

TECHNICAL REPORT – SONOMA COUNTY HABITAT CONSERVATION PLAN: PRELIMINARY STRATEGIC PLANNING

PREPARED FOR:

County of Sonoma
Permit Sonoma
2550 Ventura Avenue
Santa Rosa, CA 95403

PREPARED BY:

ICF
201 Mission St., Suite 1500
San Francisco, CA 94105
Contact: Kathryn Gaffney
628.895.7589

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Acronyms and Abbreviations

CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
County	County of Sonoma
DPS	distinct population segment
ESA	Endangered Species Act
ESU	evolutionarily significant unit
GIS	Geographic Information System
HCP	habitat conservation plan
ITP	Incidental take permit
LLC	Landscape Conservation Cooperatives
MSCP	Multiple Species Conservation Program
MSHCP	Multiple Species Habitat Conservation Plan
NCCP	Natural community conservation plan
NCCP Act	Natural Community Conservation Planning Act
NEPA	National Environmental Policy Act
NGOs	nongovernmental organizations
NHPA	National Historic Preservation Map
NMFS	National Marine Fisheries Service
Services	U.S. Fish and Wildlife Service and National Marine Fisheries Service
USFWS	U.S. Fish and Wildlife Service

Section 1

Introduction and Overview

Like many Bay Area counties, Sonoma County (County) has undergone rapid change in recent decades. Change is expected to continue over the next several decades as communities rebuild after the catastrophic wildfires of 2017 and 2019, as more people and businesses move to the region, and as existing businesses expand. This growth is expected to create conflicts with some of the County's many plant and animal species that are listed as endangered or threatened under the federal Endangered Species Act (ESA) and California Endangered Species Act (CESA). Accommodating economic growth while conserving listed species and other natural resources is an important County goal that requires foresight and good planning.

The Santa Rosa Plain exemplifies the County's challenge of balancing economic growth with listed species conservation. A large share of the County's growth has occurred, and will continue to occur, in the Santa Rosa Plain. This central County region also supports extensive seasonal wetlands and grasslands that provide habitat for four listed plant species: Sonoma sunshine (*Blenosperma bakeri*), Burke's goldfield (*Lasthenia burkei*), Sebastopol meadowfoam (*Limnanthes vinculans*), and many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*). The Santa Rosa Plain and nearby lowlands are also the only habitat for the endangered Sonoma distinct population segment (DPS) of California tiger salamander (*Ambystoma californiense*). All five species are listed as endangered under the ESA and CESA.

Lands within the unincorporated County and several municipalities are occupied by these species, increasing the regulatory burden on a variety of private (e.g., wine-grape and cannabis growers, residential developers, and other agricultural landowners) and public (e.g., municipal infrastructure) stakeholders. In the early 2000s, representatives from these stakeholders, in cooperation with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), developed the Santa Rosa Plain Conservation Strategy (U.S. Fish and Wildlife Service 2005). This voluntary conservation strategy was approved by local, state, and federal agencies in 2005 in order to protect stakeholders' land use interests and support the recovery of listed species.

Significant conservation efforts in terms of land acquisition, management, and wetland creation and restoration have been undertaken to protect and stabilize populations of the four listed plant species and the California tiger salamander. Despite these efforts, long term monitoring of the status of California tiger salamander populations shows continued decline in this DPS (U.S. Fish and Wildlife Service 2005). The conservation status of the listed plant species is not as well understood and uncertainty remains around whether populations are stable, declining, or increasing. However, current population status will not support delisting these species any time in the foreseeable future (U.S. Fish and Wildlife Service 2016).

In terms of the regulatory burdens and mitigation costs, the County and private developers continue to face substantial challenges when undertaking activities on the Santa Rosa Plain. The Santa Rosa Plain Conservation Strategy provides regulatory streamlining through a programmatic Biological Opinion issued by USFWS, but this pathway is only available to projects that have a federal nexus (e.g., those projects that also require a permit from a federal agency such as the U.S. Army Corps of Engineers). This leaves projects that would affect only upland habitat of the California tiger

salamander without a facilitated permit pathway. Additionally, few mitigation bank credits remain and the cost of those that do is high (e.g., \$480,000 to \$680,000 per acre).

Since the 2008 adoption of its General Plan 2020, the County has implemented multiple policies to protect sensitive species and habitats in general (e.g., Open Space Element, Policy 7a through 7u), and the Santa Rosa Plain in particular (Policy 7q) (County of Sonoma 2020a). In 2019, the County Board of Supervisors directed the County Permit and Resource Management Department (Permit Sonoma) staff to explore ways to streamline regulatory permitting within the County under the ESA and CESA through development of a regional habitat conservation plan (HCP) under Section 10 of the ESA. Permit Sonoma is contemplating a three-phase approach to HCP development:

- Phase 1: Develop HCP strategy and scope;
- Phase 2: Prepare Public Draft HCP and Public Draft California Environmental Quality Act(CEQA)/National Environmental Policy Act (NEPA) documents; and
- Phase 3: Finalize HCP and CEQA/NEPA documents and prepare state 2081(b) permit application.

This report contains the results of preliminary strategic planning for an HCP, providing initial strategic planning to determine the foundational elements of a potential HCP. This report provides an overview of the HCP development process, potential HCP applicants and eventual permittees, potential permit area, covered activities, and covered species. This report will conclude with a draft scope, schedule, and cost estimate for future phases of the HCP development process. Phase 2 of the HCP development process would focus on preparing the public draft HCP document and the draft environmental compliance documents to satisfy CEQA and NEPA. Phase 2 ends when these documents are released for public review. Phase 3 would involve responding to public comments and completing the final HCP and CEQA/NEPA documents. Phase 3 would conclude with the issuance of incidental take permits by USFWS, the National Marine Fisheries Service (NMFS; if anadromous fish are covered), and CDFW. Phase 2 and Phase 3 are subsequent phases of HCP development; Permit Sonoma is currently engaged in Phase 1.

This technical report is provided to offer recommendations on approach to HCP development and assess the potential scope and scale of the HCP. Three potential HCP options are evaluated:

1. A minimum option (i.e., a targeted geography focused on incidental take coverage for the four listed plant species and the Sonoma DPS of the California tiger salamander);
2. A maximum option (i.e., Countywide HCP covering more species); and
3. An intermediate option (i.e., a plan area larger than the Santa Rosa Plan but less than the entire county).

Many factors are considered when determining the appropriate scope and scale of an HCP. Among these, the most critical are those that define the basic parameters of an HCP, including the applicant and a combination of the proposed covered activities, location of covered activities, and the potential for covered activities to affect listed species. This report provides an initial evaluation of all these considerations, as well as whether the scope of the plan would be a suitable fit for development of a natural community conservation plan (NCCP) under the California Natural Community Conservation Planning Act.

The components of this technical report are listed below.

- **Section 2, *HCP Development Process***, defines terminology and describes the four phases of HCP development with an overview of the roles of the different HCP participants.
- **Section 3, *Potential HCP Permittees***, describes the process of selecting HCP applicants and permittees and provides a discussion of potential participants for the Sonoma County HCP.
- **Section 4, *Covered Activities***, describes the process of selecting covered activities and includes an initial list of potential covered activities for the Sonoma County HCP.
- **Section 5, *Plan Area and Permit Area***, identifies the potential plan area (i.e., where the HCP applies) and the potential permit area (i.e., where the incidental take authorization applies).
- **Section 6, *Covered Species***, discusses the process of selecting species to be covered in the HCP, details outstanding information needs, and presents an initial list of species to be considered for coverage under the HCP.
- **Section 7, *Evaluation of Natural Community Conservation Plan Option***, provides an overview of NCCP planning and implementation, evaluates costs associated with an NCCP, and discusses the benefits of an NCCP to the County.
- **Section 8, *References***, lists all supporting documents reviewed or used to develop this report.

The topics in Sections 3 through 6 are the primary means of defining the scope of an HCP. The discussion in Section 7 is intended to assist the County with evaluating its options for state endangered species compliance—to pursue either an NCCP or a state incidental take permit.

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Section 2

HCP Development Process

This section defines common terminology used in the HCP development process; provides an overview of the four phases of the development process; and provides an overview of the roles and responsibilities of the permit applicant(s), permittee(s), regulatory agencies, and stakeholders.

2.1 Terminology

Development of HCPs, as with many regulatory processes, comes with the use of new terms. Most of these terms are defined in the HCP and Incidental Take Permit Processing Handbook (HCP Handbook) (U.S. Fish and Wildlife Service and National Marine Fisheries Service 2016), but some are modified or expanded for clarity. Terms are listed in approximate order of when they are used in this report.

Conservation plan. The plan required by Section 10(a)(2)(B) of the ESA that an applicant must submit when applying for an incidental take permit. Conservation plans also are known as “habitat conservation plans” or “HCPs.” Incidental take is authorized through a Section 10(a)(1)(B) permit (50 Code of Federal Regulations [CFR] 17.3 for USFWS and 50 CFR 222.102 for NMFS).

Incidental take. Take of listed fish or wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a federal agency or applicant (50 CFR 402.02) (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998).

Incidental take permit (ITP). A permit issued under Section 10(a)(1)(B) of the ESA to a non-federal party undertaking an otherwise lawful project that might result in the take of an endangered or threatened species. Application for an ITP is subject to certain requirements, including preparation by the permit applicant of a conservation plan (ESA Section 10(a)(1)(B)) (U.S. Fish and Wildlife Service 2005). The term can also be used to refer to a state ITP under Section 2081(b) of the California Fish and Game Code.

Applicant. Refers to any person, as defined in Section 3(13) of the ESA, who requires formal approval or authorization from a federal agency as a prerequisite to conducting an action (50 CFR 402.02). This definition is not specific to Section 10 of the ESA, but to permit applicants for any federal permit. The term “applicant” is used when discussing HCP proponents up until the time a federal ITP is issued under Section 10 of the ESA.

Permittee. Refers to the applicant once it receives an ITP. The HCP Handbook does not define “permittee,” but it does use the term in various contexts. A single HCP may have multiple permittees, each holding their own ITP.

Co-Permittees. Refers to cases where it may be difficult to delineate unique responsibilities for each permittee and so multiple permittees collectively receive one non-severable permit from each state or federal wildlife agency that names all the permittee entities. Co-permittees then implement the HCP jointly.

Enrollee or Special Participating Entity. Refers to third parties (e.g., other agencies, special districts, or private parties) to whom take coverage provided by a federal ITP is extended if the third party enters into a binding agreement with a permittee to comply with the terms and conditions of the HCP.

Implementing entity. Programmatic HCPs established with co-permittees often designate a single entity (e.g., joint powers authority, special district, non-profit) that implements the HCP on behalf of the co-permittees. While the co-permittees are ultimately responsible for ensuring the HCP is implemented according to the terms and conditions of the HCP and its permits, the implementing entity typically carries out the bulk of implementation and oversight responsibilities, including impact and conservation tracking and reporting.

Programmatic HCP. Refers to landscape-scale HCPs that cover a variety of projects and activities over a relatively long permit term (decades instead of years). These HCPs may have one or more permittees.

Direct control. Refers to any person or entity that, except as otherwise stated on the face of the permit, is under the direct control of a permittee, or who is employed by or under contract to a permittee for purposes authorized by the permit, and who may carry out an activity authorized by the permit. In the case of permits issued under 50 CFR 17.22(b)-(d) or 17.32(b)-(d) (enhancement of survival permits) to “a State or local governmental entity, a person is under the direct control of the permittee where: (1) The person is under the jurisdiction of the permittee and the permit provides that such person(s) may carry out the authorized activity; or (2) The person has been issued a permit by the governmental entity or has executed a written instrument with the governmental entity, pursuant to the terms of the implementing agreement.” (50 CFR 13.25(d)-(e)(1)-(2))

Permit area. Refers to the geographic area where the ITP applies. It includes the area under the control of the applicant/permittee(s) where covered activities will occur. The permit area must be delineated in the permit and be included within the plan area of the HCP (U.S. Fish and Wildlife Service 2011).

Plan area. Refers to the specific geographic area described in the HCP. It is not required to define a plan area separate from the permit area, but if it is different, it must at least include the full extent of the permit area. Plan areas are often designed to be larger than the permit area to address landscape-scale planning issues such as habitat or watershed connectivity. The plan area may also be called *HCP area*, *study area*, or *planning area*.

Covered activities. Refers to activities that a permittee will conduct for which take is authorized in an ESA Section 10 permit.

Covered species. Refers to the species for which incidental take is authorized in an ITP and is adequately covered in an HCP. May also include unlisted species that have been adequately addressed in an HCP as though they were listed.

2.2 Phases of HCP Development

As described in the HCP Handbook, the HCP planning process is divided into four phases:

1. Compile and assess baseline information;
2. Develop HCP approach and assess feasibility;
3. Develop the HCP and environmental compliance document; and
4. Conduct the public review and permit process.

Figure 2-1 illustrates the planning process for a joint HCP and NCCP (HCP/NCCP). The process is not entirely linear, but iterative within each of the four phases, with many steps occurring concurrently. Each of the four phases is described further below.

During the first phase, baseline information is compiled and assessed by the applicant in order to determine general scope and coverage of the HCP. Baseline information would include detailed land cover maps, species accounts, species habitat distribution models, land use data, and estimates of locations and amounts of covered activities. Other considerations during this phase are planning for compliance with other environmental laws (e.g., CEQA, NEPA, National Historic Preservation Act [NHPA], ESA Section 7), developing timelines, determining HCP plan governance, and identifying and involving stakeholders. During this phase the USFWS and NMFS (collectively, Services) will determine the level of NEPA analysis required for the plan based on the scale of the HCP and the anticipated impacts of covered activities on the human environment. The Services will also determine which agency will serve as the NEPA Lead Agency responsible for overseeing preparation of the NEPA document. To ensure the HCP is practical, the applicant should develop a time schedule to prepare the HCP, identify key milestones, determine the goals for the HCP, determine the general plan area, evaluate what species are being considered for coverage, identify activities that may have effects on species, review existing data, and determine what key information is needed.

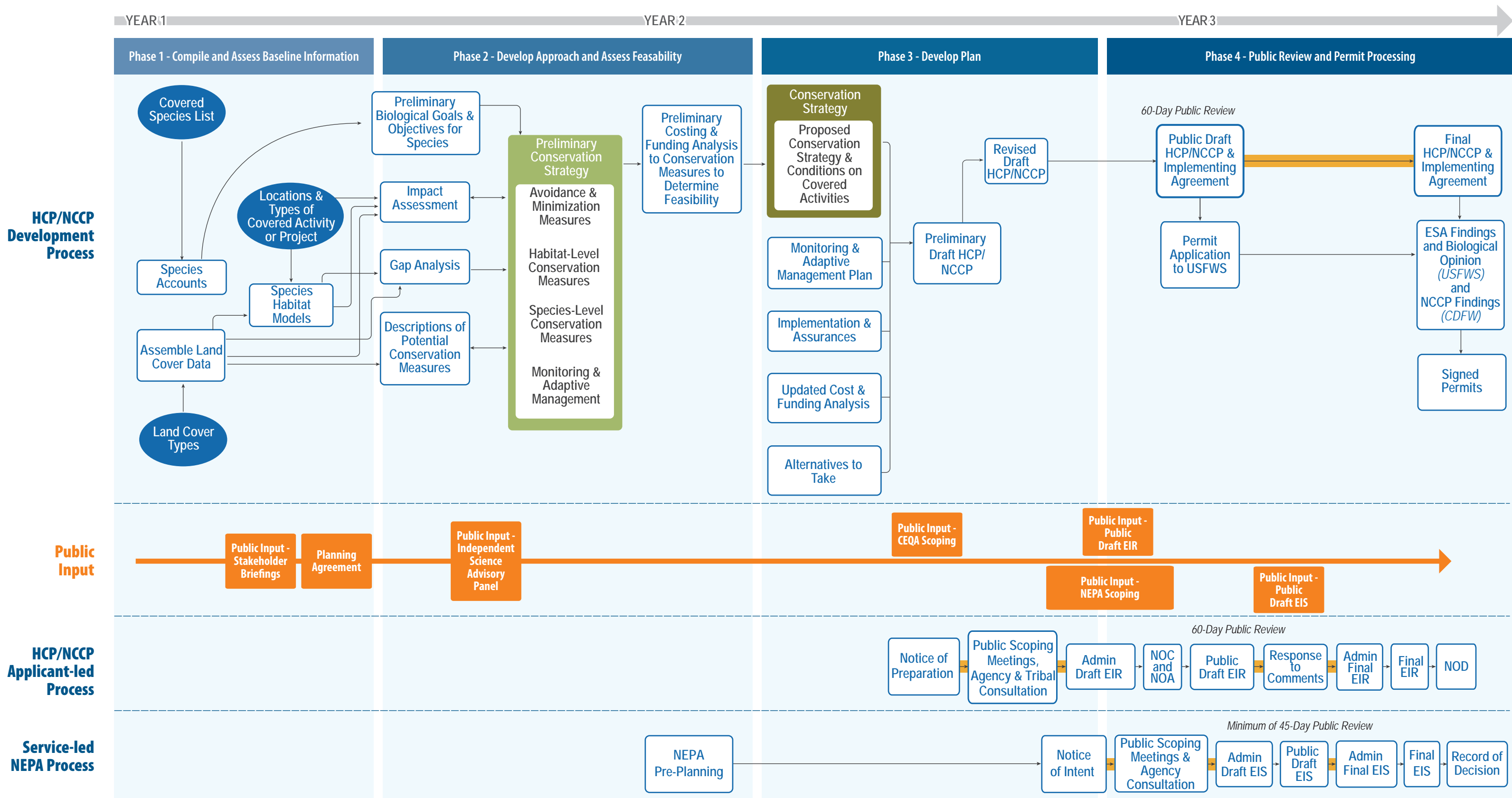
The second phase consists of developing the HCP approach and preliminary conservation strategy, and assessing costs to determine feasibility. Preparation of a regional HCP, like the Sonoma County HCP, is a complex and lengthy effort involving consensus building with multiple local stakeholders, including negotiation with the Services and CDFW.

During the third phase, the results of the planning efforts of the first two stages are applied to the development of a public draft HCP. This is also the stage at which the applicant submits the Section 10 permit application package to the Services. Either USFWS or NMFS (whichever is the federal lead agency) concurrently develops the NEPA compliance document, and coordinates with their legal counsel during this phase.

The final phase entails the public review of the HCP and the CEQA/NEPA document (always released together) and permit decision process. In this stage, the public has the opportunity to provide comments on the draft HCP and CEQA/NEPA document. The length of the public comment period is dependent upon the level of environmental compliance required (i.e., NEPA categorical exclusion, environmental assessment, or environmental impact statement) and the time necessary to resolve public comments. Once the public comment period is complete, the applicant's HCP and the Services' environmental documents are revised to address public comments and then finalized. The Services then make a permit decision and either issue or deny the permit application.

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HCP/NCCP Development Process



LEGEND

- EIR Environmental Impact Report
- EIS Environmental Impact Statement
- HCP Habitat Conservation Plan
- NCCP Natural Community Conservation Plan
- CEQA California Environmental Quality Act
- NEPA National Environmental Policy Act
- ESA Endangered Species Act
- CDFW California Department of Fish and Wildlife
- USFWS U.S. Fish & Wildlife Service
- NMFS National Marine Fisheries Service
- Service USFWS or NMFS
- NOA Notice of Availability
- NOC Notice of Completion
- NOD Notice of Determination



Figure 2-1

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Once the ITP has been issued, the permittee can then begin HCP implementation. The permittee can now conduct covered activities and implement the HCP conservation strategy. Implementation must include avoidance, minimization, mitigation, monitoring, and reporting of covered activities. The permittee should continue to closely coordinate and communicate with the Services and CDFW throughout the permit term to ensure HCP success.

2.3 Roles and Responsibilities

2.3.1 Applicant

The HCP is the applicant's document. As such, the applicant is the entity ultimately responsible for overseeing development of the HCP, including making final decisions on HCP content. When the public draft HCP is final or near final, the applicant must submit the Section 10 permit application package to the Services. The complete application package includes:

- A permit application form (the Services each require a form specific to their respective permitting process);
- A permit processing fee (only required for USFWS); and
- A complete draft HCP.

While the HCP is the applicant's document, the NEPA document is the responsibility of the federal agencies. Which federal agency has primary responsibility over the NEPA document is typically determined by the species proposed for coverage and the level of impact anticipated for the HCP.¹ In cases where an HCP may cover species under the jurisdiction of both, one agency assumes the role of lead agency for the purposes of NEPA. The applicant is typically responsible for paying a consultant to develop the NEPA document on behalf of the Services. The applicant does not have regular communication with the NEPA consultant, nor does the applicant make decisions about the content of the NEPA document. The draft NEPA document must be complete for the draft HCP to be publicly noticed in the *Federal Register*. It is the Services' responsibility to prepare and include the draft NEPA document as part of the HCP application package.

The applicant is also responsible for assembling and maintaining a complete administrative record. The administrative record should contain the complete rationale of the agency decision-making process, including all supporting documents that were considered, followed, or relied upon by the people involved in the decision-making process.

2.3.2 Permittee

If the ITP is a jointly held permit amongst multiple co-permittees, all permittees must adopt the HCP before the Services issue their respective permit to the co-permittees. Local government co-permittees may also need to adopt local ordinances to enact component of the HCP, such as HCP

¹ NMFS has jurisdictional authority over threatened and endangered marine mammals, sea turtles, and anadromous fish. USFWS has jurisdictional authority over threatened and endangered terrestrial and freshwater aquatic species.

development fees. Passing these local ordinances may be a condition of permit issuance by the Services.

Once the incidental take permits are issued by the Services, the applicant becomes the permittee. The permittee is responsible for implementing the HCP including, but not limited to, ensuring avoidance and minimization measures are implemented in accordance with the terms of the HCP, conservation measures are carried out, and compliance monitoring and reporting is completed. For an HCP that designates an implementing entity, many of these responsibilities are delegated to the implementing entity. However, compliance with avoidance and minimization measures during implementation of covered activities is a requirement of all permittees and enrollees using the HCP's take coverage.

2.3.3 Regulatory Agencies

The Services are responsible for working with the applicant(s) on the development of HCPs applicable to their species responsibilities. For USFWS, the local field office is usually the primary point of contact for the applicant. For NMFS, HCPs addressing anadromous fish are developed in cooperation with the local office of the West Coast Region. For Sonoma County, these offices are the USFWS Sacramento Field Office and the NMFS Santa Rosa Field Office.

When developing and implementing an HCP, the Services' field office staff have primary responsibility (U.S. Fish and Wildlife Service and National Marine Fisheries Service 2016) for the following:

- Providing active guidance to applicants early and throughout the HCP development process.
- Ensuring transparency.
- Initiating internal cross program coordination within the field office to ensure consistency, increase communication between teams, and to gather the most current species data or other information.
- Maintaining coordination and communication between the field office and all parties early and throughout the process to facilitate development of a legally sufficient HCP and expedite its review.
- Maintaining communication up and down the chain of command throughout the development of the HCP, including coordinating with the regional office when an applicant seeks an incidental take permit or other outreach needs arise.
- Providing the applicant with scientific information regarding the species' needs, distribution, habitat, life history, survey methodologies, conservation strategy, and other relevant information.
- Providing the applicants or their consultants with tools such as habitat suitability models, population viability models, information on climate change effects, Geographic Information System (GIS) data, survey protocols for detecting species or evaluating habitat.
- Working with the applicant to develop appropriate biological goals and objectives for the HCP.
- Coordinating with Landscape Conservation Cooperatives (LCC), the Regional Climate Science Center, or the local or regional climate change specialist to help take advantage of conservation

partnering opportunities, and to stay abreast of the latest climate change information relevant for the HCP effort.

- Reviewing drafts of the HCP.
- Advising the applicant when the HCP is ready for submission as a complete application package.
- Compiling and maintaining the decision record, the final administrative record, and keeping the Services' tracking databases up to date.
- When appropriate, conducting public meetings, reviewing and compiling public comments.
- Ensuring compliance—or providing guidance to the applicant on how to comply—with other federal laws such as NEPA and NHPA during the HCP development process.
- Briefing decision-makers on key decisions concerning the HCP.
- Serving as a link between the applicant and others in the Services, including the regional office, headquarters office, and solicitor's or general counsel's office.
- Assisting the regional office by drafting the public notice, NEPA decision documents, findings documents, and the incidental take permit.
- Participating in implementation evaluation meetings or reviews established in the HCP and ITP.
- Giving permittees guidance as they implement their HCP in accordance with their ITP.
- Ensuring that the permittee is in compliance with their ITP and is implementing the HCP effectively and appropriately.

As discussed in Section 7 of this report, Sonoma County will request take authorization from the state through one of two potential permits. In either case, CDFW staff will be involved throughout the development of the HCP in ways very similar to that of USFWS and NMFS staff to ensure consistency and close alignment with the state permit. It is recommended that CDFW staff meet jointly with the applicant(s) and Services to determine key elements of the HCP and state permit together. For Sonoma County, CDFW's local office is the Bay Delta Region, located in Fairfield, CA.

2.3.4 Stakeholders

Stakeholders are individuals and groups affected by, or who can affect, the outcome of an HCP. The degree of stakeholder involvement in the HCP depends on each stakeholder's interest and motivations. Stakeholders can be individuals or entities who have an interest in an HCP for intellectual, academic, or political reasons, even though they may not be directly affected by the HCP.

Early in the HCP development process, applicants are encouraged to identify potential key stakeholders. For the Sonoma County HCP, this includes (but is not limited to) private (e.g., wine-grape and cannabis growers, residential developers and other, agricultural landowners) and public (e.g., municipal infrastructure) stakeholders. Additional stakeholders may include other regulatory agencies (e.g., CDFW, North Coast Regional Water Quality Control Board, U.S. Army Corps of Engineers), federally recognized Native American Tribes, and other state or federal agencies that may have an interest or a role in how the HCP is developed or implemented.

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Section 3

Potential HCP Permittees

Permit Sonoma is leading the strategic planning efforts to consider how to prepare an HCP. Other County departments that may be part of the HCP include the Department of Agriculture/Weights and Measures, Department of Transportation and Public Works, and Sonoma County Regional Parks. All of these County departments are expected to have activities or projects that could require take authorization. Many regional HCPs and all NCCPs in California are developed by coalitions of local government agencies as co-permittees. Regional HCPs and NCCPs led by county governments often include as co-permittees one or more cities, water agencies, local transportation agencies, or open space agencies. Incorporating a range of local agencies into a regional HCP or NCCP can greatly expand the benefits these plans and permits provide. A large group of co-permittees can also spread the cost of plan preparation and implementation more widely, reducing costs for individual participants.

The County will conduct outreach to determine if cities or special districts operating in the county may also be interested in participating in the HCP. As potential participants express interest in the HCP, the County should evaluate the type and scope of involvement of each additional participant in the context of role in HCP development and/or implementation. For example, a participant may wish to have their activities covered by the HCP, but they may not want to be a permittee under the HCP. In such cases, those participants would need to negotiate a process by which they would seek coverage from the County as needed. The benefit of this type of arrangement is that there is less involvement and commitment in efforts to develop and implement the HCP, but this reduced commitment typically comes with higher costs to use the HCP once permitted. Others may wish to be involved in HCP development and implementation, holding their own permit or as a co-permittee.

A larger group of co-permittees brings additional benefits to the planning process, but it can also increase the complexity and schedule to complete the plan. More co-permittees can sometimes mean more challenging negotiations to reach agreement on key plan components such as mitigation levels and funding. The County should carefully balance the additional benefits more permittees may bring with the risk of the plan taking longer to prepare and costing more to complete.

To help the County evaluate other potential participants that wish to also be applicants (and an eventual permittee), the following set of six criteria are proposed.

- **Geographic coverage.** Does the agency's jurisdiction fall partially or entirely within the plan area?
- **Complexity.** Would adding the agency substantially increase the size and complexity of the plan area and potentially add more covered species?
- **Relationship.** Does the County have a good working relationship with the agency to facilitate a partnership and agreement when negotiating with the Services and CDFW?
- **Capacity.** Does the agency have the capacity and organizational resources to serve as a permittee and assume some responsibility for implementing the HCP? Or could the agency simply participate as a Special Participating Entity?

- **Jurisdiction or Control.** Does the agency have any covered activities themselves, or jurisdiction over the covered activities of private landowners?
- **Covered Activities.** Are the agency's projects and activities sufficiently well described and forecasted to allow an impact analysis in the plan?

Section 4

Covered Activities

One of the first steps in developing an HCP is selecting a list of projects and activities that will be “covered” by the HCP. This is the list of covered activities for which take authorization will be provided by the Services and CDFW for the covered species. To be eligible for incidental take authorization, and therefore covered by the HCP, activities must be otherwise lawful; not funded, authorized, or carried out by a federal agency; and must be under the direct control or authority of the permittee (e.g., the County) through jurisdictional authority, employment, contracts, leases, or land ownership. This requirement ensures that the Services and CDFW can enforce the provisions of the permits.

The purpose of this section is to inform the development of a list of covered activities for the Sonoma County HCP. The covered activities must be described in detail in the HCP, typically in a separate chapter of the document. This section of the report is the first step in creating that HCP chapter. Specifically, the objectives of this section are to:

- Explain the process to develop the covered activities list;
- Define the criteria to identify, screen and select covered activities;
- Solicit information on potential covered activities from County of Sonoma staff; and
- Provide initial information for the *Covered Activities* chapter of the HCP.

The selection of covered activities should be guided by specific criteria to provide a transparent, systematic, and repeatable process. Criteria for inclusion in the Sonoma County HCP as well as a description of the process and a list of potential activities for consideration are described below.

4.1 Process to Select the Covered Activities

The HCP must identify the activities that could result in take of covered species and that will be covered by the HCP (50 CFR 222.307). The activities described in the HCP will be those for which incidental take authorization will be requested from the Services and CDFW. These activities must avoid or minimize impacts on covered species, where possible, and compensate for impacts when avoidance is not feasible. As such, the covered activities list and description will be the foundation for the impacts analysis, which is an important component in the development of the conservation strategy.

To identify the covered activities, a three-step process is used (each step is described in detail below).

- Step 1. Identify potential covered activities.
- Step 2. Apply covered activities screening criteria.
- Step 3. Draft, review, and finalize the proposed covered activities and associated descriptions.

By using this process, HCP preparers are able to respond to feedback objectively and to identify covered activities that are consistent with the HCP goals as well as any specific needs of the

anticipated permittees and end-users of the HCP (e.g., private developers within participating jurisdictions).

4.1.1 Step 1: Identify Potential Covered Activities

Covered activities include both specific projects and ongoing activities. *Projects* are well-defined actions that occur once in a discrete location (e.g., construction of a new facility). *Activities* are actions that occur repeatedly in one area or over a wide area (e.g., transportation facility operation and maintenance). For the purposes of this report and the HCP, the more general term “covered activities” refers to both specific projects and ongoing activities.

Covered activities could include any actions under the ITP applicant’s control that could result in impacts on listed (threatened or endangered) species or on species that are likely to become listed within the permit term of the HCP.

For a long-term HCP, a comprehensive set of relevant covered activities should be considered so long as there is a reasonable expectation that the covered activities would occur within the permit term of the HCP and that enough is known to adequately describe the activity and the effect it would have on covered species. This approach maximizes the long-term assurances and flexibility of the HCP and reduces the chance that additional covered activities will need to be amended to it at a later time. The benefits in HCP implementation associated with a more expansive suite of covered activities needs to be balanced by the added complexity (and therefore time and cost) for HCP development.

Given that the primary factors driving development of a Sonoma County HCP are the challenges surrounding rural residential, commercial (e.g., cannabis), and agricultural (e.g., vineyards) development, the first step in establishing an initial list of covered activities is to evaluate how development is expected to occur based on the current land use plan and future growth expectations.

4.1.2 Step 2: Apply Covered Activities Screening Criteria

Once a set of covered activities is identified through Step 1, each activity is assessed based on a set of criteria. Having a clear set of criteria is very helpful throughout the HCP development process because stakeholders, new applicants, or agency staff frequently propose adding new covered activities. Using the criteria, these new activities can be easily evaluated for coverage at any time during HCP development.

The following six criteria are commonly used to guide the selection process. To be covered, the project or activity must meet all the following criteria.

1. **Control or Authority.** The covered activity must be under the direct control of the applicant, or an applicant has the authority for direct control through regulation (e.g., a permit or authorization).
2. **Location.** The covered activity will occur within the geographic area of the HCP.
3. **Timing.** The covered activity will occur during the term of the HCP.

4. **Impact.** The covered activity has a reasonable likelihood of resulting in take² of one or more covered species.
5. **Project Definition.** The location, footprint, and type of impacts resulting from the activity are reasonably well understood and can be evaluated in the HCP to the satisfaction of the regulatory agencies involved. Specifically, the impacts resulting from the activity and associated mitigation must be technically and economically feasible and can be reasonably evaluated in the plan.
6. **Practicability.** The activity can be included in the HCP without substantially increasing the scope and cost of HCP development or implementation (e.g., adding new covered species, adding significant complexity to the analysis, or adding significant new controversy).

Not all projects and activities will meet the criteria for inclusion as a covered activity in the HCP.

4.1.3 Step 3: Draft, Review, and Finalize Covered Activities

A preliminary list of potential covered activities is provided below. During HCP development (Phase 2), the proposed covered activities list will be described in more detail in a *Covered Activities* chapter of the HCP and will be reviewed by the County, resource agencies, and other stakeholders. The process of developing a final list is an iterative one, and one that demands a high level of input and feedback from the County staff familiar with these activities. The County will provide information on all covered activities so that the HCP consultant can conduct an impact analysis to quantify effects on covered species and/or their habitats. As more detail is provided about the covered activities, and as other actions that accompany covered activities are considered, the covered and not-covered activities lists will be refined. Any proposed changes would be assessed according to the criteria described in this report.

4.2 Potential HCP Covered Activities for Sonoma County HCP

This section lists the potential projects and activities that will be “covered” by the HCP and for which take authorization will be provided by the Services and CDFW for species addressed in the HCP.

4.2.1 Covered Activities

An initial working list of covered activities based on the County’s input and used in other regional HCPs in northern California with similar circumstances is presented Table 4-1. The potential covered activities are grouped by the responsible agency/potential permittee.

² As defined by the ESA. Under the ESA, *take* is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” *Harm* is further defined as “any act that kills or injures the species, including significant habitat modification.” Note that take is not the same as an adverse impact. The definition of take under the CESA is narrower than the federal definition, which is why the federal definition is used for the criterion.

Table 4-1. Possible Covered Activities for a Sonoma County HCP

Responsible Agency	Covered Activity Grouping Specific Covered Activities
County of Sonoma	
Permit Sonoma	<p>Land Development or Construction in Unincorporated Areas of Sonoma County (authorized by permit)</p> <ul style="list-style-type: none"> • Land use authorizations (use, grading, zoning, building permits) for residential, commercial, industrial development, utilities • Lot line adjustments and subdivisions • Communications facilities • Public facility construction and maintenance • Vegetation management for wildfire prevention (establishment of defensible space) • Minor Timberland Conversion (conversion of timberland to a non-timber growing use on less than 3 acres) • Hazard tree (post-fire snags) removal
Department of Agriculture	<p>Vineyard and Orchard Development (VESCO)</p> <ul style="list-style-type: none"> • New vineyard and orchard development • Vineyard and orchard redevelopment • Agricultural grading and drainage alteration • Agricultural roads and avenues • Tree removal • Hemp/cannabis farming
Department of Transportation and Public Works	<p>Sonoma County Airport</p> <ul style="list-style-type: none"> • Facility operation and maintenance • Airport expansion <p>Construction and Maintenance of Linear Transportation Facilities</p> <ul style="list-style-type: none"> • New or expanded road construction and maintenance • New or expanded transit hubs • Road resurfacing (including full depth reclamation projects) • Culvert installation, repair, and replacement • Bridge construction, maintenance, retrofit, and replacement • Ditch cleaning and maintenance • Vegetation management within and along right-of-way, including for defensible space and hazard tree removal <p>Water and Integrated Waste</p> <ul style="list-style-type: none"> • Landfill expansion

Responsible Agency	Covered Activity Grouping Specific Covered Activities
Sonoma County Regional Parks	Recreational Facility and Natural Resources Management Activities <ul style="list-style-type: none"> • Trails construction and maintenance • Other recreation facility construction and maintenance • Grazing management • Fire fuel reduction and vegetation management around structures and rights-of-way (e.g., shaded fuel breaks, prescribed fire to reduce fine fuels, ladder fuel reduction) • Prescribed burning • Invasive species management • Habitat restoration and conservation activities
Other Agencies	
Sonoma County Agricultural Preservation and Open Space District	Land and Natural Resources Management Activities <ul style="list-style-type: none"> • Possible partner in HCP conservation strategy implementation
Sonoma Water	Floodwater Management Facility Maintenance <ul style="list-style-type: none"> • Maintenance of flood and stormwater management facilities (e.g., managed channels or streams, culverts, levees, percolation ponds, retention ponds) • Vegetation management • Sediment management • Bank stabilization • Habitat restoration & enhancement Public Water and Wastewater Facility Construction and Maintenance <ul style="list-style-type: none"> • Construction and maintenance of public utilities including water and wastewater systems • Hazard mitigation projects Public Water and Wastewater Facility Operations
Cities³	
City of Cloverdale City of Cotati City of Healdsburg City of Petaluma City of Rohnert Park City of Santa Rosa ¹ City of Sebastopol City of Sonoma Town of Windsor	<ul style="list-style-type: none"> • Land use authorizations (use, grading, zoning, building permits) for residential, commercial, industrial development, utilities • Lot line adjustments and subdivisions • Public facility construction and maintenance • Communications facilities • New or expanded roads and bridges • New or expanded transit hubs • Road resurfacing (including full depth reclamation projects) • Culvert installation, repair, and replacement • Bridge construction, maintenance, retrofit, and replacement • Ditch cleaning and maintenance • Vegetation management within and along right-of-way
¹ The City of Santa Rosa has land holdings and facilities outside its urban growth boundary, including in areas of the Santa Rosa Plain that are primarily unincorporated and to the north along the Highway 101 corridor.	

³ List of cities has not yet been confirmed.

These covered activities could be implemented or authorized by the County, other potential permittees, or by other agencies or private landowners who enter into an agreement as a Special Participating Entity with one of the permittees.

This initial list does not yet take into consideration where the proposed activities would occur. That will be informed based on analysis conducted for determining an appropriate permit area (Section 5, *Plan Area and Permit Area*) as well as current and future (anticipated) land use designations.

4.2.2 Conservation Measure Implementation

The mitigation strategy will be designed to meet the federal and state regulatory standards. For the federal HCP, the mitigation strategy will fully offset the impacts of the taking on each of the covered species. For the state incidental take permit, the mitigation strategy will “fully mitigate” the impacts of the covered activities on each state-listed species. Implementing some of the mitigation actions may result in low levels of take of the covered species that therefore require take authorization and must also be identified and described as covered activities. Activities related to implementation of the mitigation strategy that may require take authorization may include the following:

- Habitat enhancement and restoration actions.
- Vegetation management, including control of invasive plant species (e.g., livestock grazing, prescribed burns, mowing, hand clearing).
- Control of invasive wildlife.
- Relocation of covered species from impact sites (generally in cases where impacts are unavoidable and relocation has a high likelihood of success).
- Monitoring activities associated with conditions on covered activities or mitigation sites.
- Covered species surveys.
- Research into key uncertainties that affect management or restoration for the covered species.

4.2.3 Activities Not Covered

A common mistake in the development of HCPs is covering all projects and activities under the control of an HCP permittee, regardless of whether those projects or activities may result in take of the covered species. It is inadvisable to include covered activities that have no potential for take of the covered species because it creates an unnecessarily lengthy and complex document for the resource agencies and the public to review. An HCP with unnecessary covered activities also makes the environmental review unnecessarily complex. The scope of the CEQA analysis and the NEPA analysis is determined largely by the nature and scope of the HCP covered activities. Keeping HCP covered activities focused only on what is needed will help streamline the CEQA and NEPA review of the HCP.

Some projects or activities will not meet the covered activity criteria. In certain cases, it is useful to provide a list and short description of such projects or activities and the rationale for their exclusion. This allows for transparency in the selection process and a clear framework for the County (and its Board and staff), regulatory agencies, and others to evaluate the rationale.

Section 5

Plan Area and Permit Area

An important milestone in developing an HCP is defining the permit area in which all covered activities and all mitigation will be implemented. HCPs may also identify a plan area. Other types of boundaries may be defined if they help support development of the HCP in a more clear and transparent manner. For example, HCPs have been known to define a portion of the permit area where only a subset of take from covered activities is permitted, or where only conservation measures would occur. This section:

- Describes useful criteria for determining one or more HCP boundary;
- Explains the process for developing the plan area and permit area boundaries; and
- Considers three potential plan areas for a Sonoma County HCP.

5.1 Plan Area and Permit Area Criteria

The permit area must include the entire geographic area where the covered activities and the conservation program will occur. There are no requirements for a minimum or maximum permit area size for an HCP. A smaller permit area typically results in coverage of fewer species and a shorter planning timeline. However, establishing a larger permit area may make the HCP more attractive to the County and other potential participants because it can provide regulatory streamlining for a wider range of projects and stakeholders. A larger HCP can also be more competitive if grant funding is sought for HCP planning or implementation tasks. When defining the permit area (i.e., the area where the incidental take authorization applies) or a larger plan area boundary (i.e., the geographic area evaluated in the HCP, which may be bigger than the permit area), applicants should consider existing boundaries meaningful to the specifics of the HCP such as political boundaries, land ownership boundaries, physical boundaries, and ecological boundaries (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998). Political boundaries such as municipal growth lines, county lines, or state lines may be relevant depending on the applicant and the covered activities.

If covered activities do not occur on certain lands (e.g., federal or state land), the permit area boundary can exclude those land ownership types, although the plan area may include them if it is helpful to consider these lands for ecological context. For example, existing populations of covered species on adjacent federal lands may provide a source population to repopulate restored habitat constructed as HCP mitigation. Physical boundaries such as major highways, rivers, or watersheds may be useful to define plan areas, particularly when a covered species' range is affected by those boundaries. Other ecological boundaries that should be considered include the ranges of covered species, major natural community or ecosystem boundaries, watersheds, and the potential locations of mitigation sites (Schroder and Zippin 2015). Finally, HCPs often consider landscape- or regional-scale plan areas to maximize the conservation benefit of the HCP.

At minimum, the permit area for the Sonoma County HCP should be large enough to include the following elements:

- The entire footprint and associated areas of direct and indirect effects of the covered activities; and
- All potential mitigation sites.

5.2 Process to Define the Geographic Scope

One of the objectives of the preliminary strategic planning for a Sonoma County HCP is to evaluate different HCP permit areas that may meet the species permitting needs of the County. At the smallest scale, the County contemplates an HCP that matches, or is close to, the boundary of the Santa Rosa Plain Conservation Strategy. At the largest scale, the County contemplates a countywide HCP. The County was also interested in considering an intermediate boundary that would address development needs on the Santa Rosa Plain as well as in other targeted areas of the County. The method for identifying an intermediate plan area is described below.

5.2.1 Methods to Identify Location of Potential Development Consistent with Existing Land Use Designations

To identify an appropriate intermediate permit area, the geographic location of the potential covered activities was identified and compared against existing natural land cover types that served as a proxy for habitat of potential covered species. The intent was to understand the overlap of potentially developable lands with lands currently in an undeveloped state that may support one or more special-status species, and thereby making a rough evaluation of geographic areas that may benefit from coverage under an HCP.

The first step in identifying an intermediate permit area was to identify and incorporate into a GIS the datasets available to support the analysis. These datasets included the following.

- Sonoma County Fine-scale Vegetation and Habitat Map (Sonoma Veg Map) (SonomaVegMap.org, March 2020).
- County land use (SonomaVegMap.org, March 2020).
- Urban service area (County of Sonoma, March 2020).
- Urban growth (County of Sonoma, March 2020).

Beginning with the Sonoma County Fine-scale Vegetation and Habitat Map data, each of the 19 “lifeform type class” features were assigned a “Yes” or “No” designation regarding the potential for it to support one or more species proposed for coverage in Group 1. Lifeform type classes that are primarily vegetated were assumed for the purposes of this analysis to support one or more special-status species. Table 5-1 lists the lifeform type classes, include a brief description of the lifeform and designation regarding potential to support a listed species.

Table 5-1. Lifeform Type Classes and Likelihood to Support Proposed Covered Species

Lifeforms Type Class¹	Description of Lifeform Type Class	Likely to Support Covered Species? (Yes/No)
Annual Cropland	Irrigated annual crop (e.g., row crop, close grain crop, vegetable crop).	No
Barren & Sparsely Vegetated	Very sparsely vegetated herbaceous stands, generally growing on steep, serpentine barrens with exposed gravel and bedrock. Vegetation dominated by <i>Allium falcifolium</i> , <i>Asclepias solanoana</i> , <i>Eriogonum cedrorum</i> , <i>E. luteolum</i> , <i>E. nudum</i> , and/or <i>Streptanthus morrisonii</i> .	Yes
Developed	Human-made areas greater than 0.2 acre. Areas that contain significant human-made impervious cover or highly altered by humans; includes lawns, tennis courts, horse riding arenas, landscaped garden and patio areas, baseball fields, soccer fields, swimming pools, and playgrounds.	No
Herbaceous	Includes any species of plant that lacks main woody stem development, is at least 10% absolute cover, and is not overtopped by woody vegetation of equal or higher cover. Includes grasses, forbs, perennial species that die back each year, <i>Arundo</i> and <i>Typha</i> stands, and non-irrigated rangeland. Includes herbaceous stands found in wetland settings or in seasonally moist to dry areas, including marshes, meadows, upland grasses, and vernal pools. Floating vegetation is also included in this class.	Yes
Intensively Managed Hayfield	Areas that are mechanically turned over every year.	No
Irrigated Pasture	Areas where the vegetation structure and/or composition is determined by human agricultural activities and appears green in fall, 2013 imagery.	Yes
Major Roads	Data derived from Sonoma County Roads GIS data; does not include minor roads. Includes freeways, highway, interchange, local roads, and railways.	No
Native Forest	Tree (woody vegetation greater than 5 meters in height) stands that are at least 10% absolute cover.	Yes
Non-native Forest & Woodland	Tree (woody vegetation greater than 5 meters in height) stands dominated by non-native, ornamental, or landscaping trees and are at least 10% absolute cover. Includes <i>Eucalyptus</i> , <i>Pinus radiata</i> , and <i>Hesperocyparis macrocarpa</i> .	No
Non-native Shrub	Herbaceous vegetation that is at least 10% absolute cover and is not overtopped by woody vegetation of equal or higher cover and defined as stands dominated by non-native, ornamental, or landscaping shrubs.	No
Nursey or Ornamental Horticultural Area	Horticultural garden vegetation.	No
Orchards or Grove	Temperate and tropical orchard sub-class; includes grove of fruit or nut trees.	No
Perennial Agriculture	Perennial cropland (e.g., lavender, berries, Christmas trees, rhododendron).	No
Shrub	A multi-stemmed woody plant that is between 0.2 and 5 meters tall, evenly distributed throughout the stand, providing a consistent structural component, and has at least 10% absolute cover.	Yes

Lifeforms Type Class¹	Description of Lifeform Type Class	Likely to Support Covered Species? (Yes/No)
Urban Window	Identifies urban land use. Fully developed areas that are part of an urban core; does not include large city parks and riparian corridors that cross urban areas.	No
Vineyard	Temperate and tropical grape-bearing vines, grown mainly for winemaking, but also for raisins, table grape, and non-alcoholic grape juice.	No
Vineyard Replant	Vineyard completely cleared for replanting and must be replanted with mature vines on 2011 orthophotography and appear cleared in 2013 orthophotography base imagery used for mapping.	No
Water	Water covers the area as it appears in the fall, 2013 high resolution imagery	Yes

¹ Source: Sonoma County Fine-scale Vegetation and Habitat Map (SonomaVegMap.org, March 2020).

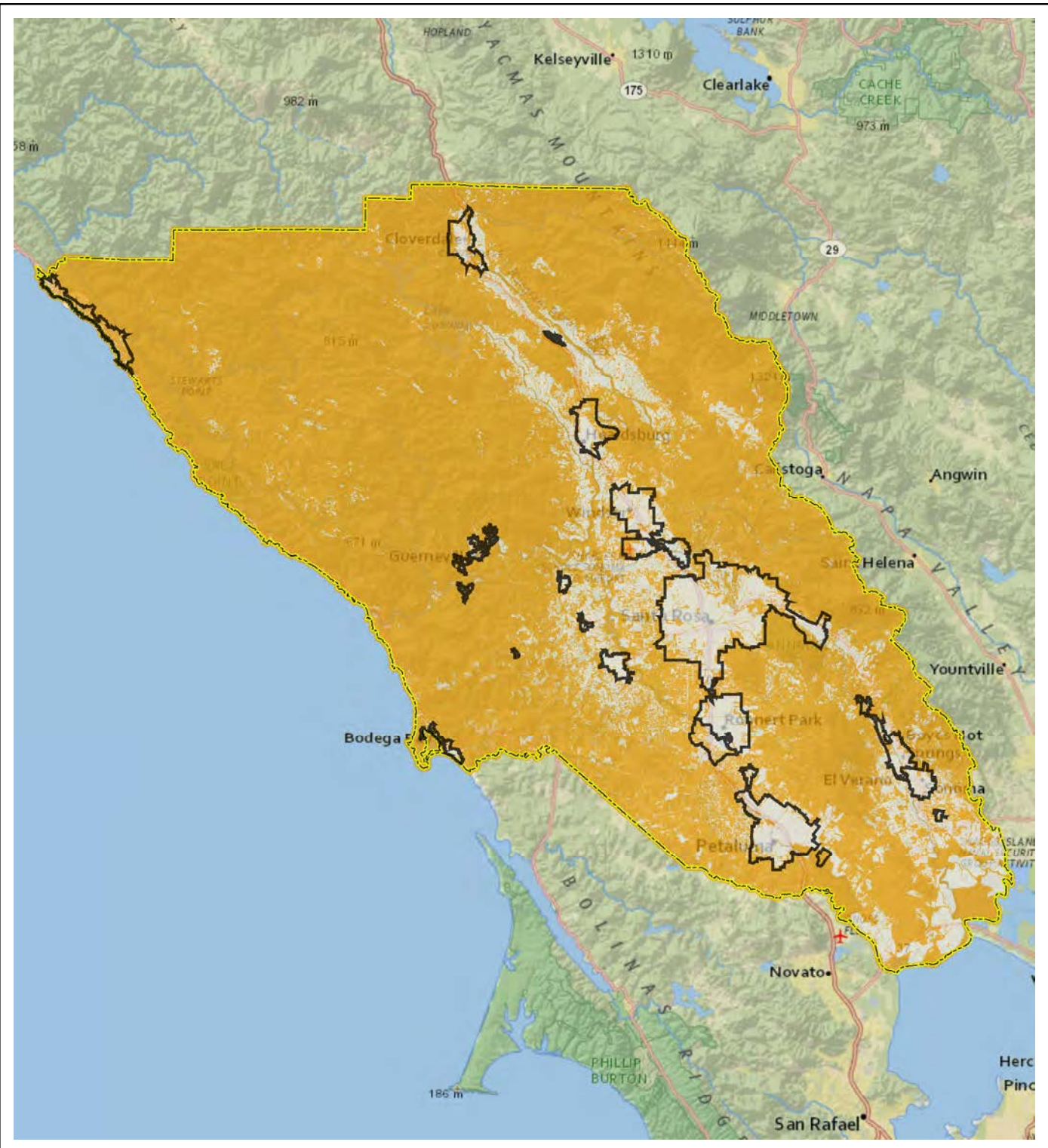
Six of the 19 lifeform types received “Yes” designations as likely to support proposed covered species:





- Barren & Sparsely Vegetated
- Herbaceous
- Irrigated Pasture
- Native Forest
- Shrub
- Water

These areas of potential species habitat were then overlaid on urban service areas and urban growth boundaries in GIS. Figure 5-1 shows the lifeforms type class assignments mapped with the urban service area. This figure shows the locations of all lifeform types that could support proposed covered species within areas that are likely to develop in the future based on existing urban service area. A similar map based on existing County land use designations (instead of urban growth or urban service area boundaries) is presented in Figure 5-2. Figure 5-2 uses County land use designations of Land Intensive Agriculture and Rural Residential to identify land uses most likely to be converted to residential development or agricultural uses (e.g., vineyards) consistent with current land use planning. Appendix A includes a summary list of all County land use designations along with a brief definition.

Finally, the location of the Santa Rosa Plain Conservation Strategy was mapped against the urban growth boundaries (Figure 5-3) to show the extent of overlap between that existing conservation boundary.

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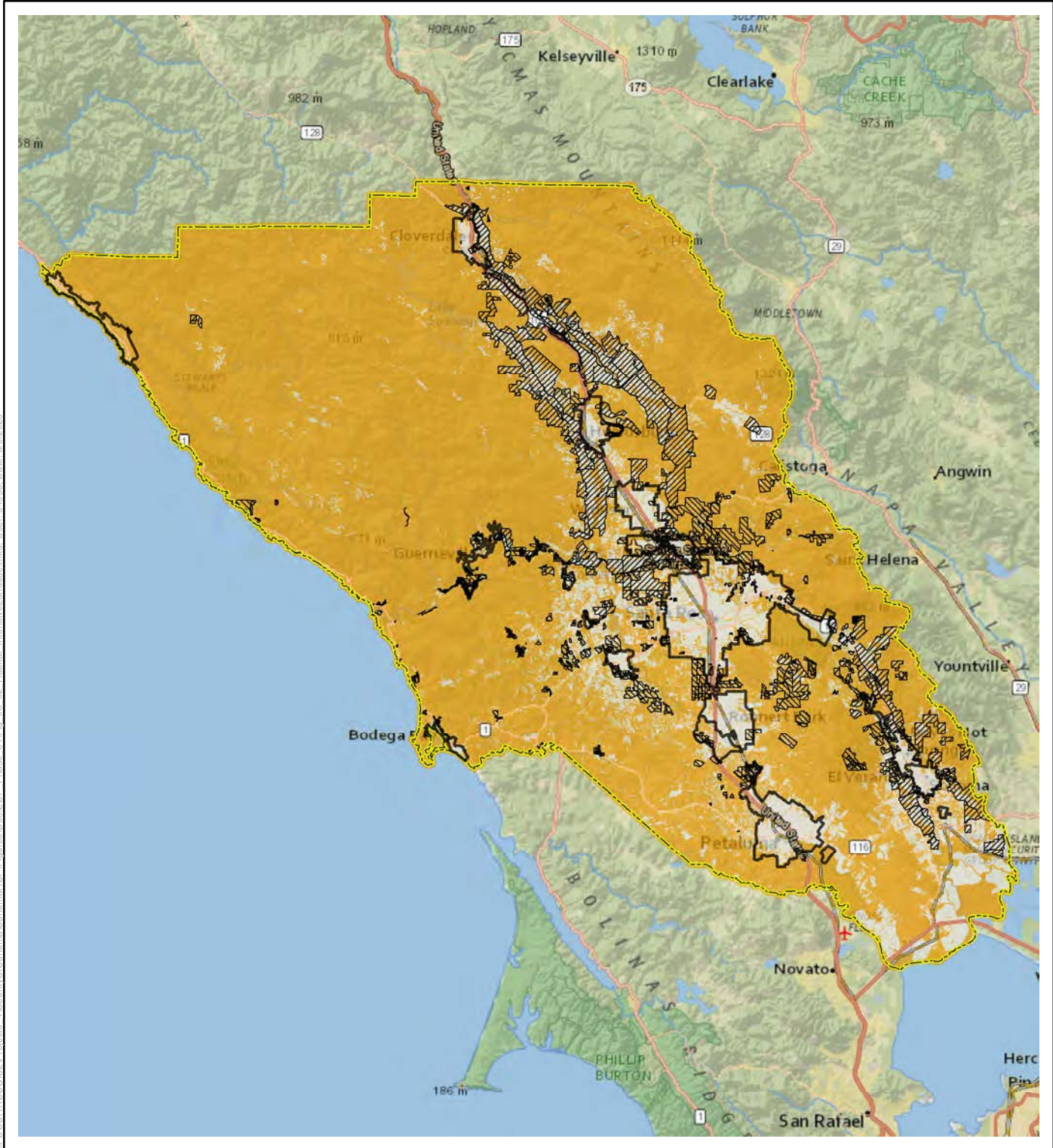
-  Sonoma County Boundary
-  Urban Service Area
- Lifeform Types that may Support Proposed Covered Species**
-  Yes
-  No









  
1:600,000 Miles

Figure 5-1
Lifeform Types that May Support Proposed Covered Species in the Urban Service Areas

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-  Sonoma County Boundary
 -  Urban Service Area
 -  Land Intensive Agriculture District
 -  Rural Residential District
- Lifem Types that may Support Proposed Covered Species**
-  Yes
 -  No

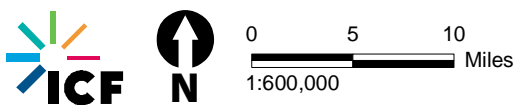
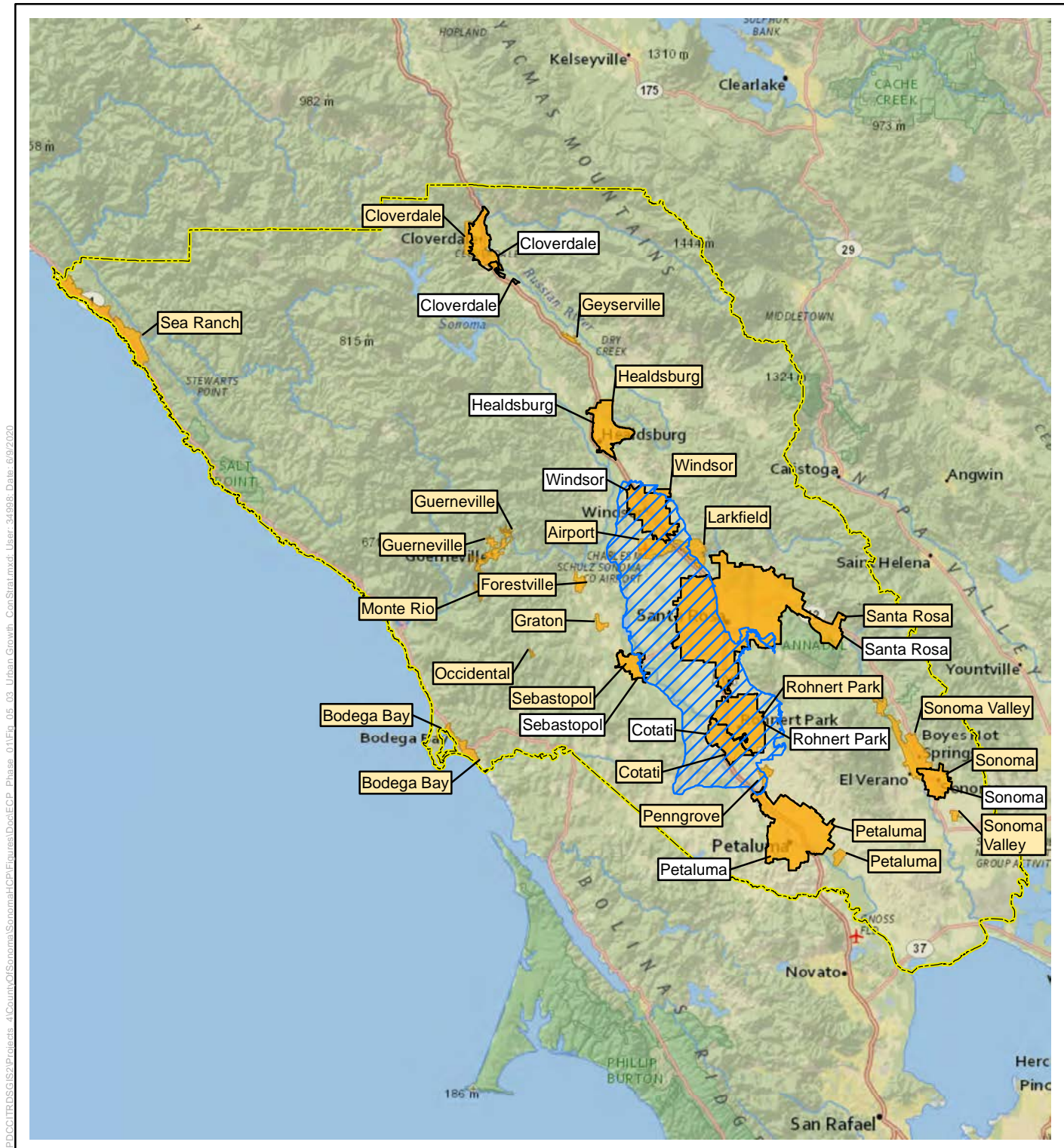


Figure 5-2
Lifem Types that May Support Proposed Covered Species in Land Intensive Agriculture and Rural Residential



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- Sonoma County Boundary
- Urban Growth Boundary
- Urban Service Area
- Santa Rosa Plain Conservation Strategy Boundary



Figure 5-3
Existing Land Use and Conservation
Boundaries Informing the HCP Plan Area

5.2.2 Results of the Analysis

Appendix B provides the tabulated result of the overlay for all lifeforms type classes as compared to urban service area (Table B-1), urban growth boundary (Table B-2), and County land use designation (Table B-3). This analysis demonstrates that there is potential need to include other portions of the County beyond just the Santa Rosa Plain. For example, there are approximately 3,900 acres of herbaceous and 4,350 acres of native woodland remaining in the urban service area of the City of Santa Rosa. Some of this acreage overlaps with the Santa Rosa Plain Conservation Strategy boundary, but there is also a substantial amount in the foothills of the Mayacamas Mountains. The analysis also shows that much of the anticipated development is located along the Highway 101 corridor. Therefore, an intermediate plan area could be one that encompasses the Santa Rosa Plain, but extends north and south along Highway 101. It is currently unknown, however, if these cities and towns along Highway 101—or in other areas of the County—have faced challenges related to species permitting. The County is in the process of updating its general plan and will need to evaluate how likely buildout in these unincorporated portions of the County is and if it will occur in areas that may also provide habitat to listed species.

As discussed in Section 4, *Covered Activities*, the County has indicated a need for coverage not only for land use development and agricultural activities, but also for construction of linear transportation facilities (e.g., roads) and recreational facilities (e.g., trails). The former would likely connect existing communities along new routes, potentially through areas of the County that fall outside of urban service areas.

5.3 Potential Plan Area and Permit Area Boundaries for a Sonoma County HCP

Based on the County's proposed list of covered activities, together with an assessment of potential loss of listed species habitat, there is not an obvious "best fit" for an intermediate HCP permit area. Instead, it is recommended that the Board of Supervisors consider only two options for an HCP plan area: either an HCP narrowly focused on the Santa Rosa Plain or a countywide plan. A narrowly focused HCP would have a boundary similar to the current limits of the Santa Rosa Plain Conservation Strategy, although the plan area may need to be somewhat larger to provide for additional mitigation lands. An HCP permit area focused on the Santa Rosa Plain will present the fastest and least costly path to meeting regulatory needs for endangered species in that region. However, an HCP focused just on the Santa Rosa Plain would not provide the County with sufficient coverage for linear transportation and recreational projects throughout the County. To address those needs, the County should prepare an almost countywide HCP. A countywide HCP could remain focused by:

- Limiting coverage only to County jurisdiction, or including only those cities with substantial needs for coverage and a strong commitment to the HCP partnership with the County as a co-permittee; and/or
- Excluding covered activities (limiting the permit area) that occur in areas of the county with unique and complex species issues such as tidal wetlands in San Pablo Bay or unique and complex planning issues such as the Pacific Coast shoreline or the Coastal Zone.

A countywide HCP would also be the only appropriate plan area if the County also chooses to pursue an NCCP (described in Section 7, *Evaluation of Natural Community Conservation Plan Option*). The precise boundaries of the HCP plan area under either option will be examined more thoroughly and defined in Phase 2 of the HCP planning process.

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Section 6

Covered Species

Both the ESA and CESA require applicants for federal ITPs and state ITPs (also referred to as 2081[b] permits), to list the species for which take authorization is requested. This is commonly referred to as the *covered species* list and defines the species for which take authorization will be provided by the Services and CDFW. Both the ESA and CESA require an evaluation of the impacts of covered activities on covered species and require estimated level of take expected from these covered activities to be described. Because of this regulatory requirement, HCPs and 2081[b] permit applications must justify the selection of covered species.

The purpose of this section is to provide a recommended list of covered species for a Sonoma County HCP. The objectives of this section are to:

- Define criteria for covered species selection;
- Summarize the process to select covered species; and
- Identify an initial, recommended list of covered species that could be covered by a Sonoma County HCP.

The final list of covered species will be developed by the County in consultation with the Services and CDFW. The selection of covered species should be guided by specific criteria in order to provide a transparent, systematic, and repeatable process, as described below.

6.1 Process to Select the Covered Species

The HCP will identify the species that will be affected by the covered activities and for which take coverage will be requested. The covered species list for the federal permits may include both listed species and non-listed species that have the potential to become federally listed during the permit term. Under CESA, the state permit can only include species that are state listed at the time of permit issuance (i.e., the state permit cannot include non-state-listed species). To develop the covered species list, a three-step process is used:

- Step 1. Identify potential covered species.
- Step 2. Apply covered species screening criteria.
- Step 3. Develop an initial list of proposed covered species.

Applying a systematic process has numerous benefits. The process enables HCP preparers to respond to feedback and to build a covered species list that is consistent with the HCP goals as well as any specific needs of the anticipated permittee(s).

6.1.1 Step 1: Identify Potential Covered Species

The first step in identifying covered species is to assess which special-status species may be present in the plan area. The best resource for identifying terrestrial species occurrence data for special-status species is the California Natural Diversity Database (CNDDDB). The CNDDDB is a geodatabase (a

database designed to store, query, and manipulate geographic information and spatial data) that provides information such as location and natural history information on special-status species in California. Other resources were also consulted, including the following:

- Species that are listed as threatened or endangered under ESA (50 CFR 17.11 [listed wildlife] and 17.12 [listed plants]).
- Proposed or candidate species for possible future listing as threatened or endangered under the ESA (Environmental Conservation Online System 2019).
- Listed or candidate species for listing by the State of California as threatened or endangered under CESA (14 California Code of Regulations [CCR] 670.5).
- Species listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.).
- Species determined to meet the definitions of rare or endangered under CEQA (State CEQA Guidelines, Section 15380).
- Species considered by the California Native Plant Society to be “rare, threatened or endangered in California” (California Rare Plant Rank of 1B).

During HCP development, the County will also reach out to local species experts, including resource agencies staff and representatives of local environmental groups, for additional input on covered species.

Based on the data sources reviewed to date, Appendix C provides a list of 136 special-status species considered for inclusion in the HCP’s proposed covered species list.

6.1.2 Step 2: Apply Covered Species Screening Criteria

Once a comprehensive set of special-status species is identified through Step 1, each species is assessed based on a set of criteria. Species selection criteria are very helpful throughout the HCP development process because stakeholders or new agency staff often propose to add new covered species. Using the criteria, these new species can be consistently evaluated for coverage at any time during HCP development. Criteria are also helpful in explaining to stakeholders and the public why some species may not be covered by the HCP.

The following criteria are proposed to guide the selection process. To be covered, a species must meet all the following criteria.

Listing Status. The species falls into one of the following categories:

- Listed or proposed for listing under the ESA as threatened or endangered,
- Listed under the CESA as threatened or endangered, or
- Expected to become listed under the ESA or CESA within the proposed permit term based on the following: current listing status, consultation with experts and wildlife agency staff, evaluation of species population trends and threats, and best professional judgment.

Occurrence. The species is known to occur or have potential to occur in the plan area. Occurrence data is based on credible evidence, and consideration is given to species not currently known in the planning area but that are expected to occur in the planning area during the permit term (e.g., through range expansion or reintroduction to historic range).

Impact. Proposed covered activities are likely to result in take of the species as defined by the ESA.⁴

Data. Whether sufficient scientific data exist on species life history, habitat requirements, and occurrence in the plan area to adequately evaluate impacts on the species and to develop conservation measures to mitigate these impacts to levels specified by regulatory standards.

For species that meet all the above criteria, a final screening criterion is whether coverage for the species is necessary and efficient through a regional HCP. For example, if there is an alternative ESA compliance pathway through Section 7 consultation, and if covered activities may rarely take a certain listed species, then it may be both easier and less costly to omit the species from the HCP and seek a Section 7 incidental take statement as needed for individual projects.

Appendix C, Table C-1 includes an assessment of the 136 species identified in Step 1 using these criteria.

6.1.3 Step 3: Develop Initial List of Proposed Covered Species

Table 6-1 presents the results of an initial application of Steps 1 and 2 of the covered species selection process. The covered species are identified as “proposed” for coverage in the HCP because they do not receive coverage until the permits are issued by the regulatory agencies.

The covered species screening criteria were applied to the initial list of 136 identified special-status species (or subspecies), and each was categorized into one of three groups. The groups were categorized by potential for coverage under particular plan areas, with the third group containing all species not recommended to be considered for coverage. All species recommended for coverage, Group 1 and 2, are rare, declining, or potentially threatened by land use changes and are of concern to local organizations. The remaining 121 species are placed in Group 3.

The following subsections provide more detail on the three groups and describe how the selection process for each group.

6.1.3.1 Group 1: Santa Rosa Plain HCP

Group 1 includes the species that meet the criteria for coverage within a plan area focused around the Santa Rosa Plain. The 11 species (Table 6-1) include the 4 federal- and state-listed plants currently addressed by the Santa Rosa Plain conservation strategy, 3 federal-listed fish, 1 federal- and state-listed amphibian (California tiger salamander), 1 special-status reptile, 1 state-listed bird, and 1 special-status bird species. The 2 special-status species are included because they are expected to be listed during the term of the HCP.

⁴ The CESA has a narrower definition of “take” than the ESA, so the ESA definition is used for this criterion to be more inclusive. The state definition of “take” will be used to define which species would be covered by the state ITP.

Table 6-1. Initial Analysis of Possible Covered Species for a Sonoma County HCP

Common Name	Scientific Name	Status (Federal/ State/CRPR) ¹
GROUP 1 SPECIES: Santa Rosa Plain		
Plants		
Sonoma sunshine	<i>Blennosperma bakeri</i>	FE/SE/1B
Burke's goldfields	<i>Lasthenia burkei</i>	FE/SE/1B
Sebastopol meadowfoam	<i>Limnanthes vinculans</i>	FE/SE/1B
Many-flowered navarretia	<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	FE/SE/1B
Fish		
Chinook salmon – California coastal ESU	<i>Oncorhynchus tshawytscha</i>	FT/-/-
Coho salmon – central California Coast ESU	<i>Oncorhynchus kisutch</i>	FE/SE/-
Steelhead – central California coast DPS	<i>Oncorhynchus mykiss</i>	FT/-/-
Amphibians		
California tiger salamander – Sonoma County DPS	<i>Ambystoma californiense</i>	FE/ST/-
Reptiles		
Western pond turtle	<i>Emys marmorata</i>	-/ SSC /-
Birds		
Western burrowing owl	<i>Athene cunicularia hypugaea</i>	-/ SSC /-
Tricolored blackbird	<i>Agelaius tricolor</i>	-/ST/-
GROUP 2 SPECIES: Countywide HCP (additive to Group 1 species)		
Plants		
Two-fork clover	<i>Trifolium amoenum</i>	FE/-/1B
Invertebrates		
California freshwater shrimp	<i>Syncaris pacifica</i>	FE/SE/-
Amphibians		
California red-legged frog	<i>Rana draytonii</i>	FT/SSC/-
Birds		
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT/ST/-

¹ Status:

State Status

SE = State listed as endangered.

ST = State listed as threatened.

SSC = California special concern species (August 2019 list).

Federal Status

FE = Federally endangered.

FT = Federally threatened.

California Native Plant Society (CNPS) Rare Plant Ranking

1B = Rare or endangered in California and elsewhere.

CRPR = California Rare Plant Rank; DPS = Distinct Population Segment; ESU = Evolutionarily Significant Unit

6.1.3.2 Group 2: Countywide HCP

Group 2 includes all species recommended for coverage in a Countywide HCP plan area alternative. It includes the 11 Group 1 species and 4 additional species, for a total of 15 (Table 6-1). Additional Group 2 species include the two-fork clover, California freshwater shrimp, California red-legged frog, and northern spotted owl. The additional Group 2 species were selected using the same criteria as Group 1, taking into consideration the larger geographic scope of the alternative plan area and whether coverage for the species is likely to be necessary in the larger plan area.

6.1.3.3 Group 3: Not Recommended for Coverage

Group 3 contains the remaining 121 species not recommended for coverage in the Sonoma County HCP at this time, based on the regional analysis conducted for this report. Group 3 species include 83 plants, 2 invertebrates, 11 fish species, 3 amphibians, 14 birds, and 8 mammals. While many of these species have special-status designations and/or have been identified as rare or declining and are important to local conservation, they do not meet the screening criteria due to lack of sufficient available data or do not occur within areas expected to be affected by covered activities. The rationale for why coverage for each of these 121 species is not recommended is presented in Appendix C, Table C-1. Appendix C, Table C-2, lists the Group 3 species not recommended for coverage in the Sonoma County HCP.

6.2 Proposed Covered Species for Sonoma County HCP

Based on an initial analysis, the species in Group 1 and Group 2 in Table 6-1 are proposed for coverage in a Sonoma County HCP. This list is preliminary and will require review and further assessment regarding likelihood to be affected by the covered activities, presence in the permit area, and other key considerations. This initial list of covered species will be updated as HCP development progresses. The revised list of proposed covered species will be used to develop the HCP chapters, including detailed species profiles, an effects analysis, and a detailed analysis of the species conservation needs. As this detailed information is developed, it may become apparent that one or more of the proposed covered species no longer meets an evaluation criterion and, therefore, are dropped from the HCP. Similarly, the Services, CDFW, stakeholders, or the County may propose that certain species be added to the list.

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Section 7

Evaluation of Natural Community Conservation Plan Option

NCCPs are ecosystem-based conservation strategies that provide for the long-term protection of listed and non-listed species and their habitats on a landscape scale. NCCPs are part of a program unique to California that began in 1991 with the Natural Community Conservation Planning Act (NCCP Act). The NCCP program allows state, local, and private entities to receive permits for lawful incidental take (i.e., authorization to incidentally injure or kill individuals in the process of conducting otherwise lawful activities) for species listed as threatened or endangered pursuant to CESA for activities and projects covered within the NCCP permit area. NCCPs are voluntary, optional approaches to CESA compliance done as on large scale over long time spans. Without an approved NCCP, entities that require state take authorization must apply for an incidental take permit through the project-by-project process established by CESA (California Fish and Game Code Section 2081[b]).

NCCPs are always prepared jointly with HCPs because the covered species list would be the same for the two documents, as would the covered activities and plan area. CDFW may recommend development of an NCCP when multiple large-scale development and/or road construction activities are planned to occur in a county or region or when existing urban areas are expected to expand significantly in the future.

This section:

- Provides an overview of the NCCP Act and NCCP planning and implementation requirements;
- Presents the important differences between the two state permitting options: NCCP and Section 2081;
- Evaluates the benefits and costs associated with an NCCP;
- Discusses whether an NCCP would be advisable for the County to pursue; and
- Outlines the schedule and budget implications of an NCCP.

7.1 Overview of the Natural Community Conservation Planning Act

The NCCP Act is broader in its orientation and objectives than are the ESA or CESA. Preparation of an NCCP is voluntary, providing CESA compliance for multiple projects in a large region or landscape across several decades. The main objective of the NCCP Act is to conserve natural communities at the ecosystem level while accommodating development based on approved land use plans. To be approved by CDFW, an NCCP must provide for the “conservation” of species and protection and management of natural communities in perpetuity within the area covered by the permit. *Conservation* is defined by the NCCP Act and the California Fish and Game Code as actions that result in the delisting of state-listed species or avoiding the listing of non-listed species. What this means in practice is that NCCPs must contribute to the recovery of listed species or prevent the

listing of non-listed species rather than just mitigate the effects of covered activities. This regulatory standard is higher than that of ESA or CESA and is one of the major differences between an NCCP and an HCP or the typical state CESA permit.

To approve an NCCP under the NCCP Act, CDFW must make a series of findings, listed below.

- The plan must be consistent with the Planning Agreement.⁵
- The plan must provide for the conservation and management of the covered species (conservation is defined to mean that the plan must contribute to species recovery).
- The plan must protect habitat, natural communities, and species diversity on the landscape level.
- The plan must conserve the ecological integrity of large habitat blocks, ecosystem function, and biodiversity.
- The plan must support sustainable populations of covered species.
- The plan must provide a range of environmental gradients and habitat diversity to support shifting species distributions.
- The plan must sustain movement of species among reserves.
- Mitigation and conservation must be roughly proportional⁶ to impacts in timing and extent.
- Funding for conservation, monitoring, and adaptive management must be adequately assured.

Table 7-1 presents a detailed list of NCCP Act requirements and corresponding sections of the California Fish and Game Code.

Table 7-1. Checklist for NCCP Act Requirements

NCCP Act Requirement	Fish and Game Code Section
The plan was developed in accordance with the process identified in the planning agreement per Section 2810.	2820(a)(1)
The plan integrates adaptive management strategies that are periodically evaluated and modified based on information from monitoring programs and other sources; these strategies assist conservation of covered species and ecosystems within the plan area.	2820(a)(2)
[The plan] Protects habitat, natural communities, and species diversity on a landscape or ecosystem basis through the creation and long-term management of habitat reserves or other measures that provide equivalent conservation of covered species appropriate for land, aquatic, and marine habitats within the plan area.	2820(a)(3)

⁵ The Planning Agreement is a document required by the NCCP Act that would be executed by Sonoma County, other local co-permittees, CDFW, and USFWS to guide the preparation of the NCCP. The Planning Agreement would define the parties' goals and obligations with regard to development of a legally sufficient and approvable plan that will form the basis for take permits for covered activities and covered species.

⁶ The conservation strategy of an NCCP must be implemented at or faster than the rate at which impacts on habitat or covered species occur, so that conservation always stays ahead of impacts and rough proportionality is maintained between impacts on habitats or covered species and conservation measures (California Fish and Game Code 2820(b)(3)(B)).

NCCP Act Requirement	Fish and Game Code Section
[The plan] Conserves, restores, and manages representative natural and semi-natural landscapes to maintain the ecological integrity of large habitat blocks, ecosystem function, and biological diversity.	2820(a)(4)(A)
[The plan] Establishes one or more reserves or proposes other measures that provide equivalent conservation of covered species within the plan area and linkages between them and adjacent habitat areas outside of the plan area.	2820(a)(4)(B)
[The plan] Protects and maintains habitat areas that are large enough to support sustainable populations of covered species.	2820(a)(4)(C)
[The plan] Sustains the effective movement and interchange of organisms between habitat areas to maintain ecological integrity of habitat within the plan area.	2820(a)(4)(E)
The plan incorporates a range of environmental gradients (such as slope, elevation, aspect, and coastal or inland characteristics) and high habitat diversity; this provides for shifting distributions of species due to changed circumstances.	2820(a)(4)(D)
The plan identifies allowable activities and restrictions within reserve areas compatible with conservation of species, habitats, natural communities, and associated ecological functions.	2820(a)(5)
The plan contains specific conservation measures that meet the biological needs of covered species and that are based on the best available scientific information about the status of covered species and the impacts of permitted activities on those species.	2820(a)(6)
The plan contains a monitoring program.	2820(a)(7)
The plan contains an adaptive management program.	2820(a)(8)
The plan includes an estimated timeframe and process for implementing reserves or other conservation measures, including obligations of landowners and plan signatories and consequences for failure to acquire lands in a timely manner.	2820(a)(9)
The plan ensures that mitigation and conservation measures are roughly proportional in time and extent to the impact on habitat or covered species authorized under the plan. These provisions identify (a) the conservation measures—including assembly of reserves where appropriate and implementation of monitoring and management activities—that the landowner will maintain or carry out in rough proportion to the impact on habitat or covered species and (b) the measurements that will be used to determine if this occurs.	2820(b)(3)(D)(9)
The plan ensures adequate funding to carry out the conservation measures identified in the plan.	2820(a)(10)
The plan defines species coverage, including any conditions of coverage. The plan establishes long-term protection of habitat reserves or provides equivalent conservation of covered species.	2820(b)(1) and 2820(b)(2)

NCCP Act Requirement	Fish and Game Code Section
<p>The plan defines specific terms and conditions, which, if violated, would result in the suspension or revocation of the permit, in whole or in part. CDFG will include a provision requiring notification to the plan participant of a specified period of time to cure any default prior to suspension or revocation of the permit in whole or in part. These terms and conditions will address, but are not limited to, provisions specifying the actions CDFG will take under all of the following circumstances:</p> <ul style="list-style-type: none"> • The plan participant fails to provide adequate funding. • The plan participant fails to maintain the rough proportionality between impacts on habitat or covered species and conservation measures. • The plan participant adopts, amends, or approves any plan or project without the concurrence of the wildlife agencies that is inconsistent with the objectives and requirements of the approved plan. • The level of take exceeds that authorized by the permit. 	2820(b)(3)
The plan specifies procedures for amendment of the plan and the implementation agreement.	2820(b)(4)
The plan ensures implementation of a monitoring program and adaptive management program.	2820(b)(5)
The plan provides for oversight of plan implementation to assess mitigation performance, funding, and habitat protection measures.	2820(b)(6)
The plan provides for periodic reporting to the wildlife agencies and the public for purposes of information and evaluation of plan progress.	2820(b)(7)
The plan provides mechanisms to ensure adequate funding to carry out the conservation actions identified in the plan.	2820(b)(8)
The plan stipulates that if a participant does not maintain proportionality between <i>take</i> and conservation measures specified in the implementation agreement and does not either (a) cure the default within 45 days or (b) enter into an agreement with CDFG within 45 days to expeditiously cure the default, CDFG will suspend or revoke the permit, in whole or in part.	2820(c)
The plan requires that data and reports associated with monitoring programs be available for public review; the landowner must also conduct public workshops on an annual basis to provide information and evaluate progress toward attaining the conservation objectives of the plan.	2820(d)

To date, CDFW has approved eight NCCPs focused on covered activities similar to the covered activities anticipated in a Sonoma County HCP, including urban and rural development and related infrastructure (e.g., transportation projects, flood control projects, and other public works projects) (Table 7-2). Many of these approved plans have been in implementation for 10 years or more, providing a sufficient period in which to demonstrate the actual benefits and costs that have been realized for local communities and jurisdictions.

The NCCP Act was first approved in 1991. In 2002, the original NCCP Act was repealed and replaced with a significantly expanded NCCP Act that took effect January 1, 2003. The new NCCP Act added many more regulatory requirements and several new planning steps (Table 7-1), both of which made the planning process more complex and longer than with NCCPs under the original 1991 law.

For this reason, NCCPs approved after 2004⁷ are far more comparable to a Sonoma County HCP/NCCP than plans approved under the original 1991 NCCP Act. As shown in Table 7-2, four NCCPs have been approved under the current NCCP Act. A fifth, the Western Placer County HCP/NCCP, is expected to be completed soon with permits issued in 2020 by the Services and CDFW.

Table 7-2. Approved HCP/NCCPs in California Focused on Urban and Rural Development and Related Infrastructure

Approved HCP/NCCP	County	Plan Area (acres)	Year(s) Approved	Permit Term (years)
<i>Plans under original 1991 NCCP Act</i>				
Central/Coastal Orange County HCP/NCCP	Orange	208,000	1996	50
San Diego Multiple Species Conservation Program (MSCP) Subregional Plan ¹	San Diego	582,000	1996-2005	50
San Diego Multiple Habitat Conservation Program (MHCP) ²	San Diego	111,908	2004	50
Western Riverside Multiple Species Habitat Conservation Plan (MSHCP)	Riverside	1,200,000	2004	75
<i>Plans under revised 2003 NCCP Act</i>				
East Contra Costa County HCP/NCCP	Contra Costa	174,000	2007	30
Coachella Valley MSHCP	Riverside	1,100,000	2008	50
Santa Clara Valley Habitat Plan	Santa Clara	519,506	2013	50
Yolo HCP/NCCP	Yolo	653,663	2018	50
Western Placer County HCP/NCCP	Placer	201,000	2020 (expected)	50

¹ The San Diego MSCP Subregional Plan is an umbrella program over 11 subarea plans covering the southwestern portion of San Diego County. Five subarea plans have been approved, including the San Diego County (South County Plan) (1998), City of San Diego (1997), City of Poway (1996), City of La Mesa (1999), and City of Chula Vista (2005). The City of Santee submitted a draft subarea plan to the Wildlife Agencies in 2018.

² The San Diego MHCP is an umbrella program over six subarea plans covering the incorporated jurisdictions in the northern portion of San Diego County. To date, only one subarea plan has been completed in the City of Carlsbad (2004).

7.2 Comparison of 2081 Permit and NCCP Requirements

There are two options for the County to acquire state take authorization: (1) a 2081 incidental take permit, or (2) an NCCP pursuant to the NCCP Act. ESA compliance would be the same, so the permit application would either require an HCP with a separate 2081 state permit application or an HCP prepared jointly with a NCCP, depending on which state coverage was requested. Table 7-3 summaries important difference between the two permitting options.

⁷ Several plans in process when the new NCCP Act was enacted in 2002 were grandfathered under the original 1991 law, including the Western Riverside County MSCP and the San Diego MHCP (both approved in 2004).

Table 7-3. Comparison of 2081 Permit and NCCP Permit Requirements and Benefits

Parameter	California Endangered Species Act (2081 Permit)	Natural Community Conservation Planning Act (2835 Permit)
Planning Agreement	Not required	Required
Geographic Scope	Small to large scale	Landscape scale only ¹
Species Covered	State-listed species only	Listed and non-listed species ²
Regulatory Standards for Take Authorization	<ul style="list-style-type: none"> • Minimize and fully mitigate • Rough proportionality • No jeopardy • Do not preclude recovery • Adequate funding 	<ul style="list-style-type: none"> • CESA 2081 permit requirements • Consistent with Planning Agreement • Conserve covered species (= contribute to recovery) • Protect natural communities on a landscape scale • Preserve ecological integrity • Support sustainable populations • Sustain species movement
Regulatory Assurances	<ul style="list-style-type: none"> • Covered species only • No regulatory assurances • No take authorization for fully protected species 	<ul style="list-style-type: none"> • Broad regulatory assurances (“No Surprises”) • Take authorization for fully protected species is available
Public Participation	Through CEQA (and NEPA) process only	<ul style="list-style-type: none"> • Public participation and outreach as part of NCCP preparation • Stakeholder involvement during NCCP preparation • CEQA and NEPA process
Implementing Agreement	Not required	Required
Independent Scientific Input Early in the Planning Process	Not required	Required
Public Funding Available for Plan Preparation	No	Yes
Public Funding Available for Implementation	Limited	Yes

¹ Landscape scale plans in California are typically on the order of a county or part of a county. Plans of this size allow for the preservation of more ecological diversity than smaller, project-level plan areas.

² Species expected to be listed by the state during the permit term.

Key differences between an NCCP and 2081 permit that the County should consider in determining which option to pursue include the following.

1. **Strong Regulatory Assurances.** NCCPs provide strong and durable “No Surprises” assurances from the state for all listed and non-listed covered species. These No Surprises assurances are not available under a CESA 2081 permit, nor can a CESA permit cover non-listed species. The state No Surprises assurances provided by an NCCP are equivalent to those provided by the ESA for an HCP.
2. **Take of Fully Protected Species.** NCCPs allow for direct take of fully protected species. Direct take of fully protected species is not allowed under a CESA 2081 permit. There are four fully

protected species in Group 3: bald eagle, California Ridgway's rail, white-tailed kite, and salt marsh harvest mouse (Table 6-1).

3. **Higher Conservation and Procedural Standards.** NCCPs require a higher standard of "conservation" of each covered species, rather than a "fully mitigate" standard as under a CESA 2081 permit. Additional planning and implementation costs would be incurred to meet the higher conservation standard of an NCCP. NCCPs also have additional procedural requirements that contribute to slightly higher planning costs as compared to a 2081 permit.

Each of these factors is discussed in more detail below. The County can use the information present in this section to help determine whether the increased planning and implementation costs of an NCCP and the potential increase in development fees are worth the additional benefits that an NCCP provides.

7.2.1 Regulatory Assurances

The type of state take authorization available differs substantially between the two state permit options. An NCCP allows CDFW to provide take authorization for both listed and non-listed species. A state incidental take permit under Fish and Game Code Section 2081 can only be issued for species currently listed by the state.

As soon as a non-listed covered species becomes state listed the NCCP automatically provides take authorization, as does the federal permit. This approach gives applicants the opportunity to evaluate potential effects on species that are expected to become listed during the permit term thereby avoiding a costly plan amendment. This "insurance policy" could be valuable for the Sonoma County HCP for species such as the burrowing owl, which is expected to become a state-listed species in the near future. Table 7-4 identifies the proposed covered species in the Sonoma County HCP and identifies the additional benefits or assurances offered under an NCCP compared to a 2081 permit for non-listed or fully protected species.

Table 7-4. Comparison of Species Assurances under State Permit Scenarios

Species Proposed for Coverage in Sonoma County HCP	Federal Status	State Status	Likelihood of State listing during Permit Term	Additional Benefits from NCCP Permit vs. CESA 2081 Permit?
Group 1 Species				
Sonoma sunshine	E	E/1B	n/a	None
Burke's goldfields	E	E/1B	n/a	None
Sebastopol meadowfoam	E	E/1B	n/a	None
Many-flowered navarretia	E	E/1B	n/a	None
Chinook salmon – California coastal ESU	T	-	Low	Yes, No Surprises assurances from state
Coho salmon – central California coast ESU	E	E	n/a	None
Steelhead – central California coast DPS	T	-	Low	Yes, No Surprises assurances from state
California tiger salamander – Sonoma DPS	E	T	n/a	None
Western pond turtle	-	SSC	Moderate	Yes, No Surprises assurances from state

Species Proposed for Coverage in Sonoma County HCP	Federal Status	State Status	Likelihood of State listing during Permit Term	Additional Benefits from NCCP Permit vs. CESA 2081 Permit?
Western burrowing owl	–	SSC	High	Yes, No Surprises assurances from state
Tricolored blackbird	–	T	n/a	None
Additional Group 2 Species				
Two-fork clover	E	-/1B	Low	Yes, No Surprises assurances from state
California freshwater shrimp	E	E	n/a	None
California red-legged frog	T	SSC	Low	Yes, No Surprises assurances from state
Northern spotted owl	T	T	n/a	None

The assurances provided by the NCCP permit are nearly identical to the federal assurances known as “No Surprises.” According to the California Fish and Game Code Section 2820(f)(2), “[i]f there are unforeseen circumstances, additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources shall not be required without the consent of plan participants for a period of time specified in the implementation agreement, unless the department determines that the plan is not being implemented consistent with the substantive terms of the implementation agreement.” What this means is that if conditions change during the permit term in ways not anticipated by the plan, the state cannot require the County to provide more conservation or more funding for conservation without their consent, as long as the plan is being implemented properly. These assurances have proven very durable in operating HCPs and NCCPs, but they are not available through a 2081 permit.

7.2.2 Fully Protected Species

The California Fish and Game Code lists 37 species as “fully protected,” for which the state cannot authorize take of individuals.⁸ In 2011, the Governor signed new legislation allowing take of fully protected species by an approved NCCP. There are five fully protected species that were considered for coverage in the Sonoma County HCP; however, all five species (bald eagle, California Ridgeway’s rail, golden eagle, white-tailed kite, and saltmarsh harvest mouse) are in Group 3.

Take of California Ridgeway’s rail and saltmarsh harvest could result from covered activities primarily occurring along the Petaluma River, near Petaluma Marsh, south to the southernmost tip of the County, near the marshes of north San Pablo Bay. Take of white-tailed kite could result from covered activities that take place throughout the County where suitable foraging and nesting habitat (i.e., low foothills or valley areas with oak trees, riparian areas, grassland, and marsh habitat) is present. Take of golden eagle and bald eagle could result from covered activities primarily occurring near Sonoma Mountain, Lake Sonoma, and the Laguna de Santa Rosa.

⁸ Note that the definition of “take” differs between the ESA and CESA. Take is defined more broadly under the ESA to include “harm” and “harassment,” which may include the removal or modification of unoccupied habitat. Take under the state definition only includes direct mortality or injury to individuals. The loss of unoccupied habitat is typically not considered take by CESA.

The inability to execute projects in these diverse habitat types is often reported as a permitting hurdle for projects within the jurisdiction of the County because project applicants have difficulty demonstrating full avoidance of these species in areas of suitable habitat, and/or full avoidance and minimization measures are costly and time intensive to implement (e.g., may result in construction delay, may require intense protocol-level surveys and expensive wildlife exclusion fencing).

7.2.3 Regulatory and Procedural Standards

NCCPs must meet higher regulatory standards than a 2081 permit. Under the NCCP Act, applicants must *conserve* each of the covered species. “Conserve” is defined by the NCCP Act to essentially mean that one must contribute to the recovery of species by providing conservation that exceeds typical mitigation. In cases where the NCCP incorporates the entire range of the species in the plan area and covers activities that represent the majority of threats to the species, this has been interpreted to mean that the NCCP must recover the species in the plan area. This is particularly relevant here because the range of the Sonoma DPS of California tiger salamander is found entirely within Sonoma County. In addition, the range of all four of the listed plants in Group 1 is mostly within Sonoma County. Because the primary threats to these species would be covered by a Sonoma County HCP/NCCP, the NCCP would be expected to substantially contribute to the recovery of, or fully recover, the species in the plan area.

The NCCP Act also has additional requirements to conserve biological diversity, ecological integrity, and environmental gradients, among others. These requirements change the conservation strategy approach compared to a 2081 permit, including a focus on natural community conservation, rather than just species mitigation. By contrast, under a 2081 permit the standard is that the applicant must “fully mitigate” for the effects of the covered actions.

Configuring the conservation strategy in the plan to meet the higher NCCP requirements would result in additional planning costs. An initial estimate of these costs is provided in Section 7.3, *Benefits and Costs of an NCCP*, Table 7-5. Most importantly, pursuing an HCP/NCCP would require the applicants to protect more land through conservation easements or fee title acquisition than would be required by an HCP/2081. The additional land acquisition required to meet the NCCP standard is unknown and can only be determined with additional analysis. However, our rough estimate is that a Sonoma County HCP/NCCP would need to acquire approximately 50 to 75% more land than an HCP/2081 due to the rarity of and threats to the covered species.

7.3 Benefits and Costs of an NCCP

This section describes the potential benefits and expected costs of the Sonoma County HCP.

7.3.1 Benefits

Because NCCPs are, by definition, landscape-scale permitting and conservation programs, they are always developed in concert with an HCP, and as a joint HCP/NCCP. There are several benefits to applicants who develop a joint HCP/NCCP and receive state and federal endangered species permits, including the following.

- Long-term species take permit duration (30- to 50-year permit terms are typical of an NCCP).

- Permits that cover a wide range of projects over a large geographic area.
- Standardized avoidance and minimization measures for duration of permits.
- Predictable mitigation costs for all covered activities.
- Reduced per-project mitigation costs achieved through economies-of-scale associated with a large conservation program.
- The No Surprises assurances available under an NCCP provide a strong and durable guarantee from the state that the requirements of the plan would not change if environmental conditions change in the future.
- Delivery of more effective, landscape-scale conservation than can be achieved through project-by-project mitigation (conservation funds are pooled to implement the high-priority, larger-scale conservation actions). The Sonoma County HCP could better help to achieve that goal if it were an NCCP.
- Streamlined ESA Section 7 consultations for covered activities that also require other federal permits (e.g., a Clean Water Act Section 404 permit).
- Qualification for federal and state grant-based funding to support HCP/NCCP preparation and implementation. If received, this funding can ease the applicants' cost of implementation, especially during times of slow economic development. (However, this federal funding must be matched by local, non-mitigation funding sources.)
- Take coverage for fully protected species, if needed.
- Streamlined permitting (i.e., few additional avoidance, minimization, and mitigation measures) under California Fish and Game Code Section 1600 Lake or Streambed Alteration Agreement program.

7.3.2 Costs

The findings required by the NCCP Act that go beyond the requirements for an HCP increase the scale and complexity of the plan, which adds time and financial cost to both development and implementation. While this increased cost is often offset by the availability of grant funding, overcoming these complexities can be challenging. The specific factors that tend to add costs are summarized below.

- Creation of an expansive and robust conservation strategy;
- Development of a Planning Agreement;
- Development of an Implementing Agreement;
- Convening a Science Advisor Panel; and
- Development of a more robust Stakeholder process.

To estimate cost differences between an NCCP and a CESA 2081 permit, ICF first identified the differences that have cost implications. For an NCCP, the County will need to: develop and execute a planning agreement, organize and convene an independent scientific review of the conservation strategy, and create a more expansive conservation strategy, as described above. An Implementing Agreement is also required for an NCCP. There will be additional project management time and time spent in meetings because completing an NCCP is expected to take longer than a CESA 2081 permit.

For example, there will be additional coordination with CDFW to make sure NCCP requirements are being met. Table 7-5 shows each of the planning components and a range of associated costs. All of these additional costs can be covered, at least in part, by the federal HCP planning assistance grant.

Table 7-5. Estimated Planning Costs of Required NCCP Components that Would Not Be Necessary for an HCP/2081 Conservation Plan

NCCP Component with Cost Implications	Range of Additional Planning Costs	Notes and Assumptions
Planning Agreement	\$15,000–\$100,000	High end assumes City hires an attorney to prepare the agreement and that the document is negotiated among multiple co-permittees
Convene Independent Scientific Review Panel	\$65,000–\$100,000 ¹	Cost depends largely on the number of panel members, each of whom are paid a stipend to participate
Expanded Conservation Strategy	\$45,000–\$70,000	Additional analysis would be required to ensure NCCP standards are met
Stakeholder Involvement	\$85,000–\$160,000	Assumes a stakeholder group would be convened and would meet monthly throughout NCCP development
Implementing Agreement	\$15,000–\$100,000	High end assumes City hires an attorney to prepare the agreement and that the document is negotiated among multiple co-permittees
Project Management/Meetings	\$35,000–\$70,000	Assumes additional meetings with CDFW specifically on NCCP requirements and longer overall development timeline
Total	\$260,000–\$600,000	

¹ The cost for the science review panel includes hiring a lead reviewer to coordinate the panel and complete the final review document, offering an honorarium to reviewers, paying for travel and lodging for one 2-day workshop, and the organization and execution of the workshop and a field trip to familiarize reviewers with the plan area.

The added requirements inherent to an NCCP also, as noted above, add time to the planning schedule. The additional amount of time varies depending on the complexity of the NCCP but should be assumed to add roughly 1 year to the overall schedule.

7.4 Considerations

The decision to undertake an NCCP should consider a variety of factors. While grant funding is available to alleviate some of the added cost for HCP planning, the primary source of grant funding—the Cooperative Endangered Species Conservation Fund, tied to Section 6 of the ESA—does require a non-federal minimum match of 25% of the total value of each grant. Implementation of the HCP/NCCP also typically assumes contributions from local funding sources. For example, the Yolo HCP/NCCP anticipates up to 14% of the cost of implementing the plan (45% of the cost attributed to the conservation portion of the HCP/NCCP) will be covered by non-mitigation local funding sources. These costs are often made up of acquired lands placed under conservation

easement for the HCP/NCCP that would have been acquired regardless, but then the County would need to consider if there are existing land agencies willing to direct their funding and efforts to conserving lands for compliance with the HCP/NCCP.

While there is added time and cost associated with planning for an NCCP, the benefit of oversight of the County's own state species take permits is also considerable. NCCPs allow local governments to expedite in a matter of weeks permitting that would otherwise take months if not over a year. Over the course of the NCCP permit term, this results in extensive cost savings and increased efficiency for the County and those to whom it extends coverage.

While the NCCP process requires negotiating and signing a Planning Agreement, this does not commit the County to finishing the NCCP. NCCPs are voluntary plans and if through the course of developing the NCCP it becomes clear that it is not the right fit, the County can always pull back to an HCP/2081 permitting approach. The County would not have to return grant funds expended up to the time of the decision to drop the NCCP portion, although it may not be able to use all of the remaining grant funding either if the actual project ceases to fit the project description in the grant agreement. Furthermore, the Cooperative Endangered Species Conservation Fund grant is available to the County even if it chooses to only develop an HCP, although the application may not score as high (however, all applications for the last two cycles have received awards).

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Appendix A

County of Sonoma General Plan Land Use Designations

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County of Sonoma General Plan Land Use Designations

- **Diverse Agriculture (DA):** This category shall enhance and protect those land areas where soil, climate, and water conditions support farming but where small acreage intensive farming and part time farming activities are predominant. In these areas, farming may not be the principal occupation of the farmer. The primary purpose of this category is to protect a full range of agricultural uses and to limit further residential intrusion consistent with the policies of the Agricultural Resources Element.
- **General Commercial (GC):** The General Commercial category provides sites for intense commercial uses that primarily serve a mix of business activities and the residential and business community as a whole rather than a local neighborhood. These uses provide for comparison shopping and services which are ordinarily obtained on an occasional rather than daily basis. This category is also intended to provide opportunities for a mix of residential and commercial use in Urban Service Areas.
- **General Industrial (GI):** This category provides sites for industrial activities and employment that require urban services and that primarily serve an urban population. The intent of the category is to assure that industrial development is compatible with adjacent land uses, infrastructure and environmental quality. This category also may provide locations for workforce housing for persons employed in adjoining businesses
- **Land Extensive Agriculture (LEA):** This category shall enhance and protect lands capable of and generally used for animal husbandry and the production of food, fiber, and plant materials. Soil and climate conditions typically result in relatively low production per acre of land. The objective in land extensive agricultural areas shall be to establish and maintain densities and parcel sizes that are conducive to continued agricultural production
- **Land Intensive Agriculture (LIA):** This category shall enhance and protect lands capable of and generally used for animal husbandry and the production of food, fiber, and plant materials. The soil type and climate support relatively high production per acre of land. The objective in land intensive agricultural areas shall be to establish densities and parcel sizes that are conducive to continued agricultural production.
- **Limited Industrial (LI):** The "Limited Industrial" land use category provides sites for development to meet service and employment needs where the range or scale of industrial uses is limited. Factors that may limit these uses are lack of public services, incompatible adjacent land uses, and adverse environmental impacts. Industrial parks are included in this category as well as land extensive industrial development. This category also may provide locations for workforce housing for persons employed in adjoining businesses.
- **Public/Quasi-Public (PQP):** This category provides sites that serve the community or public need and are owned or operated by government agencies, non-profit entities, or public utilities. However, public uses are also allowed in other land use categories. The Public Facilities and Services Element establishes policies for location of public uses in these other categories.
- **Rural Residential (RR):** This category provides for very low density residential development on lands that have few if any urban services but have access to County maintained roads.
- **Resources and Rural Development (RRD):** This category allows very low-density residential development and also is intended to:

- (1) Protect timberlands needed for commercial timber production under the California Timberland Productivity Act;
 - (2) Protect lands needed for geothermal resource production;
 - (3) Protect lands for aggregate resource production as identified in the Aggregate Resources Management Plan;
 - (4) Protect natural resource lands including, but not limited to watershed, fish and wildlife habitat and biotic areas;
 - (5) Protect against intensive development of lands constrained by geologic hazards, steep slopes, poor soils or water, fire and flood prone areas, biotic and scenic areas, and other constraints;
 - (6) Accommodate agricultural production activities but limit such activities on timberland;
 - (7) Protect county residents from proliferation of growth in areas where there are inadequate public services and infrastructure, including water supply and safe wastewater disposal.
 - (8) It is further the intent of this category that public services and facilities not be extensively provided in these areas and that development have the minimum adverse impact on the environment.
- **Recreation and Visitor Serving Commercial (RVSC):** This category provides sites for both outdoor recreation uses and the commercial service needs of visitors and travelers. Its purpose is to limit this type of development to those appropriate sites. This category is also intended to provide opportunities for a mix of residential and commercial use in Urban Service Areas.
 - **Urban Residential (UR):** This category includes land planned for a full range of urban services for residential development. It accommodates a variety of housing types, such as stick built and manufactured homes, and all tenure types, depending upon the density allowed in the Land Use Element under State law.

Appendix B
**Regional Assessment of Potential Impacts on Listed
Species Habitat**

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Table B-1. Vegetation Lifeforms by Urban Service Area

Urban Service Area	Annual Cropland	Barren & Sparsely Vegetated	Developed	Forest Sliver	Herbaceous	Intensively Managed Hayfield	Irrigated Pasture	Major Roads	Native Forest	Non-native Forest & Woodland	Non-native Shrub	Nursery or Ornamental Horticultural Area	Orchard or Grove	Perennial Agriculture	Shrub	Urban Window	Vineyard	Vineyard Replant	Water	Total
Airport	2.7	34.1	21.9	5.2	577.6	16.1		0.3	79.7	0.7					6.5	722.8	0.1		33.5	1,501.7
Bodega Bay		8.3	394.5	8.3	233.8			8.9	0.8	53.8	4.0				143.7				4.3	860.5
Cloverdale		8.3	233.8	8.2	771.3			65.5	917.6	11.9			4.7		23.2	1,031.9	117.9		27.5	3,221.7
Cotati	0.2	0.7	229.1	37.7	1,132.5			18.9	52.8	112.2	2.3	4.5	4.7	0.2	12.5	925.6	23.7		1.5	2,559.2
Forestville			177.1	8.8	73.8			7.0	32.5	49.0	2.0		12.2		11.5		20.4		1.5	395.7
Geyserville		1.4	113.0	1.7	25.8			1.6	18.4	4.0			0.1		1.0		21.1		1.1	189.2
Graton			151.9	7.7	24.0			4.4	65.4	13.1	0.7		3.5	2.9	4.4		0.4			278.4
Guerneville		17.0	363.2	5.4	33.1			19.6	592.0	15.8	1.8		5.3		17.6		0.0		53.9	1,124.6
Healdsburg	0.1	64.9	354.8	16.8	395.5			36.7	1,077.1	31.7	8.3		8.1		85.8	1,311.7	52.1	5.0	28.8	3,477.4
Larkfield			58.8	7.0	42.6			0.7	286.7	22.6	0.0		1.3			863.3	9.5		0.9	1,293.3
Monte Rio		6.2	76.7	3.5	1.5			3.9	145.7				1.1		6.5				25.8	270.8
Occidental			28.4		0.8			1.9	22.5		0.6									54.2
Penngrove		0.8	213.3	11.2	138.3			16.8	30.0	25.0					3.0	2.9	0.2		0.1	441.4
Petaluma	8.2	6.8	201.8	33.2	1,858.8	43.4		36.0	416.3	85.6	3.4	2.0	1.0	4.6	47.4	7,279.7	3.8		235.4	10,267.5
Rohnert Park	75.0	11.4	70.2	16.3	520.2	378.9		9.7	116.6	41.1	0.5		0.8		4.5	4,236.9	0.5		0.9	5,483.5
Santa Rosa	25.3	43.1	1,270.6	149.4	3,877.4	158.6	0.8	115.2	4,363.0	382.6	35.0	3.3	50.0	1.0	193.2	18,272.6	33.3		114.4	29,088.6
Sea Ranch		55.8	435.6	39.9	1,269.5			17.1	1,050.1	208.3	0.6	0.1			276.1				59.9	3,413.1
Sebastopol	0.0		19.0	5.5	149.8		0.0	0.0	53.7	37.6	0.9		17.1	0.0	22.7	1,086.0	1.4		2.2	1,396.0
Sonoma	3.3	2.1	14.9	10.0	170.0			1.0	198.1	32.5			7.9		4.8	1,458.0	18.5		0.8	1,922.0
Sonoma Valley	3.5	4.7	488.5	29.2	438.9			22.7	1,020.6	84.3	1.3	4.0	11.5		33.8	2,727.6	239.6		5.2	5,115.2
Windsor	1.3	18.6	97.2	26.2	704.8	9.2	0.2	24.2	439.5	23.7	5.1		4.7		8.9	3,236.9	171.4		39.4	4,811.2
Grand Total	119.6	284.1	5,014.3	431.4	12,439.8	606.1	1.0	412.1	10,979.2	1,235.4	66.6	14.5	133.9	8.7	907.2	43,155.9	713.6	5.0	636.9	77,165.5

Table B-2. Vegetation Lifeforms by Urban Growth Boundary

Growth Area	Annual Cropland	Barren & Sparsely Vegetated	Developed	Forest Sliver	Herbaceous	Intensively Managed Hayfield	Irrigated Pasture	Major Roads	Native Forest	Non-native Forest & Woodland	Non-native Shrub	Nursery or Ornamental Horticultural Area	Orchard or Grove	Perennial Agriculture	Shrub	Urban Window	Vineyard	Vineyard Replant	Water	Total
City of Cloverdale		18.2	289.0	6.6	698.9			62.1	472.2	11.6			4.2		19.6	1,037.4	82.7	7.0	27.1	2,736.7
City of Cotati	0.2	0.7	229.1	37.7	1,132.5			19.0	52.8	112.2	2.3	4.5	4.7	0.2	12.5	925.6	23.7		1.5	2,559.4
City of Healdsburg	0.1	64.9	354.8	16.8	395.5			36.7	1,077.1	31.7	8.3		8.1		85.8	1,311.7	52.1	5.0	28.8	3,477.4
City of Petaluma	8.2	6.8	200.6	31.3	1,634.1	35.2		36.0	413.4	77.0	3.4	2.0	1.0	4.6	47.4	7,279.7	3.8		95.8	9,880.3
City of Rohnert Park	75.0	11.4	70.2	16.3	520.9	464.0		9.7	116.6	41.0	0.5		0.8		4.5	4,239.7	0.5		0.9	5,572.2
City of Santa Rosa	25.3	43.1	1,270.7	149.4	3,875.8	158.6	0.8	115.2	4,360.4	382.7	35.0	3.3	50.0	1.0	193.0	18,272.6	33.3		114.4	29,084.4
City of Sebastopol	0.0		20.8	5.5	152.7		0.0	0.3	60.0	37.6	0.9		17.1	0.0	26.8	1,087.0	1.4		2.2	1,412.3
City of Sonoma	3.3	2.1	14.9	10.0	170.0			1.0	198.1	32.5			7.9		4.8	1,450.3	18.5		0.8	1,914.3
Town of Windsor	1.3	18.6	98.0	26.2	706.8	9.2	16.7	24.6	439.7	24.7	5.1		4.7		9.2	3,239.4	171.4		40.4	4,835.9
Grand Total	113.4	165.7	2,548.2	299.9	9,287.3	667.0	17.6	304.7	7,190.4	751.1	55.5	9.8	98.5	5.8	403.6	38,843.4	387.3	12.0	311.9	61,472.9

Table B-3. Vegetation Lifeforms by County Land Use Designation

Growth Area	Annual Cropland	Barren & Sparsely Vegetated	Developed	Forest Sliver	Herbaceous	Intensively Managed Hayfield	Irrigated Pasture	Major Roads	Native Forest	Non-native Forest & Woodland	Non-native Shrub	Nursery or Ornamental Horticultural	Orchard or Grove	Perennial Agriculture	Shrub	Urban Window	Vineyard	Vineyard Replant	Water	Total
Administrative and Professional Office District			1					0	4	1						20	0			26
Agricultural Services District			20	2	14				2	4			0		2		0		0	44
Agriculture and Residential District	80	74	4,090	394	13,501	30	39	12	12,718	1,477	132	47	323	72	640	264	1,389		54	35,336
Commercial Fishing District (Coastal Zone)			13		6			0		2	1				10				3	34
Commercial Rural District			11	1	13			0	7	0					1					32
Commercial Tourist District (Coastal Zone)			2	44	3	50		0	11	16	2				19				9	157
Diverse Agriculture District	219	367	3,551	445	28,470	2,229	793	24	14,607	1,241	115	14	2,317	77	1,572	160	10,684	108	269	67,261
General Commercial District			13	0	6			0	9	0					0	59			0	88
Heavy Industrial District			0	12	2	49		0	24						1	220			0	308
High Density Residential District			11		13			0	0	0					0	70				
Industrial Park District			1	44	2	107	16	1	0	26	3				6	265	0		1	
Land Extensive Agriculture District	578	1,382	1,561	640	99,468	12,878	1,952	51	36,708	1,639	314	12	153	24	7,207	0	9,927	238	1,436	
Land Intensive Agriculture District	151	463	1,953	284	12,850	211	31	37	19,241	281	114	24	301	43	1,269	45	30,933	798	968	
Limited Commercial District	1	9	276	6	164	5	2	2	86	14	1	1	1		10	111	1		6	
Limited Rural Industrial District	0	16	308	7	227		0	1	33	15	2				11	71	0		1	
Limited Urban Industrial District			3	116	4	119		0	34	1					5	200	3		8	
Low Density Residential District			3	534	25	79		1	720	62	2		6		8	1,089	8		12	
Medium Density Residential District			0	102	4	7		0	38	4					2	355	1		0	
Neighborhood Commercial District			39	1	9			0	22	2	0					14	1		0	
Planned Community District			55	844	45	1,384		0	1,290	220	2	0			364	75	0		53	
Public Facilities District	10	1,128	973	180	16,608	33	17	52	31,725	364	95	1	38	0	5,046	762	15		2,639	
Railroad			0	8	2	94	0	0	22	2	0	0	0		4	13	3	0	0	150
Recreation and Visitor-Serving Commercial District	1	96	496	12	608		0	1	427	23			0		25	297	56	3	64	2,108
Resources and Rural Development	13	1,196	2,054	1,035	69,339	7	52	268	287,208	1,401	182	1	344	3	24,205	17	7,508	68	794	395,696
Retail Business and Service District			1		2				2							45				50
Road			0	2	0	61	0	0	71	3	0		0		3		1		0	143
Rural Residential District	60	68	4,788	408	10,231	32	9	11	13,673	1,403	83	2	316	7	927	717	1,021	2	147	33,903

Growth Area	Annual Cropland	Barren & Sparsely Vegetated	Developed	Forest Sliver	Herbaceous	Intensively Managed Hayfield	Irrigated Pasture	Major Roads	Native Forest	Non-native Forest & Woodland	Non-native Shrub	Nursery or Ornamental Horticultural	Orchard or Grove	Perennial Agriculture	Shrub	Urban Window	Vineyard	Vineyard Replant	Water	Total
Rural Services District (Coastal Zone)			20	1	11		2	0	3	2					3				1	43
Timberland Production District	1	193	48	62	7,864			18	85,882	37	36		7		881		231		37	95,297
Grand Total	1,114	5,056	21,932	3,566	261,354	15,441	2,900	480	504,596	8,218	1,078	101	3,807	227	42,219	4,869	61,781	1,217	6,502	630,675

Appendix C
Covered Species Evaluation

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Table C-1. Special-Status Species Considered as Covered Species for Three Alternative Plan Areas

Species	Criteria ² (columns shaded in gray are required screening criteria)										Criterion Met? ²	Recommend Coverage in HCP ³			Evaluation Notes
	Status ¹		Occurrence			Impact			Data ²	Coverage Necessary & Efficient?		Santa Rosa Plain	TBD	County	
	State	Federal	Santa Rosa Plain	TBD	County	Santa Rosa Plain	TBD	County				Santa Rosa Plain	TBD	County	
Invertebrates															
California freshwater shrimp <i>Syncaris pacifica</i>	SE	FE	N		Y	N		Y	Y	Y	N/ /Y	N		Y	There are 14 CNDDDB occurrences in the County, all from streams in the Outer Northern Coast Ranges. May be affected by covered activities.
Crotch bumble bee <i>Bombus crotchii</i>	CE	—	Y	Y	Y	N	N	N	N	N	N/ /N	N	N	N	There are no extant CNDDDB occurrences in the County but the CESA listing petition (Xerces Society 2018) shows a historic occurrence in central Sonoma County. If recovery efforts are successful, this species could recolonize suitable habitat in the County within the permit term. Current data in the County insufficient to adequately evaluate impacts and develop conservation measures, however. No near-term mitigation needs.
Western bumble bee <i>Bombus occidentalis</i>	CE	—	Y	Y	Y	Y	N	N	N	N	N/ /N	N	N	N	There are 13 CNDDDB occurrences in the County, all of which are from museum collections. The species is currently known from high elevation sites in the northern California Coast but historically occurred in meadows and grasslands at lower elevations (Xerces Society 2018). If recovery efforts are successful, this species could recolonize suitable habitat in the County within the permit term. Current data in the County insufficient to adequately evaluate impacts and develop conservation measures, however.
Fish															
Chinook salmon – California coastal Evolutionarily Significant Unit <i>Oncorhynchus tshawytscha</i>	—	FT	Y		Y	Y		Y	Y	Y	Y/ /Y	Y		Y	Occurs in Russian River and its tributaries, including Santa Rosa Creek. Likely outside area expected to be affected by covered activities known at this time
Coho salmon – central California Coast Evolutionarily Significant Unit <i>Oncorhynchus kisutch</i>	SE	FE	Y		Y	Y		Y	Y	Y	Y/ /Y	Y		Y	Most of County’s watersheds considered accessible. There are 14 CNDDDB occurrences in the County.
Green sturgeon- Southern Distinct Population Segment <i>Acipenser medostris</i>	SSC	FT	N		Y	N		N	N	Y	N/ /N	N		N	Occurs in San Pablo Bay. Likely outside area expected to be affected by covered activities known at this time.
Gualala roach <i>Lavinia symmetricus parvipinnis</i>	SSC	—	N		Y	N		N	N	N	N/ /N	N		N	Known to occur in the Gualala River. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Hardhead <i>Mylopharodon conocephalus</i>	SSC	—	N		Y	N		N	N	N	N/ /N	N		N	Known to occur in the Russian River. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Longfin smelt <i>Spirinchus thaleichthys</i>	ST	FC	N		Y	N		N	Y	N	N/ /N	N		N	Occurs in the lower Russian River and San Pablo Bay. Likely outside area expected to be affected by covered activities known at this time.
Navarro roach <i>Lavinia symmetricus navarroensis</i>	SSC	—	N		Y	N		N	N	N	N/ /N	N		N	Occurs in Mark West Creek and Russian River. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.

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	Status ¹		Occurrence			Impact			Data ²	Coverage Necessary & Efficient?		Santa Rosa Plain	TBD	County	
	State	Federal	Santa Rosa Plain	TBD	County	Santa Rosa Plain	TBD	County				Santa Rosa Plain	TBD	County	
Pacific lamprey <i>Entosphenus tridentatus</i>	SSC	—	N		Y	N		N	Y	N	N/ /N	N		N	Occurs in all tributaries in Sonoma County that are accessible from the Pacific Ocean. Likely outside area expected to be affected by covered activities known at this time. Low to moderate likelihood of being listed during permit term.
Russian River tule perch <i>Hysterocarpus traskii pomo</i>	SSC	—	N		Y	N		N	N	N	N/ /N	N		N	Occurs in Russian River. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	SSC	—	N		Y	Y		N	Y	N	N/ /N	N		N	Occurs in Petaluma River and associated tidal marshes. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Steelhead – central California coast Distinct Population Segment <i>Oncorhynchus mykiss irideus</i>	—	FT	Y		Y	Y		Y	Y	Y	Y/ /Y	Y		Y	Occurs in Russian River and its tributaries, including Santa Rosa Creek. May be affected by covered activities. In need of mitigation.
Steelhead – northern California Distinct Population Segment <i>O. mykiss</i>	—	FT	N		Y	N		N	Y	N	N/ /N	N		N	Northern California Distinct Population Segment occurs in the Gualala River, northern Sonoma County. Likely outside area expected to be affected by covered activities known at this time.
Tidewater goby <i>Eucyclogobius newberryi</i>	—	FE	N		Y	N		Y	Y	N	N/ /N	N		N	Occurs in Salmon Creek and Estero Americano. May be affected by covered activities (e.g., infrastructure improvements in or near tidal estuaries).
White sturgeon <i>Acipenser transmontanus</i>	SSC	—	N		Y	N		N	Y	N	N/ /N	N		N	Occurs in San Pablo Bay. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
California giant salamander <i>Dicamptodon ensatus</i>	SSC	—	N		Y	Y		Y	N	N	N/ /N	N		N	There are 85 CNDDDB occurrences in the County. Occurs in wet coastal forests; larvae in cold, clear streams (occasionally ponds and lakes), adults under rocks and logs near streams and lakes. Little known about basic biology (Thomsen et al. 2016). Not expected to be listed during permit term.
California red-legged frog <i>Rana draytonii</i>	SSC	FT	N		Y	N		Y	Y		N/ /Y	N		Y	There are 63 CNDDDB occurrences in the County, primarily from the Outer and Inner Northern Coast Ranges.
California tiger salamander - Sonoma County Distinct Population Segment <i>Ambystoma californiense</i>	ST	FE	Y		Y	Y		Y	Y		Y/ /Y	Y		Y	There are 82 CNDDDB occurrences in the County, nearly all from the Santa Rosa Plain. Covered by Santa Rosa Plain Conservation Strategy.

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Foothill yellow-legged frog – Northwest/North Coast Clade <i>Rana boylei</i>	SSC	—	N		Y	N		Y	N	N/ /N	N		N	There are 155 CNDDDB occurrences in the County. Sonoma County populations belong to the Northwest/North Coast clade (CDFW 2019). At its February 21, 2020 meeting, the California Fish and Game Commission adopted its February 13 draft finding that listing this clade under CESA “is not warranted at this time” (CDFW 2020). CDFW listed all other clades in CA as either threatened or endangered under CESA. Low to moderate likelihood of becoming listed during permit term.	
Red-bellied newt <i>Taricha rivularis</i>	SSC	—	N		Y	N		N	N	N/ /N	N		N	There are 58 CNDDDB occurrences in the County, all from the Outer and Inner Northern Coast Ranges. Occurs in moist coastal forests; juveniles underground, adults aboveground in moist environments. Breeds in streams with rocky bottoms. Limited distribution and abundance data (Thomson et al. 2016). Not expected to be listed during permit term.	
Reptiles															
Western pond turtle <i>Emys marmorata</i>	SSC	—	Y		Y	Y		Y	N	Y/ /Y	Y		Y	There are 85 CNDDDB occurrences in the County. Species likely to be listed during permit term.	
Birds															
Bald eagle <i>Haliaeetus leucocephalus</i>	FP	BGPA	Y		Y	Y		Y	N	N/ /N	N		N	There are no CNDDDB occurrences in the County but many observations in eBird and nesting has been documented at Lake Sonoma and the Laguna de Santa Rosa. May be affected by covered activities near these and other known nests, but fully protected status and listing under federal Bald and Golden Eagle Protection Act makes coverage in the HCP impractical for anything other than habitat loss. Covered activities not likely to result in enough foraging habitat loss to qualify as take	
Bank swallow <i>Riparia riparia</i>	ST	—	N	N	N	N	N	Y	N	N/ /N	N	N	N	Only two historic (1893, 1960) CNDDDB occurrences in the County. No extant nest colonies.	
Burrowing owl <i>Athene cunicularia</i>	SSC	—	Y		Y	Y		Y	Y	Y/ /Y	Y		Y	There are 14 CNDDDB occurrences in the County, all during the non-breeding season. Species likely to become state-listed during permit term and take not easily avoided year-round because this species uses burrows and requires focused surveys to determine site occupancy.	
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST	—	N		Y	N		Y	N	N//N	N		N	There are 10 CNDDDB occurrences in the southern portion of the County, all from the tidal marshes along the Petaluma River. Likely outside area expected to be affected by covered activities known at this time.	
California Ridgway’s rail <i>Rallus obsoletus obsoletus</i>	SE, FP	SE	N		Y	N		Y	N	N//N	N		N	There are 12 CNDDDB occurrences in the southern portion of the County, all from the tidal marshes along the Petaluma River. Likely outside area expected to be affected by covered activities known at this time.	

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Golden eagle <i>Aquila chrysaetos</i>	FP	BGPA	N		Y	N		N	Y	N	N//N	N		N	There is one CNDDDB occurrence in the County associated with a nesting territory on Sonoma Mountain. Likely outside area expected to be affected by covered activities known at this time. Fully protected status and listing under federal Bald and Golden Eagle Protection Act makes coverage in HCP impractical for anything except habitat loss. Covered activities not likely to result in enough foraging habitat loss to qualify as take
Grasshopper sparrow <i>Ammodramus savannarum</i>	SSC	—	N		Y	N		N	N	N	N//N	N		N	There are only two CNDDDB occurrences in the County. Distribution and abundance difficult to determine due to nomadic nesting habits. Not expected to be listed in permit term.
Marbled murrelet <i>Brachyramphus marmoratus</i>	ST	FE	N	N	Y	N	N	N	Y	N	N//N	N	N	N	There is only one CNDDDB occurrence in the County. Likely outside area expected to be affected by covered activities known at this time.
Northern spotted owl <i>Strix occidentalis caurina</i>	ST	FT	N		Y	N		Y	Y	Y	N//Y	N		Y	Multiple occurrences in the Outer and Inner Northern Coast Ranges. May be affected by covered activities if they include habitat impacts and/or noise within territories as mapped in CDFW SPOW Observations database.
Purple martin <i>Progne subis</i>	SSC	—	N		Y	N		N	N	Y	N//N	N		N	There are two CNDDDB occurrences in the County, both in the Mayacamas Mountains. Scarce as a nesting species. Low to moderate likelihood of becoming listed during permit term.
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	SSC	—	N	N	Y	N	N	N	N		N//N	N		N	There are 20 CNDDDB occurrences in the southern portion of the County, all from the tidal marshes along the Petaluma River. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	SSC	—	N		Y	N		N	N	N	N//N	N	N	N	There are 14 CNDDDB occurrences in the southern portion of the County, all from the tidal marshes along the Petaluma River. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Swainson's hawk <i>Buteo swainsoni</i>	ST	—	N		Y	N		N	Y	N	N//N	N		N	There are two CNDDDB occurrences in the County; only one of these is extant (2013 nest along Sonoma Creek south of the City of Sonoma). HCP covered activities can avoid take as defined by CESA through seasonal avoidance.
Tricolored blackbird <i>Agelaius tricolor</i>	ST	—	Y		Y	Y		Y	Y	Y	Y//Y	Y		Y	There are five CNDDDB occurrences in the County. There is some potential for human presence and construction noise during emergency maintenance activities to affect nesting tricolored blackbirds, but permanent loss or conversion of primary habitat is not expected. Conversion of secondary foraging habitat as a result of new infrastructure construction or implementation of conservation actions is possible. Recommend for take coverage unless these potential impacts can be avoided.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	—	FT	N	N	N	N	N	N	N	N	N//N	N	N	N	There are only two CNDDDB occurrences in the County, neither from the last 30 years. Extensive coastal monitoring of species strongly suggests absence from County.

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Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FE	ST	N	N	N	N	N	N	N	N	N//N	N	N	N	There is only one extant CNDDDB occurrence in the County (1996 observation of window-killed bird near Bodega). Extirpated as a breeding species in the County.
White-tailed kite <i>Elanus leucurus</i>	FP	—	Y	Y	Y	N	N	N	Y	N	N//N	N	N	N	There are five CNDDDB occurrences in the County. Noise or human presence associated with covered activities could indirectly affect this species, but permanent habitat loss nor injury or mortality as a result of covered activities will occur. Species is fully protected; take of individuals not allowed. Not expected to be listed during permit term.
Mammals															
American badger <i>Taxidea taxus</i>	SSC	—	N		Y	N		Y	N	N	N//N	N		N	There are 21 CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Humboldt marten <i>Martes caurina humboldtensis</i>	SE, SSC	—	N		Y	N		N	N	N	N//N	N		N	There are no CNDDDB occurrences in the County but this species historically occupied coastal forests in northwest Sonoma County. Current status unknown.
Pallid bat <i>Antrozous pallidus</i>	SSC	—	Y		Y	Y		Y	Y	N	N//N	N		N	There are 19 CNDDDB occurrences in the County. Not expected to be listed during permit term.
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	SE, FP	FE	N		Y	N		N	Y	N	N//N	N		N	There are eight CNDDDB occurrences in the southern portion of the County, all from the tidal marshes along the Petaluma River. Likely outside area expected to be affected by covered activities known at this time.
Sonoma tree vole <i>Arborimus pomo</i>	SSC	—	N		Y	N		N	N	N	N//N	N		N	There are 27 CNDDDB occurrences in the northwestern portion of the County. Occurs in North coast coniferous forest. Likely outside area expected to be affected by covered activities known at this time.
Suisun shrew <i>Sorex ornatus sinuosus</i>	SSC	—	N		Y	N		N	N	N	N//N	N		N	There are two CNDDDB occurrences in the southern portion County in the tidal marshes adjacent to San Pablo Bay. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SSC	—	N		Y	N		Y	N	Y?	N//N	N		N	There are no CNDDDB occurrences in the County but detection of roost sites difficult and there may be undocumented occurrences in caves or cave-like habitat (e.g., abandoned mines or buildings, old bridges). Current data on County distribution insufficient to adequately evaluate impacts and develop effective conservation measures. Low to moderate potential of being listed during permit term.
Western red bat <i>Lasiurus blossevillii</i>	SSC	—	Y		Y	Y		Y	N	N	N//N	N		N	There are three CNDDDB occurrences in the County. This tree-roosting species is very difficult to detect, making mitigation of impacts difficult. Not expected to be listed during permit term.
Plants															
Pink sand-verbena <i>Abronia umbellata var. breviflora</i>	1B	—	N	N	Y	N	N	N	Y	N	N/N/N	N	N	N	There are three CNDDDB occurrences in the County, all along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.

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Blasdale's bent grass <i>Agrostis blasdalei</i>	1B	—	N	N	Y	N	N	N	Y	N	N/N/N	N	N	N	There are 15 CNDDDB occurrences in the County, all along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	1B	—	N		Y	N		N	Y	N	N//N	N		N	There are 4 CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Sonoma alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i>	1B	FE	N		Y	N		N	N	N	N//N	N		N	There are 13 CNDDDB occurrences in the southwestern portion of the County from the Outer Northern Coast Range. Occurs in freshwater wetlands and riparian scrub. Likely outside area expected to be affected by covered activities known at this time.
Napa false indigo <i>Amorpha californica</i> var. <i>napensis</i>	1B	—	N		Y	N		N	Y	N	N//N	N		N	There are 34 CNDDDB occurrences in the County in the Outer and Inner Northern Coast Ranges. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Bent-flowered fiddleneck <i>Amsinkckia lunaris</i>	1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There are two historic but extant CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Baker's manzanita <i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	SR, 1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There are three CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time.
The Cedars manzanita <i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>	SR, 1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There are four CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time.
Vine Hill manzanita <i>Arctostaphylos densiflora</i>	SE, 1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There are two CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time.
Konocti manzanita <i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There are two CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time.
Rincon Ridge manzanita <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>	1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There are 10 CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time.
Clara Hunt's milk-vetch <i>Astragalus claranus</i>	ST, 1B	FE	N		Y	N	N	N	Y	N	N//N	N		N	There are two CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time.
Big-scale balsamroot <i>Balsamorhiza macrolepis</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are three CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Sonoma sunshine <i>Blennosperma bakeri</i>	SE, 1B	FE	Y		Y	Y		Y	Y	Y	Y//Y	Y		Y	There are 23 CNDDDB occurrences in the County. Covered by Santa Rosa Plain Conservation Strategy.

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Narrow-anthered brodiaea <i>Brodiaea leptandra</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 22 CNDDDB occurrences in the County. Occurs on volcanic soils. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
The Cedars fairy-lantern <i>Calochortus raichei</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are nine CNDDDB occurrences in the County. Occurs in serpentine chaparral and Sargent cypress woodland. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Coastal bluff morning-glory <i>Calystegia purpurata ssp. saxicola</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 19 CNDDDB occurrences in the County. Occurs coastal dunes and coastal scrub. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Swamp harebell <i>Campanula californica</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 39 CNDDDB occurrences in the County. Occurs in bogs and fens. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Deceiving sedge <i>Carex saliniformis</i>	1B	—	N	N	N	N	N	N	N	N	N/N/N	N	N	N	There are three CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Mendocino Coast paintbrush <i>Castilleja mendocinensis</i>	1B	—	N	N	N	N	N	N	N	N	N/N/N	N	N	N	There is one CNDDDB occurrence in the County in Gualala. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Rincon Ridge ceanothus <i>Ceanothus confusus</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 17 CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Calistoga ceanothus <i>Ceanothus divergens</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 14 CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Vine Hill ceanothus <i>Ceanothus foliosus var. vineatus</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are four CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Holly-leaved ceanothus <i>Ceanothus purpureus</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are four CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Sonoma ceanothus <i>Ceanothus sonomensis</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 23 CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.

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Pappose tarplant <i>Centromadia parryi ssp. parryi</i>	1B	—	Y		Y	Y		Y	N	Y	N//N	N		N	There are four CNDDDB occurrences in the County. May be affected by covered activities that impact alkaline fields. Not expected to be listed in permit term.
Dwarf soaproot <i>Chlorogalum pomeridianum var. minus</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are two CNDDDB occurrences in the County. Occurs in chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Point Reyes salty bird's-beak <i>Chloropyron maritimum ssp. palustre</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are three CNDDDB occurrences in the County. Occurs in tidal salt marsh. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Woolly-headed spineflower <i>Chorizanthe cuspidata var. villosa</i>	1B	—	N		Y	N		N	N	N		N		N	There are four CNDDDB occurrences in the County along the immediate coast. Occurs on sandy beaches. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Vine Hill clarkia <i>Clarkia imbricata</i>	SE	FE	N		Y	N		N	N	N	N//N	N		N	There are two CNDDDB occurrences in the County at Vine Hill. Likely outside area expected to be affected by covered activities known at this time.
Pennell's bird's-beak <i>Cordylanthus tenuis ssp. capillaris</i>	SR	FE	N		Y	N		N	N	N	N//N	N		N	There are four CNDDDB occurrences in the County. Occurs in open, disturbed areas in serpentine forest or chaparral. Likely outside area expected to be affected by covered activities known at this time.
Serpentine cryptantha <i>Cryptantha dissita</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There is single CNDDDB occurrence in the County on the Modini Mayacamas Preserve. Occurs on serpentine outcrops in chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Mendocino dodder <i>Cuscuta pacifica var. papillata</i>	1B	—	N		Y	N	N	N	N	N	N//N	N		N	There is one CNDDDB occurrence in the County along the immediate coast.
Golden larkspur <i>Delphinium luteum</i>	SR, 1B	FE	N		N	N		N	N	N	N//N	N		N	There are six CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Western leatherwood <i>Dirca occidentalis</i>	1B	—	N		N	N		N	N	N	N//N	N		N	There are three CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Greene's narrow-leaved daisy <i>Erigeron greenei</i>	1B	—	N		N	N		N	N	N	N//N	N		N	There are five CNDDDB occurrences in the County. Occurs in serpentine chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Serpentine daisy <i>Erigeron serpentinus</i>	1B	—	N		N	N		N	N	N	N//N	N		N	There are six CNDDDB occurrences in the County. Occurs in serpentine chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.

Species	Criteria ² (columns shaded in gray are required screening criteria)										Criterion Met? ²	Recommend Coverage in HCP ³			Evaluation Notes
	Status ¹		Occurrence			Impact			Data ²	Coverage Necessary & Efficient?		Santa Rosa Plain	TBD	County	
	State	Federal	Santa Rosa Plain	TBD	County	Santa Rosa Plain	TBD	County				Santa Rosa Plain	TBD	County	
Supple daisy <i>Erigeron supplex</i>	1B	—	N		N	N		N	N	N	N//N	N		N	There are seven CNDDDB occurrences in the County. Occurs in serpentine chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
The Cedars buckwheat <i>Eriogonum cedrorum</i>	1B	—	N		N	N		N	N	N	N//N	N		N	There are three CNDDDB occurrences in the County. Occurs in serpentine chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Snow Mountain buckwheat <i>Eriogonum nervulosum</i>	1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There are two CNDDDB occurrences in the County, both of which are limited to Snow Mountain and outside the area affected by covered activities.
Loch Lomond button-celery <i>Eryngium constancei</i>	SE, 1B	FE	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There is one CNDDDB occurrence in the County on Diamond Mountain. Occurs in volcanic ash flow vernal pools. Likely outside area expected to be affected by covered activities known at this time.
Bluff wallflower <i>Eysimum concinnum</i>	1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There are three CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Fragrant fritillary <i>Fritillaria liliacea</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 14 CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Blue coast gilia <i>Gilia capitata ssp. chamissonis</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are five CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Pacific gilia <i>Gilia capitata ssp. pacifica</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are four CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Woolly-headed gilia <i>Gilia capitata ssp. tomentosa</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are six CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Dark-eyed gilia <i>Gilia millefoliata</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are three CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Boggs Lake hedge-hyssop <i>Gratiola heterosepala</i>	SE, 1B	—	N	N	Y	N	N	N	N	N	N/N/N	N	N	N	There is a single 1994 CNDDDB occurrence in the County at Pepperwood Ranch Natural Preserve. Occurs in vernal pools and in marshy area on the margins of reservoirs and lakes. Likely outside area expected to be affected by covered activities known at this time.

Species	Criteria ² (columns shaded in gray are required screening criteria)										Recommend Coverage in HCP ³			Evaluation Notes	
	Status ¹		Occurrence			Impact			Data ²	Coverage Necessary & Efficient?	Criterion Met? ²	Santa Rosa Plain	TBD		County
	State	Federal	Santa Rosa Plain	TBD	County	Santa Rosa Plain	TBD	County				Santa Rosa Plain	TBD		County
Congested-headed hayfield tarplant <i>Hemizonia congesta ssp. congesta</i>	1B	—	Y		Y	Y		Y	Y	N//N	N		N	There are 34 CNDDDB occurrences in the County. Occurs in grassland and fallow fields, sometimes along roadsides. May be affected by covered activities, but not expected to be listed during permit term.	
Short-leaved evax <i>Hesperovax sparsiflora var. brevifolia</i>	1B	—	N		Y	N		N	N	N//N	N		N	There are 11 CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.	
Pygmy cypress <i>Hesperocyparis pygmaea</i>	1B	—	N		N	N		Y	N	N//N	N		N	There are two CNDDDB occurrences in the County along the immediate coast, outside the areas affected by covered activities.	
Two-carpellate western flax <i>Hesperolinon bicarpellatum</i>	1B	—	N	N	N	N	N	N	N	N/N/N	N	N	N	There is a single CNDDDB occurrence in the County on the western flank of Mount St. Helena (1979 collection).	
Point Reyes horkelia <i>Horkelia marinensis</i>	1B	—	N	N	N	N	N	N	N	N/N/N	N	N	N	There is only one CNDDDB occurrence in the County at Bodega Head (1980 map), outside the areas affected by covered activities.	
Thin-lobed horkelia <i>Horkelia tenuiloba</i>	1B	—	N		Y	N		N	N	N//N	N		N	There are 11 CNDDDB occurrences in the County. Occurs in sandy soils. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.	
Burke's goldfields <i>Lasthenia burkei</i>	SE, 1B	FE	Y		Y	Y		Y	Y	Y//Y	Y		Y	There are 28 CNDDDB occurrences in the County. Occurs in vernal pools and swales. Covered by Santa Rosa Plain Conservation Strategy.	
Perennial goldfields <i>Lasthenia californica ssp. macrantha</i>	1B	—	N		Y	N		N	N	N//N	N		N	There are 10 CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.	
Contra Costa goldfields <i>Lasthenia conjugens</i>	1B	FE	N		Y	N		Y	Y	N//N	N		N	There is a single CNDDDB occurrence in the County east of Petaluma. Likely outside area expected to be affected by covered activities known at this time. Due to extreme rarity of species take authorization cannot likely be provided.	
Delta tule pea <i>Lathyrus jepsonii var. jepsonii</i>	1B	—	N		Y	N		Y	N	N//N	N		N	There is one CNDDDB occurrence in the County in Napa Marsh. Occurs in tidally influenced freshwater and brackish marshes. Likely outside area expected to be affected by covered activities known at this time. Potential for future listing is moderate to low.	
Colusa layia <i>Layia septentrionalis</i>	1B	—	N		Y	N		N	N	N//N	N		N	There are four CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.	
Jepson's leptosiphon <i>Leptosiphon jepsonii</i>	1B	—	N		Y	N		N	N	N//N	N		N	There are 20 CNDDDB occurrences in the County. Occurs in volcanic and serpentine areas. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.	
Crystal Springs lessingia <i>Lessingia arachnoidea</i>	1B	—	N		Y	N		N	N	N//N	N		N	There are three CNDDDB occurrences in the County. Occurs on serpentinite. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.	

Species	Criteria ² (columns shaded in gray are required screening criteria)									Criterion Met? ²	Recommend Coverage in HCP ³			Evaluation Notes	
	Status ¹		Occurrence			Impact			Data ²		Coverage Necessary & Efficient?	Santa Rosa Plain	TBD		County
	State	Federal	Santa Rosa Plain	TBD	County	Santa Rosa Plain	TBD	County				Santa Rosa Plain	TBD		County
Coast lily <i>Lilium maritimum</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are nine CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Pitkin Marsh lily <i>Lilium pardalinum ssp. pitkinense</i>	SE, 1B	FE	N		Y	N		N	N	N	N//N	N		N	There are four CNDDDB occurrences in the County (locations suppressed).
Sebastopol meadowfoam <i>Limnanthes vinculans</i>	SE, 1B	FE	Y		Y	Y		Y	Y	Y	Y//Y	Y		Y	There are 44 CNDDDB occurrences in the County. Covered by Santa Rosa Plan Conservation Strategy.
Cobb Mountain lupine <i>Lupinus sericatus</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 14 CNDDDB occurrences in the County. Occurs in knobcone pine-oak woodland. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Tidestrom's lupine <i>Lupinus tidestromii</i>	SE, 1B	FE	N		Y	N		N	N	N	N//N	N		N	There are 2 CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time.
Marsh microseris <i>Microseris paludosa</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are four CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Baker's navarretia <i>Navarretia leucocephala ssp. bakeri</i>	1B	—	Y		Y	Y		Y	Y	Y	N//N	N		N	There are 18 CNDDDB occurrences in the County. Occurs in vernal pool and swales. May be affected by covered activities, but not expected to be listed during permit term.
Many-flowered navarretia <i>Naarretia leucocephala ssp. plieantha</i>	SE, 1B	FE	Y		Y	Y		Y	Y	Y	Y//Y	Y		Y	There are two CNDDDB occurrences in the County. Covered by Santa Rosa Plain Conservation Strategy.
Geysers panicum <i>Panicum acuminatum var. thermale</i>	SE, 1B	—	N		Y	N		N	Y	N	N//N	N		N	There are five CNDDDB occurrences in the County, all near The Geysers. Occurs near hot springs. Likely outside area expected to be affected by covered activities known at this time.
Sonoma beardtongue <i>Penstemon newberryi var. sonomensis</i>	1B	—	N		Y	N		N	Y	N	N//N	N		N	There are two CNDDDB occurrences in the County. Occurs in rocky chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
White-flowered rein orchid <i>Piperia candida</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 5 CNDDDB occurrences in the County. Occurs in North Coast coniferous forest. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
North Coast semaphore grass <i>Pleuropogon hooverianus</i>	ST, 1B	—	N		Y	N		N	N	N	N//N	N		N	There are two CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time.
California beaked-rush <i>Rhynchospora californica</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are three CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.

Species	Criteria ² (columns shaded in gray are required screening criteria)										Criterion Met? ²	Recommend Coverage in HCP ³			Evaluation Notes
	Status ¹		Occurrence			Impact			Data ²	Coverage Necessary & Efficient?		Santa Rosa Plain	TBD	County	
	State	Federal	Santa Rosa Plain	TBD	County	Santa Rosa Plain	TBD	County				Santa Rosa Plain	TBD	County	
Point Reyes checkerbloom <i>Sidalcea calycosa ssp. rhizomata</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are eight CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Purple-stemmed checkerbloom <i>Sidalcea malviflora ssp. purpurea</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are 11 CNDDDB occurrences in the County along the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Kenwood Marsh checkerbloom <i>Sidalcea oregana ssp. valida</i>	SE, 1B	FE	N		Y	N		N	N	N	N//N	N		N	There are 2 CNDDDB occurrences in the County. Likely outside area expected to be affected by covered activities known at this time.
Socrates Mine jewelflower <i>Streptanthus brachiatus ssp. brachiatus</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are nine CNDDDB occurrences in the County. Occurs in serpentine chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Freed's jewelflower <i>Streptanthus brachiatus ssp. hoffmanii</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are five CNDDDB occurrences in the County. Occurs in serpentine chaparral. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Hoffman's bristly jewelflower <i>Streptanthus glandulosus ssp. hoffmanii</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are seven CNDDDB occurrences in the County. Occurs on steep rocky banks in serpentine and non-serpentine areas. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Dorr's Cabin jewelflower <i>Streptanthus morrisonii ssp. hirtiflorus</i>	1B	—	N	N	N	N	N	N	N	N	N/N/N	N	N	N	There is one CNDDDB occurrence in the County. This subspecies is endemic to serpentine barrens at the head of Austin Creek, outside the area affected by covered activities.
Morrison's jewelflower <i>Streptanthus morrisonii ssp. morrisonii</i>	1B	—	N		Y	N		N	N	N	N/N/N	N	N	N	There are five CNDDDB occurrences in the County. This subspecies only occurs on serpentine outcrops in the Austin Creek area, outside the area affected by covered activities.
Beaked tracyina <i>Tracyina rostrata</i>	1B	—	N		Y	N		N	N	N	N/N/N	N	N	N	There is one CNDDDB occurrence in the County near White Mountain Summit. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Two-fork clover <i>Trifolium amoenum</i>	1B	FE	N		Y	N		Y	Y	Y	N//Y	N		Y	There are 10 CNDDDB occurrences in the County. Occurs in open grassland and scrub, sometimes serpentinite. Historically ranged throughout much of County, and undocumented occurrences may exist due to its resemblance to other <i>Trifolium</i> sp. May be affected by covered activities if found in future. Therefore, recommended for coverage by countywide HCP.
Santa Cruz clover <i>Trifolium buckwestiorum</i>	1B	—	Y		Y	Y		Y	N	N	N//N	N		N	There are four CNDDDB occurrences in the County. Occurs in moist grasslands. May be affected by covered activities near Santa Rosa, but not expected to be listed during permit term.
Saline clover <i>Trifolium hydrophilum</i>	1B	—	Y		Y	Y		Y	N	Y	N//N	N		N	There are 7 CNDDDB occurrences in the County. Occurs in alkaline wetlands and grassland. May be affected by covered activities, but the species is widely distributed in central California coastal counties and it is not likely to be listed during the permit term.

Species	Criteria ² (columns shaded in gray are required screening criteria)										Criterion Met? ²	Recommend Coverage in HCP ³			Evaluation Notes
	Status ¹		Occurrence			Impact			Data ²	Coverage Necessary & Efficient?		Santa Rosa Plain	TBD	County	
	State	Federal	Santa Rosa Plain	TBD	County	Santa Rosa Plain	TBD	County				Santa Rosa Plain	TBD	County	
Pacific Grove clover <i>Trifolium polyodon</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There is one CNDDDB occurrence in the County near Petaluma but exact location unknown. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.
Coastal triquetrella <i>Triquetrella californica</i>	1B	—	N		Y	N		N	N	N	N//N	N		N	There are two CNDDDB occurrences in the County near the immediate coast. Likely outside area expected to be affected by covered activities known at this time. Not expected to be listed during permit term.

¹ Status
The species is either:

- listed under the federal ESA as threatened or endangered or proposed for listing;
- listed under CESA as rare, threatened or endangered or a candidate for such listing;
- lacks a listing status (—); or
- expected to be listed under ESA or CESA within the permit term. Potential for listing during the permit term is based on current listing status and best professional judgment.

State Status
SE = State listed as endangered.
ST = State listed as threatened.
CE = listed as a candidate, endangered, species. A candidate species is one that the California Fish and Game Commission has formally declared a candidate species.
FP = State full protect.
SR = State listed as rare.
SSC = California special concern species (August 2019 list).

Federal Status
BGPA= Bald Eagle and Golden Eagle Protection Act.
FE = Federally endangered.
FT = Federally threatened.
FC = Candidate for federal listing.
FPT = Federally proposed for threatened listing.
UR = Under review. Species that have been petitioned for listing and for which a 90 day finding has not been published or for which a 90 day substantial has been published but a 12 Month finding have not yet been published in the Federal Register. Also includes species that are being reviewed through the candidate process, but the Candidate Notice of Review has not yet been signed.

California Native Plant Society (CNPS) Rare Plant Ranking
1B = Rare or endangered in California and elsewhere.

² Criteria
Occurrence: The species is known to occur or has potential to occur in the plan area. Occurrence data is based on credible evidence, and consideration is given to species not currently known in the planning area but that are expected to occur in the planning area during the permit term (e.g., through range expansion or reintroduction to historic range).
Impact: Implementation of proposed covered activities is expected to result in take of the species, including take of individuals or of habitat.
Data: Sufficient scientific data exist on the species' life history, habitat requirements, and occurrence in the plan area to adequately evaluate impacts on the species and to develop conservation measures to mitigate these impacts to levels specified by regulatory standards.
Coverage Necessary and Efficient: Species anticipated to need mitigation by potential projects in the planning area in the near-term (30-50 years).

³ Recommend Coverage in HCP
Y = recommended as covered species in the HCP. (Species meets all criteria to be recommended for coverage.)
N = not recommended as covered species in the HCP.

Table C-2. Group 3 Species Not Recommended for Coverage

GROUP 3 SPECIES		
Plants		
Pink sand verbena	<i>Abronia umbellate</i> var. <i>breviflora</i>	-/-/1B
Blasdale's bent grass	<i>Agrostis blasdalei</i>	-/-/1B
Franciscan onion	<i>Allium peninsulare</i> var. <i>franciscanum</i>	-/-/1B
Napa false indigo	<i>Amorpha californica</i> var. <i>napensis</i>	-/-/1B
Bent-flowered fiddleneck	<i>Amsinckia lunaris</i>	-/-/1B
Baker's manzanita	<i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	-/SR/1B
The Cedars manzanita	<i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>	-/SR/1B
Vine Hill manzanita	<i>Arctostaphylos densiflora</i>	-/E/1B
Konocti manzanita	<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>	-/-/1B
Rincon Ridge manzanita	<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>	-/-/1B
Clara Hunt's milk-vetch	<i>Astragalus claranus</i>	E/T/1B
Big-scale balsamroot	<i>Balsamorhiza macrolepis</i>	-/-/1B
Narrow-anthered brodiaea	<i>Brodiaea leptandra</i>	-/-/1B
The Cedars fairy-lantern	<i>Calochortus raichei</i>	-/-/1B
Coastal bluff morning-glory	<i>Calystegia purpurata</i> ssp. <i>saxicola</i>	-/-/1B
Swamp harebell	<i>Campanula californica</i>	-/-/1B
Deceiving sedge	<i>Carex saliniformis</i>	-/-/1B
Mendocino Coast paintbrush	<i>Castilleja mendocinensis</i>	-/-/1B
Rincon Ridge ceanothus	<i>Ceanothus confusus</i>	-/-/1B
Calistoga ceanothus	<i>Ceanothus divergens</i>	-/-/1B
Vine Hill ceanothus	<i>Ceanothus foliosus</i> var. <i>vineatus</i>	-/-/1B
Holly-leaved ceanothus	<i>Ceanothus purpureus</i>	-/-/1B
Sonoma ceanothus	<i>Ceanothus sonomensis</i>	-/-/1B
Pappose tarplant	<i>Centromadia parryi</i> ssp. <i>parryi</i>	-/-/1B
Dwarf soaproot	<i>Chlorogalum pomeridianum</i> var. <i>minus</i>	-/-/1B
Point Reyes salty bird's-beak	<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	-/-/1B
Woolly-headed spineflower	<i>Chorizanthe cuspidata</i> var. <i>villosa</i>	-/-/1B
Vine Hill clarkia	<i>Clarkia imbricata</i>	E/E/-
Pennell's bird's-beak	<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	E/SR/-
Serpentine cryptantha	<i>Cryptantha dissita</i>	-/-/1B
Mendocino dodder	<i>Cuscuta pacifica</i> var. <i>papillata</i>	-/-/1B
Golden larkspur	<i>Delphinium luteum</i>	E/SR/1B
Western leatherwood	<i>Dirca occidentalis</i>	-/-/1B
Greene's narrow-leaved daisy	<i>Erigeron greenei</i>	-/-/1B
Serpentine daisy	<i>Erigeron serpentinus</i>	-/-/1B
Supple daisy	<i>Erigeron supplex</i>	-/-/1B
The Cedars buckwheat	<i>Eriogonum cedrorum</i>	-/-/1B
Snow Mountain buckwheat	<i>Eriogonum nervulosum</i>	-/-/1B

Loch Lomond button-celery	<i>Eryngium constancei</i>	E/E/1B
Bluff wallflower	<i>Eysimum concinnum</i>	-/-/1B
Fragrant fritillary	<i>Fritillaria liliacea</i>	-/-/1B
Blue coast gilia	<i>Gilia capitata ssp. chamissonis</i>	-/-/1B
Pacific gilia	<i>Gilia capitata ssp. pacifica</i>	-/-/1B
Woolly-headed gilia	<i>Gilia capitata ssp. tomentosa</i>	-/-/1B
Dark-eyed gilia	<i>Gilia millefoliata</i>	-/-/1B
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	-/E/1B
Congested-headed hayfield tarplant	<i>Hemizonia congesta ssp. congesta</i>	-/-/1B
Short-leaved evax	<i>Hesperevax sparsiflora var. brevifolia</i>	-/-/1B
Pygmy cypress	<i>Hesperocyparis pygmaea</i>	-/-/1B
Two-carpellate western flax	<i>Hesperolinon bicarpellatum</i>	-/-/1B
Point Reyes horkelia	<i>Horkelia marinensis</i>	-/-/1B
Thin-lobed horkelia	<i>Horkelia tenuiloba</i>	-/-/1B
Perennial goldfields	<i>Lasthenia californica ssp. macrantha</i>	-/-/1B
Contra Costa goldfields	<i>Lasthenia conjugens</i>	E/-/1B
Delta tule pea	<i>Lathyrus jepsonii var. jepsonii</i>	-/-/1B
Colusa layia	<i>Layia septentrionalis</i>	-/-/1B
Jepson's leptosiphon	<i>Leptosiphon jepsonii</i>	-/-/1B
Crystal Springs lessingia	<i>Lessingia arachnoidea</i>	-/-/1B
Coast lily	<i>Lilium maritimum</i>	-/-/1B
Pitkin marsh Lily	<i>Lilium pardalinum ssp. Pitkinense</i>	E/E/1B
Cobb Mountain lupine	<i>Lupinus sericatus</i>	-/-/1B
Tidestrom's lupine	<i>Lupinus tidestromii</i>	E/E/1B
Marsh microseris	<i>Microseris paludosa</i>	-/-/1B
Baker's navarretia	<i>Navarretia leucocephala ssp. bakeri</i>	-/-/1B
Geysers panicum	<i>Panicum acuminatum var. thermale</i>	-/E/1B
Sonoma beardtongue	<i>Penstemon newberryi var. sonomensis</i>	-/-/1B
White-flowered rein orchid	<i>Piperia candida</i>	-/-/1B
North Coast semaphore grass	<i>Pleuropogon hooverianus</i>	/T/1B
California beaked-rush	<i>Rhynchospora californica</i>	-/-/1B
Point Reyes checkerbloom	<i>Sidalcea calycosa ssp. rhizomata</i>	-/-/1B
Purple-stemmed checkerbloom	<i>Sidalcea malviflora ssp. purpurea</i>	-/-/1B
Kenwood Marsh checkerbloom	<i>Sidalcea oregana ssp. valida</i>	E/E/1B
Socrates Mine jewelflower	<i>Streptanthus brachiatus ssp. brachiatus</i>	-/-/1B
Freed's jewelflower	<i>Streptanthus brachiatus ssp. hoffmanii</i>	-/-/1B
Hoffman's bristly jewelflower	<i>Streptanthus glandulosus ssp. hoffmanii</i>	-/-/1B
Dorr's Cabin jewelflower	<i>Streptanthus morrisonii ssp. hirtiflorus</i>	-/-/1B
Morrison's jewelflower	<i>Streptanthus morrisonii ssp. morrisonii</i>	-/-/1B
Beaked tracyina	<i>Tracyina rostrata</i>	-/-/1B
Santa Cruz clover	<i>Trifolium buckwestiorum</i>	-/-/1B
Saline clover	<i>Trifolium hydrophilum</i>	-/-/1B

Pacific Grove clover	<i>Trifolium polyodon</i>	-/-/1B
Coastal triquetrella	<i>Triquetrella californica</i>	-/-/1B
Invertebrates		
Crotch bumble bee	<i>Bombus crotchii</i>	-/CE/-
Western bumble bee	<i>Bombus occidentalis</i>	-/CE/-
Fish		
Green sturgeon- Southern Distinct Population Segment	<i>Acipenser medostris</i>	T/SSC/-
Gualala roach	<i>Lavinia symmetricus parvipinnis</i>	-/SSC/-
Hardhead	<i>Mylopharodon conocephalus</i>	-/SSC/-
Longfin smelt	<i>Spirinchus thaleichthys</i>	C/T/-
Navarro roach	<i>Lavinia symmetricus navarroensis</i>	-/SSC/-
Pacific lamprey	<i>Entosphenus tridentatus</i>	-/SSC/-
Russian River tule perch	<i>Hysterocharys traskii pomo</i>	-/SSC/-
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	-/SSC/-
Steelhead – northern California Distinct Population Segment	<i>O. mykiss</i>	-/T/-
Tidewater goby	<i>Eucyclogobius newberryi</i>	E/-/-
White sturgeon	<i>Acipenser transmontanus</i>	-/SSC/-
Amphibians		
California giant salamander	<i>Dicamptodon ensatus</i>	-/SSC/-
Foothill yellow-legged frog – Northwest/North Coast Clade	<i>Rana boylei</i>	-/SSC/-
Red-bellied newt	<i>Taricha rivularis</i>	-/SSC/-
Birds		
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGPA/FP/-
Bank swallow	<i>Riparia riparia</i>	-/T/-