	BCC
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT, SSC, BCC, RP
<i>Coturnicops noveboracensis</i>	yellow rail	BCC, SSC
<i>Cypseloides niger</i>	black swift	SSC, BCC

SCIENTIFIC NAME	COMMON NAME	STATUS*
<i>Elanus leucurus</i>	white-tailed kite	CFP
<i>Eremophila alpestris actia</i>	California horned lark	DFG:WL
<i>Falco mexicanus</i>	prairie falcon	BCC
<i>Falco peregrinus anatum</i>	American peregrine falcon	FD, SD, CFP, BCC
<i>Laterallus jamaicensis coturniculus</i>	California black rail	ST, CFP
<i>Pelecanus occidentalis californicus</i>	California brown pelican	FD, SD, CFP
<i>Rallus obsoletus obsoletus</i>	California Ridgway's rail	FE, SE, CFP
<i>Riparia riparia</i>	bank swallow	ST
<i>Baeolophus inornatus</i>	Oak Titmouse	BCC
<i>Picoides nuttallii</i>	Nuttall's Woodpecker	BCC
<i>Sterna antillarum</i>	Least Tern	FE, SE, CFP
<i>Carduelis lawrencei</i>	Lawrence's Goldfinch	BCC
<i>Aechmophorus clarkii</i>	Clark's Grebe	BCC
<i>Rynchops niger</i>	Black Skimmer	BCC, SSC
<i>Haematopus bachmani</i>	Black Oystercatcher	BCC
<i>Selasphorus sasin</i>	Allen's Hummingbird	BCC
Reptiles and Amphibians		
<i>Ambystoma californiense</i>	California tiger salamander	FE/FT, ST, RP
<i>Ambystoma macrodactylum croceum</i>	Santa Cruz long-toed salamander	FE, SE, CFP
<i>Rana boylei</i>	foothill yellow-legged frog	SC, SSC
<i>Rana draytonii</i>	California red-legged frog	FT, SSC, RP
<i>Spea hammondi</i>	western spadefoot	SSC
<i>Taricha torosa</i>	Coast Range newt	SSC
<i>Anniella pulchra</i>	northern California legless lizard	SSC, FS sensitive
<i>Emys marmorata</i>	western pond turtle	SSC
<i>Phrynosoma blainvillii</i>	coast horned lizard	SSC

SCIENTIFIC NAME	COMMON NAME	STATUS*
<i>Thamnophis hammondi</i>	two-striped gartersnake	SSC
Fishes		
<i>Eucyclogobius newberryi</i>	tidewater goby	FE, SSC
<i>Lavinia exilicauda harengus</i>	Pajaro/Salinas hitch	SSC
<i>Oncorhynchus mykiss irideus</i> pop. 9	steelhead - south-central California coast DPS	FT
<i>Spirinchus thaleichthys</i>	longfin smelt	FC, ST
Invertebrates		
<i>Branchinecta lynchi</i>	Vernal Pool Fairy Shrimp	FT, SSI, RP
<i>Linderiella occidentalis</i>	California linderiella	SSI
<i>Bombus occidentalis</i>	western bumble bee	SC
<i>Danaus plexippus</i> pop. 1	monarch - California overwintering population	SSI
<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	FE, SSI
*Key to status codes: FC Federal Candidate for Listing FE Federal Endangered BGEPA Bald and Golden Eagle Protection Act Species FT Federal Threatened SC (E/T) State Candidate for Listing (Endangered/Threatened) SE State Endangered SFP State Fully Protected Animal SR State Rare SSC State Species of Special Concern ST State Threatened Rank 1A CNPS Rank 1A: Plants presumed extinct in California Rank 1B CNPS Rank 1B: Plants rare, threatened or endangered in California and elsewhere Rank 2A CNPS Rank 2A: Plants presumed extirpated in California, but more common elsewhere Rank 2B CNPS Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere Rank 3 CNPS Rank 3: Plants about which CNPS needs more information (a review list) Rank 4 CNPS Rank 4: Plants of limited distribution (a watch list) WBWG Western Bat Working Group High or Medium-high Priority Species WL CDFW Watch List **Rare status rank applies to native stands only. All Monterey cypress and Monterey pine observed within the Study Area are planted, and therefore this Rank does not apply.		

**Appendix D –
Representative Photographs of the Study Area**

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Photograph 1. Photopoint 1 at Pond 1, facing south.



Photograph 2. Photopoint 2 at Pond 1, facing east.



Photograph 3. Photopoint 3 at Pond 1, facing north.



Photograph 4. Photopoint 4 at Pond 1, facing north.



Photograph 5. Photopoint 5 at Pond 1, facing west.



Photograph 6. Photopoint 6 at Pond 2, facing south.



Photograph 7. Photopoint 7 at Pond 2, facing east.



Photograph 8. Photopoint 8 at Pond 2, facing north.



Photograph 9. Photopoint 9 at Pond 2, facing northwest.



Photograph 10. Photopoint 10 at Pond 3a, facing east.



Photograph 11. Photopoint 11 at Pond 3a, facing north.



Photograph 12. Photopoint 12 at Pond 3a, facing west.



Photograph 13. Photopoint 13 at Pond 3a, facing south.



Photograph 14. Photopoint 14 at Pond 3b, facing southwest.



Photograph 15. Photopoint 15 at Pond 3b, facing north.



Photograph 16. Photopoint 16 at Pond 3b, facing northwest.



Photograph 17. Photopoint 17 at Pond 3b, facing east.



Photograph 18. Photopoint 18 at Pond 4, facing southwest.



Photograph 19. Photopoint 19 at Pond 4, facing north.



Photograph 20. Photopoint 20 at Pond 4, facing west.



Photograph 21. Photopoint 21 at Pond 4, facing south.



Photograph 22. Photopoint 22 at Pond 5, facing south.



Photograph 23. Photopoint 23 at Pond 5, facing east.



Photograph 24. Photopoint 24 at Pond 5, facing north.



Photograph 25. Photopoint 25 at Pond 5, facing west.



Photograph 26. Photopoint 26 at Pond 7, facing south.



Photograph 27. Photopoint 27 at Pond 7, facing east.



Photograph 28. Photopoint 28 at Pond 7, facing X.



Photograph 29. Photopoint 29 at Pond 7, facing west.