Appendix A
Glossary

This glossary defines terms that are used throughout this Santa Clara County RCIS. Additional terms and extended definitions are provided in the *Regional Conservation Investment Strategies Program Guidelines* (Program Guidelines), Section 2, *Standard Terminology.*[1]

Term	Definitions
adaptive management and monitoring strategy	A component of an RCIS that incorporates an adaptive management process that is informed by periodic monitoring of the implementation of both conservation actions and habitat enhancement actions. Adaptive management means using the results of new information gathered through a monitoring program to adjust management strategies and practices to help provide for the conservation of focal species and their habitats. A monitoring strategy is the periodic evaluation of monitoring results to assess the adequacy of implementing a conservation action or habitat enhancement action and to provide information to direct adaptive management activities to determine the status of the focal species, their habitats, or other natural resources.[2]
Administrative draft NCCP	A substantially complete draft of an NCCP that is released after January 1, 2016, to the general public, plan participants, and CDFW.
advance mitigation	Compensatory mitigation for impacts on ecological resources (species and their habitat) and other natural resources that contributes to the fulfillment of regional conservation priorities and that is implemented prior to impacts occurring.
Assembly Bill 2087	Amended CFGC Chapter 9, Sections 1850–1861 to create a pilot RCIS through January 1, 2020.
Bay Area RAMP Technical Advisory Committee	Provided feedback on technical issues and draft elements of the RCIS planning process.
biodiversity	The full array of living things considered at all levels, from genetic variants of a single species to arrays of species and arrays of genera, families, and higher taxonomic levels; includes natural communities and ecosystems.
California State Coastal Conservancy (Coastal Conservancy)	The state agency sponsoring this Santa Clara County RCIS (RCIS state agency sponsor).

[1] California Department of Fish and Wildlife California Department of Fish and Wildlife. 2017a. Regional Conservation Investment Strategies Program Guidelines. June 5. Sacramento, CA. Available: https://www.wildlife.ca.gov/Conservation/Planning/Regional-Conservation.

[2] Adapted from Fish and Game Code section 2805, subdivisions (a) and (g).

Term	Definitions
California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California	A statewide assessment[3] of essential habitat connectivity completed by consultants and commissioned by CDFW and Caltrans; the assessment used the best available science, data sets, and spatial analysis and modeling techniques to identify large remaining blocks of intact habitat or natural landscape and model linkages between them that need to be maintained, particularly as corridors for wildlife.
California Fish and Game Code (CFGC)	State code amended by Assembly Bill 2087 to provide for a regional RCIS program (CFGC 1850–1861).
climate change vulnerability	Refers to the degree to which an ecological system, habitat, or individual species is likely to be negatively affected as a result of changes in climate and is often dependent on factors such as exposure, sensitivity, and adaptive capacity.
compensatory mitigation	Actions taken to fulfill, in whole or in part, mitigation requirements under state or federal law or a court mandate.
conservation	The use of habitat and other natural resources in ways such that they may remain viable for future generations. Compare with "land preservation."
conservation action	Actions identified in an RCIS whose implementation through an MCA would create credits to be used as compensatory mitigation. Actions would preserve or restore ecological resources, including habitat, natural communities, ecological processes, and wildlife corridors, to protect those resources permanently, and would provide for their perpetual management to help to achieve one or more goals and objectives for one or more focal species or other conservation elements.
conservation bank	Conservation banks are permanently protected lands managed typically for species that are endangered, threatened, candidates for listing as endangered or threatened, or are otherwise species-at-risk, and other sensitive resources. Conservation banks are conserved and managed in accordance with a written agreement with CDFW that includes provisions for the issuance of credits, which may be used to offset adverse impacts to these species and other sensitive resources that occurred elsewhere, sometimes referred to as off-site mitigation. See *mitigation bank.*
conservation easement	Any limitation in a recorded instrument that contains an easement, restriction, covenant, condition, or offer to dedicate, which is or has been executed by or on behalf of the owner of the land subject to that limitation and is binding upon successive owners of the land, and the purpose of which is to retain land predominantly in its natural, scenic, historical, agricultural, forested, or open-space condition.[4]

[3] U.S. Fish and Wildlife Service. *California Essential Habitat Connectivity Project*. Available: https://www.wildlife.ca.gov/conservation/planning/connectivity/CEHC. Accessed: March 3, 2017.

[4] "Conservation easement" includes a conservation easement as defined in Civil Code section 815.1, an open-space easement as defined in Civil Code section 51075, and an agricultural conservation easement as defined in Public Resources Code section 10211.

Term	Definitions
conservation element	An element with ecological functions in an RCIS, including focal species and their habitats, wildlife corridors and linkages, and other natural resources.
conservation goal	Broad, guiding principle that describes a desired future condition for a focal species, other species, or other important conservation elements. Each conservation goal is supported by one or more conservation objectives.
conservation investment	Conservation actions or habitat enhancement actions that are implemented under an approved RCIS but the implementer does not create credits through an MCA with CDFW. Conservation investments are typically funded by public agencies and nonprofit or other philanthropic organizations.
conservation objective	A concise, measurable statement of what is to be achieved in support of a conservation goal.
Conservation Partners	A group of representatives of conservation agencies and organizations and public infrastructure agencies established by the Steering Committee to obtain data and input necessary to ensure that this Santa Clara County RCIS will be effective, and to increase capacity and support for its long-term implementation. The Conservation Partners include conservation organizations, resource agencies and public infrastructure agencies.
conservation priority	A conservation action (land acquisition, restoration, or habitat enhancement) that is ranked based on its importance for contributing to the conservation and recovery of focal species and their habitats, or other conservation elements in an RCIS area.
conservation purpose	Statement or statements in an RCIS that identify focal species and other natural resource conservation priorities within the RCIS area and which outline conservation actions or habitat enhancement actions that, if implemented, will sustain and restore these resources.
creation (of natural community or focal species' habitat)	The creation of a specified resource condition where none existed before. Also see "*establishment.*"
critical habitat	Habitat designated as critical[5] refers to specific areas occupied by a federally listed species at the time it is listed, and that are essential to the conservation of the species and that may require special management considerations or protection. Critical habitat also includes specific areas outside occupied habitat into which the species could spread and that is considered essential for the species' recovery.
California Wildlife Habitat Relationships	System that contains the life history, geographic range, habitat relationships, and management information for over 700 regularly occurring species of amphibians, reptiles, birds, and mammals in the state; allows users to produce queries to generate lists of species by geographic location or habitat type and provides information on expert opinion–based habitat suitability ranks for each species within each habitat type.[6]

[5] United States Code Title 16, section 1532, subdivision (5)(a).

[6] https://www.wildlife.ca.gov/Data/CWHR

Term	Definitions
distinct population segment	A subdivision of a vertebrate species that is treated as a species for purposes of listing under the Endangered Species Act (ESA). Based on FWS and NMFS "Policy Regarding the Recognition of Distinct Vertebrate Population Segments under the Endangered Species Act" (61 FR 4722; February 7, 1996), two elements are considered in determining whether there is a distinct population segment: (1) discreteness of the population segment in relation to the remainder of the species to which it belongs; and (2) the significance of the population segment to the species to which it belongs.
ecological integrity	The degree to which the components (types of species, soil, etc.), structures (arrangement of components), and processes (flows of energy and nutrients) of an ecosystem or natural community are present and functioning intact. Lands with low ecological integrity generally have been subject to significant human influences or disruption of natural processes, such as fire, floods, or nutrients and hydrological cycling.
ecological resources	Species, habitat, biological resources, and natural resources identified in an RCA or RCIS. See *conservation element* and *natural resources*.
ecoregion, sub-ecoregion	As used in this document, ecoregion means a USDA Section[7] and sub-ecoregion means a portion of the Section or USGS Hydrological Units (assigned hydrological unit codes; HUC).[8] The U.S. Department of Agriculture (USDA) describes four geographic levels of detail in a hierarch of regional ecosystems including domains, divisions, provinces, and sections. Sections are subdivisions of provinces based on major terrain features, such as a desert, plateau, valley, mountain range, or a combination thereof.
ecosystem	A natural unit defined by both its living and nonliving components; a balanced system of the exchange of nutrients and energy. Compare with *habitat*.
ecosystem function	The processes that sustain species and ecosystems such as the cycling of matter, energy and nutrients.
endemic	A species, subspecies, or variety found only in a specified geographic region.
enhancement	A manipulation of an ecological resource or natural resource that improves a specific ecosystem function. An enhancement does not result in a gain in protected or conserved land, but it does result in an increase in ecological function.

[7] Goudey, C.B., and D.W. Smith, eds. 1994. Ecoregions California07_3. McClellan, CA. Remote Sensing Lab. Updated with ECOMAP 2007: Cleland, D.T.; Freeouf, J.A.; Keys, J.E., Jr.; Nowacki, G.J.; Carpenter, C; McNab, W.H. 2007. Ecological Subregions: Sections and Subsections of the Conterminous United States [1:3,500,000] [CD-ROM]. Sloan, A.M., cartog. Gen. Tech. Report WO-76. Washington, DC: U.S. Department of Agriculture, Forest Service. Miles and Goudey 1997. Ecological Subregions of California. Technical Report R5-EM-TP-005, USDA Forest Service, Pacific Southwest Region, San Francisco, CA.

[8] The United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS), the United States Geological Survey (USGS), and the Environmental Protection Agency (EPA). The Watershed Boundary Dataset (WBD) was created from a variety of sources from each state and aggregated into a standard national layer for use in strategic planning and accountability. http://datagateway.nrcs.usda.gov

Term	Definitions
establishment	The manipulation of the physical, chemical, or biological characteristics present on a site to develop an aquatic or terrestrial habitat resource for focal species. Establishment will result in a gain in resource area and/or function. Also, see *creation*.
focal species	Species that are identified and analyzed in an RCIS that will benefit from conservation actions and habitat enhancement actions set forth in the RCIS.
gap analysis	An analysis that identifies gaps between land areas that are rich in biodiversity and areas that are managed for conservation.
habitat	The specific places where the environmental conditions (i.e., physical and biological conditions) are present that are required to support occupancy by individuals or populations of a given species. Habitat may be occupied (i.e., individuals or a population of the species are or have recently been present) or unoccupied.
habitat connectivity	The capacity of areas of intact habitat to facilitate the movement of species and ecological processes.
habitat enhancement action	An action identified in an RCIS that is intended to improve the quality of wildlife habitat, or to address risks or stressors to wildlife. It would have long-term durability but would not involve acquiring land or permanently protecting habitat. Examples include improving in-stream flows to benefit fish species, enhancing habitat connectivity, and controlling or eradicating invasive species. A habitat enhancement action that is implemented through an MCA would create credits to be used as compensatory mitigation.
habitat quality	The capacity of a habitat to support a species. The precise meaning of habitat quality varies by species and depends on the specific needs of a species in the context of a particular area. High-quality habitat for species may have only foraging and resting elements or it may include foraging, resting, and nesting elements. For other species, it may encompass all elements needed for the species to complete its lifecycle. Low-quality habitat has only the minimal elements to support occurrence of the species. High-quality habitat tends to support larger numbers of species than low-quality habitat..
habitat conservation plan (HCP)	A plan which outlines ways of maintaining, enhancing, and protecting a given habitat type needed to protect species. The plan usually includes measures to minimize impacts, and might include provisions for permanently protecting land, restoring habitat, and relocating plants or animals to another area. An HCP is required before an incidental take permit may be issued.
implementation sponsor	The entity or entities responsible for implementing this Santa Clara County RCIS (the Santa Clara Valley Open Space Authority), including the technical and administrative updates of this RCIS.
in-lieu fee program	Programs that allow payment to government or nonprofit organizations to fund actions (e.g., restoration, creation), to meet the compensatory mitigation requirements for certain permits.

Term	Definitions
indicator species	A species, the presence or absence of which is indicative of a particular habitat, community, or set of environmental conditions.[9]
invasive species, nonnative species	A nonnative species that can spread into the ecosystems and displace native species, hybridize with native species, alter biological communities, and alter ecosystem processes and that has the potential to cause environmental or economic harm.[10] According to the California Invasive Plan Council, nonnative species refers to any species introduced to California after European contact and as a direct or indirect result of human activity.[11]
keystone species	A species whose impacts on its community or ecosystem are much larger than would be expected from its abundance[12] or a species whose loss from an ecosystem would cause a greater-than-average change in other species populations or ecosystem processes and whose continued well-being is vital for the functioning of a whole community.
land conversion	The conversion of natural and agricultural land to other land uses through the process of development.
land cover type	The dominant feature of the land surface defined by vegetation, water, or human uses.
land preservation	Generally, the preservation of natural resources by acquiring land in fee title or a permanent conservation easement. Compare with "conservation."
mitigation bank	Land managed for its natural resource values, with an emphasis on targeted resources. Mitigation banks conserve existing, restored, enhanced, or created wetland habitats that may also provide habitat for listed species. Mitigation banks function to offset adverse impacts to these natural resources that occurred elsewhere, sometimes referred to as off-site mitigation. See *conservation bank*.
mitigation credit agreement (MCA)	Identifies the type and number of credits a person or entity proposes to create by implementing one or more conservation actions or habitat enhancement actions. An MCA includes the terms and conditions under which those credits may be used. The person or entity may create and use, sell, or otherwise transfer the credits upon CDFW's approval that the credits have been created in accordance with the MCA. To enter into an MCA with CDFW, a person or entity shall submit a draft MCA to CDFW for its review, revision, and approval.

[9] Lincoln, R., G. Boxshall, and P. Clark. 1998. *A Dictionary of Ecology, Evolution and Systematics.* Second Edition. Cambridge University Press, Cambridge, UK.

[10] California Department of Fish and Wildlife. 2015. *California State Wildlife Action Plan, 2015 Update: A Conservation Legacy for Californians*. Edited by Gonzales, A. G. and Hoshi, J. Available: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=110399&inline>. Accessed: March 16, 2017.

[11] California Invasive Plant Council. 2006 (Updates the 1999 CalEPPC List). Cal-IPC Invasive Plant Inventory. www.cal-ipc.org.

[12] Groom, M.J., G.K. Meffe, and R.C. Carroll, and contributing authors. 2006. *Principles of Conservation Biology, 3rd Edition*. Sinauer Associates: Sunderland, MA. 793 pages.

Term	Definitions
monitoring plan	The plan for monitoring a project. It includes information needs, indicators, and monitoring methods, spatial scale and locations, timeframe, and roles and responsibilities for collecting data.
natural community	A group of organisms living together and linked together by their effects on one another and their responses to the environment they share.[13] A general term often used synonymously with habitat or vegetation type.
natural resources	Biological and ecological resources that are in addition to species and their habitats, including waters of the State, waters of the United States, wetlands, and natural communities. See *ecological resources* and *conservation element*.
natural community conservation plan (NCCP)	A plan developed pursuant to the Natural Community Conservation Planning Act (CFGC 2800–2835).
nonnative species	Any species introduced to California after European contact and as a direct or indirect result of human activity.[14] See *invasive species*.
performance standards	Observable or measurable physical or biological attributes that are used to determine if a conservation action or habitat enhancement action has met its objectives.
performance-based milestones	Identified steps in the implementation of a conservation action or habitat enhancement action, such as site protection, initiating implementation, completing implementation, or achieving performance standards.
permanently protect	Permanent protection means: (1) recording a conservation easement and (2) providing secure, perpetual funding for management of the land, monitoring, and legal enforcement.
Plan Bay Area 2040 (PBA)	A long-range integrated transportation and land-use/housing strategy through 2040 for the San Francisco Bay Area. Meets the requirements of Senate Bill 375, which requires development of a sustainable communities strategy to accommodate future population growth and reduce greenhouse gas emissions from cars and light trucks.[15]
population	The number of individuals of a particular taxon inhabiting a defined geographic area.
pressure	See "stressor, pressure."
protected area	Public or private lands protected through legal or other effective means and managed for open space use.

[13] Sawyer, J.O., T. Keeler-Wolf, and J.E. Evens. 2009. *A Manual of California Vegetation*. Second Edition. Sacramento, CA: California Native Plant Society.

[14] California Invasive Plant Council. 2006 (Updates the 1999 CalEPPC List). *Cal-IPC Invasive Plant* Inventory. www.cal-ipc.org.

[15] Metropolitan Transportation Commission. 2013. Plan Bay Area 2040. Available: http://www.planbayarea.org/.

Term	Definitions
RCIS applicant	Defined by the Program Guidelines as "the public agency or group of public agencies developing an RCA or RCIS for review and approval by CDFW and who are responsible for the technical and administrative updates of an RCIS." For the purposes of this Santa Clara County RCIS, the implementation sponsor is the entity responsible for implementing this RCIS. The term "implementation sponsor" is used to distinguish roles and responsibilities during implementation of this RCIS from the roles and responsibilities of an RCIS applicant during the RCIS development and application process. *See implementation sponsor*.
regional conservation assessment (RCA)	An assessment that provides information and analyses that document the ecosystems, ecosystem processes, species, habitat, protected and conserved areas, and habitat linkages within an ecoregion to provide the appropriate context for nonbinding, voluntary conservation strategies and actions. These assessments include information for the identification of areas with the greatest probability for long-term ecosystem conservation success incorporating co-benefits of ecosystem services, such as carbon cycling, water quality, and agricultural benefits. An RCA may be used to provide context at an ecoregional or sub-ecoregional scale to assist with the development of an RCIS. RCAs are intended to provide scientific information for the consideration of public agencies and their preparation is voluntary.
RCIS area	The geographic area encompassed by an RCIS.
RCIS state agency sponsor	The public state agency that submits the approval request letter to CDFW stating that the RCIS fulfills planning need for conservation and infrastructure or forestry.
regional conservation investment strategy (RCIS)	Information and analyses to inform nonbinding and voluntary conservation actions and habitat enhancement actions that would advance the conservation of focal species, habitat, and other natural resources and to provide nonbinding voluntary guidance for the identification of conservation priorities, investments in ecological resource conservation, or identification of priority locations for compensatory mitigation for impacts on species and natural resources. RCISs are intended to provide scientific information for the consideration of public agencies and are voluntary. RCISs are required if MCAs are to be developed.
Regional Conservation Investment Strategies Program Guidelines (Program Guidelines)	Guidelines for regional conservation investment strategies, published in support of Assembly Bill 2087 (California Department of Fish and Wildlife 2017).

Term	Definitions
recovery	The process by which the decline of an endangered or threatened species is halted or reversed or threats to its survival are neutralized, so that its long-term survival in nature can be ensured. Entails actions to achieve the conservation and survival of a species[16], including actions to prevent any further erosion of a population's viability and genetic integrity. Also includes actions to restore or establish environmental conditions that enable a species to persist (i.e., the long-term occurrence of a species through the full range of environmental variation).
recovery area	Area identified in a draft or approved recovery plan for a federally listed species.
recovery plan	A document published by USFWS, NMFS, or CDFW that lists the status of a listed species and the actions necessary to remove the species from the endangered species list.
Regional Advance Mitigation Planning (RAMP)	A comprehensive approach to mitigating unavoidable biological resource impacts potentially caused by infrastructure projects, such as roads and levees, before infrastructure projects are constructed. Initiated in 2008 by a coalition of infrastructure agencies, natural resource agencies, nongovernmental organizations, and academic researchers.
regional assessment, subregional assessment	Geographically specific plans that assess expected habitat mitigation demands over a defined period of time and identify possible mitigation approaches in advance of any impacts.
rehabilitation	Manipulation of a piece of land with the goal of repairing natural or historic ecosystem functions to degraded habitat or natural resources. This results in a gain in ecological functions but it does not result in a gain in area.
restoration	Manipulation of a site with the goal of returning species, habitat, and ecosystem functions to a site that historically supported such species, habitat, and functions, but which no longer does due to the loss of one or more required ecological factors or as a result of past disturbance.
species of special concern (SSC)	Species of Special Concern[17] is an administrative designation and carries no formal legal status. The intent of designating SSCs is to: 1) focus attention on animals at conservation risk by the Department, other State, local and federal governmental entities, regulators, land managers, planners, consulting biologists, and others; 2) stimulate research on poorly known species; and 3) achieve conservation and recovery of these animals before they meet California Endangered Species Act criteria for listing as threatened or endangered.
Steering Committee	Representatives from the Santa Clara Valley Open Space Authority, Santa Clara Valley Habitat Agency, Santa Clara Valley Transportation Authority, The Nature Conservancy, and the State Coastal Conservancy responsible for coordinating and developing this Santa Clara County RCIS.

[16] U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. Recovery Plan for Upland Species of the San Joaquin Valley, California. Portland, OR: Region 1.

[17] https://www.wildlife.ca.gov/Conservation/SSC

Term	Definitions
strategy term	The initial 10-year period of RCIS approval. May be extended by CDFW after review.
Stressor, pressure	Stressor is a degraded ecological condition of a focal species or other conservation element that resulted directly or indirectly from a negative impact of pressures such as habitat fragmentation. A pressure is an anthropogenic (human-induced) or natural driver that could result in changing the ecological conditions of the focal species or other conservation element. Stressors are negative by definition. Pressures can be positive or negative depending on intensity, timing, and duration. Negative or positive, the influence of a pressure to the target is likely to be significant.
State Wildlife Action Plan	Addresses the health of wildlife and identifies conservation actions to protect and conserve species and habitats.[18]
Technical Advisory Committee (TAC)	The group of technical specialists convened to review and comment on draft RCAs and RCISs during development. Each TAC is specific to a given RCA or RCIS.
threat	See *stressor*, *pressure*.
watershed	An area or ridge of land that contains a common set of streams and rivers that all drain into one location such as a marsh, stream, river, lake, or ocean.
working landscapes	An area where people live and work in a way that allows native ecosystems or ecosystem functions to be sustained. Business and social activities strive to minimize disturbance on native plants and animals while retaining the working nature of the landscape.

[18] California Department of Fish and Wildlife. 2017. *SWAP Final 2015 Document.* Available: https://www.wildlife.ca.gov/SWAP/Final.

Appendix B
Regulatory Processes

Appendix B
Regulatory Processes

This Santa Clara County Regional Conservation Investment Strategy (RCIS) is designed to inform implementation of conservation actions and conservation enhancements, including those conducted as mitigation. When undertaking any type of ground-disturbing or vegetation-manipulating activities, it is important to consider that the action taken may affect resources regulated by one or more agency and may require one or more regulatory permits. This appendix provides a brief overview of the permitting agencies and key regulations that may require mitigation that can be informed by this RCIS. This appendix also provides a brief overview of the Santa Clara Valley Habitat Plan (a Habitat Conservation Plan [HCP]/Natural Community Conservation Plan [NCCP]), an existing permitting program that overlaps approximately 54% of the RCIS area.

When developing permit applications to these agencies, a key consideration is whether the proposed project falls under an existing permitting program or regional program for compensatory mitigation. In addition, it is important to consider how this RCIS and other existing permitting programs are applicable to the different regulatory agencies that may have purview over the project. This appendix is designed to provide guidance related to established programs and guidance on how the information in this Santa Clara County RCIS can be used to support mitigation requirements of different regulatory agencies.

Regulatory Overview

The following sections provide a high-level overview of the regulatory agencies typically involved in project permitting where the proposed activity may disturb aquatic resources and species addressed by the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). This overview is not comprehensive, and other permits from other agencies or local jurisdictions may be required. The purpose of this overview is to provide basic guidance on regulations that may relate to proposed projects.

U.S. Army Corps of Engineers

Under Section 404 of the federal Clean Water Act (CWA), a permit is required from the U.S. Army Corps of Engineers (Corps) for the placement of dredged or fill material into waters of the United States, including wetlands. Projects may be authorized under existing general permits (nationwide permits or regional general permits), or may require an individual permit. A nationwide permit is a more streamlined permit process than an individual permit, although supporting compliance efforts, such as for the ESA and National Historic Preservation Act, are similar regardless of permit type. Project activities that could trigger CWA Section 404 permitting (individual or general) include temporarily or permanently filling any portion of a water of the United States.

U.S. Fish and Wildlife Service and National Marine Fisheries Service

U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) administer the federal ESA. The ESA requires these agencies to maintain lists of threatened and endangered species and affords substantial protection to listed species. NMFS's jurisdiction under ESA is limited to the protection of marine mammals, marine fishes, and anadromous fishes;[1] all other species are subject to USFWS jurisdiction. The ESA includes mechanisms that provide exceptions to take prohibitions identified in Section 9 of ESA. These are addressed in ESA Section 7 for federal actions and ESA Section 10 for nonfederal actions.

Endangered Species Act Section 7

Section 7 of the ESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of habitat critical to such species' survival. To ensure that its actions do not result in jeopardy to listed species or in the adverse modification of critical habitat,[2] each federal agency must consult with USFWS and/or NMFS regarding federal agency actions that may affect listed species regulated by the respective agencies. Consultation begins when the federal agency (often the Corps) submits a written request for initiation to USFWS or NMFS, along with the agency's biological assessment of its proposed action, and when USFWS or NMFS accepts that biological assessment as complete. If USFWS or NMFS concludes that the action is not likely to adversely affect a listed species, the action may be conducted without further review under the ESA. Otherwise, USFWS or NMFS must prepare a written biological opinion describing how the agency's action will affect the listed species and its critical habitat.

If the biological opinion concludes that the proposed action would jeopardize the continued existence of a listed species or adversely modify its critical habitat, the opinion will suggest "reasonable and prudent alternatives" that would avoid that result. If the biological opinion concludes that the proposed action would take a listed species but would not jeopardize its continued existence, the biological opinion will include an incidental take statement. *Incidental take* is take that is "incidental to, and not intended as part of, an otherwise lawful activity."[3] The incidental take statement specifies an amount of take that is allowed as a result of the action and whether reasonable and prudent measures may be required to minimize the impact of the take.

Endangered Species Act Section 10

In cases where federal land, funding, or authorization is not required for an action by a nonfederal entity, the take of listed fish and wildlife species can be permitted by USFWS and/or NMFS through the Section 10 process. Private landowners, corporations, state agencies, local agencies, and other nonfederal entities must obtain a Section 10(a)(1)(B) *incidental take permit* for take of federally listed fish and wildlife species "that is incidental to, but not the purpose of, otherwise lawful activities." An HCP must accompany an application for an incidental take permit. The purpose of the HCP, and the HCP's planning process, is to ensure that the effects of the authorized incidental take is adequately minimized and mitigated (U.S. Fish and Wildlife Service 2005).

---

[1] *Anadromous fishes* are fish that spend part of their life cycle in the ocean and part in fresh water. NMFS has jurisdiction over anadromous fish that spend the majority of their life cycle in the ocean.

[2] *Critical habitat* is defined as specific geographic areas, whether occupied by listed species or not, that are determined to be essential for the conservation and management of listed species, and that have been formally described in the *Federal Register*.

[3] 64 Code of Federal Regulations (CFR) 60728

The take prohibition for listed plants is more limited than for listed fish and wildlife. Under Section 9(a)(2)(B) of the ESA, endangered plants are protected from "removal, reduction to possession, and malicious damage or destruction" in areas that are under federal jurisdiction. Section 9(a)(2)(B) of the ESA also provides protection to plants from removal, cutting, digging up, damage, or destruction where the action takes place in violation of any state law or regulation or in violation of a state criminal trespass law. Thus, the ESA does not prohibit the incidental take of federally listed plants on private or other nonfederal lands unless the action requires federal authorization or is in violation of state law. Although Section 10 incidental take permits are only required for wildlife and fish species, the Section 7(a)(2) prohibition against jeopardy applies to plants, and issuance of a Section 10(a)(1)(B) incidental take permit cannot result in jeopardy to a listed plant species.

California Department of Fish and Wildlife

California Endangered Species Act

The CESA prohibits take of wildlife and plants listed as threatened or endangered by the California Fish and Game Commission. *Take* is defined under the California Fish and Game Code (CFGC) (more narrowly than under the ESA) as any action or attempt to "hunt, pursue, catch, capture, or kill." Therefore, take under the CESA does not include "the taking of habitat alone or the impacts of the taking."[4] Rather, the courts have affirmed that under the CESA, "taking involves mortality."

Like the ESA, the CESA allows exceptions to the prohibition for take that occurs during otherwise lawful activities. The requirements of an application for incidental take under CESA are described in CFGC 2081. Incidental take of state-listed species may be authorized if an applicant submits an approved plan that minimizes and "fully mitigates" the impacts of this take.

Natural Community Conservation Planning Act

In 1991, California's Natural Community Conservation Planning Act (NCCP Act)[5] was enacted to implement broad-based planning that balances appropriate development and growth with conservation of wildlife and habitat. Pursuant to the NCCP Act, local, state, and federal agencies are encouraged to prepare NCCPs to provide comprehensive management and conservation of multiple species and their habitats under a single plan, rather than through preparation of numerous individual plans on a project-by-project basis. The NCCP Act is broader in its orientation and objectives than are the ESA and the CESA. Preparation of an NCCP is voluntary. The primary objective of the NCCP Act is to conserve natural communities at the ecosystem scale while accommodating compatible land use. To be approved by the California Department of Fish and Wildlife (CDFW), an NCCP must provide for the conservation of species and protection and management of natural communities in perpetuity within the area covered by permits. *Conservation* is defined, in summary, by the NCCP Act and the CFGC as actions that result in the delisting of state-listed species. Thus, NCCPs must contribute to the recovery of listed species or prevent the listing of nonlisted species rather than just mitigate the effects of covered activities. This recovery standard is one of the major differences between an NCCP and an HCP prepared to satisfy ESA or CESA.

The 1991 NCCP Act was replaced with a substantially revised and expanded NCCP Act in 2002. The revised NCCP Act established new standards and guidance on many facets of the program, including scientific information, public participation, biological goals, interim project review, and approval criteria. The new NCCP Act took effect on January 1, 2003.

[4] *Environmental Council of Sacramento v. City of Sacramento*, 142 Cal. App. 4th 1018 (2006).

[5] CFGC 2800 *et seq.*

Lake and Streambed Alteration Agreement

A project proponent is required to enter into a lake and streambed alteration agreement with CDFW when a proposed project would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.[6] Through this process, CDFW can impose conditions on a project to ensure that no net loss of wetland values or acreage will be incurred. Strictly speaking, the agreement is not a permit but, rather, a mutual agreement between CDFW and the applicant; however, it serves a similar regulatory and protective function. CDFW cannot provide a streambed alteration agreement until after the California Environmental Quality Act (CEQA) review is complete.

Regional Water Quality Control Board

Clean Water Act Section 401 Water Quality Certification

CWA Section 401 requires that applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain water quality certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401. The Regional Water Quality Control Board (RWQCB) cannot provide Section 401 certification until after CEQA review is complete. The Corps will require compliance with Section 401 as a prerequisite to authorization of the project under Section 404.

Although the RWQCB has its own application forms, in practice, the application for Section 401 certification and for issuance or waiver of waste discharge requirements (WDRs) (see below) are combined, and can use much of the same information as the CWA Section 404 permit application. For projects occurring within multiple state and federal agency jurisdictions, the Joint Aquatic Resources Permit Application may also be used.

Waste Discharge Requirements

The RWQCBs designate beneficial uses and establish water quality objectives for the state's waters through development of basin plans under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), federal CWA, and general provisions of California Water Code Section 13000 (California State Water Resources Control Board 2017). The water quality objectives include both quantitative and narrative targets that may differ depending on the specific beneficial uses being protected. Narrative objectives are established for parameters such as color, suspended and settleable material, oil and grease, biostimulatory substances, and toxicity. Numeric objectives can include such parameters as dissolved oxygen levels, temperature, turbidity, pH, and concentrations of specific chemical constituents such as trace metals and synthetic organic compounds.

Under the Porter-Cologne Act, the RWQCB regulates the discharge of waste to waters of the state. All parties proposing to discharge waste that could affect waters of the state must file a report of waste discharge with the local RWQCB, which will then respond by issuing WDRs in a public hearing or by waiving them (with or without conditions).

[6] CFGC 1602

The terms *discharge of waste* and *waters of the state* are broadly defined in the Porter-Cologne Act such that discharges of waste include fill, any material resulting from human activity, or any other discharge that may directly or indirectly affect waters of the state. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States are more specifically defined, with the result that they are a subset of waters of the state in practice.

Any activity that results or may result in a discharge that directly or indirectly affects waters of the state or the beneficial uses of those waters are subject to WDRs, even if they are not also waters of the United States. Thus, the WDRs are more broadly applicable. The San Francisco Bay Regional Water Quality Control Board (San Francisco Bay Water Board) and the Central Coast Regional Water Quality Control Board (Central Coast Regional Board) have produced a combined application forms for Section 401 certification and waiver of WDRs to ensure that applicants do not need to file both a report of waste discharge and an application for Section 401 certification.

Santa Clara Valley Habitat Plan

The Santa Clara Valley Habitat Plan (Habitat Plan) (ICF International 2012) is the only regional permitting program currently in place in this Santa Clara County RCIS area. The Habitat Plan permit area includes 508,669 acres in Santa Clara County, including areas within the cities of San Jose, Morgan Hill, and Gilroy. A small portion of the Habitat Plan permit area extends into Alameda and San Mateo Counties, as part of an expanded study area and permit area for burrowing owl conservation.[7] It also includes areas within the county defined by a combination of political, ecological, and hydrologic factors. Watershed boundaries were used to define the inventory area wherever possible.

Most projects in the Habitat Plan permit area—all of which is within the RCIS area except for the portions of the expanded study area for burrowing owl conservation outside of Santa Clara County—will be subject to the Habitat Plan and will use that plan's incidental take species permits (for both state and federal listed species). The Habitat Plan is designed so that project proponents pay a fee to the Santa Clara Valley Habitat Agency to address compensatory mitigation needs, and there is no need to consider further compensatory mitigation needs for the species covered by the Habitat Plan[8], though occasionally projects may require permits for species not covered in the Habitat Plan, including fish. The Habitat Plan also has established a regional general permit with the Corps. The permit allows projects covered by the Habitat Plan to receive an expedited permit from the Corps and to use Habitat Plan fees to address impacts on waters of the United States. This 5-year renewable regional general permit provides a framework for integrating and streamlining waters permitting under Section 404 of the Clean Water Act with the endangered species permitting already in place under the Habitat Plan. The Habitat Agency is pursuing an in-lieu fee program with the U.S. Army Corps of Engineers-led Interagency Review Team to ensure that mitigation fees paid to the Habitat Plan will fulfill waters mitigation requirements under Section 404. The In-Lieu Fee program may also provide waters mitigation requirements under Section 401 and the Porter-Cologne Water Quality Control Act as regulated by the Regional Water Quality Control Boards. The

[7] The expanded study area for burrowing owl conservation that falls outside of the primary Habitat Plan study area is 48,464 acres. The allowable activities covered by the Habitat Plan in this expanded study area and permit area are limited only to conservation actions for western burrowing owl.

[8] Species covered by the Habitat Plan, or "covered species" are those species addressed in the Habitat Plan for which conservation actions will be implemented and for which the Habitat Plan's Permittees are authorized for take under Section 2835 of the California Natural Community Conservation Planning Act and Section 10 of the federal Endangered Species Act.

Habitat Agency is seeking an In-Lieu Fee Program that could provide waters mitigation requirements for all activities covered by the Habitat Plan, not only those also covered by the RGP.

This Santa Clara County RCIS is a non-regulatory and voluntary program designed to complement the Habitat Plan. CFGC1856(j) includes regulations for when a mitigation credit agreement (MCA) may be established within the plan area of an approved NCCP (Section 4.3.1.1, *Mitigation Credit Agreements and the Santa Clara Valley Habitat Plan*).

Water Quality Objectives for Use in Designing and Implementing Projects with Impacts on Creeks or Wetlands

Two RWQCBs have jurisdiction that overlap this Santa Clara County RCIS area: the San Francisco Bay Regional Water Quality Control Board in the northern two-thirds of the RCIS area (north of Morgan Hill) and the Central Coast Regional Water Quality Control Board in the southern third of the RCIS area (south of Morgan Hill). These two water boards are charged with maintaining the beneficial uses of waters of the United States in the San Francisco Bay and Central Coast Region, as presented in the *San Francisco Bay Basin Water Quality Control Plan* (San Francisco Bay Regional Water Quality Control Board 2015) and the *Water Quality Control Plan for the Central Coastal Basin* (Central Coast Regional Water Quality Control Board 2016). If a project will affect waters of the state (as defined by the California State Water Resources Control Board), project proponents are required to apply to the geographically appropriate RWQCB for waste discharge requirements (waters of the State of California) or for CWA Section 401 certification (waters of the United States). The RWQCB reviews applications for waste discharge requirements and certifications to ensure that potential impacts on waters of the United States and state have been avoided and minimized to the maximum extent practicable.

To assist project proponents in designing projects to avoid and/or minimize impacts on waters of the state, the San Francisco Bay Regional Water Quality Control Board developed a technical reference circular titled "*A Primer on Stream and River Protection for the Regulator and Program Manager*," that provides guidance for applicants on how to design projects that protect and restore stream and wetland system functions. Project proponents are encouraged to consult this circular when developing projects with potential impacts on creeks or wetlands (San Francisco Bay Regional Water Quality Control Board 2003).

Projects that affect creeks or wetlands should strive to achieve three water quality objectives—watershed hydrology, stream dynamic equilibrium, and stream and wetland system habitat integrity. The following is a summary of the technical reference circular. This guidance applies broadly to all RWQCBs.

- **Watershed hydrology.** The hydrologic connectivity between headwaters and estuary, surface water and groundwater, and landscape, floodplain, and stream channel should be protected to produce the pattern and range of flows necessary to support beneficial uses identified in the San Francisco Bay Basin Plan and a functional ecosystem.
- **Stream dynamic equilibrium.** Stream attributes, including hydrologic and sediment regimes, vegetation communities, channel forms, slopes, and floodplain areas, should be protected in a manner so as not to arrest natural hydrogeomorphic processes nor accelerate an imbalance resulting in excessive erosion or deposition of sediment, cause nuisance, or otherwise adversely affect beneficial uses. Over time, watershed processes contribute to a dynamic balance between

sediment loads and surface water flows, which produce complex, fluctuating, and resilient systems.

- **Stream and wetland system habitat integrity.** Stream and wetland system habitats should be maintained by protecting the type, amount, and complexity of wetland and riparian vegetation, the extent of riparian areas, and the substrate characteristics necessary to support aquatic life.

Achievement of these water quality objectives protects and restores the physical integrity and associated functionality of stream and wetland systems, which include perennial, intermittent, and ephemeral streams and wetlands and their associated riparian areas. The following four principles should be used in developing projects in order to achieve the water quality objectives.

- **Water quality functions and land use.** Functioning stream and wetland systems provide a wide range of water quality benefits that support the beneficial uses identified in the San Francisco Bay Basin Plan. Many land use activities have the potential to substantially degrade water quality functions of stream and wetland systems. Therefore, project proponents should recognize the intrinsic connections between land use activities and the structures, processes, and functions of stream and wetland systems.
- **No net loss.** Stream and wetland system areas, functions, and beneficial uses in the region have been substantially degraded from historical levels because of human activities. Therefore, the remaining resources are especially valuable. Projects and associated mitigation measures should be consistent with the California Wetlands Conservation Policy (No Net Loss Policy, Executive Order W-59-93) to ensure no net loss and to achieve a long-term net gain in the quantity, quality, and permanence of stream and wetland system areas, functions, and beneficial uses.
- **Climate change adaptation.** Stream and wetland system protection and restoration are a critical element of a strategy for reducing adverse impacts of greenhouse gas emissions and adapting the region's water resource management to account for the adverse impacts of climate change and sea level rise. Protecting and restoring stream and wetland system functions, including floodwater storage, groundwater recharge, carbon sequestration (e.g., in riparian vegetation and wetland soils that are rich in organic matter), and maintaining aquatic life and wildlife habitat connectivity are important to mitigate for the adverse impacts of climate change.
- **Watershed approach.** Many water quality and ecosystem problems are best identified, prioritized, addressed, and solved using a watershed approach. A watershed approach helps to address cumulative impacts on water quality, and encourages the development of watershed plans and partnerships that coordinate the planning, use, and protection of stream and wetland system resources. Project proponents should consider their project's impacts when multiple individual impacts add to or interact with other impacts in a watershed, resulting in cumulative adverse impacts on water quality. Project proponents should include all appropriate and practicable measures to avoid and minimize potential direct, secondary, and cumulative temporary and permanent impacts on water quality and beneficial uses.

Tables B-1 through B-3 summarize goals for achieving the water quality objectives.

Table B-1. Watershed Hydrology Goals for Stream and Wetland System Functions

Runoff flow and volume Maintain site runoff and transport characteristics (i.e., timing, magnitude, duration, time of concentration, and discharge pathways of runoff flow) such that post-project flow rates and durations mimic preproject levels. Where practicable, incorporate measures to restore natural runoff patterns (e.g., enhance soil infiltration capacity and increase the storage of runoff) in watersheds that have been substantially altered from their predevelopment conditions.
Hydrologic connectivity Maintain lateral, vertical, and longitudinal flow pathways, including connectivity between stream channels, riparian areas, floodplains, and wetlands; surface water and groundwater; and ocean or estuary-to-headwaters at adequate levels to protect stream and wetland system functions and beneficial uses, including the maintenance of, and access to, a diverse range of habitats for aquatic life and wildlife.
Natural flow regime Maintain the natural variation of flows and hydrograph characteristics (i.e., timing, magnitude, duration, and time of concentration) such that the range of flows including low, channel forming, and flood flows are of a magnitude and duration to achieve the following goals. • Sustain channel morphology and balance sediment transport. • Support riparian vegetation community maintenance. • Provide adequate flows and velocities during low-flow months to satisfy aquatic life and wildlife habitat requirements. • Maintain seasonal flows that permit the migration or free movement of migratory fish and access to floodplain and off-channel habitat (e.g., sloughs and permanently or seasonally flooded wetlands) for aquatic life.

Table B-2. Stream Dynamic Equilibrium Goals for Stream and Wetland System Functions

Channel form and processes Where channels are modified, design projects with proper channel form (e.g., channel shape, width/depth ratio), sinuosity, slope, and floodplain areas such that the balance between sediment loads and surface flows is attained for a range of low to high discharges. This goal promotes natural bank erosion as a desirable attribute of stream and wetland systems while requiring that projects avoid causing excessive erosion or deposition of sediment in and around the project area, creating hydraulic constrictions (e.g., undersized culverts), or requiring ongoing channel maintenance (e.g., dredging to maintain channel capacity, ongoing bed and bank repair). Where practicable, restore channel dimensions and slopes, riparian vegetation communities, floodplain, meander belt, and geomorphic adjustment zone widths, and adequate side slopes from the top of the banks to the top of the floodplain terraces in areas where geomorphic dynamic equilibrium has been affected.
Drainage network Maintain the naturally occurring pattern and density of perennial, intermittent, and ephemeral streams, as well as associated aquatic habitats (e.g., wetlands) that transport water, materials, energy, and organisms through the watershed (i.e., the drainage network). Avoid changing the natural runoff pathways by filling, piping, ditching, or culverting.
Gullies and headcuts Avoid formation or expansion of headcuts and gullies. Design projects with proper channel slope and avoid reducing the landscape infiltration capacity and increasing runoff, which may lead to soil erosion and gully formation or expansion.

Table B-3. Stream and Wetland System Habitat Integrity Goals for Stream and Wetland System Functions

Floodplain and riparian areas Maintain floodplains and/or riparian areas of adequate width to provide water quality functions such as floodwater and sediment storage, water quality enhancement, and maintenance of aquatic life and wildlife habitat. Establishment and protection of functioning riparian areas is one of the most straightforward and effective strategies to protect water quality; this strategy is a critical element in adapting to the impacts of climate change including changes in rainfall and runoff patterns.
Wetland hydrology Maintain the natural hydrologic regimes of wetlands, including their hydroperiods and levels of hydrologic connectivity to other aquatic habitats, at levels sufficient to support hydrophytic vegetation (where naturally present), aquatic life and wildlife habitat, and other associated beneficial uses.
Wetland and riparian vegetation Maintain wetland and riparian vegetation (both woody and herbaceous) such that the type, amount, and complexity are adequate to maintain water temperatures appropriate to the needs of aquatic life, withstand site-specific erosive forces, and supply large woody debris of sufficient quantities to maintain aquatic habitat.
Habitat connectivity Avoid creating unnatural barriers between or within stream/wetland systems and upland habitats (e.g., in-stream structures that restrict fish migration or encroachments on floodplains that restrict wildlife movement along a riparian corridor). These barriers affect migration corridors and dispersal systems connecting aquatic life and wildlife with resources and refuges. Protecting stream and wetland system corridors can increase the resiliency of biodiversity by providing migration corridors as aquatic life and wildlife adapt to the impacts of climate change on habitat conditions and distribution.

Compensatory Mitigation Approach

This Santa Clara County RCIS was designed with the intent that it not only meets compensatory mitigation requirements of CDFW under the CESA, but that it also supports compliance with state and federal water-related regulations and the ESA. Guidance on how this Santa Clara County RCIS can support implementation of compensatory mitigation for separate, but related, regulations is provided below.

Compliance with the Clean Water Act and the Porter-Cologne Water Quality Control Act

An RCIS can provide information and analysis useful for identifying conservation actions and habitat enhancements to fulfill compensatory mitigation requirements under federal and state water quality protection laws. For example, both federal and state guidance for compensatory mitigation for impacts on aquatic resources stress the need for a *watershed approach* to compensatory mitigation. This approach considers the importance of landscape position and resource type of compensatory mitigation projects for the sustainability of aquatic resource functions within the watershed.

In 2008, the Corps and U.S. Environmental Protection Agency (USEPA) adopted regulations governing compensatory mitigation for impacts on waters of the United States authorized in permits issued pursuant to CWA Section 404 (the Compensatory Mitigation Rule).[9] The Compensatory

[9] 33 CFR Part 332

Mitigation Rule requires the Corps to ". . . use a watershed approach to establish compensatory mitigation requirements in [Corps] permits to the extent appropriate and practicable."[10] The Rule defines a watershed approach as:

> . . . an analytical process for making compensatory mitigation decisions that support the sustainability or improvement of aquatic resources in a watershed. It involves consideration of watershed needs, and how locations and types of compensatory mitigation projects address those needs. A landscape perspective is used to identify the types and locations of compensatory mitigation projects that will benefit the watershed and offset losses of aquatic resource functions and services caused by activities authorized by [Corps] permits. The watershed approach may involve consideration of landscape scale, historic and potential aquatic resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections between aquatic resources when determining compensatory mitigation requirements for [Corps] permits.[11]

The ultimate goal of a watershed approach is to ". . . maintain and improve the quality and quantity of aquatic resources within watersheds through strategic selection of compensatory mitigation sites."[12] Similarly, the State Water Resources Control Board proposes to require an almost identical watershed approach to compensatory mitigation as identified in its *Draft Procedures for Discharges of Dredged or Fill Materials to Waters of the State* (Draft Procedures) (California State Water Resources Control Board 2016a:28, 2016b).

The information needs identified for a watershed approach under the Compensatory Mitigation Rule and State Water Resources Control Board's Draft Procedures are almost identical. Where a watershed plan is available, it can be the basis of the watershed approach. A *watershed plan* is defined as follows.

> . . . a plan developed by federal, tribal, state, and/or local government agencies or appropriate non-governmental organizations, in consultation with relevant stakeholders, for the specific goal of aquatic resource restoration, establishment, enhancement, and preservation. A watershed plan addresses aquatic resource conditions in the watershed, multiple stakeholder interests, and land uses. Watershed plans may also identify priority sites for aquatic resource restoration and protection. Examples of watershed plans include special area management plans, advance identification programs, and wetland management plans.[13]

Where a watershed plan is not available, a watershed approach to compensatory mitigation may be based on the following elements.

> . . . analysis of information regarding watershed conditions and needs, including potential sites for aquatic resource restoration activities and priorities for aquatic resource restoration and preservation. Such information includes: current trends in habitat loss or conversion; cumulative impacts of past development activities, current development trends, the presence and needs of sensitive species; site conditions that favor or hinder the success of compensatory mitigation projects; and chronic environmental problems such as flooding or poor water quality.[14]

This RCIS is intended to provide information, analysis, and a process that supports a watershed approach to compensatory mitigation. Staff from the Corps, USEPA, and applicable RWQCBs were involved in the process of developing this RCIS in an effort to ensure that it provides accurate and up-to-date information and analysis regarding the watersheds and aquatic resources within the RCIS strategy area.

[10] 33 CFR 332.3(c)(1)

[11] 33 CFR 332.2

[12] 33 CFR 332.3(c)(1)

[13] 33 CFR 332.2:25, lines 872–878.

[14] 33 CFR 332.3(c)(3):29, lines 1030–1948.

This Santa Clara County RCIS includes information and analysis regarding aquatic resources that can be used for compensatory mitigation under the federal CWA and the Porter-Cologne Act in several ways. Project proponents can use the information in this RCIS (e.g., conservation actions and priorities) to develop and site compensatory mitigation actions in connection with a specific permit or project. Mitigation bankers can use the information to develop and site mitigation banks that generate mitigation credits. Public agencies can use the information to develop and establish in-lieu fee programs that generate mitigation credits. In each of these cases, the approval of the Corps and/or the applicable RWQCB would be required. However, this RCIS could be useful in developing mitigation proposals for their approval.

Mitigation credit agreements that meet the requirements of relevant Corps, USEPA, and RWQCB mitigation regulations and policies could also be used to generate mitigation credits for compensatory mitigation under the CWA and Porter-Cologne Act. MCAs can create mitigation credits that can be used to fulfill "compensatory mitigation requirements established under any state or federal environmental law, as determined by the applicable local state, or federal regulatory agency . . ."[15] California CDFW approval of an MCA does not authorize the creation of mitigation credits under the CWA or Porter-Cologne Act. However, if the Corps or RWQCB determines that an MCA meets relevant federal requirements under the CWA and Porter-Cologne Act, they could allow the MCA to create mitigation credits that can be used under those acts. For example, the Corps and USEPA could determine that the MCA meets the Compensatory Mitigation Rule regulations and policies for in-lieu fee programs and could approve the MCA as an in-lieu fee program-enabling instrument. By fulfilling relevant Corps and USEPA requirements and obtaining their approval, the MCA could then be used to create mitigation credits that could be used to comply with the CWA. Similarly, the RWQCB could determine that such mitigation credits are consistent with Porter-Cologne Act requirements for purposes of a CWA Section 401 certification.

Compliance with the Federal Endangered Species Act

An RCIS can provide information and analysis for identifying conservation actions and habitat enhancements to fulfill compensatory mitigation requirements under federal wildlife protection laws. For example, in December 2016, the USFWS published their final compensatory mitigation policy under the ESA.[16] For compensatory mitigation under the federal ESA, USFWS prefers the following mitigation conditions.

- Compensatory mitigation projects sited within priority conservation areas identified in landscape-scale conservation plans.
- Compensatory mitigation projects implemented in advance of impacts.
- Mitigation mechanisms that consolidate compensatory mitigation on the landscape.

USFWS has also described the following standards for compensatory mitigation.

- Siting compensatory mitigation in locations identified in landscape-scale conservation plans or mitigation strategies in areas that will meet conservation objectives and provide the greatest long-term benefit to the species.
- Providing compensatory in-kind mitigation for the species affected by the proposed action.
- Providing metrics to measure the ecological functions at compensatory mitigation sites that are science-based, quantifiable, consistent, repeatable, and related to the conservation goals for the species.

[15] CFGC 1856(c)

[16] 81 FR 95316–95349.

- Providing benefits beyond those that would have otherwise occurred through routine or required practices or actions.
- Achieving conservation objectives within a reasonable timeframe or for at least the duration of the impacts.
- Securing the compensatory mitigation by durable means, including adequate legal, real estate, and financial protections that ensure its success.
- Providing accountability in case compensatory mitigation fails to meet its conservation objectives.
- Providing for appropriate and effective engagement of local communities and stakeholders.

This Santa Clara County RCIS is intended specifically to provide information, analysis, and a process that supports compensatory mitigation that meets all of these criteria. USFWS and the NMFS have been involved in the process of developing this Santa Clara County RCIS to ensure that that it provides accurate and up-to-date information and analysis regarding species listed under the federal ESA.

This Santa Clara County RCIS includes information and analysis regarding federally listed species that can be used for compensatory mitigation under the federal ESA in a variety of ways. They can be used by project proponents to develop and site mitigation actions in connection with a specific permit or project. They can be used by mitigation bankers to develop and site conservation banks that generate mitigation credits, and they can be used by public agencies to develop and establish in-lieu fee programs that generate mitigation credits. In each of these cases, the approval of USFWS or NMFS would be required. However, this Santa Clara County RCIS could be useful in developing mitigation proposals for their approval.

USFWS or NMFS could also incorporate or refer to an RCIS in regulatory designations and analyses, such as recovery plans, critical habitat designations, habitat conservation plans, and biological opinions. For example, USFWS could determine that the mitigation strategies or actions of an RCIS meet the requirements of Section 7 of the federal ESA and include them in a biological opinion.

MCAs that meet the requirements of relevant USFWS or NMFS mitigation regulations and policies could also be used to generate mitigation credits for compensatory mitigation under the federal ESA.[17] For example, USFWS could determine that the MCA meets regulations and policies for conservation banks and could approve the MCA as a programmatic (umbrella) conservation bank-enabling instrument. Or USFWS or NMFS could determine that the MCA meets its policies for in-lieu fee programs and could approve the MCA as an in-lieu fee program-enabling instrument.

[17] CFGC 1856(c)

References

California State Water Resources Control Board. 2017. Porter-Cologne Water Quality Control Act. Water Code Division 7 and Related Sections (As amended, including Statutes 2016).

California State Water Resources Control Board. 2016a. *Draft Procedures for Discharges of Dredged or Fill Materials to Waters of the State*. June 17.

California State Water Resources Control Board. 2016b. *Comparison of CWA 404(b)(1) Guidelines to the State Supplemental Dredged or Fill Guidelines.* Available: http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/dredge_fill/final_draft_40CFR%20230_201606017_2.pdf.

Central Coast Regional Water Quality Control Board. 2016. Water Quality Control Plan for the Central Coastal Basin, March 2016 Edition. California Environmental Protection Agency.

ICF International 2012. Final Santa Clara Valley Habitat Plan. Prepared for the County of Santa Clara, City of San Jose, City of Morgan Hill, City of Gilroy, Santa Clara Valley Water District, and Santa Clara Valley Transportation Authority. August. Available: http://scv-habitatagency.org/178/Santa-Clara-Valley-Habitat-Plan.

San Francisco Bay Regional Water Quality Control Board. 2003. A Primer on Stream and River Protection for the Regulator and Program Manager. Available: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stream_wetland/streamprotectioncircular.pdf.

San Francisco Bay Regional Water Quality Control Board. 2015. *San Francisco Bay Basin Water Quality Control Plan*. Available: http://www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml#2004basinplan.

U.S. Fish and Wildlife Service. 2005. Habitat Conservation Plans: *Section 10 of the Endangered Species Act*. U.S. Fish and Wildlife Service, Endangered Species Program. Arlington, VA. Available: https://www.fws.gov/endangered/esa-library/pdf/HCP_Incidental_Take.pdf

This Page Intentionally Left Blank

Appendix C
Public Outreach

Appendix C
Public Outreach

Santa Clara County RCIS Conservation Partners

During the Santa Clara County Regional Conservation Investment Strategy (RCIS) development process, the Steering Committee conducted outreach and provided briefings for key environmental, agricultural, and business organizations; local governments, including counties and cities in the RCIS area; and the San Francisco Bay Area regional advance mitigation planning (RAMP) program's Technical Advisory Committee. In addition, the Steering Committee held two conservation partner meetings, with the following goals.

1. Provide conservation partners in the region with information on this RCIS and RAMP planning efforts.
2. Invite partner input regarding draft ecological values, and approaches to identifying conservation priorities, and actions.

Partner Engagement Meeting #1 was held on August 3, 2016 at Santa Clara Valley Open Space Authority offices in San Jose, California. Partner Engagement Meeting #2 was held on February 14, 2017 through a Webinar.

The following organizations and agencies participated in the Santa Clara County RCIS Partner Engagement Meetings.

- Association of Monterey Bay Area Governments
- California Department of Fish and Wildlife-Bay Delta (Region 3)
- California Department of Fish and Wildlife-Central (Region 4)
- California Department of Fish and Wildlife-Habitat Conservation Planning Branch
- California Department of Transportation
- California Strategic Growth Council
- Creekside Center for Earth Observations
- Midpeninsula Regional Open Space District
- National Marine Fisheries Service (Central Coast)
- National Marine Fisheries Service (South Central Coast)
- Pajaro River Watershed Flood Prevention Authority
- Peninsula Open Space Trust
- Regional Water Quality Control Board-Central Coast
- Regional Water Quality Control Board-San Francisco
- San Jose State University
- Santa Clara County Parks

- Santa Clara Valley Habitat Agency
- Santa Clara Valley Transportation Authority
- Santa Clara Valley Water District
- U. S. Army Corps of Engineers
- U. S. Fish and Wildlife Service (Sacramento)
- U. S. Fish and Wildlife Service (Ventura)

Following is a list of invite and meeting materials provided for each Partner Engagement Meeting. These items are available upon request from the Santa Clara Valley Open Space Authority.

1. Partner Engagement #1 Meeting Materials
    a. Santa Clara County RCIS and RAMP partner meeting agenda
    b. Santa Clara County RCIS and RAMP overview
    c. List of Santa Clara County RCIS and RAMP Steering Committee Members
    d. Santa Clara County RCIS and RAMP partner invitee list
    e. Figure of the Bay Area RCIS boundaries
    f. Figure of the Santa Clara County RCIS area
    g. Figure of land cover in the Santa Clara County RCIS area
    h. Table of Santa Clara County RCIS wildlife focal species
    i. Table of Santa Clara County RCIS plant focal species
2. Partner Engagement #2 Meeting Materials
    a. Partner Meeting #2 Webinar

Public Meeting

A public meeting was held on December 8, 2016 at Santa Clara Valley Open Space Authority offices in San Jose, California. Notice of this meeting was posted in the San Jose Mercury News and on the Open Space Authority's website, and was sent directly to representatives of the cities and counties within or adjacent to this RCIS, including the clerks of the board and city councils, as well as subscribers of the agency's Board meeting packet. The public meeting was held as part of a regularly-scheduled Board of Directors meeting.

Following are the public meeting notice and handout provided at the public meeting.

Notice of Public Meeting on the Proposed Santa Clara County Regional Conservation Investment Strategy

Interested parties are invited to attend a regular meeting of the Santa Clara Valley Open Space Authority Board of Directors to be held at 6:30 PM on December 8, 2016 at the Open Space Authority's administrative offices, 6980 Santa Teresa Blvd., Ste. 100, San Jose, CA 95119. The meeting agenda will include an item which allows interested parties to receive preliminary information about a proposed Santa Clara County Regional Conservation Investment Strategy (RCIS) and to provide comments. Regional Conservation Investment Strategies are new, voluntary, landscape-scale conservation planning tools that will identify conservation priorities to guide public and private conservation actions, such as habitat protection or restoration. Guided by state legislation (AB 2087), the Santa Clara Valley Open Space Authority is sponsoring development of an RCIS for Santa Clara County and the northern portion of San Benito County in the Upper Pajaro River region. Following approval of the Santa Clara County RCIS by the California Department of Fish and Wildlife (Department), conservation actions identified in the RCIS could be used to develop mitigation credit agreements with the Department for transportation and other projects. The Santa Clara County RCIS is part of a broader effort to implement regional advance mitigation planning in the Bay Area to facilitate landscape-scale conservation while improving the delivery of transportation projects.

Interested persons may provide oral and written comments at said time and place. Written comments may also be sent to the Open Space Authority, Attn: Santa Clara RCIS, 6980 Santa Teresa Blvd., Ste. 100, San Jose, CA 95119 or via email: clerk@openspaceauthority.org. Written comments should be provided by December 8, 2016.

6980 Santa Teresa Blvd
Suite 100
San Jose, CA 95119
408.224.7476 T
408.224.7548 F
openspaceauthority.org

Santa Clara County Regional Conservation Investment Strategy

A new State law passed in 2016, AB 2087, establishes a conservation planning tool called a Regional Conservation Investment Strategy (RCIS) to promote the conservation of species, habitats, and other natural resources. The Santa Clara County RCIS, which addresses Santa Clara County and northern San Benito County, is one of four pilot RCISs currently being developed in California.

The Santa Clara County RCIS:

- Is a voluntary, non-binding assessment of conservation priorities;
- Is being developed based on existing plans and other information, including the *Santa Clara Valley Greenprint*, the *Valley Habitat Plan*, and the Bay Area's *Conservation Lands Network,* among others;
- Promotes implementation of landscape-scale conservation actions, such as habitat protection, restoration, and enhancement measures including efforts to enhance landscape connectivity for wildlife;
- Coordinates various types of conservation investments, such as:
  - local, state, and federal government conservation projects;
  - private foundation and conservation organization (e.g. land trust) projects;
  - mitigation projects by private entities and public agencies;
- Considers focal species and sensitive habitats, and addresses working lands, proposed infrastructure, and development projects;
- Is designed to be consistent with and complement the Valley Habitat Plan, a regional HCP/NCCP that covers a portion of the RCIS plan area;
- Is being sponsored by the Santa Clara Valley Open Space Authority, which is developing the RCIS in collaboration with partner organizations and agencies and with the assistance of a consultant team, through a planning process providing opportunities for public input; and
- Will be provided for approval by the California Department of Fish and Wildlife, with opportunities for other regulatory agencies to 'sign on' and similarly utilize the RCIS for their work.

Once finalized, the Santa Clara County RCIS can help expedite delivery of public infrastructure projects by facilitating regional advance mitigation planning: a process in which the environmental mitigation for impacts from multiple projects is pooled and conducted in advance, resulting in larger conservation projects that have greater benefits, while expediting delivery of public infrastructure projects such as transportation or water supply projects.

Additional information about the RCIS program can be found at: https://www.wildlife.ca.gov/Conservation/Planning/Regional-Conservation. To provide input or request more information, please contact: Santa Clara Valley Open Space Authority 6980 Santa Teresa Blvd, Suite 100, San Jose, CA 95119; or RCIS@openspaceauthority.org

Regulatory Agency Outreach

The following regulatory agencies were invited to participate in the development of the Santa Clara County RCIS through agency-specific meetings as well as participation in the Partner Engagement Meetings.

- U.S. Army Corps of Engineers, San Francisco District
- San Francisco Bay Conservation and Development Commission (BCDC)
- California Department of Fish and Wildlife–Region 3
- California Department of Fish and Wildlife–Headquarters
- Environmental Protection Agency–Region 9
- National Marine Fisheries Service–Central Coast
- San Francisco Bay Regional Water Quality Control District
- State Water Resources Control Board
- U.S. Fish and Wildlife Service–Bay-Delta Region
- U.S. Fish and Wildlife Service–Pacific Southwest Region
- U.S. Fish and Wildlife Service–Sacramento Branch
- U.S. Fish and Wildlife Service-Ventura Fish and Wildlife Office

RAMP Technical Advisory Committee

- Alameda County Transportation Commission
- California Department of Fish and Wildlife–Headquarters
- California Department of Fish and Wildlife–Region 3
- California Natural Resources Agency
- Contra Costa Transportation Authority
- East Contra Costa County Habitat Conservancy
- Environmental Protection Agency–Region 9
- Caltrans Headquarters
- Caltrans, District 4
- Contra Costa Transportation Authority
- Metropolitan Transportation Commission
- National Marine Fisheries Service–Central Coast
- San Francisco Bay Conservation and Development Commission
- San Francisco Bay Regional Water Quality Control District

- Santa Clara Valley Transportation Authority
- Santa Clara County Habitat Conservancy
- Solano Transportation Authority
- U.S. Fish and Wildlife Service
- AECOM
- ICF
- Jodi McGraw Consulting
- Resources Law Group

Responses to Public Comments

This is a placeholder for public comments that will be received during the public review period. No written comments were received during or after (i.e., within 60 days) the public meeting held on December 8, 2016.

Appendix D
Letters of Support

SANTA CLARA VALLEY
HABITAT AGENCY

December 13, 2017

Ron Unger
Landscape Conservation Planning Program Manager
California Department of Fish and Wildlife
1416 9th Street, 12th Floor
Sacramento, CA 95814

RE: Santa Clara County Regional Conservation Investment Strategy Consistency with the Valley Habitat Plan

Dear Mr. Unger:

I am writing to provide the Santa Clara Valley Habitat Agency's (Habitat Agency) support for the draft Santa Clara County Regional Conservation Investment Strategy (SCCRCIS) submitted to your agency by the Santa Clara Valley Open Space Authority (OSA). The Habitat Agency implements the Santa Clara Valley Habitat Plan (Habitat Plan), an approved Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP; ICF 2012). We participated in the development of the SCCRCIS over the past 22 months as a member of the steering committee and reviewed the draft SCCRCIS and determined that it is consistent with and complements the Habitat Plan. The draft SCCRCIS includes provisions ensuring that the RCIS's goals, objectives, and actions will not preclude the Habitat Plan from achieving its goals, objectives, and actions or the Habitat Plan's conservation strategy. We believe the SCCRCIS will support collaborative conservation efforts that will help the Habitat Agency achieve the Habitat Plan's biological goals and objectives.

Habitat Agency and Habitat Plan (HCP/NCCP)

The Santa Clara Valley Habitat Agency is a joint exercise of powers entity (JPA) created by the County of Santa Clara and the cities of San Jose, Morgan Hill, and Gilroy, under Government Code Section 6500 *et seq.* The Habitat Agency was formed to implement the Habitat Plan, which is a 50-year regional plan to protect endangered species and natural resources while allowing for future development in Santa Clara County. The Habitat Plan was adopted in 2013 by the JPA entities as well as the Santa Clara Valley Water District and the Santa Clara Valley Transportation Authority. The adopting entities and Habitat Agency are Co-Permittees to the Section 10 and Natural Community Conservation Planning Act permits issued by the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife in 2013. The Habitat Plan covers 18 wildlife and plant species, including many species endemic to the serpentine communities in the South Bay Area region, and activities implemented by the Co-Permittees within the permit area. Participation in the Habitat Plan by the Co-Permittees is required and is not voluntary.

Santa Clara County Regional Conservation Investment Strategy

The SCCRIS is a regional conservation strategy created under AB 2087, to inform science-based nonbinding and voluntary conservation actions and habitat enhancement actions that advance the conservation of focal species, natural communities, and other conservation elements at a regional scale. The RCIS was developed as part of the California Department of Fish and Wildlife's (CDFW's) Regional Conservation Investment Strategies Program, established by AB 2087 and signed into law on September 22, 2016 by Governor Brown. AB 2087 established the RCIS Program to create a new, voluntary conservation planning tool to promote the conservation of species, habitats, and other natural resources and enable advance mitigation for public infrastructure projects. The SCCRCIS provides a non-regulatory assessment and analysis of conservation needs in a region, including habitat connectivity and climate resilience. The SCCRCIS is intended to provide scientific information for the consideration of public agencies, are voluntary, and do not create, modify, or impose regulatory requirements or standards, regulate the use of land, establish land-use designations, or affect the land-use authority of or exercise of discretion by any public agency. The preparation and use of SCCRCIS's is voluntary.

Once approved, entities can use SCCRCIS approved to guide voluntary investment in conservation actions, including habitat protection, restoration, and enhancement. The program enables project proponents to enter into Mitigation Credit Agreements (MCAs) with CDFW so that the conservation actions can generate mitigation credits that can be used to offset the impacts of public infrastructure, development, and other projects. Such MCAs can help ensure mitigation contributes to broader regional conservation goals identified in an SCCRCIS, reduce the transaction costs of mitigation, decrease the time required to obtain mitigation approval, and provide assurances to project proponents that advance mitigation investments will be counted and credited for future development permits.

SCCRCIS relationship to the Habitat Plan

The SCCRCIS conservation strategy, including focal species, goals, objectives, and conservation actions were designed to be consistent with, and complementary to, the Habitat Plan. To achieve this goal, the Habitat Agency participated on the SCCRCIS Steering Committee, was active in crafting the AB2087 legislation, and will sign a memorandum of understanding with OSA to jointly implement the SCCRIS and Habitat Plan. The SCCRCIS area includes most of the Habitat Plan's permit area, as well as, the remaining area in Santa Clara County, and a portion of northern San Benito County in the Upper Pajaro River Watershed.

Steering Committee. The steering committee was convened by the OSA to guide development of the RCIS. It includes OSA, the Habitat Agency, The Nature Conservancy, the State Coastal Conservancy, and the Valley Transportation Authority. Through monthly meetings of the Steering Committee, which occurred since the inception of the planning process in March 2016, the Habitat Agency communicated its interests as well as concerns about the SCCRCIS, including how it might influence its ability to fulfill permit requirements. The Habitat Agency's issues were integrated into draft documents, which were reviewed ensure that SCCRCIS will support collaborative conservation efforts and complement the achievement of Habitat Plan biological goals and objectives. Section 3.5 of the SCCRCIS, which was developed with the Habitat Agency, details how the SCCRCIS complements and does not conflict with the Habitat Plan.

AB2087. Several provisions in AB2087 (Section 1856j) which govern CDFW approval of MCAs are designed to ensure that implementation of RCISs does not negatively impact any approved HCP/NCCP in the region, including the Habitat Plan. This includes:

- MCAs require advance written approval of the implementing entity of a HCP/NCCP
- Credits created through MCAs can only be used for covered activities under a HCP/NCCP in accordance with the requirements of the HCP/NCCP
- Individuals and entities eligible for coverage as participating special entities under a HCP/NCCP may use MCA mitigation credits only if the implementing entity declines to extend coverage to the covered activities proposed by the eligible individual or entity

Joint Implementation. OSA and the Habitat Agency will be expanding their collaborative Habitat Plan implementation to the SCCRCIS. OSA purchased and manages the Habitat Agency's first property, Coyote Ridge, which was enrolled into the Reserve System via a Conservation Easement. We work together on regional conservation priorities, such as the preservation and restoration of Coyote Valley, which serves as an important wildlife linkage. This relationship is being codified in an MOU that lays out the roles and responsibilities for collaborative implementation of the Habitat Plan and SCCRIS. For example, the Habitat Agency is set up for managing mitigation projects, could create MCAs that can be used to generate credits for non-covered activities and/or non-covered species. This would expand the cost-effectiveness of work to meet the existing mitigation and recovery requirements of the Habitat Plan's conservation strategy while supporting the SCCRCIS.

We look forward to continuing to participate as members of the Steering Committee to refine the SCCRCIS based on feedback from the Department as well as the public.

I hope you will not hesitate to contact me if you have any questions.

Sincerely,

Edmund Sullivan
Executive Officer

Reference

ICF International 2012. Final Santa Clara Valley Habitat Plan. Prepared for the County of Santa Clara, City of San Jose, City of Morgan Hill, City of Gilroy, Santa Clara Valley Water District, and Santa Clara Valley Transportation Authority. August. Available: http://scvhabitatagency.org/178/Santa-Clara-Valley-Habitat-Plan.

Coastal Conservancy

July 7, 2017

Charlton H. Bonham
Director
California Department of Fish and Wildlife
1416 Ninth Street
Sacramento, CA 95814

Subject: Santa Clara County Regional Conservation Investment Strategy

Dear Mr. Bonham:

In accordance with Cal. Fish and Game Code Section 1852(a), we are writing to request that the California Department of Fish and Wildlife (CDFW) approve the Santa Clara County Regional Conservation Investment Strategy (RCIS). The 934,028-acre RCIS area comprises all of Santa Clara County, plus portions of three watersheds in northern San Benito County. This area is of statewide importance for conservation, as it supports numerous rare and endangered species, including serpentine endemics found nowhere else in the world; contains important wetland, riparian, and oak woodland habitat, including that located in the Upper Pajaro River floodplain; and features critical areas for wildlife connectivity, including a landscape linkage connecting the Santa Cruz and Diablo mountain ranges across Coyote Valley.

The RCIS would facilitate current efforts to safeguard these and other conservation values by contributing to smart growth principles, including informed planning for conservation, urbanization, and public infrastructure that are important to the California State Coastal Conservancy (Coastal Conservancy) and the numerous local, state, and federal conservation agencies and organizations working in the region. This RCIS will help target acquisition, restoration, or enhancement where it will have the largest benefit for focal species and other conservation elements.

The RCIS area encompasses almost all of the permit area of the Santa Clara Valley Habitat Plan (Habitat Plan)—a regional Habitat Conservation Plan and Natural Community Conservation Plan approved in 2013 by the U.S. Fish and Wildlife Service and CDFW. This RCIS was developed in coordination with the Valley Habitat Agency, the entity implementing the Habitat Plan, and was designed to complement the Habitat Plan, both within and beyond the Habitat Plan's permit area, by building on its conservation goals, objectives, and reserve design in order to "fill in the gaps" that are not addressed by the Habitat

1515 Clay Street, 10th Floor
Oakland, California 94612-1401
510·286·1015 Fax: 510·286·0470

Plan, both in geography and in resources. As such, this RCIS was prepared consistent with Section 1852(c)(11), that states that for an RCIS to be approved by CDFW, an RCIS shall include "provisions ensuring that the strategy is consistent with and complements any administrative draft natural community conservation plan, approved natural community conservation plan, or federal habitat conservation plan that overlaps with the RCIS area."

By using a science-based approach to identify areas of high conservation value in the region, this RCIS will also aid the development of public infrastructure projects by helping agencies avoid and minimize their project impacts and then identify priority conservation actions for compensatory mitigation, including as part of advance mitigation programs. It is expected that a number of transportation projects will be designed and proposed for construction in the next three to 10 years in the RCIS area. Some of these projects will not have their compensatory mitigation needs met by the Habitat Plan because the activities are not in the permit area or otherwise covered by the Habitat Plan's permits. The RCIS was developed in consideration of these and other transportation projects as part of a collaborative effort with the Metropolitan Transportation Commission (MTC), Caltrans, and The Nature Conservancy to establish a regional advance mitigation planning (RAMP) program in the San Francisco Bay Area.

The RCIS will also inform the mitigation needs of other projects occurring in the RCIS area, including ongoing development in the 13 cities covered by this Santa Clara County RCIS (outside the Habitat Plan's plan area), installation or replacement of large-scale utilities, and water supply and flood infrastructure projects.

The Coastal Conservancy appreciates CDFW's efforts to review and approve this conservation strategy. If you have any questions, please contact Laura Cholodenko at (510) 286-0752.

Sincerely,

Matt Gerhart
Bay Area Program Manager

Cc: Kevin Hunting, Chief Deputy Director, CDFW
Rick Macedo, Habitat Conservation Planning Branch Chief, CDFW
Ronald Unger, Landscape Conservation Planning Program Manager, CDFW

Appendix E

Evaluation of Species for Inclusion as Focal Species

Appendix E
Evaluation of Species for Inclusion as Focal Species

Introduction

Tables E-1 and E-2 list wildlife and fish species and plant species, respectively, evaluated for inclusion as focal species in this Santa Clara County RCIS. Evaluation for inclusion of a given species as a focal species followed a three-step process, which is discussed in Section 2.6.3.1, *Focal Species Selection Process*, shown in Tables E-1 and E-2, and briefly summarized here.

Step 1: Identify Focal Species. This step was used to populate Tables E-1 and E-2 with a comprehensive list of declining and vulnerable species that occur or may occur in the RCIS area.

Step 2: Apply Screening Criteria. This step applies screening criteria to the list of potential focal species to determine which species should be considered for inclusion as focal species in this Santa Clara County RCIS. To meet the screening criteria (i.e., to receive a TRUE value in the Meets Screening Criteria column), the species must receive a TRUE value in the Enough Data Available and Occurs in the RCIS Area column and receive a TRUE value in one of the other Filtering of Species columns.

A species receives a TRUE value in the Filtering of Species columns if it meets the corresponding criteria in the Criteria column (i.e., receives a 1). A species receives a FALSE value in the Filtering of Species columns if it does not meet the corresponding criteria in the Criteria column (i.e., receives a 0).

Step 3: Finalize Focal Species Lists. Many species meet the screening criteria in Step 2, but not all of these species are included as focal species in the RCIS Area. This list of potential focal species was further narrowed down to limit the scope of this RCIS to be consistent with the available planning resources and this RCIS's preparation schedule. To narrow the list to those species that would benefit most from this RCIS and add conservation value to the conservation strategy, the following types of species were prioritized.

- Species that are anticipated to have mitigation needs for public infrastructure projects in the next 10 years.
- Species in the RCIS area that are not completely addressed by the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) (over species that are completely addressed by the Santa Clara Valley HCP/NCCP).
- Species in the RCIS area that occur on unprotected lands and that may be impacted by development (over species where the only known occurrences are on protected lands).
- Species in the RCIS area that are not addressed by other regional conservation strategies.

The Step 3 column in Tables E-1 and E-2 explains the rationale behind the inclusion or exclusion of each species as a focal species in this Santa Clara County RCIS.

Species that met the screening criteria, whose needs are not completely addressed by the Santa Clara Valley HCP/NCCP or other regional conservation strategy, that do not occur only on protected land, and that are likely to need mitigation for transportation infrastructure projects within the next 10 years were included as focal species. This RCIS includes 18 focal species: 10 wildlife species and eight plant species.

Table E-1a. Wildlife and Fish Species Evaluated for Inclusion as Focal Species in the Santa Clara County RCIS, Step 1

		Status				
Scientific Name	**Common Name**	**Federal**	**State**	**Global**	**SWAP-SGCN**	**SWAP-CV**
Adela oplerella	Opler's longhorn moth	–	–	G2	N	N
Branchinecta lynchi	Vernal pool fairy shrimp	T	–	G3	Y	N
Danaus plexippus	Monarch butterfly	*	–	G4T2T3	Y	N
Euphydryas editha bayensis	Bay checkerspot butterfly	T	–	G5T1	Y	N
Helminthoglypta nickliniana bridgesi	Bridges' Coast Range shoulderband snail	–	–	G3T1	Y	N
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	–	–	G2?	N	N
Hygrotus curvipes	Curved-foot hygrotus diving beetle	–	–	G1?	Y	N
Ischnura gemina	San Francisco forktail damselfly	–	–	G2	N	N
Lepidurus packardi	Vernal pool tadpole shrimp	E	–	G4	Y	N
Linderiella occidentalis	California fairy shrimp	–	–	G2G3	N	N
Microcina homi	Hom's microblind harvestman	–	–	G1	Y	N
Microcina juni	Jung's microblind harvestman	–	–	G1	Y	N
Nothochrysa californica	San Francisco lacewing	–	–	-	N	N
Speyeria adiaste adiaste	Unsilvered fritillary butterfly	–	–	G1G2T1	Y	N
Speyeria callippe callippe	Callippe silverspot butterfly	E	–	G5T1	Y	N
Speyeria zerene behrensii	Behren's silverspot butterfly	E	–	G5T1	Y	N
Speyeria zerene myrtleae	Myrtle's silverspot butterfly	E	–	G5T1	Y	N
Acipenser medirostris	Green sturgeon	T	SSC	G3	Y	Y
Archoplites interruptus	Sacramento perch	–	SSC	G5T2T3	Y	N
Eucyclogobius newberryi	Tidewater goby	E	SSC	G3	Y	Y
Hypomesus transpacificus	Delta smelt	T	T	G1	Y	Y
Lampetra ayresi	River lamprey	–	SSC	G4	Y	Y
Oncorhynchus kisutch	Coho salmon—central California coast	T	E	G4?	Y	Y
Oncorhynchus mykiss	Central California Coastal steelhead	T	SSC	G5T2T3Q	Y	Y
Oncorhynchus mykiss	South Central California steelhead	T	SSC	G5T2Q	Y	Y

		Status				
Scientific Name	**Common Name**	**Federal**	**State**	**Global**	**SWAP-SGCN**	**SWAP-CV**
Oncorhynchus tshawytscha	Central Valley fall/late fall–run Chinook salmon	SC	SSC	G5	Y	Y
Pogonichthys macrolepidotus	Sacramento splittail	--	SSC	GNR	Y	N
Spirinchus thaleichthys	Longfin smelt	C	T	G5	Y	Y
Ambystoma californiense	California tiger salamander (Central CA DPS)	T	T	G2G3	Y	Y
Rana boylii	Foothill yellow-legged frog	*	SC Threatened	G3	Y	Y
Rana draytonii	California red-legged frog	T	SSC	G2G3	Y	N
Spea hammondii	Western spadefoot toad	*	SSC	G3	Y	N
Anniella pulchra pulchra	Silvery legless lizard	–	SSC	G3G4T2 T3Q	Y	N
Emys marmorata	Western pond turtle	*	SSC	G3G4	Y	N
Masticophis flagellum ruddocki	San Joaquin coachwhip (=whipsnake)	–	SSC	G5T2T3?	Y	N
Masticophis lateralis euryxanthus	Alameda whipsnake	T	T	G4T2	Y	N
Phrynosoma coronatum frontale	California horned lizard	–	SSC	-	N	N
Accipiter cooperii	Cooper's hawk	–	SSC	G5	N	N
Accipiter striatus	Sharp-shinned hawk	–	SSC	G5	N	N
Agelaius tricolor	Tricolored blackbird	*	SC Endangered	G5T1T2	Y	N
Ammodramus savannarum	Grasshopper sparrow	–	SSC	G5	Y	N
Artemisiospizaa belli belli	Bell's sage sparrow	–	SSC	G5T2T4?	N	N
Aquila chrysaetos	Golden eagle	–	FP, SSC	G5	N	N
Ardea alba	Great Egret	–	–	G5	N	N
Ardea herodias	Great blue heron	–	Sensitive	G5	N	N
Asio flammeus	Short-eared owl	–	SSC	G5	Y	N
Athene cunicularia	Burrowing owl	–	SSC	G4	Y	N
Botaurus lentiginosus	American bittern	–	–	G4	N	N
Branta canadensis leucopareia	Aleutian Canada goose	–	–	G5T3	N	N
Buteo regalis	Ferruginous hawk	–	SSC	G4	N	N
Buteo swainsoni	Swainson's hawk	–	T	G5	Y	Y
Charadrius alexandrinus nivosus	Western snowy plover	T	SSC	G3T3	Y	Y
Circus cyaneus	Northern harrier	–	CSC	G5	Y	N

		Status				
Scientific Name	**Common Name**	**Federal**	**State**	**Global**	**SWAP-SGCN**	**SWAP-CV**
Egretta thula	Snowy egret	–	Nesting colonies of "interest" to CDFW	G5	N	N
Elanus leucurus	White-tailed kite	–	FP	G5	N	N
Eremophila alpestris actia	California horned lark	–	CSC	G5T3Q	N	N
Falco mexicanus	Prairie falcon	–	–	G5	N	N
Falco peregrinus anatum	American peregrine falcon	D	FP	G4T4	N	N
Geothlypis trichas sinuosa	Saltmarsh common yellowthroat	–	SSC 1st priority	G5T3	N	N
Haliaeetus leucocephalus	Bald eagle	D	E; FP	G5	Y	N
Lanius ludovicianus	Loggerhead shrike	–	SSC	G4	Y	N
Laterallus jamaicensis coturniculus	California black rail	–	T; FP	G3G4T1	Y	Y
Nycticorax nycticorax	Black-crowned night heron	–	CSC—rookeries only	G5	N	N
Pandion haliaetus	Osprey	–	CSC	G5	N	N
Pelecanus occidentalis californicus	California brown pelican	D	E; FP	G4T3	Y	Y
Phalacrocorax auritus	Double-crested cormorant	–	CSC	G5	N	N
Progne subis	Purple martin	–	SSC	G5	Y	N
Rallus obsoletus obsoletus	Ridgway's rail	E	E; FP	G5T1	Y	Y
Riparia riparia	Bank swallow		T	G5	Y	N
Sterna antillarum (=albifrons) browni	California least tern	E	E; FP	G4T2T3Q	Y	Y
Vireo bellii pusillus	Least Bell's vireo	E	E	G5T2	Y	Y
Antrozous pallidus	Pallid bat	–	SSC	G5	Y	N
Corynorhinus townsendii townsendii	Townsend's big-eared bat	–	C	G3G4	Y	N
Eumops perotis californicus	Western mastiff-bat	–	SSC	G5T4	N	N
Lasionycteris noctivagans	Silver-haired bat	–	–	G5	N	N
Lasiurus blossevillii	Western red bat	–	SSC	G5	N	N
Lasiurus cinereus	Hoary bat	–	–	G5	N	N
Myotis ciliolabrum	Western small-footed myotis	–	–	G5	N	N
Myotis evotis	Long-eared myotis	–	–	G5	Y	N

		Status				
Scientific Name	**Common Name**	**Federal**	**State**	**Global**	**SWAP-SGCN**	**SWAP-CV**
Myotis thysanodes	Fringed myotis	–	–	G4	Y	N
Myotis volans	Long-legged myotis	–	–	G5	Y	N
Myotis yumanensis	Yuma myotis	–	–	G5	N	N
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	–	SSC	G5T2T3	N	N
Nyctinomops macrotis	Big free-tailed bat	–	SSC	G5	Y	N
Puma concolor	Mountain lion	-	-	-	N	N
Reithrodontomys raviventris	Salt marsh harvest mouse	E	E; FP	G1G2	Y	N
Sorex vagrans halicoetes	Salt marsh wandering shrew	–	SSC	G5T1	Y	N
Taxidea taxus	American badger	–	SSC	G5	Y	N
Vulpes macrotis mutica	San Joaquin kit fox	E	T	G4T2	Y	N

Status

Federal

E = listed as endangered under the federal Endangered Species Act.
T = listed as threatened under the federal Endangered Species Act.
C = listed as a candidate species, which is a species for which the U.S. Fish and Wildlife Service has on file sufficient information to warrant a listing.
= no listing.

State (CDFW July 2016, Special Animals List, Available: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406)

E = listed as endangered under the California Endangered Species Act.
T = listed as threatened under the California Endangered Species Act.
SC = listed as a candidate species. A candidate species is one that the California Fish and Game Commission has formally declared a candidate species.
SSC = listed as a California special of special concern by the California Department of Fish and Wildlife
FP = listed as a fully protected by the California Department of Fish and Wildlife
= no listing.

Global Conservation Status (Nature Serve 2015. Available http://explorer.natureserve.org/granks.htm)

G1 = critically imperiled- high risk of extinction due to extreme rarity (often 5 or fewer populations)
G2 = imperiled- high risk of extinction due to very restricted range, very few populations (often 20 or fewer populations)
G3 = vulnerable- moderate risk of extinction due to restricted range and very few populations (often 80 or fewer populations)
G4 = apparently secure- uncommon but not rare
G5 = secure- common, widespread and abundant
G#G# = Range rank; numeric range rank (e.g., G2G3) is used to indicate the range of uncertainty in the status of a species or community.
Q = Questionable taxonomy; taxonomic distinctiveness of this entity at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid.
T# = Infraspecific taxon; the status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

Rules for assigning T-ranks follow the same principles outlined above for global conservation.

SWAP State Wildlife Action Plan (CDFW 2015. https://www.wildlife.ca.gov/SWAP/Final)
SGCN- Species of Greatest Conservation Need
CV- Climate Vulnerable

Table E-1b. Wildlife and Fish Species Evaluated for Inclusion as Focal Species in the Santa Clara County RCIS, Step 2

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Adela oplerella	Opler's longhorn moth	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Branchinecta lynchi	Vernal pool fairy shrimp	1	1	0	1	1	FALSE	FALSE	FALSE	FALSE	FALSE
Danaus plexippus	Monarch butterfly	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Euphydryas editha bayensis	Bay checkerspot butterfly	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE
Helminthoglypta nickliniana bridgesi	Bridges' Coast Range shoulderband snail	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Hygrotus curvipes	Curved-foot hygrotus diving beetle	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Ischnura gemina	San Francisco forktail damselfly	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Lepidurus packardi	Vernal pool tadpole shrimp	1	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Linderiella occidentalis	California fairy shrimp	0	1	0	1	1	FALSE	FALSE	FALSE	FALSE	FALSE
Microcina homi	Hom's microblind harvestman	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Microcina juni	Jung's microblind harvestman	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Nothochrysa californica	San Francisco lacewing	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Speyeria adiaste adiaste	Unsilvered fritillary butterfly	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Speyeria callippe callippe	Callippe silverspot butterfly	1	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Speyeria zerene behrensii	Behren's silverspot butterfly	1	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Speyeria zerene myrtleae	Myrtle's silverspot butterfly	1	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Acipenser medirostris	Green sturgeon	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Archoplites interruptus	Sacramento perch	0	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Eucyclogobius newberryi	Tidewater goby	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Hypomesus transpacificus	Delta smelt	1	1	0	1	1	FALSE	FALSE	FALSE	FALSE	FALSE
Lampetra ayresi	River lamprey	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Oncorhynchus kisutch	Coho salmon—central California coast	1	1	0	1	1	FALSE	FALSE	FALSE	FALSE	FALSE
Oncorhynchus mykiss	Central California Coastal steelhead	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE
Oncorhynchus mykiss	South Central California steelhead	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE
Oncorhynchus tshawytscha	Central Valley fall/late fall–run Chinook salmon	0	1	1	1	1	TRUE	TRUE	FALSE	TRUE	TRUE
Pogonichthys macrolepidotus	Sacramento splittail	0	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Spirinchus thaleichthys	Longfin smelt	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE

		Criteria					Filtering of Species				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Ambystoma californiense	California tiger salamander (Central CA DPS)	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Rana boylii	Foothill yellow-legged frog	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Rana draytonii	California red-legged frog	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Spea hammondii	Western spadefoot toad	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Anniella pulchra pulchra	Silvery legless lizard	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Emys marmorata	Western pond turtle	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Masticophis flagellum ruddocki	San Joaquin coachwhip (=whipsnake)	0	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Masticophis lateralis euryxanthus	Alameda whipsnake	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Phrynosoma coronatum frontale	California horned lizard	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Accipiter cooperii	Cooper's hawk	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Accipiter striatus	Sharp-shinned hawk	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Agelaius tricolor	Tricolored blackbird	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Ammodramus savannarum	Grasshopper sparrow	0	1	1	1	1	TRUE	TRUE	FALSE	TRUE	TRUE
Artemisiospizaa belli belli	Bell's sage sparrow	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Aquila chrysaetos	Golden eagle	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Ardea alba	Great Egret	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Ardea herodias	Great blue heron	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Asio flammeus	Short-eared owl	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Athene cunicularia	Burrowing owl	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Botaurus lentiginosus	American bittern	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Branta canadensis leucopareia	Aleutian Canada goose	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Buteo regalis	Ferruginous hawk	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Buteo swainsoni	Swainson's hawk	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Charadrius alexandrinus nivosus	Western snowy plover	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Circus cyaneus	Northern harrier	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Egretta thula	Snowy egret	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Elanus leucurus	White-tailed kite	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Eremophila alpestris actia	California horned lark	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Falco mexicanus	Prairie falcon	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Falco peregrinus anatum	American peregrine falcon	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Geothlypis trichas sinuosa	Saltmarsh common yellowthroat	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Haliaeetus leucocephalus	Bald eagle	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Lanius ludovicianus	Loggerhead shrike	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Laterallus jamaicensis coturniculus	California black rail	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Nycticorax nycticorax	Black-crowned night heron	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Pandion haliaetus	Osprey	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Pelecanus occidentalis californicus	California brown pelican	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Phalacrocorax auritus	Double-crested cormorant	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Progne subis	Purple martin	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Rallus obsoletus obsoletus	Ridgway's rail	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE
Riparia riparia	Bank swallow	1	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Sterna antillarum (=albifrons) browni	California least tern	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Vireo bellii pusillus	Least Bell's vireo	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Antrozous pallidus	Pallid bat	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Corynorhinus townsendii townsendii	Townsend's big-eared bat	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Eumops perotis californicus	Western mastiff-bat	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Lasionycteris noctivagans	Silver-haired bat	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Lasiurus blossevillii	Western red bat	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Lasiurus cinereus	Hoary bat	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Myotis ciliolabrum	Western small-footed myotis	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Myotis evotis	Long-eared myotis	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Myotis thysanodes	Fringed myotis	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Myotis volans	Long-legged myotis	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Myotis yumanensis	Yuma myotis	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Nyctinomops macrotis	Big free-tailed bat	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Puma concolor	Mountain lion	0	0	1	1	1	TRUE	FALSE	FALSE	TRUE	TRUE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Reithrodontomys raviventris	Salt marsh harvest mouse	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Sorex vagrans halicoetes	Salt marsh wandering shrew	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Taxidea taxus	American badger	0	1	1	1	1	TRUE	TRUE	FALSE	TRUE	TRUE
Vulpes macrotis mutica	San Joaquin kit fox	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE

Criteria

Status = The species is listed by state or federal resource agencies as threatened or endangered, or is a candidate for such listing; or the species is reasonably expect to be considered for listing within 10 years of East Bay RCIS approval. This includes species covered by a regional NCCP or HCP that overlaps the RCIS area.

Rarity = The species is recognized by NatureServe as Critically Imperiled (G1) or Imperiled (G2) globally, or is described as a Species of Greatest Conservation Need (SGCN) or Climate Vulnerable (CV) in the State Wildlife Action Plan, or is recognized by CNPS as Rare, Threatened, or Endangered in California and elsewhere (1B) or Rare, Threatened or Endangered in California but is more common elsewhere (2B).

Occur = The species is known or likely to occur in the RCIS area. Occurrence data should be based on credible evidence. Some species may not be present in the RCIS area at the time this RCIS is developed but could have a reasonable expectation to expand their range into the RCIS area within 10 years following RCIS development.

Data = Drawing on best available science and emerging data, sufficient data on the species' life history, habitat requirements, and occurrence in the RCIS area are available to propose viable conservation actions.

0- Does not meet criteria
1- Meets Criteria

Filtering of Species

FALSE- Does not meet criteria
TRUE- Meets Criteria

Table E-1c. Wildlife and Fish Species Evaluated for Inclusion as Focal Species in the Santa Clara County RCIS, Step 3

		Step 3	
Scientific Name	**Common Name**	**Rationale for Exclusion from Focal Species List**	**Included as Focal Species**
Adela oplerella	Opler's longhorn moth	Criteria	No
Branchinecta lynchi	Vernal pool fairy shrimp	Only occurs on Don Edwards NWR, not in RCIS Area	No
Danaus plexippus	Monarch butterfly	Low level of winter roosting; Conservation needs in RCIS Area not well understood	No
Euphydryas editha bayensis	Bay checkerspot butterfly	Completely addressed by SCVHP	No
Helminthoglypta nickliniana bridgesi	Bridges' Coast Range shoulderband snail	Criteria	No
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	Criteria	No
Hygrotus curvipes	Curved-foot hygrotus diving beetle	Criteria	No
Ischnura gemina	San Francisco forktail damselfly	Criteria	No
Lepidurus packardi	Vernal pool tadpole shrimp	Only occurs on Don Edwards NWR, not in RCIS Area	No
Linderiella occidentalis	California fairy shrimp	Widespread in vernal pool systems, only occurs on Don Edwards NWR, not in RCIS Area	No
Microcina homi	Hom's microblind harvestman	Criteria	No
Microcina juni	Jung's microblind harvestman	Criteria	No
Nothochrysa californica	San Francisco lacewing	Criteria	No
Speyeria adiaste adiaste	Unsilvered fritillary butterfly	Criteria	No
Speyeria callippe callippe	Callippe silverspot butterfly	Criteria	No
Speyeria zerene behrensii	Behren's silverspot butterfly	Criteria	No
Speyeria zerene myrtleae	Myrtle's silverspot butterfly	Criteria	No
Acipenser medirostris	Green sturgeon	Minor portion of range inside RCIS Area, minimal conservation opportunities	No
Archoplites interruptus	Sacramento perch	Criteria	No

		Step 3	
Scientific Name	**Common Name**	**Rationale for Exclusion from Focal Species List**	**Included as Focal Species**
Eucyclogobius newberryi	Tidewater goby	Minor portion of range inside RCIS Area, minimal conservation opportunities	No
Hypomesus transpacificus	Delta smelt	Criteria	No
Lampetra ayresi	River lamprey	Criteria	No
Oncorhynchus kisutch	Coho salmon—central California coast	Minor portion of range inside RCIS Area, minimal conservation opportunities	No
Oncorhynchus mykiss	Central California Coastal steelhead	None	Yes
Oncorhynchus mykiss	South Central California steelhead	None	Yes
Oncorhynchus tshawytscha	Central Valley fall/late fall–run Chinook salmon	Minor portion of range inside RCIS Area (stray hatchery fish in Guadalupe River), minimal conservation opportunities	No
Pogonichthys macrolepidotus	Sacramento splittail	Criteria	No
Spirinchus thaleichthys	Longfin smelt	Minor portion of range inside RCIS Area, minimal conservation opportunities	No
Ambystoma californiense	California tiger salamander (Central CA DPS)	None	Yes
Rana boylii	Foothill yellow-legged frog	None	Yes
Rana draytonii	California red-legged frog	None	Yes
Spea hammondii	Western spadefoot toad	Criteria	No
Anniella pulchra pulchra	Silvery legless lizard	Criteria	No
Emys marmorata	Western pond turtle	Criteria	No
Masticophis flagellum ruddocki	San Joaquin coachwhip (=whipsnake)	Criteria	No
Masticophis lateralis euryxanthus	Alameda whipsnake	Regulatory status undefined in RCIS Area; minimal threat to species	No
Phrynosoma coronatum frontale	California horned lizard	Criteria	No
Accipiter cooperii	Cooper's hawk	Criteria	No
Accipiter striatus	Sharp-shinned hawk	Criteria	No
Agelaius tricolor	Tricolored blackbird	None	Yes

		Step 3	
Scientific Name	**Common Name**	**Rationale for Exclusion from Focal Species List**	**Included as Focal Species**
Ammodramus savannarum	Grasshopper sparrow	Adequate focus on grassland conservation from other focal species	No
Artemisiospizaa belli belli	Bell's sage sparrow	Criteria	No
Aquila chrysaetos	Golden eagle	Nests at low densities in RCIS Area relative to range; Minimal threat to nest sites	No
Ardea alba	Great Egret	Criteria	No
Ardea herodias	Great blue heron	Criteria	No
Asio flammeus	Short-eared owl	Not well understood in RCIS Area; Adequate focus on grassland conservation from other focal species	No
Athene cunicularia	Burrowing owl	None	Yes
Botaurus lentiginosus	American bittern	Criteria	No
Branta canadensis leucopareia	Aleutian Canada goose	Criteria	No
Buteo regalis	Ferruginous hawk	Criteria	No
Buteo swainsoni	Swainson's hawk	None	Yes
Charadrius alexandrinus nivosus	Western snowy plover	Addressed by Baylands conservation goals and objectives	No
Circus cyaneus	Northern harrier	Criteria	No
Egretta thula	Snowy egret	Criteria	No
Elanus leucurus	White-tailed kite	Low conservation priority in the RCIS Area, Minimal threats to species	No
Eremophila alpestris actia	California horned lark	Criteria	No
Falco mexicanus	Prairie falcon	Criteria	No
Falco peregrinus anatum	American peregrine falcon	Nesting in built environment, minimal conservation opportunities	No
Geothlypis trichas sinuosa	Saltmarsh common yellowthroat	Criteria	No
Haliaeetus leucocephalus	Bald eagle	Occasional nester in RCIS Area; Minimal threat to nest site	No
Lanius ludovicianus	Loggerhead shrike	Adequate focus on grassland and shrubland conservation from other focal species	No
Laterallus jamaicensis coturniculus	California black rail	Addressed by Baylands conservation goals and objectives	No
Nycticorax nycticorax	Black-crowned night heron	Criteria	No

		Step 3	
Scientific Name	**Common Name**	**Rationale for Exclusion from Focal Species List**	**Included as Focal Species**
Pandion haliaetus	Osprey	Criteria	No
Pelecanus occidentalis californicus	California brown pelican	RCIS Area includes small part of non-breeding range; Minimal threat to species or conservation opportunities	No
Phalacrocorax auritus	Double-crested cormorant	Criteria	No
Progne subis	Purple martin	Only known nesting locations on Santa Clara/Santa Cruz county line in Santa Cruz Mtns.	No
Rallus obsoletus obsoletus	Ridgway's rail	Addressed by Baylands conservation goals and objectives	No
Riparia riparia	Bank swallow	Criteria	No
Sterna antillarum (=albifrons) browni	California least tern	RCIS Area includes small part of range; Minimal threat to species or conservation opportunities; Addressed by Baylands conservation goals and objectives	No
Vireo bellii pusillus	Least Bell's vireo	Completely addressed by SCVHP	No
Antrozous pallidus	Pallid bat	Conservation needs not well understood in the RCIS Area	No
Corynorhinus townsendii townsendii	Townsend's big-eared bat	Conservation needs not well understood in the RCIS Area	No
Eumops perotis californicus	Western mastiff-bat	Criteria	No
Lasionycteris noctivagans	Silver-haired bat	Criteria	No
Lasiurus blossevillii	Western red bat	Criteria	No
Lasiurus cinereus	Hoary bat	Criteria	No
Myotis ciliolabrum	Western small-footed myotis	Criteria	No
Myotis evotis	Long-eared myotis	Criteria	No
Myotis thysanodes	Fringed myotis	Conservation needs not well understood in the RCIS Area	No
Myotis volans	Long-legged myotis	Criteria	No
Myotis yumanensis	Yuma myotis	Criteria	No
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	Criteria	No
Nyctinomops macrotis	Big free-tailed bat	Criteria	No
Puma concolor	Mountain lion	None	Yes
Reithrodontomys raviventris	Salt marsh harvest mouse	Addressed by Baylands conservation goals and objectives	No
Sorex vagrans halicoetes	Salt marsh wandering shrew	Criteria	No

		Step 3	
Scientific Name	**Common Name**	**Rationale for Exclusion from Focal Species List**	**Included as Focal Species**
Taxidea taxus	American badger	Addressed by mountain lion conservation goals and objectives	No
Vulpes macrotis mutica	San Joaquin kit fox	None	Yes

Table E-1d. Wildlife and Fish Species Evaluated for Inclusion as Focal Species in the Santa Clara County RCIS, Additional Information

Scientific Name	Common Name	Additional Information
Adela oplerella	Opler's longhorn moth	14 CNDDB occurrences, 8 between 1991 and 2006. Occurrences in Santa Clara, Sonoma Santa Cruz, San Francisco, and Marin Counties. Most of the current occurrences are located in Santa Clara county. Larvae feed on Platystemon californicus.
Branchinecta lynchi	Vernal pool fairy shrimp	Covered ECCC; addressed by EACCS
Danaus plexippus	Monarch butterfly	378 CNDDB occurrences along the coast from Baja to Mendocino.
Euphydryas editha bayensis	Bay checkerspot butterfly	Covered by SCVHP.
Helminthoglypta nickliniana bridgesi	Bridges' Coast Range shoulderband snail	Species' ecology is not well understood, one CNDDB occurrence.
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	Little is known about species' habitat.
Hygrotus curvipes	Curved-foot hygrotus diving beetle	Little is known about species' habitat.
Ischnura gemina	San Francisco forktail damselfly	Very localized in urban areas; endemic to wetlands in the San Francisco Bay Area.
Lepidurus packardi	Vernal pool tadpole shrimp	Covered by ECCC.
Linderiella occidentalis	California fairy shrimp	CNDDB occurrences throughout Sacramento Valley and central California in hardpan or sandstone depressions.
Microcina homi	Hom's microblind harvestman	5 CNDDB occurrences, 4 from 1966, one from 1983. All are vague and non-specific.
Microcina juni	Jung's microblind harvestman	1 CNDDB occurrence in Santa Clara county. This occurrence and very vague and provide very few occurrences details. Accuracy for the occurrence is 1/10th of a mile.
Nothochrysa californica	San Francisco lacewing	Little information is available on species.
Speyeria adiaste adiaste	Unsilvered fritillary butterfly	Little information available on the species, uncertain if it occurs in the RCIS Area.
Speyeria callippe callippe	Callippe silverspot butterfly	Covered by ECCC.
Speyeria zerene behrensii	Behren's silverspot butterfly	Few occurrences in coastal Sonoma County.
Speyeria zerene myrtleae	Myrtle's silverspot butterfly	Many occurrences in Marin and Sonoma Counties.
Acipenser medirostris	Green sturgeon	The distinct population segment that occurs in the study area spawns primarily in the mainstem of the Sacramento River.

Scientific Name	Common Name	Additional Information
Archoplites interruptus	Sacramento perch	Moves through Bay on way to spawning habitat; spawns in Abbotts Lagoon within the protected Point Reyes National Seashore in Marin.
Eucyclogobius newberryi	Tidewater goby	Many occurrences in Marin, San Mateo, and Sonoma Counties.
Hypomesus transpacificus	Delta smelt	Many occurrences in Contra Costa and Solano Counties.
Lampetra ayresi	River lamprey	Insufficient data to create conservation strategy.
Oncorhynchus kisutch	Coho salmon—central California coast	Occurrences in Marin and Sonoma Counties.
Oncorhynchus mykiss	Central California Coastal steelhead	Occurs in Alameda, Marin, Napa, San Mateo, Santa Clara and Sonoma Counties. Addressed by EACCS.
Oncorhynchus mykiss	South Central California steelhead	Potential habitat in southern Santa Clara.
Oncorhynchus tshawytscha	Central Valley fall/late fall–run Chinook salmon	Moves through Bay on way to spawning habitat.
Pogonichthys macrolepidotus	Sacramento splittail	Many Occurrences in Solano and Sonoma Counties.
Spirinchus thaleichthys	Longfin smelt	Occurrences in Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma Counties.
Ambystoma californiense	California tiger salamander (Central CA DPS)	Covered by ECCC and SCVHP. Addressed by EACCS.
Rana boylii	Foothill yellow-legged frog	Covered by ECCC and SCVHP. Addressed by EACCS.
Rana draytonii	California red-legged frog	Covered by ECCC and SCVHP. Addressed by EACCS.
Spea hammondii	Western spadefoot toad	Not in RCIS Area. Range is Sacramento- San Joaquin valley and southern California.
Anniella pulchra pulchra	Silvery legless lizard	Covered by ECCC.
Emys marmorata	Western pond turtle	Covered by ECCC and SCVHP. 1159 CNDDB occurrences. Aquatic habitat generalist.
Masticophis flagellum ruddocki	San Joaquin coachwhip (=whipsnake)	Majority of range is not within the RCIS Area.
Masticophis lateralis euryxanthus	Alameda whipsnake	Covered by ECCC and addressed by EACCS.
Phrynosoma coronatum frontale	California horned lizard	The taxonomy of this species is uncertain.
Accipiter cooperii	Cooper's hawk	Widespread forest generalist. Populations have increased by >200% between 1970 and 2014.
Accipiter striatus	Sharp-shinned hawk	Widespread forest generalist. Populations have increased by 68% between 1970 and 2014.

Scientific Name	Common Name	Additional Information
Agelaius tricolor	Tricolored blackbird	Covered by ECCC and SCVHP and addressed by EACCS. Greater than 50% of population lost between 1970 and 2014. High vulnerability due to small population and range.
Ammodramus savannarum	Grasshopper sparrow	Uncommon in the study area.
Artemisiospizaa belli belli	Bell's sage sparrow	Not listed; listing unlikely.
Aquila chrysaetos	Golden eagle	Covered by ECCC and addressed by EACCS. Habitat generalist in western U.S./Mexico. Area-dependent species.
Ardea alba	Great Egret	Widely distributed egret common in the study area.
Ardea herodias	Great blue heron	Widely distributed, common in the study area.
Asio flammeus	Short-eared owl	Uncommon species in the study area.
Athene cunicularia	Burrowing owl	Covered by EACCS, ECCC, and SCVHP.
Botaurus lentiginosus	American bittern	Widespread species common in the study area.
Branta canadensis leucopareia	Aleutian Canada goose	Widespread species that occurs in San Mateo County
Buteo regalis	Ferruginous hawk	Species found in Western U.S./Mexico. Breeds in grassland habitat outside study area. Populations have increased by 39% between 1970 and 2014, with a population estimate of 110,000.
Buteo swainsoni	Swainson's hawk	Covered by ECCC, recent occurrences in Santa Clara County.
Charadrius alexandrinus nivosus	Western snowy plover	Many occurrences in Alameda, Marin, Napa San Mateo, Contra Costa, and Santa Clara. Limited to coastal beach and salt ponds. Threatened by development and human recreation.
Circus cyaneus	Northern harrier	Breeds throughout California. Nests in tidal, brackish and freshwater marshes, and other wet, vegetated areas.
Egretta thula	Snowy egret	Common species in the study area.
Elanus leucurus	White-tailed kite	Many occurrences in Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano, and Sonoma Counties.
Eremophila alpestris actia	California horned lark	Wide range in coastal regions from Sonoma County to San Diego County, as well as main part of San Joaquin Valley and east to foothills.
Falco mexicanus	Prairie falcon	Common in California, 458 CNDDB occurrences.
Falco peregrinus anatum	American peregrine falcon	Not enough regular nesting occurrences in Bay Area. This species has been federally delisted due to recovery.
Geothlypis trichas sinuosa	Saltmarsh common yellowthroat	Locally numerous in areas where extensive wetlands with adjacent riparian thickets remain.
Haliaeetus leucocephalus	Bald eagle	Not enough regular nesting occurrences in Bay Area. This species has been federally delisted due to recovery.
Lanius ludovicianus	Loggerhead shrike	Significant declines (74%) of population between 1970 and 2014. Occurs in grasslands in Alameda and Contra Costa County. Primarily overwinters in RCIS Area
Laterallus jamaicensis coturniculus	California black rail	Many occurrences in Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano, and Sonoma Counties.

Scientific Name	Common Name	Additional Information
Nycticorax nycticorax	Black-crowned night heron	Common species in the study area.
Pandion haliaetus	Osprey	Population has increased by more than 200% between 1970 and 2014.
Pelecanus occidentalis californicus	California brown pelican	This species has been federally delisted due to recovery; common and widespread in the study area.
Phalacrocorax auritus	Double-crested cormorant	Common species in the study area.
Progne subis	Purple martin	Uncommon breeder; in the study area, nests local on the coastal ridges of Marin County and isolated locations in the Santa Cruz Mountains.
Rallus obsoletus obsoletus	Ridgway's rail	Many occurrences in saltmarsh habitat around the Bay fringe.
Riparia riparia	Bank swallow	Only one known colony in Bay Area at Fort Funston National Park, S.F.
Sterna antillarum (=albifrons) browni	California least tern	Many occurrences in Alameda, Contra Costa, San Mateo, Santa Clara, and Solano Counties.
Vireo bellii pusillus	Least Bell's vireo	Limited occurrences in Santa Clara County in past 20 years. Covered by SCVHP. Mitigation may not be necessary if species does not occur in RCIS Area.
Antrozous pallidus	Pallid bat	Locally common species in low elevation of California. 405 CNDDB occurrences.
Corynorhinus townsendii townsendii	Townsend's big-eared bat	Covered by ECCC but not enough data to create a mitigation strategy.
Eumops perotis californicus	Western mastiff-bat	Uncommon resident in southeastern San Joaquin Valley and Coastal Ranges from Monterey Co. southward through southern California.
Lasionycteris noctivagans	Silver-haired bat	Very uncommon in the study area, Of 138 CNDDB occurrences, one in Alameda County in 1920.
Lasiurus blossevillii	Western red bat	Uncommon in the study area. Winter range includes western lowlands and coastal regions south of San Francisco Bay.
Lasiurus cinereus	Hoary bat	The most widespread bat in North America. Found throughout California.
Myotis ciliolabrum	Western small-footed myotis	Common bat of arid upland in California. No CNDDB occurrences in the study area.
Myotis evotis	Long-eared myotis	Widespread but uncommon in its range. Occurs along the entire coast in a variety of wooded habitat. No CNDDB occurrences in the study area.
Myotis thysanodes	Fringed myotis	Widespread in California, occurring in all but the Central Valley and Colorado and Mojave deserts. 3 CNDDB occurrences in Sonoma County.
Myotis volans	Long-legged myotis	Common in California occurring in the coastal ranges from Oregon to Mexico. Most common in woodland and forests habitat above 4000 feet.

Scientific Name	Common Name	Additional Information
Myotis yumanensis	Yuma myotis	Common and widespread in California. Uncommon in the Mojave and Colorado desert regions. Uncommon above 8000 feet.
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	Subspecies status is unresolved.
Nyctinomops macrotis	Big free-tailed bat	Low-lying arid areas in southern California.
Puma concolor	Mountain lion	Good indicator of habitat connectivity; area-dependent species.
Reithrodontomys raviventris	Salt marsh harvest mouse	Many occurrences in Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano, Sonoma Counties.
Sorex vagrans halicoetes	Salt marsh wandering shrew	Little data available on the life history of this species. The current distribution and status in unknown.
Taxidea taxus	American badger	Addressed by EACCS.
Vulpes macrotis mutica	San Joaquin kit fox	Covered by ECCC and SCVHP. Addressed by EACCS.

Table E-2a. Plant Species Evaluated for Inclusion as Focal Species in the Santa Clara County RCIS, Step 1

		Status				
Scientific Name	**Common Name**	**Federal**	**State**	**Global**	**CRPR**	**SWAP Status**
Acanthomintha lanceolata	Santa Clara thornmint	–	–	G4	4.2	N
Allium peninsulare var. franciscanum	Franciscan onion	–	–	G5T1	1B.2	N
Allium sharsmithae	Sharsmith's onion	–	–	G2	1B.3	N
Amsinckia lunaris	Bent-flowered fiddleneck	–	–	G2?	1B.2	N
Androsace elongata subsp. acuta	California androsace	–	–	G5?T3T4	4.2	N
Arctostaphylos andersonii	Santa Cruz manzanita	–	–	G2	1B.2	N
Azolla mexicana	Mexican mosquito fern	–	–	G5	4.2	N
Balsamorhiza macrolepis var. macrolepis	Big-scale balsamroot	–	–	G2	1B.2	N
Calandrinia breweri	Brewer's calandrinia	–	–	G4	4.2	N
California macrophylla	Round-leaved filaree	–	–	G2	1B.2	Y
Calochortus umbellatus	Oakland star-tulip	–	–	G4	4.2	N
Calyptridium parryi var. hesseae	Santa Cruz Mountain pussypaws	–	–	G3G4T2	1B.1	N
Campanula exigua	Chaparral harebell	–	–	G2	1B.2	N
Campanula sharsmithiae	Mt. Hamilton harebell	–	–	G1	1B.2	N
Castilleja affinis subsp. neglecta	Tiburon paintbrush = Tiburon Indian paintbrush	E	T	G4G5T1	1B.2	Y
Ceanothus ferrisae	Coyote ceanothus	E	–	G2	1B.1	Y
Centromadia parryi subsp. congdonii	Congdon's spikeweed	–	–	G3T2	1B.2	Y
Chloropyron maritimus subsp. palustris	Point Reyes bird's-beak	–	–	G4?T2	1B.2	N
Cirsium fontinale var. campylon	Mt. Hamilton thistle	–	–	G2T2	1B.2	N
Clarkia breweri	Brewer's clarkia	–	–	G4	4.2	N
Clarkia concinna subsp. automixa	Santa Clara red-ribbons	–	–	G5?T3	4.3	N

		Status				
Scientific Name	**Common Name**	**Federal**	**State**	**Global**	**CRPR**	**SWAP Status**
Collinsia multicolor	San Francisco collinsia	–	–	G2	1B.2	N
Delphinium californicum subsp. interius	Hospital Canyon larkspur	–	–	G3T3	1B.2	N
Dirca occidentalis	Western leatherwood	–	–	G2	1B.2	N
Dudleya abramsii subsp. setchellii	Santa Clara Valley dudleya	E	–	G2	1B.1	Y
Eriastrum tracyi	Tracy's eriastrum	–	R	G3Q	1B.2	N
Eriogonum argillosum	Clay-loving buckwheat	–	–	G3	4.3	N
Eriogonum umbellatum var. bahiiforme	Bay buckwheat	–	–	G5T3	4.2	N
Eriophyllum jepsonii	Jepson's woolly sunflower	–	–	G3	4.3	N
Eryngium aristulatum var. hooveri	Hoover's button-celery	–		G5T1	1B.1	N
Erysimum franciscanum	San Francisco wallflower	–	–	G3	4.2	N
Extriplex joaquiniana	San Joaquin spearscale = San Joaquin saltbush	–	–	G2	1B.2	N
Fritillaria agrestis	Stinkbells	–	–	G3	4.2	N
Fritillaria falcata	Talus fritillary	–	–	G2	1B.2	N
Fritillaria liliacea	Fragrant fritillary	–	–	G2	1B.2	N
Galium andrewsii subsp. gatense	Serpentine bedstraw	–	–	G5T3	4.2	N
Hoita strobilina	Loma Prieta hoita	–	–	G2	1B.1	Y
Isocoma menziesii var. diabolica	Satan's goldenbush	–	–	G3G5T3	4.2	N
Lasthenia conjugens	Contra Costa goldfields	E	–	G1	1B.1	Y
Legenere limosa	Legenere	–	–	G2	1B.1	N
Leptosyne hamiltonii	Mt. Hamilton coreopsis	–	–	G2	1B.2	N
Leptosiphon acicularis	Bristly leptosiphon	–	–	G3	4.2	N
Leptosiphon ambiguus	Serpentine linanthus	–	–	G4	4.2	N
Leptosiphon grandiflorus	Large-flowered linanthus	–	–	G3	4.2	N

		Status				
Scientific Name	**Common Name**	**Federal**	**State**	**Global**	**CRPR**	**SWAP Status**
Lessingia hololeuca	Wooly-headed lessingia	–	–	G3?	3	N
Lessingia micradenia var. glabrata	Smooth lessingia	–	–	G2T2	1B.2	N
Lessingia tenuis	Spring lessingia	–	–	G4	4.3	N
Lomatium observatorium	Mt. Hamilton lomatium	–	–	G1	1B.2	N
Lomatium parvifolium	Small-leaved lomatium	–	–	G4	4.2	N
Madia radiata	Showy madia	–	–	G2	1B.1	Y
Malacothamnus arcuatus	Arcuate bush mallow	–	–	G2Q	1B.2	N
Malacothamnus hallii	Hall's bush mallow	–	–	G2	1B.2	N
Meconella oregana	Oregon meconella	–	–	G2G3	1B.1	N
Micropus amphibolus	Mt. Diablo cottonweed	–	–	G3G4	3.2	N
Microseris sylvatica	Sylvan microseris	–	–	G4	4.2	N
Monardella antonina subsp. antonina	San Antonio Hills monardella	–	–	G4T1T3Q	3	N
Monolopia gracilens	woodland woollythreads	–	–	G3	1B.2	N
Myosurus minimus subsp. apus	Little mousetails	–	–	G5T2Q	3.1	N
Navarretia cotulifolia	Cotula navarretia	–	–	G4	4.2	N
Navarretia prostrata	Prostrate navarretia	–	–	G2	1B.1	N
Perideridia gairdneri subsp. gairdneri	Gairdner's yampah	–	–	G5T4	4.2	N
Phacelia phacelioides	Mt. Diablo phacelia	–	–	G2	1B.2	N
Pinus radiata	Monterey pine	–	–	G1	1B.1	N
Piperia leptopetala	Narrow-petaled rein orchid	–	–	G4	4.3	N
Piperia michaelii	Michael's rein orchid	–	–	G3	4.2	N
Plagiobothrys chorisianus var. hickmanii	Hickman's popcornflower	–	–	G3T3Q	4.2	N
Plagiobothrys verrucosus	Forget-me-not popcornflower	–	–	G4?	2B.1	N
Psilocarphus brevissimus var. multiflorus	Delta wooly-marbles	–	–	G4T3	4.2	N
Ranunculus lobbii	Lobb's aquatic buttercup	–	–	G4	4.2	N

		Status				
Scientific Name	**Common Name**	**Federal**	**State**	**Global**	**CRPR**	**SWAP Status**
Ribes victoris	Victor's gooseberry	–	–	G4	4.3	N
Sanicula saxatilis	Rock sanicle	–	R	G2	1B.2	N
Senecio aphanactis	Chaparral ragwort	–	–	G3	2B.2	N
Sidalcea malachroides	Maple-leaved checkerbloom	–	–	G3	4.2	N
Streptanthus albidus subsp. peramoenus	Most beautiful jewelflower	–	–	G2T2	1B.2	N
Streptanthus glandulosus subsp. albidus	Metcalf Canyon jewleflower	–	–	G2T2	1B.1	Y
Streptanthus callistus	Mt. Hamilton jewelflower	–	–	G1G2	1B.3	N
Suaeda californica	California seablight	E	–	G1	1B.1	N
Trifolium amoenum	Showy Indian clover	E	–	G1	1B.1	N
Trifolium hydrophilum	Saline clover	–	–	G2	1B.2	N

Status

Federal

E = listed as endangered under the federal Endangered Species Act.
= no listing.

State

T = listed as threatened under the California Endangered Species Act.
R = listed as rare under the California Endangered Species Act.
= no listing.

Global (NatureServe 2015. Available http://explorer.natureserve.org/granks.htm)

G1 = Critically imperiled; at very high risk for extinction.
G2 = Imperiled; at high risk for extinction.
G3 = Vulnerable; at moderate risk for extinction.
G4 = Apparently secure; uncommon but not rare.
G5 = Secure; common, widespread and abundant.
G#G# = Range rank; numeric range rank (e.g., G2G3) is used to indicate the range of uncertainty in the status of a species or community.
T# = Infraspecific Taxon; the status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

Rules for assigning T-ranks follow the same principles outlined above for global conservation status ranks. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1.

California Rare Plant Rank (CRPR) (California Native Plant Society 2016. Available http://www.cnps.org/cnps/rareplants/ranking.php)

1B = plants rare, threatened or endangered in California and elsewhere.
0.1- = seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2- = moderately threatened in California (20-80% of occurrences threatened/moderate degree of immediacy of threat)

SWAP State Wildlife Action Plan (CDFW 2015. https://www.wildlife.ca.gov/SWAP/Final)

Table E-2b. Plant Species Evaluated for Inclusion as Focal Species in the Santa Clara County RCIS, Step 2

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Acanthomintha lanceolata	Santa Clara thornmint	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Allium peninsulare var. franciscanum	Franciscan onion	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Allium sharsmithae	Sharsmith's onion	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Amsinckia lunaris	Bent-flowered fiddleneck	0	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Androsace elongata subsp. acuta	California androsace	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Arctostaphylos andersonii	Santa Cruz manzanita	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Azolla mexicana	Mexican mosquito fern	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Balsamorhiza macrolepis var. macrolepis	Big-scale balsamroot	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Calandrinia breweri	Brewer's calandrinia	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
California macrophylla	Round-leaved filaree	1	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Calochortus umbellatus	Oakland star-tulip	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Calyptridium parryi var. hesseae	Santa Cruz Mountain pussypaws	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Campanula exigua	Chaparral harebell	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Campanula sharsmithiae	Mt. Hamilton harebell	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Castilleja affinis subsp. neglecta	Tiburon paintbrush = Tiburon Indian paintbrush	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE
Ceanothus ferrisae	Coyote ceanothus	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE
Centromadia parryi subsp. congdonii	Congdon's spikeweed	0	1	1	1	1	TRUE	TRUE	FALSE	TRUE	TRUE
Chloropyron maritimus subsp. palustris	Point Reyes bird's-beak	0	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Cirsium fontinale var. campylon	Mt. Hamilton thistle	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE
Clarkia breweri	Brewer's clarkia	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Clarkia concinna subsp. automixa	Santa Clara red-ribbons	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Collinsia multicolor	San Francisco collinsia	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Delphinium californicum subsp. interius	Hospital Canyon larkspur	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Dirca occidentalis	Western leatherwood	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Dudleya abramsii subsp. setchellii	Santa Clara Valley dudleya	1	1	1	1	1	TRUE	TRUE	TRUE	TRUE	TRUE
Eriastrum tracyi	Tracy's eriastrum	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Eriogonum argillosum	Clay-loving buckwheat	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Eriogonum umbellatum var. bahiiforme	Bay buckwheat	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Eriophyllum jepsonii	Jepson's woolly sunflower	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Eryngium aristulatum var. hooveri	Hoover's button-celery	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Erysimum franciscanum	San Francisco wallflower	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Extriplex joaquiniana	San Joaquin spearscale = San Joaquin saltbush	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Fritillaria agrestis	Stinkbells	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Fritillaria falcata	Talus fritillary	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Fritillaria liliacea	Fragrant fritillary	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Galium andrewsii subsp. gatense	Serpentine bedstraw	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Hoita strobilina	Loma Prieta hoita	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Isocoma menziesii var. diabolica	Satan's goldenbush	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Lasthenia conjugens	Contra Costa goldfields	1	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Legenere limosa	Legenere	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Leptosyne hamiltonii	Mt. Hamilton coreopsis	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Leptosiphon acicularis	Bristly leptosiphon	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Leptosiphon ambiguus	Serpentine linanthus	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Leptosiphon grandiflorus	Large-flowered linanthus	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Lessingia hololeuca	Wooly-headed lessingia	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Lessingia micradenia var. glabrata	Smooth lessingia	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Lessingia tenuis	Spring lessingia	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Lomatium observatorium	Mt. Hamilton lomatium	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Lomatium parvifolium	Small-leaved lomatium	0	0	1	1	0	TRUE	FALSE	FALSE	FALSE	FALSE
Madia radiata	Showy madia	1	1	0	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Malacothamnus arcuatus	Arcuate bush mallow	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Malacothamnus hallii	Hall's bush mallow	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Meconella oregana	Oregon meconella	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Micropus amphibolus	Mt. Diablo cottonweed	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Microseris sylvatica	Sylvan microseris	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Monardella antonina subsp. antonina	San Antonio Hills monardella	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Monolopia gracilens	woodland woollythreads	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Myosurus minimus subsp. apus	Little mousetails	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Navarretia cotulifolia	Cotula navarretia	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Navarretia prostrata	Prostrate navarretia	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Perideridia gairdneri subsp. gairdneri	Gairdner's yampah	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Phacelia phacelioides	Mt. Diablo phacelia	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Pinus radiata	Monterey pine	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Piperia leptopetala	Narrow-petaled rein orchid	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Piperia michaelii	Michael's rein orchid	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Plagiobothrys chorisianus var. hickmanii	Hickman's popcornflower	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Plagiobothrys verrucosus	Forget-me-not popcornflower	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Psilocarphus brevissimus var. multiflorus	Delta wooly-marbles	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species →				
Scientific Name	**Common Name**	**Status**	**Rarity**	**Occur**	**Data**	**Provides Other Conservation Benefit**	**Enough Data Available and Occurs in RCIS Area AND**	**Qualifies as Rare OR**	**Has Special Status OR**	**Provides Additional Conservation Value**	**Meets Screening Criteria**
Ranunculus lobbii	Lobb's aquatic buttercup	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Ribes victoris	Victor's gooseberry	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Sanicula saxatilis	Rock sanicle	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Senecio aphanactis	Chaparral ragwort	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Sidalcea malachroides	Maple-leaved checkerbloom	0	0	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Streptanthus albidus subsp. peramoenus	Most beautiful jewelflower	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Streptanthus glandulosus subsp. albidus	Metcalf Canyon jewleflower	1	1	1	1	0	TRUE	TRUE	TRUE	FALSE	TRUE
Streptanthus callistus	Mt. Hamilton jewelflower	0	1	1	1	0	TRUE	TRUE	FALSE	FALSE	TRUE
Suaeda californica	California seablight	1	1	0	1	0	FALSE	FALSE	FALSE	FALSE	FALSE
Trifolium amoenum	Showy Indian clover	1	1	0	0	0	FALSE	FALSE	FALSE	FALSE	FALSE
Trifolium hydrophilum	Saline clover	0	1	1	0	0	FALSE	FALSE	FALSE	FALSE	FALSE

		Criteria					Filtering of Species				
Scientific Name	Common Name	Status	Rarity	Occur	Data	Provides Other Conservation Benefit	Enough Data Available and Occurs in RCIS Area AND	Qualifies as Rare OR	Has Special Status OR	Provides Additional Conservation Value	Meets Screening Criteria

Criteria

Status = The species is listed by state or federal resource agencies as threatened or endangered, or is a candidate for such listing; or the species is reasonably expect to be considered for listing within 10 years of East Bay RCIS approval. This includes species covered by a regional NCCP or HCP that overlaps the RCIS area.

Rarity = The species is recognized by NatureServe as Critically Imperiled (G1) or Imperiled (G2) globally, or is described as a Species of Greatest Conservation Need (SGCN) or Climate Vulnerable (CV) in the State Wildlife Action Plan, or is recognized by CNPS as Rare, Threatened, or Endangered in California and elsewhere (1B) or Rare, Threatened or Endangered in California but is more common elsewhere (2B).

Occur = The species is known or likely to occur in the RCIS area. Occurrence data should be based on credible evidence. Some species may not be present in the RCIS area at the time this RCIS is developed but could have a reasonable expectation to expand their range into the RCIS area within 10 years following RCIS development.

Data = Drawing on best available science and emerging data, sufficient data on the species' life history, habitat requirements, and occurrence in the RCIS area are available to propose viable conservation actions.

0- Does not meet criteria
1- Meets Criteria

Filtering of Species

FALSE- Does not meet criteria
TRUE- Meets Criteria

Table E-2c. Plant Species Evaluated for Inclusion as Focal Species in the Santa Clara County RCIS, Step 3

Scientific Name	Common Name	Rationale for Exclusion from Focal Species List	Included as Focal Species
Acanthomintha lanceolata	Santa Clara thornmint	Criteria	No
Allium peninsulare var. franciscanum	Franciscan onion	Criteria	No
Allium sharsmithae	Sharsmith's onion	Will not need mitigation	No
Amsinckia lunaris	Bent-flowered fiddleneck	Criteria	No
Androsace elongata subsp. acuta	California androsace	Criteria	No
Arctostaphylos andersonii	Santa Cruz manzanita	All but one occurrence in the study area on protected land	No
Azolla mexicana	Mexican mosquito fern	Criteria	No
Balsamorhiza macrolepis var. macrolepis	Big-scale balsamroot	2 occurrences in RCIS Area, one on protected land. Adequate focus on grassland and shrubland conservation from other focal species	No
Calandrinia breweri	Brewer's calandrinia	Criteria	No
California macrophylla	Round-leaved filaree	Criteria	No
Calochortus umbellatus	Oakland star-tulip	Criteria	No
Calyptridium parryi var. hesseae	Santa Cruz Mountain pussypaws	Criteria	No
Campanula exigua	Chaparral harebell	Will not need mitigation	No
Campanula sharsmithiae	Mt. Hamilton harebell	Criteria	No
Castilleja affinis subsp. neglecta	Tiburon paintbrush = Tiburon Indian paintbrush	Completely with SCVHP	No
Ceanothus ferrisae	Coyote ceanothus	Completely with SCVHP	No
Centromadia parryi subsp. congdonii	Congdon's spikeweed	N/A	Yes
Chloropyron maritimus subsp. palustris	Point Reyes bird's-beak	Criteria	No
Cirsium fontinale var. campylon	Mt. Hamilton thistle	N/A	Yes
Clarkia breweri	Brewer's clarkia	Criteria	No
Clarkia concinna subsp. automixa	Santa Clara red-ribbons	Criteria	No
Collinsia multicolor	San Francisco collinsia	On protected land, will not need mitigation	No
Delphinium californicum subsp. interius	Hospital Canyon larkspur	Will not need mitigation	No
Dirca occidentalis	Western leatherwood	Criteria	No

Scientific Name	Common Name	Rationale for Exclusion from Focal Species List	Included as Focal Species
Dudleya abramsii subsp. setchellii	Santa Clara Valley dudleya	Completely with SCVHP	No
Eriastrum tracyi	Tracy's eriastrum	N/A	Yes
Eriogonum argillosum	Clay-loving buckwheat	Criteria	No
Eriogonum umbellatum var. bahiiforme	Bay buckwheat	Criteria	No
Eriophyllum jepsonii	Jepson's woolly sunflower	Criteria	No
Eryngium aristulatum var. hooveri	Hoover's button-celery	Criteria	No
Erysimum franciscanum	San Francisco wallflower	Criteria	No
Extriplex joaquiniana	San Joaquin spearscale = San Joaquin saltbush	Will not need mitigation	No
Fritillaria agrestis	Stinkbells	Criteria	No
Fritillaria falcata	Talus fritillary	Criteria	No
Fritillaria liliacea	Fragrant fritillary	N/A	Yes
Galium andrewsii subsp. gatense	Serpentine bedstraw	Criteria	No
Hoita strobilina	Loma Prieta hoita	N/A	yes
Isocoma menziesii var. diabolica	Satan's goldenbush	Criteria	No
Lasthenia conjugens	Contra Costa goldfields	Criteria	No
Legenere limosa	Legenere	One occurrence in RCIS Area on protected land	No
Leptosyne hamiltonii	Mt. Hamilton coreopsis	Will not need mitigation	No
Leptosiphon acicularis	Bristly leptosiphon	Criteria	No
Leptosiphon ambiguus	Serpentine linanthus	Criteria	No
Leptosiphon grandiflorus	Large-flowered linanthus	Criteria	No
Lessingia hololeuca	Wooly-headed lessingia	Criteria	No
Lessingia micradenia var. glabrata	Smooth lessingia	N/A	Yes
Lessingia tenuis	Spring lessingia	Criteria	No
Lomatium observatorium	Mt. Hamilton lomatium	Will not need mitigation	No
Lomatium parvifolium	Small-leaved lomatium	Criteria	No
Madia radiata	Showy madia	Criteria	No
Malacothamnus arcuatus	Arcuate bush mallow	Criteria	No
Malacothamnus hallii	Hall's bush mallow	Most occurrences are on protected land, will not need mitigation	No
Meconella oregana	Oregon meconella	Will not need mitigation	No

Scientific Name	Common Name	Rationale for Exclusion from Focal Species List	Included as Focal Species
Micropus amphibolus	Mt. Diablo cottonweed	Criteria	No
Microseris sylvatica	Sylvan microseris	Criteria	No
Monardella antonina subsp. antonina	San Antonio Hills monardella	Criteria	No
Monolopia gracilens	woodland woollythreads	Will not need mitigation	No
Myosurus minimus subsp. apus	Little mousetails	Criteria	No
Navarretia cotulifolia	Cotula navarretia	Criteria	No
Navarretia prostrata	Prostrate navarretia	Will not need mitigation	No
Perideridia gairdneri subsp. gairdneri	Gairdner's yampah	Criteria	No
Phacelia phacelioides	Mt. Diablo phacelia	Will not need mitigation	No
Pinus radiata	Monterey pine	Criteria	No
Piperia leptopetala	Narrow-petaled rein orchid	Criteria	No
Piperia michaelii	Michael's rein orchid	Criteria	No
Plagiobothrys chorisianus var. hickmanii	Hickman's popcornflower	Criteria	No
Plagiobothrys verrucosus	Forget-me-not popcornflower	Criteria	No
Psilocarphus brevissimus var. multiflorus	Delta wooly-marbles	Criteria	No
Ranunculus lobbii	Lobb's aquatic buttercup	Criteria	No
Ribes victoris	Victor's gooseberry	Criteria	No
Sanicula saxatilis	Rock sanicle	N/A	Yes
Senecio aphanactis	Chaparral ragwort	Criteria	No
Sidalcea malachroides	Maple-leaved checkerbloom	Criteria	No
Streptanthus albidus subsp. peramoenus	Most beautiful jewelflower	N/A	Yes
Streptanthus glandulosus subsp. albidus	Metcalf Canyon jewleflower	Completely with SCVHCP	No
Streptanthus callistus	Mt. Hamilton jewelflower	Will not need mitigation	No
Suaeda californica	California seablight	Criteria	No
Trifolium amoenum	Showy Indian clover	Criteria	No
Trifolium hydrophilum	Saline clover	Criteria	No

Table E-2d. Plant Species Evaluated for Inclusion as Focal Species in the Santa Clara County RCIS, Additional Information

Scientific Name	Common Name	Additional Information
Acanthomintha lanceolata	Santa Clara thornmint	Species has limited distribution throughout California but not restricted to the RCIS Area.
Allium peninsulare var. franciscanum	Franciscan onion	22 CNDDB occurrences recorded in Mendocino, Sonoma, San Mateo, and Santa Clara Counties. 6 extant occurrences located on protected lands in San Mateo and Sonoma Counties. Affinity to serpentine soil.
Allium sharsmithae	Sharsmith's onion	7 CNDDB occurrences in Alameda and Santa Clara Counties. Affinity to serpentine soil.
Amsinckia lunaris	Bent-flowered fiddleneck	Most CNDDB occurrences are vague and need additional fieldwork. Insufficient information to create conservation strategy.
Androsace elongata subsp. acuta	California androsace	Species has limited distribution throughout California but is not restricted to the RCIS Area.
Arctostaphylos andersonii	Santa Cruz manzanita	23 CNDDB occurrences recorded from San Mateo and Santa Clara Counties.
Azolla mexicana	Mexican mosquito fern	Species has limited distribution throughout California but not restricted to the RCIS Area.
Balsamorhiza macrolepis var. macrolepis	Big-scale balsamroot	12 CNDDB occurrences in Alameda, Napa, Santa Clara, Solano, and Sonoma Counties. 5 extant occurrences in Alameda, Santa Clara, Solano, and Sonoma Counties.
Calandrinia breweri	Brewer's calandrinia	Species has limited distribution throughout California, but not restricted to the RCIS Area.
California macrophylla	Round-leaved filaree	Covered by ECCC
Calochortus umbellatus	Oakland star-tulip	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Calyptridium parryi var. hesseae	Santa Cruz Mountain pussypaws	13 CNDDB occurrences in Monterey, San Luis Obispo, Santa Clara, and Santa Cruz Counties. Locational data are vague for the 3 occurrences in Santa Clara County.
Campanula exigua	Chaparral harebell	17 CNDDB occurrences in Alameda, Contra Costa, and Santa Clara Counties.
Campanula sharsmithiae	Mt. Hamilton harebell	7 CNDDB occurrences in Santa Clara and Stanislaus Counties. Data on the Santa Clara County occurrences are vague.
Castilleja affinis subsp. neglecta	Tiburon paintbrush = Tiburon Indian paintbrush	Nine occurrences in the RCIS Area, covered by SCVHCP.
Ceanothus ferrisae	Coyote ceanothus	Four occurrences in Santa Clara County, covered by SCVHCP.
Centromadia parryi subsp. congdonii	Congdon's spikeweed	Addressed by EACCS.
Chloropyron maritimus subsp. palustris	Point Reyes bird's-beak	68 CNDDB occurrences in Alameda, Humboldt, Marin, San Francisco, San Mateo, Santa Clara, and Sonoma Counties. The majority of CNDDB occurrences in the RCIS Area are on protected land.

Scientific Name	Common Name	Additional Information
Cirsium fontinale var. campylon	Mt. Hamilton thistle	Covered by SCVHCP.
Clarkia breweri	Brewer's clarkia	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Clarkia concinna subsp. automixa	Santa Clara red-ribbons	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Collinsia multicolor	San Francisco collinsia	3 extant occurrences recently observed (within last 12 years), one each in San Mateo, San Francisco, and Santa Clara Counties on protected land.
Delphinium californicum subsp. interius	Hospital Canyon larkspur	22 CNDDB occurrences in Alameda, Contra Costa, and Santa Clara Counties. 2 extant occurrences in Santa Clara County on private land. 10 extant occurrences on protected land in Alameda and Contra Costa Counties.
Dirca occidentalis	Western leatherwood	Widespread in the RCIS Area, 65 CNDDB occurrences in Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Sonoma Counties; the majority of which have insufficient information.
Dudleya abramsii subsp. setchellii	Santa Clara Valley dudleya	55 occurrences in Santa Clara County, covered by SCVHCP
Eriastrum tracyi	Tracy's eriastrum	90 occurrences, many outside of the RCIS Area. Species occurs in Santa Clara county in the RCIS Area.
Eriogonum argillosum	Clay-loving buckwheat	Species has limited distribution throughout California, but not restricted to the RCIS Area
Eriogonum umbellatum var. bahiiforme	Bay buckwheat	Species has limited distribution throughout California, but not restricted to the RCIS Area
Eriophyllum jepsonii	Jepson's woolly sunflower	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Eryngium aristulatum var. hooveri	Hoover's button-celery	CNDDB occurrences in Alameda, Santa Clara counties and San Benito County within the Santa Clara RCIS boundary.
Erysimum franciscanum	San Francisco wallflower	Species has limited distribution throughout California, but not restricted to RCIS Area.
Extriplex joaquiniana	San Joaquin spearscale = San Joaquin saltbush	Only one occurrence at San Felipe lake in San Benito County
Fritillaria agrestis	Stinkbells	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Fritillaria falcata	Talus fritillary	8 CNDDB occurrences in Alameda and Santa Clara Counties.
Fritillaria liliacea	Fragrant fritillary	77 occurrences in CNDDB, nearly all located throughout RCIS Area, covered by SCVHCP.
Galium andrewsii subsp. gatense	Serpentine bedstraw	Species has limited distribution throughout California but not restricted to the RCIS Area.
Hoita strobilina	Loma Prieta hoita	Covered by SCVHCP.
Isocoma menziesii var. diabolica	Satan's goldenbush	Species has limited distribution throughout California, but not restricted to the RCIS Area
Lasthenia conjugens	Contra Costa goldfields	Current occurrences throughout the RCIS Area.

Scientific Name	Common Name	Additional Information
Legenere limosa	Legenere	17 CNDDB occurrences in Alameda, Napa, San Mateo, Santa Clara, and Solano Counties, the majority of which are on protected land.
Leptosyne hamiltonii	Mt. Hamilton coreopsis	2 CNDDB occurrences in Alameda County and 18 in Santa Clara County.
Leptosiphon acicularis	Bristly leptosiphon	Species has limited distribution throughout California, but not restricted to the RCIS Area
Leptosiphon ambiguus	Serpentine linanthus	Species has limited distribution throughout California, but not restricted to the RCIS Area
Leptosiphon grandiflorus	Large-flowered linanthus	Species has limited distribution throughout California, but not restricted to the RCIS Area
Lessingia hololeuca	Wooly-headed lessingia	Insufficient information- taxonomically problematic.
Lessingia micradenia var. glabrata	Smooth lessingia	Covered by SCVHCP.
Lessingia tenuis	Spring lessingia	Species has limited distribution throughout California, but not restricted to the RCIS Area
Lomatium observatorium	Mt. Hamilton lomatium	4 CNDDB occurrences in Santa Clara and Stanislaus counties.
Lomatium parvifolium	Small-leaved lomatium	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Madia radiata	Showy madia	Covered by ECCC.
Malacothamnus arcuatus	Arcuate bush mallow	30 CNDDB occurrences, mainly in Santa Clara and San Mateo Counties. Species taxonomy is uncertain.
Malacothamnus hallii	Hall's bush mallow	29 CNDDB occurrences mainly in Santa Clara and Contra Costa Counties.
Meconella oregana	Oregon meconella	9 CNDDB occurrences in Contra Costa, Monterey, San Luis Obispo and Santa Clara Counties. Candidate for listing in Oregon and threatened in Washington.
Micropus amphibolus	Mt. Diablo cottonweed	Insufficient information- taxonomically problematic.
Microseris sylvatica	Sylvan microseris	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Monardella antonina subsp. antonina	San Antonio Hills monardella	Insufficient information- taxonomically problematic.
Monolopia gracilens	woodland woollythreads	CNDDB occurrences in Alameda, Contra Costa, San Mateo, and Santa Clara Counties.
Myosurus minimus subsp. apus	Little mousetails	Insufficient information- taxonomically problematic.
Navarretia cotulifolia	Cotula navarretia	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Navarretia prostrata	Prostrate navarretia	Only one occurrence at San Felipe lake in San Benito County
Perideridia gairdneri subsp. gairdneri	Gairdner's yampah	Species has limited distribution throughout California but, not restricted to the RCIS Area.
Phacelia phacelioides	Mt. Diablo phacelia	13 CNDDB occurrences mainly in Contra Costa, Santa Clara, and Stanislaus Counties.

Scientific Name	Common Name	Additional Information
Pinus radiata	Monterey pine	Common introduced species in the RCIS Area. Native stands do not occur in the RCIS Area.
Piperia leptopetala	Narrow-petaled rein orchid	Species has limited distribution throughout California, but not restricted to the RCIS Area
Piperia michaelii	Michael's rein orchid	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Plagiobothrys chorisianus var. hickmanii	Hickman's popcornflower	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Plagiobothrys verrucosus	Forget-me-not popcornflower	4 CNDDB occurrences in Santa Clara County.
Psilocarphus brevissimus var. multiflorus	Delta wooly-marbles	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Ranunculus lobbii	Lobb's aquatic buttercup	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Ribes victoris	Victor's gooseberry	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Sanicula saxatilis	Rock sanicle	Seven occurrences in Santa Clara and Contra Costa Counties, all but one located on UC or State Park property.
Senecio aphanactis	Chaparral ragwort	Most CNDDB occurrences in southern California. Occurrences in the RCIS Area are poor and outdated.
Sidalcea malachroides	Maple-leaved checkerbloom	Species has limited distribution throughout California, but not restricted to the RCIS Area.
Streptanthus albidus subsp. peramoenus	Most beautiful jewelflower	Covered by SCVHCP.
Streptanthus glandulosus subsp. albidus	Metcalf Canyon jewleflower	Covered by SCVHCP.
Streptanthus callistus	Mt. Hamilton jewelflower	Four occurrences in Santa Clara County.
Suaeda californica	California seablight	All RCIS Area occurrences are transplants, numerous occurrences in San Luis Obispo County
Trifolium amoenum	Showy Indian clover	26 occurrences in RCIS Area, all of which are historic except for one.
Trifolium hydrophilum	Saline clover	Endemic to central coastal California in Alameda, Contra Costa, Colusa (?), Lake, Monterey, Napa, Sacramento, San Benito, Santa Clara, Santa Cruz, San Joaquin, San Luis Obispo, San Mateo, Solano, Sonoma, and Yolo counties. 32 CNDDB occurrences in the RCIS Area.

This Page Intentionally Left Blank

Appendix F

Associations between Land Cover and Wildlife and Plant Species

Appendix F
Associations between Land Cover and Wildlife and Plant Species

Tables F-1a and F-1b and F-2a and F-2b illustrate the relationship between the Santa Clara County RCIS land cover types and the nonfocal species that occur within the RCIS area. Tables F-1a and F-1b include the nonfocal wildlife species that occur in the RCIS area, and Tables F-2a and F-2b include the nonfocal plant species that occur in the RCIS area. These species were identified using publicly available species lists from the California Natural Diversity Database, U.S. Fish and Wildlife Service Information for Planning and Conservation Database, and the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California. Other sources evaluated included the Santa Clara Valley Habitat Conservation Plan and Natural Community Conservation Plan, the California Department of Fish and Wildlife's Special Animals List, the State Wildlife Action Plan, and personal communication with local species experts (see Section 2.3.5.1, *Focal Species Selection Process*). The species listed in the tables below include those species that received a TRUE statement in the Meets Screening Criteria column in Appendix E, but were not selected as focal species for this Santa Clara County RCIS.

This Page Intentionally Left Blank

Table F-1a. Associations between Land Cover Types and Nonfocal Wildlife Species[1]

Common Name *Scientific Name*	Land Cover Type																		
	California annual grassland	Serpentine Grassland	Serpentine rock outcrops	Barren/Rock	Northern mixed chaparral/chamise chaparral	Serpentine chaparral	Northern coastal scrub/Diablan sage scrub	Blue oak woodland	Valley oak forest and woodland	Coast live oak forest and woodland	Mixed oak woodland and forest	Montane hardwood	Serpentine hardwood	Douglas fir forest	Serpentine conifer	Coulter pine forest	Knobcone pine forest	Ponderosa pine woodland	Redwood forest
Invertebrates																			
Monarch butterfly *Danaus plexippus*																			
Bay checkerspot butterfly *Euphydryas editha bayensis*		X	X																
Fish																			
Green sturgeon *Acipenser medirostris*																			
Tidewater goby *Eucyclogobius newberryi*																			
Central Valley fall/late fall-run Chinook salmon *Oncorhynchus tshawytscha*																			
Longfin smelt *Spirinchus thaleichthys*																			

[1] This table shows the general relationships between wildlife species and land cover types. Most species select habitat based on characteristics at a finer scale than the land cover types presented here. In such cases, this table does not precisely depict the species' habitat relationships.

Common Name *Scientific Name*	Land Cover Type																		
	California annual grassland	Serpentine Grassland	Serpentine rock outcrops	Barren/Rock	Northern mixed chaparral/chamise chaparral	Serpentine chaparral	Northern coastal scrub/Diablan sage scrub	Blue oak woodland	Valley oak forest and woodland	Coast live oak forest and woodland	Mixed oak woodland and forest	Montane hardwood	Serpentine hardwood	Douglas fir forest	Serpentine conifer	Coulter pine forest	Knobcone pine forest	Ponderosa pine woodland	Redwood forest
Reptiles																			
Alameda whipsnake *Masticophis lateralis euryxanthus*	X				X		X												
Western pond turtle *Emys marmorata*																			
Birds																			
Grasshopper sparrow *Ammodramus savannarum*	X	X																	
Golden eagle *Aquila chrysaetos*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Short-eared owl *Asio flammeus*	X	X																	
Western snowy plover *Charadrius alexandrinus nivosus*																			
White-tailed kite *Elanus leucurus*	X	X																	
American peregrine falcon *Falco peregrinus anatum*	X	X																	
Bald eagle *Haliaeetus leucocephalus*																		X	
Loggerhead shrike *Lanius ludovicianus*	X	X			X	X	X												
California black rail *Laterallus jamaicensis coturniculus*																			

Common Name *Scientific Name*	Land Cover Type																		
	California annual grassland	Serpentine Grassland	Serpentine rock outcrops	Barren/Rock	Northern mixed chaparral/chamise chaparral	Serpentine chaparral	Northern coastal scrub/Diablan sage scrub	Blue oak woodland	Valley oak forest and woodland	Coast live oak forest and woodland	Mixed oak woodland and forest	Montane hardwood	Serpentine hardwood	Douglas fir forest	Serpentine conifer	Coulter pine forest	Knobcone pine forest	Ponderosa pine woodland	Redwood forest
California brown pelican *Pelecanus occidentalis californicus*																			
Purple martin *Progne subis*								X	X	X	X	X	X	X				X	
Ridgway's rail *Rallus obsoletus obsoletus*																			
California least tern *Sterna antillarum (=albifrons) browni*																			
Least Bell's vireo *Vireo bellii pusillus*							X												
Mammalsd																			
Pallid bat *Antrozous pallidus*			X	X															
Townsend's big-eared bat *Corynorhinus townsendii townsendii*				X										X		X	X	X	X
Fringed myotis *Myotis thysanodes*				X															
Salt marsh harvest mouse *Reithrodontomys raviventris*																			
American badger *Taxidea taxus*	X	X					X												

Table F-1b. Associations between Land Cover Types and Nonfocal Wildlife Species

Common Name *Scientific Name*	Land Cover Type																				
	Central coast riparian forest	Sycamore alluvial woodland	Serpentine riparian	Shallow bay	Tidal bay flat	Tidal unnatural	Tidal vegetation	Perennial freshwater marsh	Seasonal wetland	Spring/seep (non-serpentine)	Spring/seep (serpentine)	Pond	Reservoir	Cultivated-undetermined	Developed agriculture	Grain, row-crops, disked	Orchard	Vineyard	Urban	Rural residential	Ornamental woodland
Invertebrates																					
Monarch butterfly *Danaus plexippus*																					X
Bay checkerspot butterfly *Euphydryas editha bayensis*																					
Fish																					
Green sturgeon *Acipenser medirostris*				X																	
Tidewater goby *Eucyclogobius newberryi*				X																	
Central Valley fall/late fall-run Chinook salmon *Oncorhynchus tshawytscha*				X																	
Longfin smelt *Spirinchus thaleichthys*				X																	
Reptiles																					
Alameda whipsnake *Masticophis lateralis euryxanthus*																					
Western pond turtle *Emys marmorata*		X	X	X				X	X			X	X								

Common Name *Scientific Name*	Land Cover Type																			
	Central coast riparian forest	Sycamore alluvial woodland	Serpentine riparian	Shallow bay	Tidal bay flat	Tidal unnatural	Tidal vegetation	Perennial freshwater marsh	Seasonal wetland	Spring/seep (non-serpentine)	Spring/seep (serpentine)	Pond	Reservoir	Cultivated-undetermined	Developed agriculture	Grain, row-crops, disked	Orchard	Vineyard	Urban	Rural residential	Ornamental woodland
Birds																					
Grasshopper sparrow *Ammodramus savannarum*																					
Golden eagle *Aquila chrysaetos*	X	X	X																		
Short-eared owl *Asio flammeus*							X	X	X						X	X					
Western snowy plover *Charadrius alexandrinus nivosus*					X																
White-tailed kite *Elanus leucurus*							X	X						X	X	X					
American peregrine falcon *Falco peregrinus anatum*		X		X	X	X	X														X
Bald eagle *Haliaeetus leucocephalus*		X		X				X													
Loggerhead shrike *Lanius ludovicianus*														X	X	X	X				
California black rail *Laterallus jamaicensis coturniculus*							X														
California brown pelican *Pelecanus occidentalis californicus*				X	X																
Purple martin *Progne subis*	X	X	X																	X	

Common Name *Scientific Name*	Land Cover Type																				
	Central coast riparian forest	**Sycamore alluvial woodland**	**Serpentine riparian**	**Shallow bay**	**Tidal bay flat**	**Tidal unnatural**	**Tidal vegetation**	**Perennial freshwater marsh**	**Seasonal wetland**	**Spring/seep (non-serpentine)**	**Spring/seep (serpentine)**	**Pond**	**Reservoir**	**Cultivated-undetermined**	**Developed agriculture**	**Grain, row-crops, disked**	**Orchard**	**Vineyard**	**Urban**	**Rural residential**	**Ornamental woodland**
Ridgway's rail *Rallus obsoletus obsoletus*					X		X														
California least tern *Sterna antillarum (=albifrons) browni*					X							X									
Least Bell's vireo *Vireo bellii pusillus*	X	X	X																		
Mammals																					
Pallid bat *Antrozous pallidus*																					
Townsend's big-eared bat *Corynorhinus townsendii townsendii*																					
Fringed myotis *Myotis thysanodes*																					
Salt marsh harvest mouse *Reithrodontomys raviventris*					X		X														
American badger *Taxidea taxus*																					

Table F-2a. Associations between Land Cover Types and Nonfocal Plant Species[2]

Common Name *Scientific Name*	Land Cover Type																		
	California annual grassland	Serpentine Grassland	Serpentine rock outcrops	Barren/Rock	Northern mixed chaparral/chamise chaparral	Serpentine chaparral	Northern coastal scrub/Diablan sage scrub	Blue oak woodland	Valley oak forest and woodland	Coast live oak forest and woodland	Mixed oak woodland and forest	Montane hardwood	Serpentine hardwood	Douglas fir forest	Serpentine conifer	Coulter pine forest	Knobcone pine forest	Ponderosa pine woodland	Redwood forest
Sharsmith's onion *Allium sharsmithae*			X			X							X						
Santa Cruz manzanita *Arctostaphylos andersonii*					X					X	X	X		X					X
Big-scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*		X				X							X						
Chaparral harebell *Campanula exigua*			X			X													
Tiburon paintbrush *Castilleja affinis* ssp. *neglecta*		X																	
Coyote ceanothus *Ceanothus ferrisae*		X				X	X												
San Francisco collinsia *Collinsia multicolor*							X										X		
Hospital Canyon larkspur *Delphinium californicum* ssp. *interius*					X			X	X	X	X	X							
Santa Clara Valley dudleya *Dudleya abramsii* ssp. *setchellii*		X	X										X						
San Joaquin spearscale *Extriplex joaquiniana*	X																		

[2] This table shows the general relationships between plant species and land cover types. Most species select habitat based on characteristics at a finer scale than the land cover types presented here. In such cases, this table does not capture the full extent of a species' habitat relationships.

Common Name *Scientific Name*	Land Cover Type																		
	California annual grassland	**Serpentine Grassland**	**Serpentine rock outcrops**	**Barren/Rock**	**Northern mixed chaparral/chamise chaparral**	**Serpentine chaparral**	**Northern coastal scrub/Diablan sage scrub**	**Blue oak woodland**	**Valley oak forest and woodland**	**Coast live oak forest and woodland**	**Mixed oak woodland and forest**	**Montane hardwood**	**Serpentine hardwood**	**Douglas fir forest**	**Serpentine conifer**	**Coulter pine forest**	**Knobcone pine forest**	**Ponderosa pine woodland**	**Redwood forest**
Legenere *Legenere limosa*																			
Mt. Hamilton coreopsis *Leptosyne hamiltonii*								X	X	X	X	X							
Mt. Hamilton lomatium *Lomatium observatorium*								X	X	X	X	X							
Hall's bush mallow *Malacothamnus hallii*					X		X												
Oregon meconella *Meconella oregana*							X												
Woodland woollythreads *Monolopia gracilens*		X				X							X		X				
Prostrate navarretia *Navarretia prostrata*							X												
Mt. Hamilton jewelflower *Streptanthus callistus*					X			X	X	X	X								
Metcalf Canyon jewelflower *Streptanthus glandulosus* ssp. *albidus*		X	X																

Table F-2a. Associations between Land Cover Types and Nonfocal Plant Species

Common Name *Scientific Name*	Land Cover Type																				
	Central coast riparian forest	**Sycamore alluvial woodland**	**Serpentine riparian**	**Shallow bay**	**Tidal bay flat**	**Tidal unnatural**	**Tidal vegetation**	**Perennial freshwater marsh**	**Seasonal wetland**	**Spring/seep (non-serpentine)**	**Spring/seep (serpentine)**	**Pond**	**Reservoir**	**Cultivated-undetermined**	**Developed agriculture**	**Grain, row-crops, disked**	**Orchard**	**Vineyard**	**Urban**	**Rural residential**	**Ornamental woodland**
Sharsmith's onion *Allium sharsmithae*																					
Santa Cruz manzanita *Arctostaphylos andersonii*																					
Big-scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*																					
Chaparral harebell *Campanula exigua*																					
Tiburon paintbrush *Castilleja affinis* ssp. *neglecta*																					
Coyote ceanothus *Ceanothus ferrisae*																					
San Francisco collinsia *Collinsia multicolor*																					
Hospital Canyon larkspur *Delphinium californicum* ssp. *interius*																					
Santa Clara Valley dudleya *Dudleya abramsii* ssp. *setchellii*																					
San Joaquin spearscale *Extriplex joaquiniana*									X	X											
Legenere *Legenere limosa*	X	X						X	X												
Mt. Hamilton coreopsis *Leptosyne hamiltonii*																					

Common Name *Scientific Name*	Land Cover Type																				
	Central coast riparian forest	**Sycamore alluvial woodland**	**Serpentine riparian**	**Shallow bay**	**Tidal bay flat**	**Tidal unnatural**	**Tidal vegetation**	**Perennial freshwater marsh**	**Seasonal wetland**	**Spring/seep (non-serpentine)**	**Spring/seep (serpentine)**	**Pond**	**Reservoir**	**Cultivated-undetermined**	**Developed agriculture**	**Grain, row-crops, disked**	**Orchard**	**Vineyard**	**Urban**	**Rural residential**	**Ornamental woodland**
Mt. Hamilton lomatium *Lomatium observatorium*																					
Hall's bush mallow *Malacothamnus hallii*																					
Oregon meconella *Meconella oregana*																					
Woodland woollythreads *Monolopia gracilens*																					
Prostrate navarretia *Navarretia prostrata*																					
Mt. Hamilton jewelflower *Streptanthus callistus*																					
Metcalf Canyon jewelflower *Streptanthus glandulosus* ssp. *albidus*																					

Appendix G

Comparison of RCIS Species Habitat Models and Habitat Plan Habitat Models

Appendix G
Comparison of RCIS Species Habitat Models and Habitat Plan Habitat Models

This Santa Clara County RCIS's habitat models were developed to be generally consistent with the habitat models developed for the Habitat Plan's covered species. This RCIS's habitat models differ in land cover types used to represent habitat where there are differences between the land cover data (and names of land cover types) used by this RCIS and the Habitat Plan. Other differences generally reflect minor refinements in this RCIS's habitat models. Table G-1, ***Habitat Distribution Model Comparison: Plants***, and Table G-2, ***Habitat Distribution Model Comparison: Wildlife***, show the habitat model parameters for plants and wildlife species that are included both in this RCIS as a focal species and in the Habitat Plan as a covered species.

This Page Intentionally Left Blank

Table G-1 Habitat Distribution Model Comparison: Plants

Habitat Type	Santa Clara Valley Habitat Plan Habitat Model	Santa Clara County RCIS Habitat Model
Fragrant Fritillary		
Primary	Primary habitat is defined as serpentine bunchgrass grassland between 0 and 1,500 feet elevation on slopes with all degrees of steepness.	Primary habitat is defined as serpentine grassland between 0 and 1,500 feet in elevation on slopes with all degrees of steepness.
Secondary	Secondary habitat is defined as annual grassland, northern coastal scrub/Diablan sage scrub, and all oak woodland land cover types on slopes with all degrees of steepness between 0 and 1,500 feet elevation.	Secondary habitat is defined as California annual grassland, northern coastal scrub/Diablan sage scrub and blue oak woodland, valley oak forest/woodland, coast live oak forest woodland, and mixed oak woodland and forest between 0 and 1,500 feet in elevation on slopes with all degrees of steepness.
Loma Prieta hoita		
Primary	Primary habitat is defined as mixed oak woodland and coast live oak forest and woodland between 100 and 2,000 feet in elevation on slopes with all degrees of steepness and in all soil types but primarily on serpentine soils.	Primary habitat is defined as the following land cover types between 100 and 2,000 feet elevation: coast live oak forest and woodland, mixed oak woodland and forest, and montane hardwood land cover types where they occurred on SSURGO map units with a serpentine soil component, and serpentine hardwood land cover types.
Secondary	Secondary habitat is defined as northern mixed chaparral/chamise chaparral and mixed serpentine chaparral between 0 and 2,000 feet in elevation on slopes with all degrees of steepness. Northern mixed chaparral applies in all soil types.	Secondary habitat was limited to the following land cover types between 100 and 2,000 feet elevation: northern mixed chaparral/chamise chaparral, and mixed riparian forest and scrubland where they occurred on SSURGO map units with a serpentine soil component, and serpentine chaparral, and serpentine riparian cover types between 100 and 2,000 feet elevation.
Mt. Hamilton Thistle		
Primary Habitat	Primary habitat within the study area is defined as serpentine seeps or serpentine soils or grasslands within 25 feet of riverine habitat. This species is only found within the Guadalupe and Coyote watersheds.	Not included as a habitat type in this RCIS's model.
Potential Habitat	Not included as a habitat type in the Habitat Plan's model.	Potential habitat includes the serpentine seep/spring land cover type and serpentine grassland and serpentine chaparral land cover types where they occur within 25 feet of perennial, intermittent, and ephemeral streams. Potential habitat includes potentially suitable habitat that does that does not overlap a known occurrence of Mount Hamilton thistle.

Habitat Type	Santa Clara Valley Habitat Plan Habitat Model	Santa Clara County RCIS Habitat Model
Occupied Habitat	Not included as a habitat type in the Habitat Plan's model.	Occupied habitat was modeled to include all precise location CNDDB polygons and the area within a 25-foot buffer of the occurrence. Potential habitat that overlapped with occupied habitat was re-categorized as occupied habitat. Therefore, occupied habitat includes all known CNDDB occurrences recorded as a precise location.
Smooth Lessingia		
Undefined	Suitable habitat for smooth lessingia is defined as serpentine bunchgrass grassland and serpentine rock outcrops between 0 and 2,000 feet in elevation on slopes with all degrees of steepness.	Suitable habitat for smooth lessingia was thus defined as serpentine grassland and serpentine rock outcrops between 0 and 2,000 feet in elevation on slopes with all degrees of steepness.
Most Beautiful Jewelflower		
Primary	Primary habitat is defined as serpentine bunchgrass grassland, serpentine rock outcrops/barren, and mixed serpentine chaparral between 0 and 3,500 feet elevation on slopes with all degrees of steepness.	Primary habitat is defined as serpentine grassland, serpentine rock outcrop, and serpentine chaparral from 0 to 3,500 feet elevation on slopes with all degrees of steepness.
Secondary	Secondary habitat is defined as non-serpentine rock outcrops between 0 and 3,500 feet elevation on slopes with all degrees of steepness.	Secondary habitat is defined as non-serpentine rock outcrop (barren/rock land cover type) from 0 to 3,500 feet elevation on slopes with all degrees of steepness.

Appx = appendix
Pp = page number
*Information not provided in given documents

Table G-2 Habitat Distribution Model Comparison: Wildlife

Habitat Type	Santa Clara Valley Habitat Plan Habitat Model	Santa Clara County RCIS Habitat Model
California Tiger Salamander		
Occupied Habitat	Not included as a habitat type in the Habitat Plan's model.	Occupied habitat was designated using all CNDDB records with an extant record, indicating that the species is present at the location. This occupied habitat buffer is similar to the methodology used to display occupied habitat by buffering 1.3 miles from known extant occurrences in the draft recovery plan for the species (U.S. Fish and Wildlife Service 2015).
Breeding and Foraging Habitat	Potential breeding habitat within the study area is assumed to be all ponds (excluding percolation ponds), coastal and valley freshwater marshes, natural lakes, and seasonal wetlands within riparian, grassland, oak woodland, and conifer woodland land cover types.	Breeding habitat within this RCIS area includes all wetland and pond types, (excluding seeps and reservoirs) that occur within grassland, woodland, riparian woodland, conifer forest, cultivated agriculture, and shrubland land cover types up to 3,940 feet elevation.
Upland and Refugia Habitat	Upland habitats that provide subterranean refugia for this species are assumed to be within 1.3 miles of primary habitat in grassland, chaparral and coastal scrub, oak woodland, riparian forest/scrub, riparian forest/woodland wetlands, conifer woodlands, and agricultural areas.	Upland habitat extends 1.3 miles around all areas designated as breeding habitat, excluding baylands and urban land cover types.
California Red-legged Frog		
Breeding and Foraging Habitat	All riverine, coastal and valley freshwater marshes, riparian forest/woodland wetlands, ponds (excluding percolation ponds), and natural lakes in riparian forest/scrub, grasslands, oak woodland, chaparral and coastal scrub, conifer woodland, and agriculture land cover types were considered potential breeding and foraging habitat.	Breeding habitat includes all wetland and ponds (excluding reservoirs) within conifer forest, cultivated agriculture, grassland, woodland, riparian woodland, and shrubland land cover types.
Movement and Refugia Habitat	All grassland, chaparral and coastal scrub, oak woodland, riparian forest/scrub, and conifer woodland land cover types within 100 feet of primary habitat are characterized as upland refugia. All grassland, chaparral and coastal scrub, oak woodland, riparian forest/scrub, conifer woodland, and agriculture land cover types beyond 100 feet but within 2 miles of primary habitat are characterized as dispersal habitat.	Refugia habitat is defined as a 300 foot buffer from all breeding habitat.
Dispersal Habitat	Not included as a habitat type in the Habitat Plan's model.	Dispersal habitat includes all suitable land cover types found within a 2-mile buffer of the breeding habitat, which includes all of the land cover types in the conifer forest, cultivated agriculture, grassland, riparian woodland, and shrubland communities.

Habitat Type	Santa Clara Valley Habitat Plan Habitat Model	Santa Clara County RCIS Habitat Model
Foothill Yellow-legged Frog		
Breeding and Foraging Habitat	Low gradient streams (0 to 4% slope) or rivers not regulated by a dam, in riparian forest/scrub, grassland, oak woodland, and conifer woodland land cover types.	Modeled breeding and foraging habitat included a 165 foot buffer around rivers and streams associated with the following communities: conifer forests, woodlands, riparian woodlands, and shrublands. Sections of these aquatic features with low (0-11%) gradient slopes were identified as potential breeding or foraging habitat. Areas were excluded when found adjacent to urban, rural residential or landfills. The 0-11% slope used to designate potential breeding or foraging habitat was determined by comparing slope percentages for areas known to be used for breeding in a recent study of the species within the RCIS area.
Low Use Habitat	Moderate gradient streams (4% to 10% slope) or rivers in riparian woodland/scrub, grassland, oak savanna, and oak woodland land cover types.	All other stream reaches found within the same watershed as modeled breeding/foraging habitat was included as low-use or dispersal habitat. Low use habitat included a 165 foot buffer around rivers and streams associated with the following communities: conifer forests, woodlands, riparian woodlands, and shrublands.
Western Burrowing Owl		
Occupied Nesting Habitat	Occupied nesting includes sites occupied within the previous 3 years that are surrounded by at least 140 acres of foraging habitat within 0.5 mile of the nest site. The 140 acres parameter was mapped based on aerial photo analysis of known occupied nest sites.	Not included as a habitat type in this RCIS's model.
Potential Nesting Habitat	Any grassland, agricultural, or barren land cover types that are located outside of the 0.5 mile radius around occupied nest sites, and inside of one of the burrowing owl conservation zones.	Not included as a habitat type in this RCIS's model.
Breeding/Overwinter	Not included as a habitat type in the Habitat Plan's model.	Breeding/overwintering habitat included grassland, cultivated agriculture (except orchard and vineyard), woodland, and ornamental woodland and rural residential land cover types. Woodland land cover types were included where they occurred within 985 feet of grassland habitat. Breeding/overwintering habitat was restricted to suitable land cover types occurring on less than 5 percent slope.
Overwintering Habitat	All annual grassland, serpentine bunchgrass grassland, valley oak woodland, agricultural, and barren land cover types with flat (0–5%) or moderate (5–25%) slopes, outside of one of the burrowing owl conservation zones shown.	Overwintering habitat included the same land cover types as breeding/overwintering habitat, but was restricted to suitable land cover types occurring on slopes greater than 5 percent but less than 25 percent.

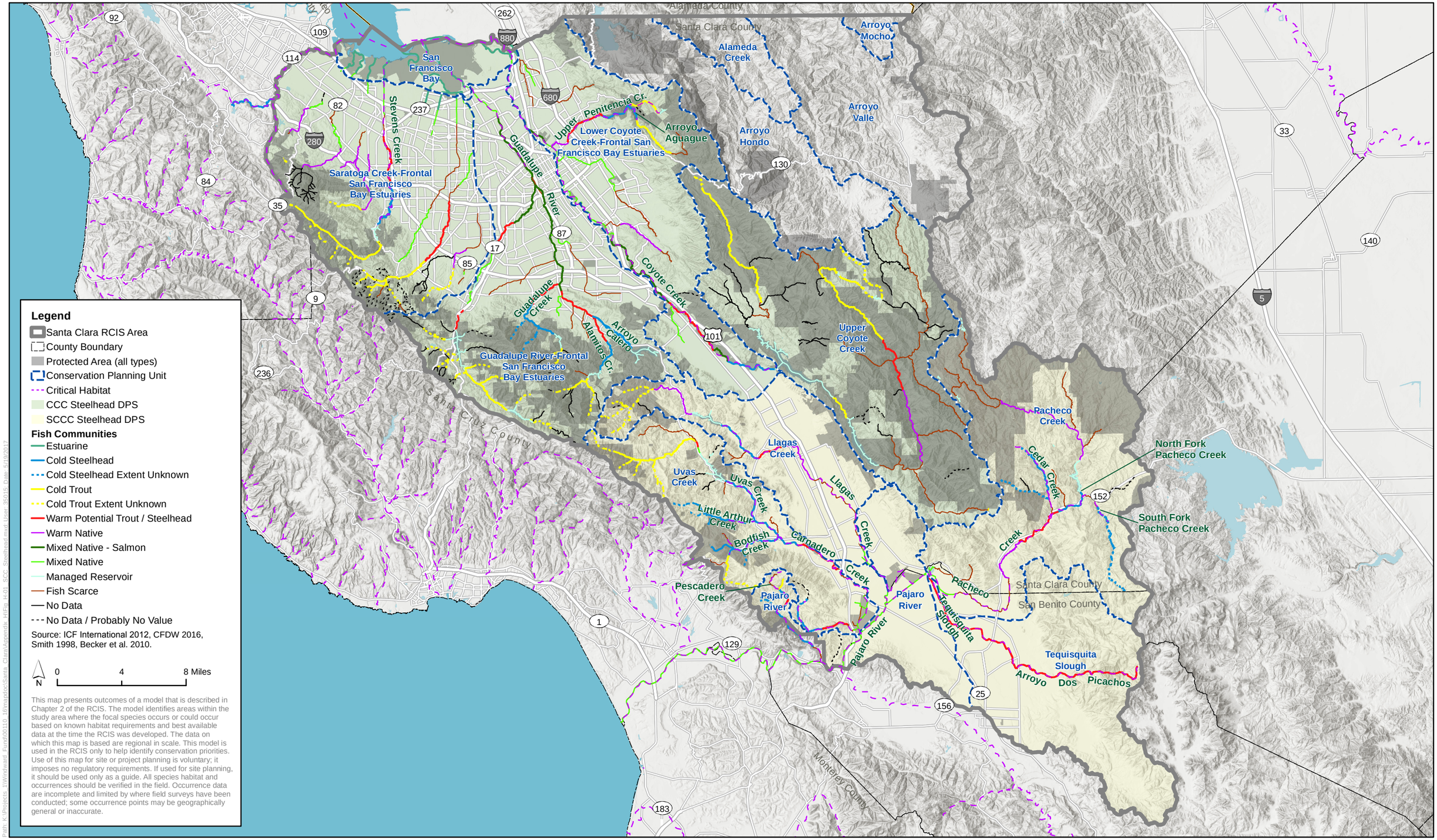
Habitat Type	Santa Clara Valley Habitat Plan Habitat Model	Santa Clara County RCIS Habitat Model
Tricolored Blackbird		
Breeding Habitat	Breeding habitat will actually be limited to small ponds/wetlands that occur in slow water portions of these riparian corridors.	Breeding habitat includes all wetland and pond and riparian land cover types within 1,640 feet of suitable foraging habitat.
Foraging Habitat	Secondary (foraging) habitat is prevalent throughout the valley floor and in the low elevations of the surrounding hills.	Foraging habitat includes cultivated agriculture, grassland, riparian woodland, and woodland land cover types within 3 miles of wetland and ponds.
San Joaquin Kit Fox		
Movement and Foraging Habitat	All grassland land cover types and seasonal wetlands and ruderal areas that are adjacent to grasslands were considered suitable movement and foraging habitat for this species. Further, valley oak/grasslands, blue oak woodland, and coast live oak woodlands within 500-feet of suitable grasslands were also considered suitable movement and foraging habitat. These parameters were only considered suitable habitat within the Pacheco and South Santa Clara Valley watersheds. Small fragments of habitat that were disconnected from contiguous habitat blocks were removed from the results to better represent actual movement potential for the species.	Movement and foraging habitat includes grassland and shrubland/woodland habitat adjacent to grassland habitat. All areas within 656 feet (200 meters) of highways were excluded from the model as habitat. The model was further refined by only including habitat in those watersheds currently thought to have potential to support kit fox movement and dispersal.
Low-Use Movement Habitat	Areas that the San Joaquin kit fox may use occasionally for movement include orchards, golf courses/urban parks, and ruderal areas that are connected to movement and foraging habitat described above. These were intended to represent areas that individuals might pass through while moving between other more suitable habitat types.	Low-use habitat includes croplands, pastures, and shrubland/woodland habitat immediately adjacent (within 1 mile) to movement and foraging habitat.

Appx = appendix
Pp = page number
*Information not provided in given documents

Literature Cited

U.S. Fish and Wildlife Service. 2015. Draft Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. v + 53pp.

Appendix H
Focal Species Habitat Models



Path: K:\Projects_1\Windward_Fund\00110_16\mapdoc\Santa_Clara\Appendix_H\Fig_H-01_SCC_Steelhead.mxd; User: 350156; Date: 5/10/2017

Figure H-1
Steelhead and Other Fish Communities In the RCIS Area

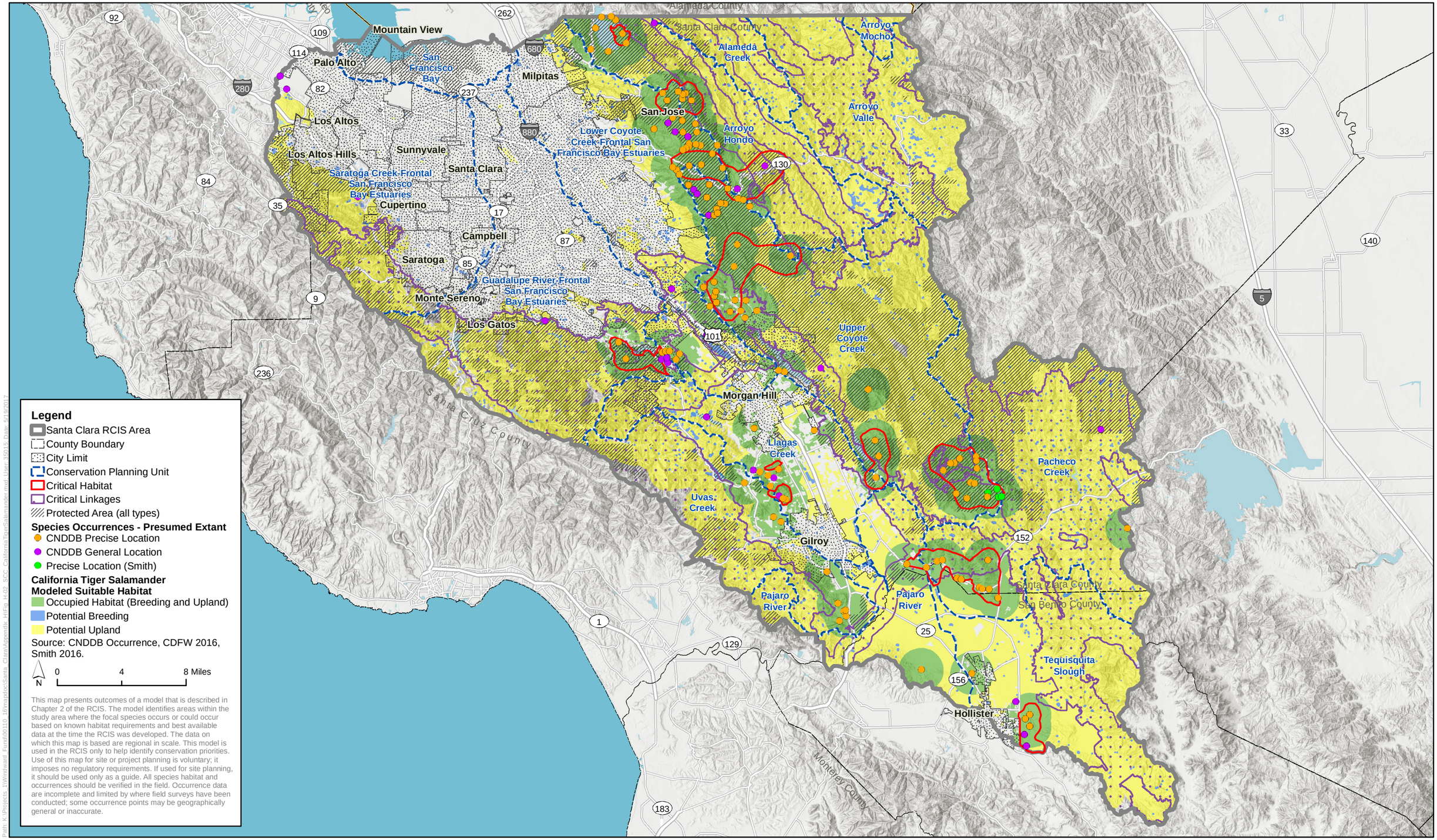


Figure H-2
California Tiger Salamander Modeled Suitable Habitat

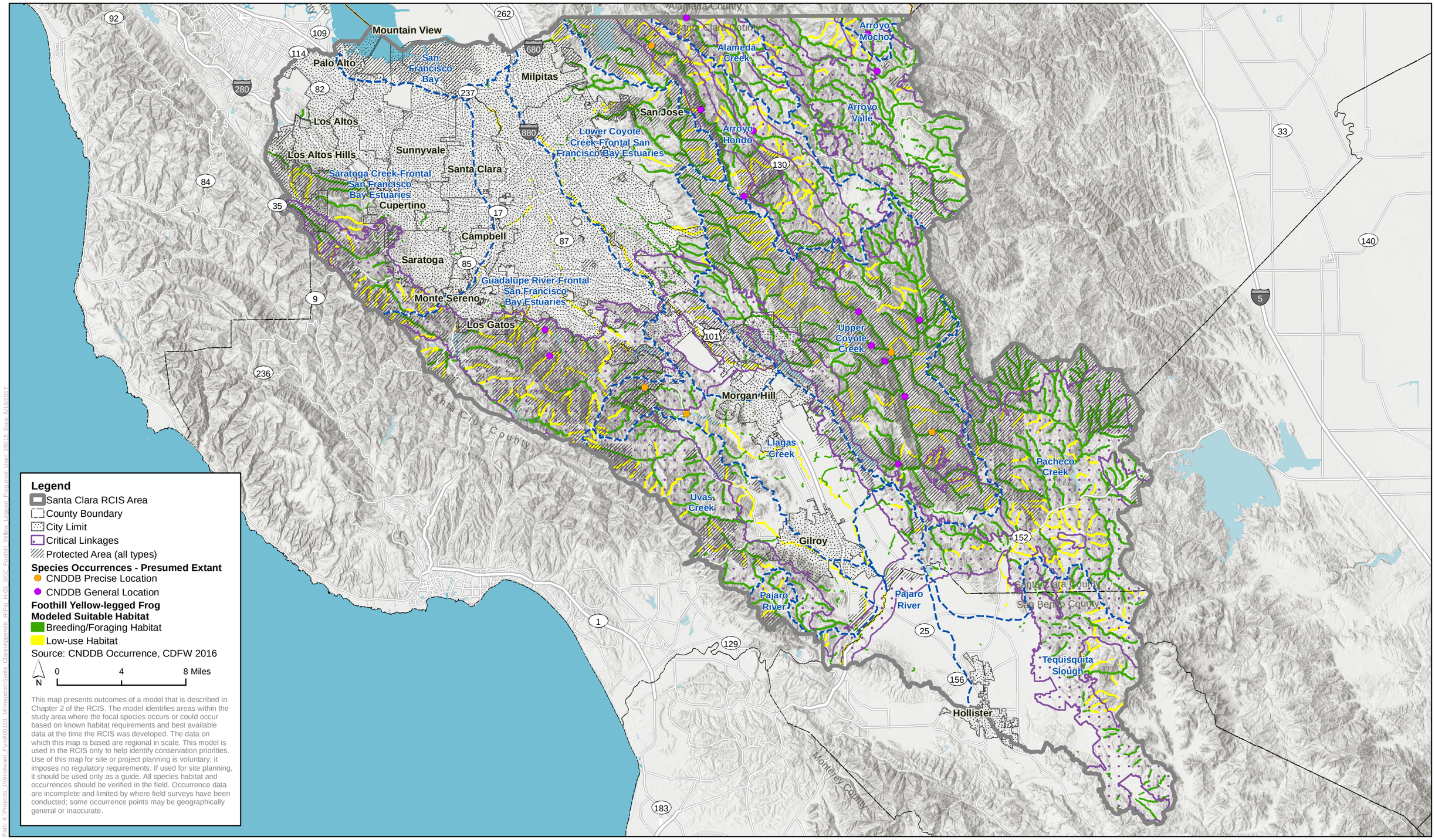
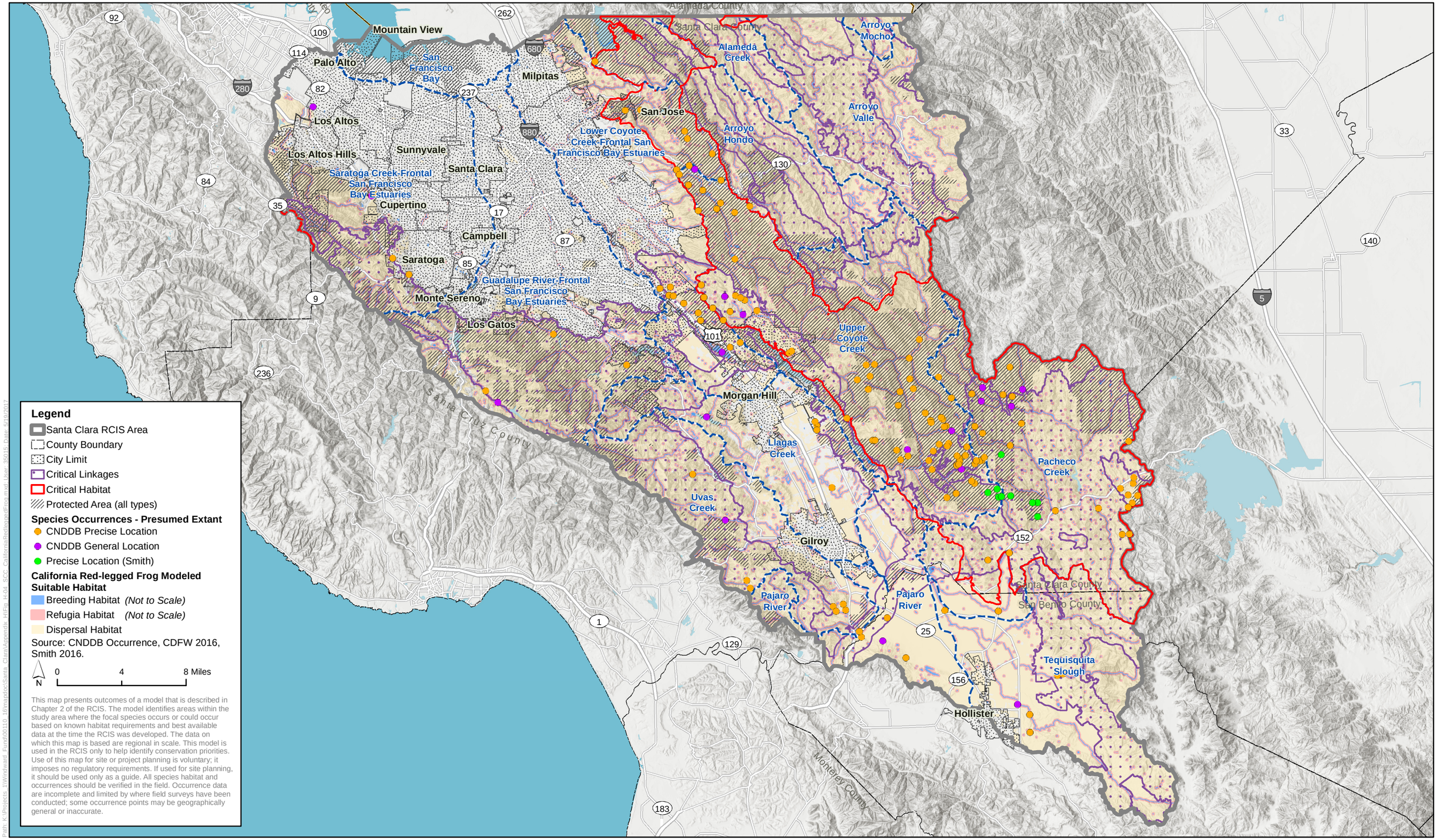


Figure H-3
Foothill Yellow-legged Frog Modeled Suitable Habitat



Legend

- Santa Clara RCIS Area
- County Boundary
- City Limit
- Critical Linkages
- Critical Habitat
- Protected Area (all types)

Species Occurrences - Presumed Extant

- CNDDB Precise Location
- CNDDB General Location
- Precise Location (Smith)

California Red-legged Frog Modeled Suitable Habitat

- Breeding Habitat *(Not to Scale)*
- Refugia Habitat *(Not to Scale)*
- Dispersal Habitat

Source: CNDDB Occurrence, CDFW 2016, Smith 2016.

N 0 4 8 Miles

This map presents outcomes of a model that is described in Chapter 2 of the RCIS. The model identifies areas within the study area where the focal species occurs or could occur based on known habitat requirements and best available data at the time the RCIS was developed. The data on which this map is based are regional in scale. This model is used in the RCIS only to help identify conservation priorities. Use of this map for site or project planning is voluntary; it imposes no regulatory requirements. If used for site planning, it should be used only as a guide. All species habitat and occurrences should be verified in the field. Occurrence data are incomplete and limited by where field surveys have been conducted; some occurrence points may be geographically general or inaccurate.

ICF

Figure H-4
California Red-legged Frog Modeled Suitable Habitat

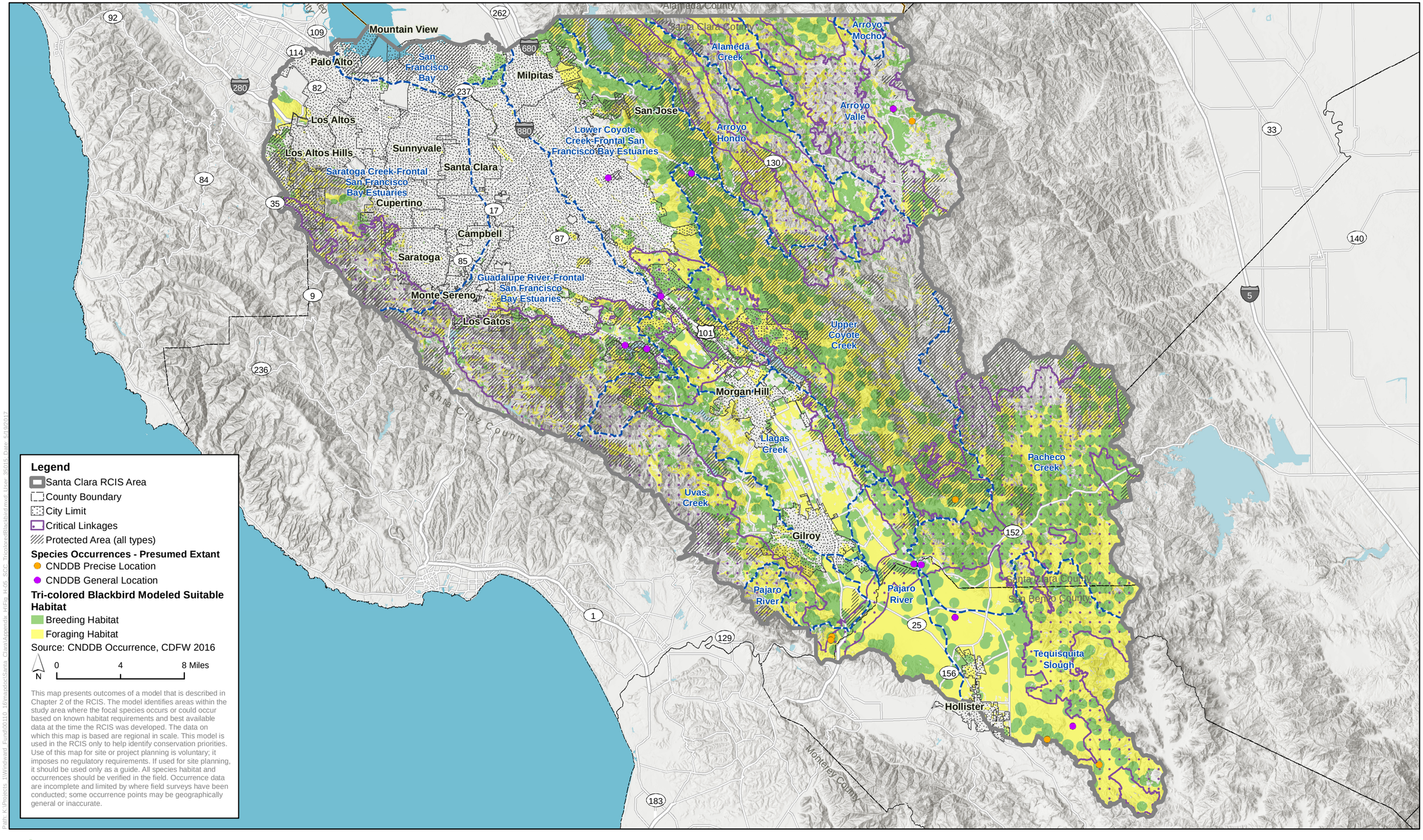


Figure H-5
Tricolored Blackbird Modeled Suitable Habitat

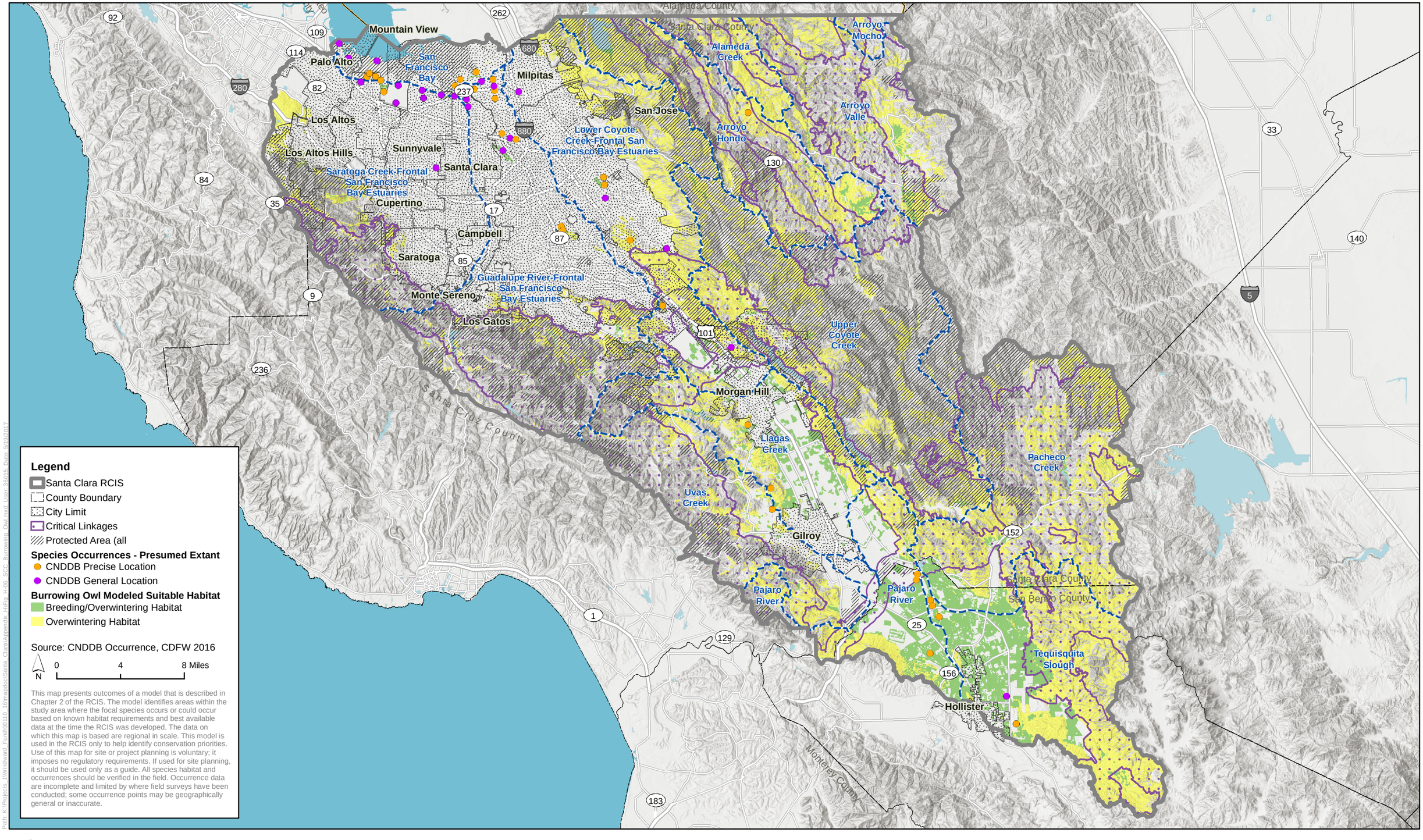


Figure H-6
Burrowing Owl Modeled Suitable Habitat

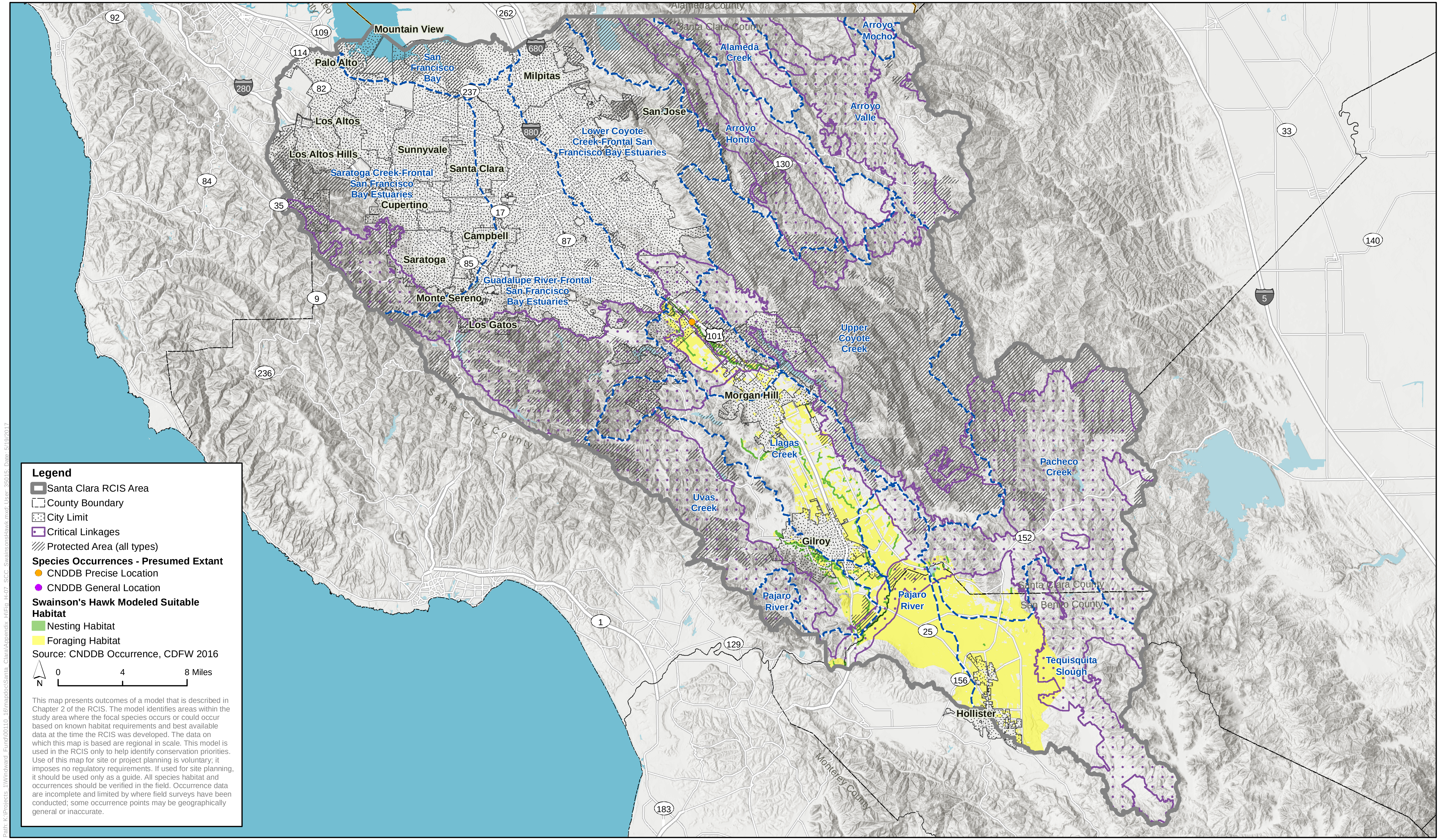

Legend
Santa Clara RCIS Area
County Boundary
City Limit
Critical Linkages
Protected Area (all types)
Species Occurrences - Presumed Extant
CNDDB Precise Location
CNDDB General Location
Swainson's Hawk Modeled Suitable Habitat
Nesting Habitat
Foraging Habitat
Source: CNDDB Occurrence, CDFW 2016
N
0
4
8 Miles
This map presents outcomes of a model that is described in Chapter 2 of the RCIS. The model identifies areas within the study area where the focal species occurs or could occur based on known habitat requirements and best available data at the time the RCIS was developed. The data on which this map is based are regional in scale. This model is used in the RCIS only to help identify conservation priorities. Use of this map for site or project planning is voluntary; it imposes no regulatory requirements. If used for site planning, it should be used only as a guide. All species habitat and occurrences should be verified in the field. Occurrence data are incomplete and limited by where field surveys have been conducted; some occurrence points may be geographically general or inaccurate.
Mountain View
Palo Alto
Milpitas
San Jose
Los Altos
Los Altos Hills
Sunnyvale
Santa Clara
Cupertino
Campbell
Saratoga
Monte Sereno
Los Gatos
Morgan Hill
Gilroy
Hollister
San Francisco Bay
Alameda Creek
Arroyo Mocho
Arroyo Valle
Arroyo Hondo
Lower Coyote Creek-Frontal San Francisco Bay Estuaries
Saratoga Creek-Frontal San Francisco Bay Estuaries
Guadalupe River-Frontal San Francisco Bay Estuaries
Upper Coyote Creek
Llagas Creek
Uvas Creek
Pacheco Creek
Pajaro River
Pajaro River
Tequisquita Slough
Alameda County
Santa Clara County
Santa Cruz County
San Benito County
Monterey County
92
109
114
262
680
280
82
237
880
130
33
84
35
17
87
85
140
9
101
5
236
152
1
25
129
156
183

Figure H-7
Swainson's Hawk Modeled Suitable Habitat