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## 1.0 INTRODUCTION

### 1.1 PROJECT BACKGROUND

In March 1999, the U.S. Fish and Wildlife Service (USFWS), in accordance with section 7 of the federal Endangered Species Act of 1973 (as amended), issued a Biological Opinion regarding the Solano Project Water Service Contract Renewal between the Bureau of Reclamation and the Solano County Water Agency (SCWA). The 25-year contract provides for continued delivery of Solano Project water for agricultural, municipal, and industrial purposes throughout the SCWA contract service area (Figures 1 and 2). SCWA delivers Solano Project water in accordance with its eight Member Agency contracts. The Member Agencies are:

- City of Vacaville
- City of Fairfield
- Suisun City
- City of Vallejo
- Solano Irrigation District (SID)
- Maine Prairie Water District (MPWD)
- University of California, Davis
- California Medical Facility/California State Prison, Vacaville.

The contract also provides for continued operations and maintenance of the Solano Project based on current operating parameters. Solano Project facilities include Lake Berryessa, Monticello Dam, Putah Diversion Dam, and Putah South Canal.

The Bureau of Reclamation, SCWA, and the above-listed member agencies have agreed to implement conservation measures to ensure the protection of threatened and endangered species and their habitat within the SCWA contract service area. As a condition of the Biological Opinion, SCWA and its member agencies are required to prepare a Habitat Conservation Plan (HCP), per Section 10(a)1(B) of the federal Endangered Species Act, in order to obtain authorization for incidental take of listed species that may be impacted by activities associated with future water use in the Solano Project contract service area.

The Solano HCP/NCCP addresses compliance with the Terms and Conditions of the Solano Project Biological Opinion for the following Plan Participants:

- SCWA
- City of Vacaville
- City of Fairfield
- Suisun City
- City of Vallejo
- Solano Irrigation District (SID)

- Maine Prairie Water District (MPWD)

In addition to these required agencies, the following agencies have chosen to voluntarily participate in the HCP/NCCP:

- City of Rio Vista
- City of Dixon
- Reclamation District No. 2068
- Vallejo Sanitation and Flood Control District (VSFCD)
- Fairfield-Suisun Sewer District

The University of California, Davis is preparing a separate HCP. The City of Vacaville's participation in this plan will fulfill the obligations of the California Medical Facility/California State Prison, Vacaville under the Solano Project Biological Opinion.

Figure 1 depicts the regional location for the Solano HCP/NCCP. Figure 2 identifies the SCWA service area and additional lands within the jurisdictions of the voluntary Plan Participants. Figure 3 identifies place names or locations for areas and regions of Solano County referred to in this document.

## **1.2 PURPOSE AND GOALS**

### **1.2.1 Background**

The Solano HCP/NCCP has been developed to support the issuance of a Section 10(a)1(B) "incidental take permit" under the federal Endangered Species Act of 1973 (as amended). This permit is required by the March 19, 1999 Solano Project Contract Renewal Biological Opinion between the USFWS and Bureau of Reclamation. The Solano HCP/NCCP has expanded the scope of the Biological Opinion requirements to comply with the State's NCCP Act of 2002 and includes additional voluntary Plan Participants and additional species for incidental take coverage. These additional species include federally listed fish species under the jurisdiction of the National Marine Fisheries Service (NOAA Fisheries) and species listed as threatened or endangered under the State's Endangered Species Act. The HCP/NCCP further addresses other species of concern (i.e., species recognized by groups such as the California Department of Fish and Game (CDFG) and California Native Plant Society (CNPS) as having declining or vulnerable populations, but not officially listed as threatened or endangered species). Seventy-seven (77) species are proposed to be covered under the Solano HCP/NCCP.

The development of the Solano HCP/NCCP has been guided by input from the applicable regulatory agencies, the Plan Participants, and general public/stakeholders group. In September 2001, a Steering Committee composed of representatives of various stakeholder's interests was established to:

- Facilitate discussions of the varied interests and serve as a consensus building group;
- Gather and disseminate information;

- Facilitate and maintain open lines of communication; and
- Make recommendations on major actions to decision makers representing the Plan Participants.

Steering Committee members are:

Agriculture/Landowners	Bruce Brazelton (Farm Bureau) Terry Riddle (Solano Resource Conservation District) Bill Peterson (Solano County Citizens Land Alliance) Alternate – Al Medvitz and Paul Lum (Farm Bureau) Alternate – Joe Moore (Ulati Resource Conservation District) Alternate - Don Pippo (Solano County Citizens Land Alliance)
Development Community	Bob Glover (Home Builders Association) Sal Evola (Albert D. Seeno Construction Company) Tad Tobitt (Creegan & D'Angelo Engineers) Alternate – Tom Kambe Alternate - Gary Andrews
Conservation Groups	Ted Swiecki (California Native Plant Society) Gerald Karr (Napa-Solano Audubon Society) Kathy Pratt (Suisun Marsh Natural History Association) Alternate – Carol Witham (CNPS) Alternate – Sue Wickham (CNPS)
Solano County Orderly Growth Committee	Lewis Martin Alternate – Horace (Tuffy) Williams
Plan Participants	Erin Beavers (City of Fairfield) Alternate – Fred Buderl (City of Vacaville)
Regulatory Agency Participants	Deblyn Mead (US Fish and Wildlife Service) Jenny Marr (Department of Fish and Game) Eric Tattersal (Department of Fish and Game) Beth Campbell (NOAA Fisheries) Diane Windham (NOAA Fisheries)

### 1.2.2 Steering Committee Member and Group Goals/Issues

At an initial meeting, steering committee members provided input on their group goals and issues with respect to the HCP/NCCP. The following summarizes the key points and issues raised by the Steering Committee members:

- Need to comply with Biological Opinion in order to continue to receive water.
- Streamline and simplify complex permit process for city activities as well as development; coordinate with other agencies such as California Department of Fish and Game, Regional Water Quality Control Board, and U.S. Army Corps of Engineers.
- Improve land use planning - mitigation leads to piecemeal approach which limits habitat value; HCP offers potential to reduce long term conflicts and provide better habitat value, reduce habitat fragmentation, and provide interconnection between habitat areas.
- Better way to direct growth versus easiest way as has often been done in past; HCP could identify areas where growth should not occur, like high habitat value areas, but also note that there are many other constraints that need to be considered such as the need to comply with mandates of other state agencies such as fair share of housing.
- Protection of larger areas is better environmentally and is more cost efficient than protecting smaller areas.
- Help breakdown barriers between landowners and advocates for conservation in order to promote conservation that is friendly to landowners; try to reestablish habitats on a cooperative basis with landowners.
- Would like to see opportunities to use conservation lands for recreation and agriculture, not just lock up land.
- Concerned about protection and preservation of agriculture in Solano County.
- Concerned about effects of HCP on landowners/property rights and the need to balance habitat and property rights/continued growth and desire for development.
- Consider economic effects - the cost/benefit of actions and the effects on farming from declining property values if next to a habitat area.
- Desire/preference for incentive based conservation to help agriculture.
- Interested in leveraging the HCP process with other efforts to preserve open space - farms and natural lands.
- Focus growth into cities
- Desire to preserve inter-city buffers

While representing diverse interests, the Steering Committee exhibited remarkable consistency with respect to many conservation and growth issues and concerns for the County.

### **1.3 PURPOSE AND GUIDING PRINCIPLES**

Plan Participant and Steering Committee input was used to develop the Purpose and Guiding Principles statements that form the basis for the decision making, conservation strategies, and implementation measures for the HCP/NCCP.

#### **1.3.1 Purpose**

The purpose of the HCP/NCCP is to promote conservation of biological diversity consistent with the recognition of private property rights, providing for a healthy economic environment for the citizens, agriculture, and industries, and on-going maintenance and operation of public and private facilities in Solano County.

### 1.3.2 Guiding Principles

Solano HCP/NCCP guiding principles for the conservation program are to:

1. Reduce conflicts between listed species and economic development, agriculture, and other land use activities to promote conservation of biological diversity and, to the maximum extent practicable, contribute to recovery of plant and animal species addressed in the HCP/NCCP.
2. Streamline the local, state, and federal regulatory processes to provide a consistent and predictable treatment of actions requiring discretionary approvals from participating agencies for obtaining incidental take permits and other required authorizations for modifications of natural communities and other habitats in a manner that is consistent with the conservation of covered species and existing regulations.
3. Lessen or avoid site specific and cumulative effects of development on covered species by replacing project-by-project mitigation with comprehensive, long-term strategies for conserving, protecting, and maintaining viable populations of covered species and natural habitats.
4. Promote retention and establishment of open space buffers/green belts consistent with the goals of local governments in order to: provide habitat linkages; separate designated urban areas; minimize the loss, fragmentation, and degradation of natural habitats; protect and enhance important habitats for covered species; and provide movement corridors and connectivity between the various habitat associations or eco-regions in the County.
5. Foster the continuation of land uses such as agriculture and open space recreation that are compatible with the protection of important habitats for covered species and to the maximum extent practicable, maintain existing agricultural values on those lands on or adjacent to where conservation activities may occur under the HCP/NCCP.
6. Establish reserves/protected habitat lands acquired only from willing sellers.
7. Comply with conservation regulations regarding the protection of air, water, and biological resources as well as other state and federal mandated laws and programs.
8. Recognize the importance of Travis Air Force Base to the economy of Solano County and promote compatible uses adjacent to and allow for the potential expansion of the facility, if necessary.
9. Implement incentive-based financing and reserve acquisition strategies that distribute implementation of conservation costs equitably among all beneficiaries, do not infringe on private property rights or overly burden agriculture, and are affordable to the region.

## 1.4 PERMIT HOLDER/PERMIT DURATION

The following agencies are participants in the HCP/NCCP and will have the primary responsibility for assuring compliance with the HCP/NCCP conservation measures within their respective jurisdictions and authorities:

### HCP/NNCP Coordination, Solano Project Water Contract Administration

- Solano County Water Agency (SCWA)

### Irrigation Districts

- Solano Irrigation District (SID)
- Maine Prairie Water District (MPWD)
- Reclamation District No. 2068

### Cities

- City of Dixon
- City of Fairfield
- City of Rio Vista
- City of Suisun City
- City of Vacaville
- City of Vallejo

### Special Districts

- Vallejo Sanitation and Flood Control District (VSFCD)
- Fairfield-Suisun Sewer District

The Plan Participants anticipate the resource agencies will issue one set of permits: two Section 10(a)(1)(B) incidental take permits, one from the US Fish and Wildlife Service and one from NOAA Fisheries for covered species within each agencies' respective jurisdiction, and a NCCP Take Authorization from the California Department of Fish and Game for activities occurring under each Plan Participant's (permittee's) respective authorities. The Plan Participants (permittees) shall utilize separate Implementation Agreement(s) that will be executed as each Plan Participant becomes signatory to the HCP. Third parties and other entities undertaking urban development or other Covered Activities under the direct control of the Plan Participants (permittees) and in compliance with the Solano HCP/NCCP will be covered under the Plan Participant's (permittee's) Incidental Take Permits. Specific Covered Activities for each of the Plan Participants are identified under Section 2 of this document.

Additional information on each Plan Participant is described in Section 2.

The requested incidental take coverage for the term of the permits is 50 years.

## 1.5 SOLANO HCP/NCCP PLAN BOUNDARIES

The Solano Multi-Species HCP/NCCP establishes a framework for complying with State and Federal endangered species regulations while accommodating future urban growth, infrastructure development, and ongoing operation and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure. It will account for all activities undertaken by or under the permitting authority and control of the Plan Participants within Solano County. To adequately address the varying interests and authorities of the Plan Participants and the presence of non-participating agencies with land use authority over portions of the County (i.e., Solano County and the City of Benicia), the County is divided into three implementation zones (Figure 4). Different types of activities that may affect designated species will be authorized in each of these three zones:

**Zone 1 – Urban Zone.** The urban zone encompasses the existing and identified potential urban development areas within the member agency cities of Dixon, Fairfield, Rio Vista, Suisun, Vacaville, and Vallejo. In addition to the cities' government participation, several special districts within the urban boundary are also participating in the HCP/NCCP. These additional Plan Participants include the Fairfield-Suisun Sewer District (FSSD) and Vallejo Sanitation and Flood Control District (VSFCD). Within this zone, all covered activities (see following discussion) affecting threatened, endangered, rare, and other covered plant and animal species and habitats conducted in compliance with the goals, objectives, and conservation strategies described in the HCP/NCCP and implemented under the authority/control of the Plan Participants would be authorized.

**Zone 2 – SCWA and Irrigation and Reclamation District Zone.** This zone consists of all lands within the boundaries of the SID, MPWD, and Reclamation District No. 2068 as well as SCWA and City of Fairfield flood control channels/facilities and right-of-ways extending beyond SID and MPWD boundaries within the County. Covered activities within this zone relate primarily to ongoing operation and maintenance, construction of new irrigation and flood control facilities, and irrigation district service area inclusions, expansions, and annexations.

**Zone 3 – Remainder of the County.** Covered activities within this zone relate primarily to implementation of HCP/NCCP conservation measures (i.e., management, enhancement, habitat restoration/construction, monitoring, scientific collection, and associated compatible activities on designated reserves, mitigation sites/banks, and open space lands and adjacent lands). Other covered activities include non-agricultural activities carried out under the authority of or participation by the Plan Participants on lands outside of the designated urban boundaries (i.e., communication towers, water supply reservoirs, and recreation facilities management).

Most of the covered activities will occur within Zones 1 and 2 over an area of approximately 255 square miles (176,334 acres) or 30 percent of Solano County and 4.6 square miles (2,922 acres) of Yolo County (Figure 4). Zone 1 and 2 encompass the Solano Project Service Area including the Solano Irrigation District (SID) and Maine Prairie Water District (MPWD) (Zone 2) and the Member Agency cities of Vacaville, Fairfield, Suisun, , and Vallejo (Zone 1). Additional participating agencies, Reclamation District No. 2068 (Zone 2) and the cities of Rio Vista and Dixon (Zone 1) also occur within these areas. Where designated, the boundaries of the Plan Area contain the spheres of

influence or urban growth boundaries/projected development limits of the Plan Participants. City boundaries also take in lands over which the cities have some regulatory authority through joint power or planning agreements. The Tri-City/County Planning Areas lying in the hills between Vallejo, Benicia, and Fairfield are examples of such lands. In the future, covered activities on additional lands within the County may be added as preserves, mitigation areas, and other conservation lands are established through implementation of the Solano HCP/NCCP.

In order to comply with the Terms and Conditions of the Solano Project Biological Opinion, the University of California, Davis is preparing a separate HCP. The City of Vacaville's participation in this plan will fulfill the obligations of the California Medical Facility/California State Prison, Vacaville. The City of Benicia and the unincorporated areas of Solano County as a whole have decided not to participate in this HCP/NCCP.

## **1.6 REGULATORY FRAMEWORK**

The following summarizes the primary state and federal laws and regulations governing the Solano HCP/NCCP: the federal Endangered Species Act, National Environmental Policy Act, the California Endangered Species Act, and California Natural Community Conservation Planning Act.

Although the HCP/NCCP is not intended to directly address other state and federal regulatory programs related to regulations that encompass endangered species and their habitats, the HCP/NCCP has been designed to incorporate regulatory procedures that provide a framework for compliance with these interrelated and often overlapping state and federal laws and regulations.

These additional regulations and administering agencies include:

### U.S. Fish and Wildlife Service (USFWS)

- Migratory Bird Treaty Act

### California Department of Fish and Game (CDFG)

- Streambed Alteration Agreement, Fish and Game Code
- Sections 3503 and 3503.5, Fish and Game Code

### U.S. Army Corps of Engineers (Corps)

- Section 404 of the Federal Clean Water Act
- Section 10 of the Rivers and Harbors Act of 1899

### State Water Resources Agency/Regional Water Quality Control Boards (RWQCB)

- Section 401 of the Federal Clean Water Act
- Porter-Cologne Water Quality Act

Administratively, Solano County occurs within two separate Corps, CDFG, and RWQCB districts or regions. These boundaries are based on broader watershed/hydro-geomorphic boundaries. In general, lands within the eastern portion of the County that drain into the Sacramento River and Delta are within the jurisdictions of the Sacramento District of the Corps, the Sacramento Valley RWQCB, and Region 2 of CDFG. Lands draining into Suisun and San Pablo Bays are within the jurisdictions

of San Francisco District of the Corps, the San Francisco Bay RWQCB, and Region 3 of CDFG. The Sacramento Fish and Wildlife Office of the USFWS administers their activities within the entire County. NMFS has offices in Sacramento and Santa Rosa.

The following provides a summary of these principal laws and regulations.

### **1.6.1 Federal Endangered Species Act**

The Federal Endangered Species Act (ESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10(a)(1)(B) of the Act. ESA defines take as “*to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.*” Federal regulation 50 CFR 17.3 further defines the term harm in the take definition to mean any act that actually kills or injures a federally listed species, including significant habitat modification or degradation.

Section 10(a) of the ESA establishes a process for obtaining an incidental take permit, which authorizes nonfederal entities to incidentally take federally listed wildlife or fish subject to certain conditions. Incidental take is defined by ESA as take that is “*incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.*” Preparation of a conservation plan, generally referred to as an HCP, is required for all Section 10(a) permit applications. USFWS and the NOAA Fisheries have joint authority under the Endangered Species Act for administering the incidental take program. NOAA Fisheries has jurisdiction over anadromous fish species, and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the ESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the ESA, or to result in the destruction or adverse modification of its habitat. Technically, the issuance of an incidental take permit is an authorization for take by a federal agency. Consequently, in conjunction with issuing a permit, USFWS must conduct an internal Section 7 consultation on the proposed HCP. The internal consultation is conducted after an HCP is developed by a nonfederal entity and submitted for formal processing and review. Provisions of Sections 7 and 10 of the ESA are similar, but Section 7 requires consideration of several factors not explicitly required by Section 10. Specifically, Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat. (ESA requires that USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered.) The internal consultation results in a Biological Opinion prepared by USFWS regarding whether implementation of the HCP will result in jeopardy to any listed species or will adversely modify critical habitat.

### **1.6.2 The Section 10 Process - Habitat Conservation Plan Requirements and Guidelines**

The Section 10 process for obtaining an incidental take permit has three primary phases: (1) the HCP development phase; (2) the formal permit processing phase; and (3) the post-issuance phase. During the HCP development phase, the project applicant (Plan Participants) prepares a plan that integrates the proposed project or activity with the protection of listed species. An HCP submitted in support of an incidental take permit application must include the following information:

- impacts likely to result from the proposed taking of the species for which permit coverage is requested;
- measures that will be implemented to monitor, minimize, and mitigate impacts; funding that will be made available to undertake such measures; and procedures to deal with unforeseen circumstances;
- alternative actions considered that would not result in take; and
- additional measures USFWS may require as necessary or appropriate for purposes of the plan.

The HCP development phase concludes and the permit processing phase begins when a complete application package is submitted to the appropriate permit-issuing office. A complete application package consists of 1) an HCP, 2) an Implementing Agreement (IA), 3) a permit application, and 4) a \$25 fee from the applicant. USFWS must also publish a Notice of Availability of the HCP package in the Federal Register to allow for public comment. The USFWS also prepares an Intra-Service Section 7 Biological Opinion; and a Set of Findings, which evaluates the Section 10(a)(1)(B) permit application in the context of permit issuance criteria (see below). An Environmental Assessment or Environmental Impact Statement, serves as the USFWS's record of compliance with the National Environmental Policy Act (NEPA), which has gone out for a 60-day to 90-day public comment period. No further NEPA review is required. An implementing agreement is required for HCPs unless the HCP qualifies as a low-effect HCP. A Section 10 incidental take permit is granted upon a determination by USFWS that all requirements for permit issuance have been met. Statutory criteria for issuance of the permit specify that:

- the taking will be incidental;
- the impacts of incidental take will be minimized and mitigated to the maximum extent practicable;
- adequate funding for the HCP and procedures to handle unforeseen circumstances will be provided;
- the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild;
- the applicant (Plan Participants) will provide additional measures that USFWS requires as being necessary or appropriate; and
- USFWS has received assurances, as may be required, that the HCP will be implemented.

During the post-issuance phase, the Plan Participants (permittee) and other responsible entities implement the HCP, and USFWS and NOAA Fisheries (as applicable) monitors the Plan Participant's compliance with the HCP as well as the long-term progress and success of the HCP. The public is notified of permit issuance by means of the Federal Register.

### **1.6.3 National Environmental Policy Act**

NEPA requires that federal agencies analyze the environmental impacts of their actions (in this instance, issuance of an incidental take permit) and include public participation in the planning and implementation of their actions. NEPA compliance is obtained through one of three actions: (1) preparation of an environmental impact statement (generally prepared for high-effect HCPs such as

the Solano HCP/NCCP); (2) preparation of an Environmental Assessment (generally prepared for moderate-effect HCPs); or (3) a categorical exclusion (allowed for low-effect HCPs). The NEPA process helps federal agencies make informed decisions with respect to the environmental consequences of their actions and ensures that measures to protect, restore, and enhance the environment are included, as necessary, as a component of their actions. Low-effect HCPs, as defined in the HCP Handbook, are categorically excluded under NEPA, as specified by the Department of Interior Manual 516DM2, Appendix 1, and Manual 516DM6, Appendix 1.

#### **1.6.4 California Endangered Species Act**

The California Endangered Species Act (Fish and Game Code § 2050 *et seq.*)(CESA) is administered by CDFG and is analogous and parallel to the ESA in many respects. CESA also allows for the issuance of “incidental take” permits for species listed as threatened or endangered under CESA. There are several options which allows the “incidental taking” of a species listed under CESA. First, “incidental taking” of a species listed under CESA can be authorized if the species is also listed under ESA and provided that: 1) an incidental take permit has been issued under ESA; 2) person receiving the permit notifies the Director of CDFG and provides a copy of the federal incidental take permit; and 3) the Director determines that the incidental taking is consistent with CDFG standards under § 2080 *et seq.* (minimized and fully mitigated) and adopts the federal findings/incidental taking authorization (Fish and Game Code §2080.1).

Secondly, CDFG may issue its own permit for taking of CESA-listed species that is “incidental to an otherwise lawful activity,” regardless of whether that species is also listed under ESA, if the impacts of the proposed taking would be “minimized and fully mitigated”(Fish and Game Code § 2081(b)).

Finally, the California Natural Community Conservation Plan Act (NCCPA) allows the CDFG to permit the taking of a CESA-listed species if that species’ “conservation and management” is provided in a CDFG-approved NCCP (Fish and Game Code § 2835).

#### **1.6.5 Natural Community Conservation Plan Act**

The California Natural Community Conservation Planning Act was enacted in 1991 to embody a broader approach to species conservation and address perceived shortcomings of state- issued “take” permits under the California Endangered Species Act (CESA) and federally- issued “incidental take” permits via Habitat Conservation Plans (HCPs). While the traditional species conservation under CESA and ESA tended to focus on single species and/or project and only provided mitigation for specific project impacts, the NCCPA was intended to be more flexible and proactive, to represent a more holistic view of conservation by seeking to protect multiple species and at an ecosystem-level framework for analysis.

At a basic level, the NCCPA envisions a conservation process whereby “incidental take” of one or more species may be authorized by CDFG upon a commitment by an entity to implement a NCCP. Under the NCCPA, the CDFG must make the following findings to approve a NCCP (§ 2820 of the Natural Community Conservation Planning Act/California Fish and Game Code):

- (1) The plan has been developed consistent with the process identified in the planning agreement entered into pursuant to Section 2810.

- (2) The plan integrates adaptive management strategies that are periodically evaluated and modified based on the information from the monitoring program and other sources, which will assist in providing for the conservation of covered species and ecosystems within the plan area.
- (3) The plan provides for the protection of habitat, natural communities, and species diversity on a landscape or ecosystem level 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.
- (4) The development of reserve systems and conservation measures in the plan area provides, as needed for the conservation of species, all of the following:
  - (A) Conserving, restoring, and managing representative natural and seminatural landscapes to maintain the ecological integrity of large habitat blocks, ecosystem function, and biological diversity.
  - (B) Establishing one or more reserves or 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.
  - (C) Protecting and maintaining habitat areas large enough to support sustainable populations of covered species.
  - (D) Incorporating a range of environmental gradients (such as slope, elevation, aspect, and coastal or inland characteristics) and high habitat diversity to provide for shifting species distributions due to changed circumstances.
  - (E) Sustaining the effective movement and interchange of organisms between habitat areas in a manner that maintains the ecological integrity of the habitat areas within the plan area.
- (5) The plan identifies activities, and any restrictions on those activities, allowed within reserve areas that are compatible with the conservation of species, habitats, natural communities and their associated ecological functions.
- (6) The plan contains specific conservation measures that meet the biological needs of covered species and that are based upon the best available scientific information regarding the status of covered species and the impacts of permitted activities on those species.
- (7) The plan contains a monitoring program.
- (8) The plan contains an adaptive management program.
- (9) The plan includes the estimated timeframe and process by which the reserves or other conservation measures are to be implemented, including obligations of landowners and plan signatories and consequences of the failure to acquire lands in a timely manner.
- (10) The plan contains provisions that ensure adequate funding to carry out the conservation actions identified in the plan.

The NCCPA emphasizes a partnership approach to planning and implementation, with collaboration among diverse stakeholders in the planning area (Hogle 2002). While NCCP/HCP plans must meet basic conservation standards that provide for the recovery of species within the plan area, the program is flexible and allows Plan Participants to develop different approaches towards meeting the overarching goal of planning for scientifically-based, regional conservation of ecological communities.

Meeting the standards of NCCP/HCP also provides regulatory assurances to Plan Participants that no further mitigation or conservation will be required so long as the plan is implemented properly. The CDFG may also authorize the take of any species whose conservation and management is provided for in the NCCP, whether or not that species is listed as endangered or threatened under CESA or ESA.

### **1.6.6 California Environmental Quality Act**

The basic goal of the California Environmental Quality Act (CEQA) (Pub. Res. Code §21000 et seq.) is to develop and maintain a high-quality environment now and in the future, while the specific goals of CEQA are for California's public agencies to:

- 1) identify the significant environmental effects of their actions; and, either
- 2) avoid those significant environmental effects, where feasible; or
- 3) mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies. "Projects" are activities which have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Actions taken under the NCCPA (e.g., issuance of incidental take authority by CDFG) are also considered projects subject to CEQA.

Where a project requires approvals from more than one public agency, CEQA requires one of these public agencies to serve as the "lead agency." A "lead agency" must complete the environmental review process required by CEQA. The most basic steps of the environmental review process are:

- 1) Determine if the activity is a "project" subject to CEQA;
- 2) Determine if the "project" is exempt from CEQA;
- 3) Perform an Initial Study to identify the environmental impacts of the project and determine whether the identified impacts are "significant". Based on its findings of "significance", the lead agency prepares one of the following environmental review documents:
  - a) Negative Declaration if it finds no "significant" impacts;
  - b) Mitigated Negative Declaration if it finds "significant" impacts but revises the project to avoid or mitigate those significant impacts;
  - c) Environmental Impact Report (EIR) if it finds "significant" impacts.

While there is no ironclad definition of "significance," the State CEQA Guidelines provides criteria to lead agencies in determining whether a project may have significant effects in Article 5.

The purpose of an EIR is to provide State and local agencies and the general public with detailed information on the potentially significant environmental effects which a proposed project is likely to have and to list ways which the significant environmental effects may be minimized and indicate alternatives to the project.

For the Solano HCP/NCCP, SCWA is serving as the lead agency for the CEQA review. This CEQA process will also serve to provide the necessary compliance for related actions by CDFG and other Plan Participants.

### **1.6.7 Migratory Bird Treaty Act**

The federal Migratory Bird Treaty Act is administered by the USFWS. The Act provides that it is unlawful to: pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product unless permitted by regulations. Most bird species within California fall under the provisions of the Act. Excluded species include nonnative species such as house sparrow, starling and ring-necked pheasant and native species such as quail.

### **1.6.8 Streambed Alteration Agreement**

Section 1602 of the California Fish and Game Code requires any person, governmental agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel or bank of any river, stream, or lake, or proposing to use any material from a streambed, to first notify CDFG of such proposed activity. Based on the information contained in the notification form and a possible field inspection, CDFG may propose reasonable modifications in the proposed construction as would allow for the protection of fish and wildlife resources. Upon request, the parties may meet to discuss these modifications. If the parties cannot agree and execute a Lake or Streambed Alteration Agreement, then the matter may be referred to arbitration.

Generally speaking, the notification requirement applies to any work undertaken within the bed and or bank of a wash, stream, or lake. Usually these features contain, or once contained, fish and wildlife or supports, or once supported, riparian vegetation.

If an activity involves the routine maintenance and operation of water supply, drainage, flood control, or waste treatment and disposal facilities, the applicant agency may enter into a Memorandum of Understanding (MOU) with CDFG for such activities. Subsequent notice to and agreement with CDFG for future operations and maintenance activities shall not be required subsequent to the initial notification and agreement unless the work as described in the agreement is substantially changed or conditions affecting fish and wildlife resources substantially change and those resources are adversely affected by the activity conducted under the agreement. CDFG may enter into agreements with Plan Participants for a term of not more than five years for the performance of routine operations and maintenance activities. The terms of the agreement may be renegotiated at any time by mutual consent of the parties. Each agreement shall be renewed automatically by CDFG at the expiration of its term unless CDFG determines that there has been a substantial change in conditions. The routine operation and maintenance MOUs also have substantially reduced fees compared to applications for individual Lake or Streambed Alteration Agreements.

The notification requirements prior to commencing regulated activities do not generally apply to any of the emergency situations. For such emergency projects notification by the agency or public utility performing any of the following projects shall be made to the CDFG within 14 days from the date of the commencement of the project:

- Immediate emergency work necessary to protect life or property.
- Immediate emergency repairs to public service facilities necessary to maintain service as a result of a disaster in a disaster-stricken area in which a state of emergency has been proclaimed by the Governor pursuant to Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code.
- Emergency projects undertaken, carried out, or approved by a public agency to maintain, repair, or restore an existing highway, as defined in Section 360 of the Vehicle Code, except for a highway designated as an official state scenic highway pursuant to Section 262 of the Streets and Highways Code, within the existing right-of-way of the highway, damaged as a result of fire, flood, storm, earthquake, land subsidence, gradual earth movement, or landslide, within one year of the damage. This paragraph does not exempt from this section any project undertaken, carried out, or approved by a public agency to expand or widen a highway damaged by fire, flood, storm, earthquake, land subsidence, gradual earth movement, or landslide.

### **1.6.9 Fish and Game Code 3503 and 3503.5**

Section 3503 of the Fish and Game Code makes it unlawful to take, possess, or needlessly destroy the nests or eggs of any bird. Section 3503.5 makes it unlawful to take or possess birds of prey (hawks, eagles, vultures, owls) or destroy their nests or eggs. These regulations, in combination with the requirements under the federal Migratory Bird Treaty Act provide the regulatory basis for the nest avoidance measures for species such as the burrowing owl and Swainson's hawk.

### **1.6.10 Section 404 of the Clean Water Act**

Section 404 of the Federal Clean Water Act requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the discharge of dredged or fill material into all waters of the United States. Waters of the United States include traditionally navigable waters, interstate waters, their tributaries, and adjacent wetlands. These categories include most wetlands, intermittent and ephemeral stream where there is an established ordinary high water mark, and areas subject to the ebb and flow of the tide.

Discharges of fill material generally include, without limitation: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection or reclamation devices such as rip-rap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for intake and outfall pipes and subaqueous utility lines; fill associated with the creation of ponds; excavation or dredging where the material has the effect of either replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water; and any other work involving the discharge of fill or dredged material. A Corps permit is required whether the work is permanent or temporary.

### **1.6.11 Section 10 Rivers and Harbors Act**

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, rechannelization, or any other modification of a navigable water of the United States, and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g. riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction.

In general, activities regulated under Section 10 of the Rivers and Harbors Act are similar to Section 404 of the Clean Water Act, but the geographic extent of jurisdiction is much more restricted and is limited to identified navigable waters of the United States. In Solano County, navigable waters are limited to the current and historic (as of 1899) tidal channels in Suisun Bay, Suisun Marsh, the Delta, and the Sacramento River.

### **1.6.12 Section 401 of the Federal Clean Water Act/Porter Colonge Water Quality Act**

Pursuant to Section 401 of the Clean Water Act, projects that require a Corps permit for discharge of dredge or fill material must obtain water quality certification or waiver that confirms a project complies with state water quality standards before the Corps permit is valid. State water quality is regulated/administered by the State Water Resources Control Board and its nine Regional Water Quality Control Boards (RWQCB). The state also maintains independent regulatory authority over the placement of waste, including fill, into waters of the State under the Porter-Cologne Act.

## **1.7 HCP/NCCP ORGANIZATION**

The following sections of this document address the required components of HCP/NCCP.

**Section 2** provides information on the project description – the activities by the Plan Participants that that may result in the incidental take of species covered under the HCP/NCCP (including species which are listed and not-listed under ESA and CESA). For urban development, these actions are based on projected urban growth contained in applicable general plans and other relevant documents of the Plan Participants.

**Section 3** summarizes the environmental setting of the HCP/NCCP area, focusing on the 77 species proposed for coverage under the Solano HCP/NCCP. Information is also provided to general environmental conditions in Solano County for typical climate, topography and geology, and hydrology (rivers, streams, etc.).

**Section 4** describes the conservation program, the essential component of the HCP/NCCP. This section describes the actions proposed by the Plan Participants to avoid, minimize, mitigate impacts

to and additional measures to conserve the covered species within the plan area. The conservation program first describes the conservation measures applicable to all species and groups. These general measures are then followed by conservation measures for various species and groups. The Solano HCP/NCCP has taken, for the most part, a habitat-based conservation approach. That is for most of the covered species, the primary conservation measures are described by habitat or community association (e.g., vernal pool ecosystem, oak woodlands, riparian). Additional species-specific conservation measures are also included where necessary to achieve conservation objectives for that individual species. For more widespread species such as the Swainson's hawk that relies on a variety of habitat types, separate, species-specific conservation measures are provided.

Each community or species conservation measure includes a brief summary of the conservation issues. This discussion is followed by a description of the Biological Goals for that community/species association. The goals are followed by specific and, where possible, measurable biological objectives and their specific conservation measures that will be implemented by the Plan Participants to achieve these objectives. The objectives and associated conservation measures are presented in a hierarchical fashion addressing measures to first avoid impacts/take, second by measures to minimize impacts, and third by measures to compensate for unavoidable impacts. The intent of the conservation program is to avoid and minimize impacts to the maximum extent practicable before compensatory measures are implemented.

The discussion of the conservation measures is followed by a description of the Monitoring, Reporting, and Adaptive Management Measures that will be implemented to document compliance with the HCP/NCCP goals and objectives and to ensure that conservation strategies are being appropriately implemented such that the optimum conservation benefit is being achieved.

**Section 5** assesses the direct, indirect, and cumulative impacts resulting from the conservation measures and an estimate of the requested level of take for each of the covered species. An assessment of the Solano HCP/NCCP's contribution to recovery for each species is also provided.

**Section 6** describes the four alternatives that were considered, but rejected by the Plan Participants. These included:

- **Alternative 1: No Action Alternative.** Under the No Action Alternative, an HCP/NCCP would not be implemented. As a result, the Service, NOAA Fisheries, and CDFG would consider the issuance of individual take authorization on a case-by-case basis for each project that may adversely affect those species designated under the ESA and California ESA. SCWA and its member agencies would continue to implement the Short-term Conservation Measures detailed in the Biological Opinion for the Solano Project Water Service Contract Renewal (Service 1999).
- **Alternative 2: Coverage of Federally-Listed Species Only Alternative.** Alternative 2 consists of implementing an HCP that addresses only the 36 species specified in the USFWS's 1999 Solano Project Biological Opinion. The USFWS would issue individual take permits for these species as provided under the ESA. An NCCP would not be prepared and the CDFG would not issue an NCCP permit authorizing incidental take of the 40 other state listed species and special status/covered species. Anadromous fish species (steelhead and salmon) under the jurisdiction of NOAA Fisheries would also not be covered. Separate authorizations would be required for individual projects that may adversely effect the 40 species not included in the HCP.

- **Alternative 3: Reduced Potential for Incidental Take Alternative.** With implementation of this alternative, an HCP/NCCP would address take of 77 species as with the Proposed Action. However, this alternative would reduce the potential impacts to covered species and habitat by reducing the footprint of urban development when compared to the Proposed Action. The conservation strategies would be qualitatively the same as the proposed action; however, the degree of mitigation (e.g., the amount of land/habitat set aside for protection that is needed for mitigation) would be less because of reduced impact severity from the covered activities. The USFWS and NOAA Fisheries would issue individual take permits and CDFG would authorize incidental take under the NCCP that could result from this level of development. The HCP/NCCP and associated permits would be in effect for a 50-year term.
- **Alternative 4: Increased Mitigation Alternative.** This alternative would implement a greater level of mitigation than being considered with the Proposed Action. This alternative consists of higher mitigation ratios (e.g., greater acreage of land/habitat set aside for species protection needed for mitigation) for compensating the loss of habitats than included in the Proposed Action. This alternative would include 77 species for a period of 50 years. A primary goal of including this alternative is to contribute to demonstrating that the Proposed Action meets the “maximum extent practicable requirement” of Section 10(a)(1)(b) of the ESA.

**Section 7** addresses HCP/NCCP implementation. This section describes the roles and responsibilities of the Plan Participants, the role of the Solano HCP/NCCP Advisory Committee, procedures for determining conservation requirements and third party coverage under the HCP/NCCP, phasing of conservation actions, and procedures for dealing with changed and unforeseen circumstances and permit renewal and modifications.

**Section 8** provides a list of citations used in the HCP/NCCP and **Section 9** lists the staff involved in the preparation of the Plan.

**Section 10** provides a glossary/definitions of terms used in the HCP/NCCP.