



Transportation and Habitat Conservation Plans

Improving Planning and Project Delivery While Preserving
Endangered Species

MARCH 2014

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EXECUTIVE SUMMARY

Introduction

The development of transportation infrastructure requires a long planning, funding, and implementation cycle that can take over a decade for a large-scale project. Environmental mitigation to meet requirements of the Endangered Species Act (ESA) is usually undertaken late in this process and for the single project being planned. Habitat Conservation Plans (HCPs) provide an alternative model and are becoming increasingly popular, consisting of early regional mitigation needs assessment and advanced planning for habitat or landscape-level impacts from multiple infrastructure projects. This approach promises several potential benefits including reduced project delays, lower mitigation and transaction costs, and improved conditions for the affected species. This report reviews the current status of landscape-level HCPs (sometimes referred to as “area-wide”) and, based upon a national survey of those either implementing or developing them, examines their use in the transportation infrastructure planning process. This research demonstrates that this model is growing in popularity and holds promise for further development as an approach to both habitat preservation and infrastructure development.

HCPs are conservation mechanisms by which transportation projects and other infrastructure projects can meet the requirements of the Endangered Species Act (ESA). Under Section 10 of that law, the harming of any endangered species or its habitat is prohibited unless it is deemed to be incidental to an otherwise lawful activity, such as land development or the construction of a transportation facility. Otherwise legal activities that might endanger protected species require applicants to seek an Incidental Take Permit (ITP) from United States Fish and Wildlife Service (FWS). In order for FWS to issue an ITP, the applicant must create an HCP, a binding planning document that describes planned conservation and mitigation strategies for activities covered by

the permit. The requirements are intended to allow socially valuable projects to proceed while balancing their benefits against potential harm to the affected species.

Instead of time consuming and costly project-specific negotiations with the FWS over endangered species issues and required mitigation, HCPs offer an alternative by which agencies engage in “landscape-level” planning that results in advanced clearance under the Act. HCPs result from negotiations over the effects and required mitigation for included suites of development activities (“covered activities”). These include construction of transportation infrastructure as well as residential and commercial developments. The HCP provides an outline of allowable impacts on endangered species and their habitats through development activities that respect the conservation goals of the ESA. This allows for an environmentally preferable regional conservation approach in areas in which growth and development impinge upon endangered species habitats. Proponents of HCPs argue that they can increase the amount of protected habitat, reduce the time and cost of negotiating suitable mitigation with FWS, and increase certainty in the environmental clearance process.

This report explores the accelerating trend toward area-wide HCPs and their relevance to transportation projects at the local and state levels. It addresses both planning and implementation of HCPs, explores why the HCP planning process is perceived to take a long time to complete, and addresses the challenges of funding the planning and implementation of HCPs. Recommendations are made as to how to integrate transportation projects into HCP planning, streamline the planning process, and use innovative funding techniques for advanced mitigation in the HCP model.

HCPs are a relatively recent innovation, beginning in 1983 and becoming a popular conservation mechanism after policy innovations in 1994. Policymakers and the public are

generally unfamiliar with HCPs. Area-wide HCPs grew out of conflicts between rapid development and those seeking to protect endangered species habitat (most often but not limited to the Southwestern US), by logging companies in the Northwest for forest preservation, and by wind farm developers in the Midwest.

This study finds that those who have participated in HCPs are nearly unanimously satisfied with the outcomes and the benefits it provides. The flexibility of the program allows it to solve many large-scale conservation problems. This research also finds that each HCP is unique, having a structure dictated by the needs of the applicants and the biological needs of the species they protect.

Methodology

The authors relied on multiple sources of information, including a review of relevant literature and FWS training materials and interviews of FWS staff and HCP representatives. Potential interviewees were identified through the FWS database of HCPs that have been permitted according the following criteria: mitigation of the environmental effects of transportation projects was a goal of the plan; acreage covered by the plan was in excess of 1000 acres, and the applicants included a governmental entity. Potential interviewees were contacted via email, and subsequent in-person and phone interviews were held with email respondents. Representatives of HCPs that met the selection criteria, but which currently are in development and not yet permitted, were identified and contacted in the same manner. In total, over 30 people were interviewed, representing HCPs, transportation agencies, and FWS. The majority of HCPs that met the criteria for inclusion were located in California. This likely is because of a coincidence of high biodiversity and rapid growth, strong state conservation laws, and a tradition of HCPs that increases familiarity with the process among both applicants and local FWS staff.

The resulting interviews reflected this California concentration, but also included HCPs from Wisconsin, Texas and Nevada. Drafts of this report were reviewed by experts whose comments and suggestions were incorporated into this document.

Findings

The inclusion of transportation projects in HCPs is an accelerating trend that can facilitate transportation project development by federal, state and local transportation agencies. The flexibility of the HCP planning process allows for inclusion of many types of transportation projects, ranging from highway and rail construction, to routine maintenance activities. Transportation agencies can participate directly as permittees, but there were many examples of HCPs in which they participated in other ways.

HCPs *can* be a mechanism to mitigate impacts of federally and non-federally funded transportation projects. Transportation projects are increasingly being funded by local sources, however, and the ESA *requires* locally funded projects – those lacking a federal “nexus” - to be permitted using the HCP model. The fact that many local transportation sales taxes include revenue dedicated to environmental planning, including HCPs, leads to the increasing use of this mechanism for the mitigation of locally funded transportation investments.

Benefits experienced by transportation agencies that mitigate impacts of their projects using HCPs include streamlined permitting, economies of scale in mitigation, increased regulatory certainty, reduced frequency of lawsuits, and a shift of some of the mitigation planning burden from transportation agencies to other HCP implementing authorities. Once the HCP permit is issued, most transportation projects only need to certify compliance with the details outlined in the HCP. This essentially eliminates delays caused by ESA permitting. Many

examples were found of benefits to additional agencies and other applicants, including local governments.

Inclusion of transportation projects in HCPs also often greatly decreases the burden of transportation agencies under NEPA. The information contained in the HCP document can provide much, if not all of the indirect and cumulative effects analysis required under NEPA. And, in many of the cases that were reviewed, participation in an HCP shifted a large portion of the environmental planning and monitoring burden from the transportation agency to a different agency that was administering the HCP, often representing local jurisdictions, which bore the responsibility of land acquisition, management and monitoring under the plan.

While many benefits were reported by study participants, the HCP planning process was also found to be lengthy and costly. This can cause hesitation on the part of transportation agencies to favor HCPs in comparison with per-project permitting, which is required in the absence of area-wide HCPs.

In most cases major costs associated with HCPs fall into three categories: funding for planning, funding for land acquisition, and ongoing funding for management of land. Given these requirements, area-wide HCPs require large amounts of assured funding before permits are issued, but innovative funding solutions are being employed by HCPs, many of which involve leveraging transportation funding for the benefit of both the transportation agency and the HCP. On the other hand, while transportation agencies must contribute financially toward the mitigation of impacts of their projects, the cost or amount of mitigation land required is often reduced due the economies of scale of the HCP.

The agencies which prepare HCPs exist in complex institutional environments in which local, state, and federal regulations interact with one another and in which there is vigorous

competition for necessary but limited funding. The political environments in which habitat plans are often prepared frequently are characterized by contentiousness and often involve litigation. Many of those interviewed reported that the most successful efforts were attributable to creative and charismatic leadership. The study revealed many examples of project management that illustrate well-known principles of organizational behavior and lead to recommendations for both transportation agencies and other applicants, such as local governments, that can result in better HCPs and more efficient planning. Often these amounted to application of well-known principles of leadership in complex organizational settings.

It was often noted that both applicants and resource agencies should view planning and management of HCPs as a collaborative process. While contentiousness was often assumed to be the norm, the most successful examples resulted from transitioning from contentiousness to collaborative partnerships. While delays were typically attributable to inefficiencies, staffing that is inadequate for their workloads, and personnel changes at both FWS and in the applicant agencies, applicants' agencies have greater flexibility to address problems creatively and through conscious management. Aggressive project management that includes decision-making deadlines and ensures continual forward progress and momentum were cited by many as the best way to achieve improved agency performance. Maintaining institutional consistency in the face of personnel turnover and despite changes in membership of politically appointed boards of directors was a challenge frequently noted by interview participants. The use of facilitators, consultants and other professionals with experience in HCPs or collaborative planning was often recommended as valuable responses to these sorts of problems because experience and deep expertise is often beneficial in overcoming hurdles. And in many instances applicants can benefit greatly by relying on existing collaborative governance structures, such as Councils of

Government and Metropolitan Planning Organizations, in order to facilitate planning and to arrive at consensus.

Conclusion

The inclusion of transportation projects and the participation of transportation agencies in HCPs seems mutually beneficial to both those agencies and the local jurisdictions with which they interact, and would appear to increase the wellbeing of endangered species while lowering social costs. Agencies can avail themselves of the streamlining and certainty of benefits outlined in this report, while local jurisdictions benefit from the expedited delivery of transportation projects and, in some cases, the dedicated stream of funding from transportation-related sources. By participating in a collaborative planning process, stakeholders are more likely to build cooperative relationships and take a long-term integrated approach to local planning. Importantly, larger and more effective and well managed habitats result which serve to implement the intent of the ESA.

Overall, area-wide HCPs are a growing model for conservation that streamlines permitting under the ESA while providing more effective conservation as compared with per-project permitting. Transportation projects are increasingly included as a covered activity under area-wide HCPs, conferring many benefits on the agencies. While the planning process may be onerous, and funding is a continuing challenge, HCPs provide a flexible model, and transportation agencies should avail themselves of the benefits available through active participation.

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Acknowledgements and Disclaimer

Financial support for this research was provided by the University of California Transportation Center (UCTC) and the Multicampus Research Programs and Initiative (MRPI), a program sponsored by the Office of the President of the University of California. The authors are grateful for this support. They also wish to express their appreciation to the interviewees at participating HCPs and planning organizations, transportation agencies, and FWS who remain anonymous for their protection. Further thanks are extended to the staff of the National Conservation Training Center. Shira Bergstein, April Mo and Daniel Chatman participated in previous research on this topic along with the authors. Douglas Wheeler and Lindell Marsh made valuable comments and offered insights that were important to the study. Additional thanks are owed to Trevor Thomas, Zenia Perez, Yasmine Diaz, and other staff at the Lewis Center and the Institution for Transportation Studies at UCLA for their help in preparing this report.

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented herein. This University of California Transportation Center document is disseminated under the sponsorship of the U.S. Department of Transportation's University Transportation Centers Program and California Department of Transportation, in the interest of information exchange. The U.S. Government and State of California assume no liability for the contents or use thereof.

| ACRONYMS | |
|-----------------|--|
| HCPs | |
| BCCP | Balcones Canyonlands Conservation Plan |
| Clark County | Clark County Multiple Species Habitat Conservation Plan (also called the Desert Conservation Program). |
| CVAG | Coachella Valley Association of Governments (local COG and regional transportation agency) |
| CVMSHCP | Coachella Valley Multiple Species Habitat Conservation Plan |
| ECC | East Contra Costa County Habitat Conservation Plan / Natural Community Conservation |
| KBB | Wisconsin Karner Blue Butterfly Habitat Conservation Plan |
| OCTA | Orange County Transportation Authority |
| Santa Clara | Santa Clara Valley Habitat Plan |
| SJMSHCP | San Joaquin Multiple Species Habitat Conservation Plan |
| WRMSHCP | Western Riverside County Multiple Species Habitat Conservation Plan |
| OTHER | |
| Caltrans | California Department of Transportation |
| COG | Council of Governments |
| CWA | Clean Water Act |
| DOT | Department of Transportation |
| EIS | Environmental Impact Statement |
| ESA | Endangered Species Act |
| FWS | United States Fish and Wildlife Service |
| HCP | Habitat Conservation Plan |
| ITP | Incidental Take Permit |
| JPA | Joint Power Authority |
| MPO | Metropolitan Planning Organization |
| MSHCP | Multiple Species Habitat Conservation Plan |

| | |
|----------|--|
| NEPA | National Environmental Policy Act |
| RCTC | Riverside County Transportation Commission |
| RTP | Regional Transportation Plan |
| SANDAG | San Diego Associations of Governments (San Diego area MPO) |
| TransNet | San Diego County local transportation sales tax |

1. BACKGROUND

The 1973 Endangered Species Act (ESA) is one of several laws that require consideration of environmental outcomes in the planning process.¹ Under the ESA, Congress declared endangered species to have intrinsic value, and designed the Act to protect endangered species from “economic growth and development untempered by adequate concern and conservation” and to also protect the “ecosystems upon which they depend.” The Act prohibited the “taking” of any endangered species, with “taking” defined to include any harm to an individual of the listed species, including “environmental modification or degradation.” 16 U.S.C. § 1531-1544. Since this would effectively prohibit any otherwise lawful development in endangered species habitat, in 1982 Congress added a provision under Section 10 of the Act, allowing the “taking” of a listed species if it was incidental to an otherwise lawful activity, such as land development. Such activities require applicants to seek an Incidental Take Permit (ITP) from United States Fish and Wildlife Service (FWS).² In order for FWS to issue an ITP, the applicant must create a Habitat Conservation Plan (HCP) that binds applicants to planned conservation and mitigation strategies for activities covered by the permit that balance harm to the species.

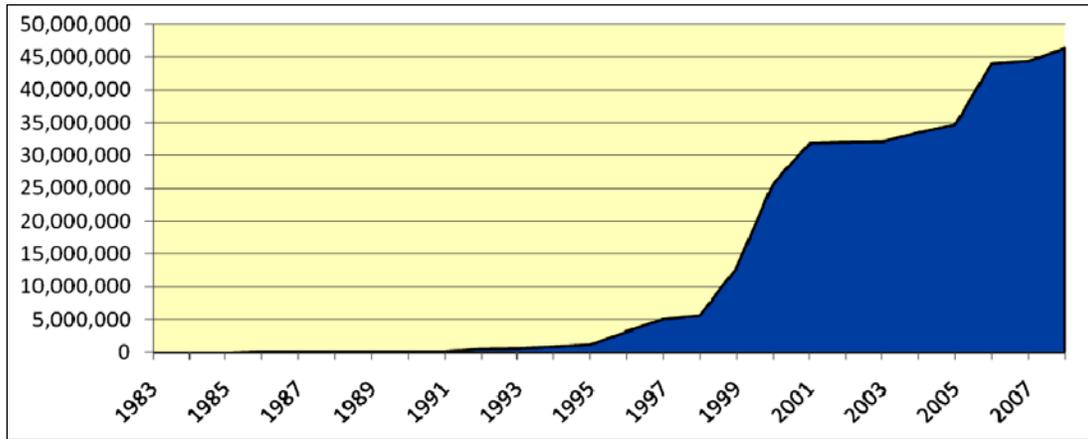
Usage of HCPs grew slowly until FWS implemented the “no surprises” policy in 1994, which assured that the responsibility of the applicants would not increase once the permit was issued, regardless of new biological findings. The “no surprises” policy, as well as visible public support for the program from the federal government, has led to a steady increase in the number of HCPs permitted each year, and to the increasing use of the area-wide plans. (Wheeler and Rowberry, 2010). The plans often cover development activities for a long period of time, frequently thirty years and in one case up to seventy years. Upon issuance of the ITP, the permit-holder is cleared to proceed with development and mitigation as specified in the plan, without seeking additional per-project clearance from FWS for the length of time specified by the permit. The plans range in size from coverage of a single residential construction project to a plan that encompasses all foreseeable development over the life of the permit in a county, with broader permits typically requiring conservation of large amounts of open space to balance development.

¹ For full text of the Endangered Species Act, see Appendix A.

² Both the US Fish and Wildlife Service and the National Marine Fisheries are both charged with enforcing the ESA and can issue ITPs, though NMFS is rarely relevant to transportation project permitting so FWS will be used throughout this report.

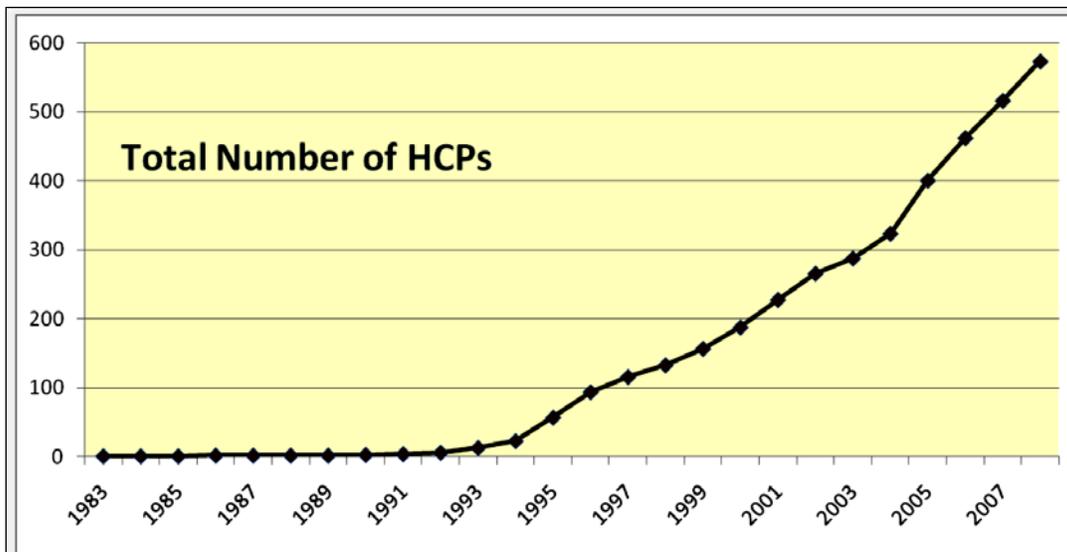
As of 2011, permits had been issued for 670 HCPs, of which 59 covered more than 10,000 acres. (Bergstein and Mo, 2012). Those 59 represent over 99% of the total land subject to an HCP. (MSI, 2009). For additional figures on HCPs, see Appendix E.

FIGURE 1-1: Total Acres Covered by HCPs by Year



Source: (MSI, 2009, p10)

FIGURE 1-2: Total Number of HCPs



Source: (MSI, 2009, p11)

1.1 What is an HCP?

Habitat Conservation Plans are conservation mechanisms by which transportation projects (among many other types of projects), can meet the requirements of the Endangered Species Act. Instead of time consuming and costly project-specific negotiations with the United States Fish and Wildlife Service (FWS) over endangered species issues and required mitigation, HCPs offer an alternative by which agencies engage in “landscape-level” planning that provides advance clearance under the Act. HCPs allow for negotiation over the effects and required mitigation for included suites of development activities, including transportation infrastructure as well as residential and commercial construction. The HCP provides an outline of allowable impacts on endangered species and their habitats through development activities that are consistent with the conservation goals of the ESA. This allows for an environmentally preferable regional conservation approach where growth and development impinge upon endangered species habitats. Advanced landscape-level mitigation presents numerous benefits for both government agencies and private parties undertaking development activities. HCPs can increase the amount of protected habitat, reduce the time and cost of negotiating suitable mitigation with FWS and increase certainty in the environmental clearance process. (Marsh and Lallas, 1995, Bergstein and Mo, 2012).

Habitat Conservation Plans are planning documents that are required as part of applications for ITPs. (United States Fish and Wildlife, 2013). HCPs are extensive plans that balance development with the possibility of harm to endangered species by outlining avoidance, minimization, and mitigation actions that will be taken by the agency responsible for development. HCPs incorporate a list of the development activities for which the applicant seeks ESA clearance (the “covered activities”), a biological opinion as to how these activities will affect endangered species and their habitat, and a mitigation strategy for the covered activities that must be followed by the applicant. Covered activities can include any type of legal development activity, and frequently include transportation projects, along with commercial and residential development. HCP documents for area-wide plans that are the focus of this study typically consist of hundreds of pages, including descriptions of the applicants, covered

activities, potential biological impacts, planned conservation, implementation guidelines, and an outline of funding sources.³

1.2 HCP Issuance Criteria

In order for an ITP to be issued, the HCP must meet the following criteria under Sec. 10(a)(2)(B) of the ESA: (1) taking will be incidental; (2) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of the taking; (3) the applicant will ensure that adequate funding for the plan will be provided; (4) taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (5) other measures, as required by the Secretary, will be met.

Under criterion 1, a taking is incidental if it results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. (50 CFR 402.02.) For example, takings that may occur during otherwise allowed transportation projects and residential development are incidental.

Criterion 2 requires that the applicant specify a plan in the HCP to minimize or mitigate the impact of the taking. According to the FWS,

Mitigation measures are actions that reduce or address potential adverse effects of a proposed activity on species included in an HCP. They should address specific conservation needs of the species and be manageable and enforceable. Mitigation measures may take many forms, including, but not limited to, payment into an established conservation fund or bank; preservation (via acquisition or conservation easement) of existing habitat; enhancement or restoration of degraded or a former habitat; establishment of buffer areas around existing habitats; modifications of land use practices, and restrictions on access. Which type of mitigation measure used for a specific HCP is determined on a case by case basis, and is based upon the needs of the species and type of impacts anticipated. (United States Fish and Wildlife Service (USFW), n.d.)

The goal of mitigation is to offset the immediate incidental take, and the ultimate goal of the ESA, according to the FWS, is species recovery and delisting – which lifts the regulatory burden for everyone. The actual mitigation measures vary among HCPs, but the majority of area-

³ Though each plan is unique, one FWS region has provided a template to outline what should be included. United States Fish and Wildlife Service. *HCP Template*, undated.

wide HCPs rely heavily on off-site mitigation, in which the agency administering the HCP acquires land in a separate conservation area to off-set the effects of any development activities.⁴

Criterion 3 will be discussed in greater detail in Section 8 of this report. The cost of area-wide HCPs can range from hundreds of millions or dollars to several billion, and the plans must detail what sources of funding will be used to cover the costs. If the funding provided is inadequate, this can be ground for a lawsuit against FWS for improperly issuing an ITP.

Criterion 4 outlines the legal requirements that FWS must fulfill to ensure that the HCP adequately protects species covered under the plan. Fulfillment of this requirement depends on the biological data gathered about the species covered by the HCP, the effect of development activities specified under the plan on these species, and the sufficiency of the mitigation measures agreed upon in the plan.

Criterion 5 is specific to each HCP and negotiations with FWS. Most typically, it results in an “implementing agreement,” a legally binding contract that defines each stakeholder’s responsibility in implementing the plan, including the FWS and state wildlife department’s responsibilities. Another typical “other measure” may be ensuring adequate and sustained funding to carry out the monitoring of compliance with the ITP conditions. (Bergstein and Mo, 2012).

If the regional office of FWS concludes that the above five criteria have been met by the strategies outlined in the HCP, it can issue an ITP permit to the applicant.⁵ The permits vary in duration, based on factors outlined in 50 CFR 17.32, in an attempt to balance the biological impacts of the HCP and the time horizon of the covered activities. For example, if the activities occur over a long period of time, such as timber-harvesting or general growth and development plans of area-wide HCPs, a long permit duration will be necessary. If the conservation activities specified in the HCP increase the survivability of a listed species or enhance its habitat, the service is more likely to issue a permit with longer time duration. These determinations are also based on the availability of data at the time of HCP planning, both in terms of the time length of development activities planned and the availability of the scientific data to provide certainty

⁴ Area-wide HCPs typically do their own off site mitigation as opposed to conservation banking because, as the land use control agency, they are able to mitigate cheaply by themselves due to scale. Some area-wide HCPs, such as Western Riverside MSHCP, incorporate conservation banks within their plan areas in their conservation acreage total.

⁵ In addition, FWS must issue a review under NEPA since its issuance of the permit is a “federal action”. See Section 4 of this report for more information.

(USFW, 1999).⁶

1.3 Trend Towards Area-Wide HCPs

While the majority of HCPs have been created to mitigate a single project or development, there has been a recent trend toward regional or “area-wide” HCPs developed by local or state bodies that outline mitigation requirements for many planned activities in a specified area, often including transportation projects. (MSI, 2009). This report demonstrates how HCPs are increasingly being created to address endangered species challenges facing transportation construction projects, to the benefit of the agencies leading the projects. Area-wide HCP planning is fundamentally a regional planning activity, (Wheeler and Rowberry, 2010) and the plans include large-scale mitigation efforts capable of addressing ESA issues at a regional level. (Thornton, 1991). This is generally thought to be environmentally preferable to project-by-project mitigation because it can provide for large, continuous preserves of open space and corridors along which species may migrate. (Bergstein and Mo, 2012, MSI, 2009). From the perspective of permit applicants, including transportation agencies, HCPs also provide many benefits. Once an HCP is approved, FWS, the agency tasked with enforcing the ESA and granting approval for HCPs, issues a permit that grants the recipient authority to approve any non-federal development activity in the permitted area as long as it is consistent with the negotiated terms of the HCP. In the absence of an HCP, project-by-project mitigation requires that each project be permitted separately by FWS, contributing to long delays obtaining permits due to the heavy workload of staff at FWS. (MSI, 2009). An area-wide HCP removes the need for non-federal projects to be permitted individually by FWS. (Bergstein and Mo, 2012, Marsh and Lallas, 1995, Greer and Som, 2010). Large-scale HCPs also allow the cost of mitigation to be spread among all development in the plan area, increasing administrative efficiency and enabling the development of landscape-scale mitigation. (Marsh and Lallas, 1995, MSI, 2009). For developers of specific projects, including agencies responsible for transportation projects, this provides certainty of ESA approval if they meet requirements specified in the HCP, greatly reducing the time and cost of environmental clearance on a per-project basis.

⁶ Some may go longer if they employ adaptive management to give time for data collection. This means uncertainty in data makes for a longer duration.

These per-project benefits must be balanced against the cost and time of developing the HCP. (Wheeler and Rowberry, 2010, Alagona and Pincetl, 2008). FWS, in its HCP Handbook, stresses its philosophical shift towards the benefits of area-wide HCPs, stating that

The cumulative total of HCP processing requirements is far greater when regional or area-wide activities are permitted individually than when addressed comprehensively under a regional HCP. Consequently, a second guiding principle of this handbook is that FWS and NMFS [National Marine Fisheries Service] will continue to encourage state and local governments and private landowners to undertake regional and multi-species HCP efforts as appropriate and will assist such efforts to the maximum extent practicable. (HCP, 1996, p. 15).

The influence of area-wide HCPs is immense, with regional HCPs in California expected to provide ITP coverage for projects with a cumulative value of \$1.6 trillion over the life of the permits. (California Habitat Conservation Planning Coalition, 2013).

FWS's push for area-wide HCPs is in line with a general shift among both environmental interests and transportation planners towards advanced mitigation. Both the FHWA and the Transportation Equity Act for the 21st Century (TEA-21) outlined policy that favors advanced mitigation strategies for transportation projects. The American Association of State Highway and Transportation Officials (AASHTO) views advanced mitigation as a way for a project to meet environmental goals cost effectively. (Venner, 2005). In 2009, the California legislature introduced but ultimately failed to pass AB 1321, the Advanced Infrastructure Mitigation Program Act, to authorize the identification of future projects by state infrastructure agencies for the purpose of facilitating advanced mitigation on a regional scale. (Greer and Som, 2010). Finally, according to a Caltrans representative, the agency has been very involved in exploring regional advanced mitigation, recently commissioning the study "Transcending Boundaries" by the University of California, Riverside, that explored innovative approaches to regional advanced mitigation across the state. Caltrans has also instituted both regional and statewide advanced mitigation initiatives, and is currently developing an institutional framework and financing mechanism for instituting advanced mitigation.

Advanced mitigation compares favorably to other mitigation approaches environmentally by better assuring funds for mitigation earlier in the planning process, securing suitable mitigation land earlier in the planning process when there is increased availability, and

enhancing regulatory predictability. (Greer and Som, 2010, Dixon et. al, 2008). According to a representative of the HCP that the Orange County Transportation Authority (OCTA), in Orange County California, is currently developing, borne out of negotiations with FWS, this struggle has always been the problem with project-by-project permitting. Project managers of transportation projects frequently had under-budgeted for mitigation and it was hard to take small amounts of money and find small, suitable parcels of mitigation land to satisfy ESA requirements. The eventual HCP will set aside dedicated funding for large-scale mitigation, which is both economical and gains support of the agencies because it avoids “patchwork ecology.”

2.METHODOLOGY

The purpose of the report is primarily to demonstrate why the increasing trend towards area-wide HCPs is relevant and beneficial to transportation development on both the local and state level. The secondary purpose of the report is to provide an understanding of both the HCP planning process and HCP implementation process. We also examine the reasons that the HCP planning process takes so long and provide a set of best practices that can help streamline the planning process.

This report relies on multiple sources of information, including a review of relevant literature, interviews with FWS staff and HCP representatives, and FWS training materials. Potential interviewees were identified through the FWS database of HCPs that have been permitted according the following criteria: acreage covered is greater than 1000 acres, permittees included a governmental entity, and mitigation of the environmental effects of transportation projects was a goal of the plan. Potential interviewees were initially contacted via email, and subsequent in-person and phone interviews were held with email respondents. Representatives of HCPs that are currently in development and have not yet been permitted, but which met the other relevant criteria, were identified and contacted in the same manner. In total, over 30 people were interviewed, representing HCPs, transportation agencies, and FWS. The majority of HCPs that met the criteria for inclusion were located in California due to the coincidence of high biodiversity and rapid growth, strong state conservation laws, and a long tradition of HCPs that increases familiarity with the process among both applicants and local FWS staff. The resulting interviews reflected this California bias, but also included HCPs from Wisconsin, Texas and Nevada.

For statistics on the HCPs interviewed for this report, please see Appendix B.

3. BENEFITS OF AREA-WIDE HCPs OVER PROJECT-BY-PROJECT PERMITTING

As discussed further below, HCPs provide an avenue for diverse stakeholders – including environmental, governmental and private developers – to reach a solution that many consider a “win-win” for both biological and development goals.

First, an HCP may enable a project to be built that would not have been allowed otherwise. In a consultation for a specific project, the developer and FWS may not be able to come to agreement on suitable mitigation. The recommended mitigation methods may be cost prohibitive, or it may be difficult to acquire requisite land from willing sellers. Many transportation-related, area-wide HCPs were formed because of the inability to come to agreement with FWS on suitable per-project mitigation strategies.

This is particularly relevant to transportation infrastructure, since FWS is required to produce an Environmental Impact Statement (EIS) analysis under the National Environmental Policy Act (NEPA) when it issues an ITP, as permit issuance is a qualifying federal action under the law. NEPA documents require FWS to consider indirect and cumulative effects of a permitted action. In the case of transportation infrastructure, this means that FWS must consider growth that will result from the transportation investment, as well as suitable mitigation for that growth. This often places a heavy burden on the road-building agency to mitigate for both the road itself and subsequent development. In some cases with low amounts of environmental funding this can stall the project indefinitely. In other cases, such as in Wisconsin under a state-wide HCP for the Karner Blue Butterfly (KBB) and in Benton County, Oregon, the initial lack of an HCP had prevented not only large-scale construction but also road maintenance. Interviewees from both HCPs credit the HCP with allowing activities as routine as roadside mowing in Endangered Species Habitat areas.

3.1 Weaknesses of Per-Project Consultations.

Beyond enabling projects otherwise prohibited under the ESA, the area-wide approach has significant advantages over project-by-project consultations from FWS.⁷ Many commentators

⁷ As explained further in Section 5 of this report, per-project permitting may take place under either Sec. 7 of the ESA, if there is a federal nexus, or as a small HCP under Sec. 10.

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have noted problems with this process from the applicants' perspective, as well as the weakness of the resulting conservation measures. Firstly, the permitting process is onerous for a particular project, both in terms of time and money. As discussed in more detail in Section 7 of this report, FWS does not have the manpower to efficiently deal with the requests for per-project reviews in a rapidly growing area. The permitting process involves gathering biological data on the species and its presence in the proposed development area, which is costly, time consuming, and prone to negotiations about the validity of data.

After biological data and the likely impact of the project are agreed upon, the developer and FWS must negotiate suitable mitigation measures. Furthermore, in the structure of transportation planning, environmental permitting occurs late in the process and is often not included in the initial project budget, leaving planners to scramble for money to provide biological data and mitigation measures. (Dixon et al, 2008, Venner 2005). This has been noted to cause conflicts in the decision making process, since changes to plans at this stage are especially costly. This also

Per-Project Permitting Difficulties

Orange County Transportation Authority is currently developing an HCP using funding from a local transportation sales tax measure. A representative stated that per-project mitigation was typically a struggle because it was underfunded. Project managers would rarely identify enough money in the project budget, and it was difficult to take a small amount of money and find a suitable small land parcel for mitigation.

places the environmental onus on the specific project, resulting in small, fragmented, and less biologically desirable mitigation compared to conservation under an area-wide HCP. (Porter and Salvesen, 1995).

3.2 Development Benefits

HCPs provide benefits for development activities in areas containing endangered species habitat, including transportation

infrastructure development. HCPs benefit development activities by streamlining environmental permitting and reducing the regulatory burden on individual projects by providing both certainty about ESA requirements and protection from liability. HCPs additionally force consideration of environmental concerns earlier in the planning process, providing greater funding while simultaneously reducing the specific fiscal burden of mitigation on a per-project basis. Overall, area-wide HCPs are able to address environmental concerns throughout an entire region. By addressing habitat concerns on a comprehensive, regional level, the burdens of environmental

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protection can be spread among the stakeholders, but can also be spread temporally, considering past and future, direct and indirect impacts. (Porter and Salvesen, 1995).

FWS has recently encouraged the establishment of area-wide HCPs, touting the benefits in the HCP Handbook:

... regional or multi-species HCPs have many benefits. They can, for example: (1) maximize flexibility and available options in developing mitigation programs; (2) reduce the economic and logistic burden of these programs on individual landowners by distributing their impacts; (3) reduce uncoordinated decision making, which can result in incremental habitat loss and inefficient project review; (4) provide the permittee with long-term planning assurances and increase the number of species for which such assurances can be given; (5) bring a broad range of activities under the permit's legal protection; and (6) reduce the regulatory burden of ESA compliance for all affected participants. (FWS, 1996, 1-14).

i. CUMULATIVE DEVELOPMENTAL BENEFITS

Relative to project-by-project permitting, HCPs greatly reduce cumulative environmental permit processing requirements with respect to total permitting time and expenses for the comprehensive suite of covered activities. (USFW, 1996). Additionally, area-wide HCPs spread the costs of ESA compliance throughout the region, particularly benefitting smaller projects such as local roads and residential private landowner development. These smaller projects may shoulder a disproportionate responsibility under project-by-project permitting. Much of the activity that threatens endangered species habitat in a region may result from larger projects, but smaller projects must work within the resulting biological framework. Without an area-wide HCP, these projects would be subject to the costs of developing individual HCPs, which could ultimately be prohibitive. (USFW, 1996).

A study of the Balcones Canyonlands Conservation Plan (BCCP) in Travis County, Texas found that the plan would save up to \$200 million compared to the cumulative cost of project-by-project consultations (Beatley, T., Fries, T. J., & Braun, D., 1995). They further found that compliance with the ESA without the HCP cost private landowners \$9,000 per acre, compared to fees up to \$1,300 under the HCP, concluding that the HCP “is a more cost effective method of complying with the Endangered Species Act than individual compliance by Travis County landowners with habitat.” (Gau and Jarrett, 1992). Similarly, according to an interviewee, an internal estimate comparing the costs of per-project ESA clearance for the Clark County, Nevada

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HCP found that projects processed under the planned HCP would save the community over \$300 million on permitting costs over project-by-project permitting.

Additionally, the HCP shoulders the burden of environmental permitting for projects occurring within the covered area. In Butte County, California, the local metropolitan planning organization (MPO) is the agency responsible for planning their HCP, which is still in development. An interviewee at the Butte County MPO took pride in the organization's efficiency and its ability to coordinate among local jurisdictions. As a result they pursued an HCP to take the burden a way from other understaffed local agencies to meet ESA requirements. A representative of the Clark County HCP also discussed how the HCP removes the burden of ESA compliance from local infrastructure agencies and developers. While identifying this as the biggest benefit of the HCP, this representative also observed that the HCP process worked so well that it made ESA compliance almost invisible within the HCP area.

ii. PROJECT-SPECIFIC DEVELOPMENTAL BENEFITS**A. Streamlining**

Streamlined permitting on a per-project basis is one of the foremost benefits of area-wide HCPs. The presence of an area-wide HCP greatly reduces the number of permits that FWS, already stretched thin for resources, must process. (Greer, n.d., Porter and Salvesen, 1995). It is the foremost reason that many interviewees gave for creating an HCP. One interviewee, citing the long wait for a project to even have access to FWS to begin the ESA permitting process, said they formed their area-wide HCP because "there had to be a way." The administrative benefits can be enormous, as per-project mitigation approval under Sec. 10 of the ESA can take up to two years. (MSI, 2009). Dixon et al. (2008) found that most of the survey respondents from the Western Riverside Multiple Species Habitat Conservation Plan (WRMSHCP), an HCP in California, reported that the presence of the MSHCP reduced permitting time for transportation projects by one to two years. In one case, the MSHCP enabled a project to proceed that otherwise would not have been able to at all. Interviewees often listed streamlined permitting as a primary motivation for HCP creation.

- *Benton County:* A representative from the Benton County HCP listed a main benefit of their plan as not having to obtain approval from FWS every time the county undertakes any action that could affect a listed species.

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- *Clark County:* The listing of the desert tortoise in Clark County threatened to virtually shut down all new construction in the Las Vegas area during a period of rapid economic growth without the formation of the Clark County HCP. (Raymond, 2006). According to a representative of the HCP, the county was in the middle of a huge residential housing boom that included new master planned communities, and with a single local FWS office there would have been no way to handle necessary project permitting on an acceptable timeline without the HCP.
- *Butte County:* When discussing their local experience with Caltrans projects, a representative of Butte County HCP noted that project-by-project mitigation often led to long delays due to environmental permitting. The interviewee noted that Caltrans has no efficient process for meeting ESA requirements, and that without consideration of environmental permitting at an early stage in project planning, FWS rejection of the permit application starts the clock all over again, substantially delaying the project. The interviewee specifically cited a 4-5 year delay for a five-mile section of SR 149 with two interchanges due to environmental issues, with costs increasing from \$58 million to \$130 million due to the delays.
- *Balcones:* The BCCP, which specifies existing and future infrastructure corridors for additional infrastructure development, notes that this approach streamlines the permitting process for transportation and other infrastructure agencies. By limiting development to corridors specified in the plan, the impacts of and mitigation for planned transportation projects have already been negotiated with FWS under the HCP. According to an interviewee, these corridors are “pre-mitigated” and, within the general implementation of the HCP, greatly streamlining the transportation construction process.
- *KBB:* According to one interviewee, the HCP provides a tested framework that provides certainty. The KBB HCP in particular is pretty well established and has a strong history. The HCP doesn’t have to talk to FWS very often, but when they do they have a cooperative relationship.

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Some interviewees explained that the existence of the HCP encourages additional development and brings the resulting economic benefits to the area. According to one interviewee, the developmental benefits can attract non-local developers by making development easier to accomplish. The degree to which additional development can be encouraged is typically dictated by the underlying land-use plans present in the area covered by the HCP and the current room for expansion. A representative of the in-development Butte County HCP felt that the HCP would encourage more development activities at the margin, as allowed under land-use plans currently in place.

B. Regulatory Certainty

One of the greatest benefits of HCPs is that they provide regulatory certainty for development projects. As long as the development activity is “covered” by the HCP and the specified mitigation is undertaken, the project developer can be certain of FWS approval of compliance with the ESA. (MSI, 2009). This certainty is both a benefit in itself, and also a contributing factor to streamlined permitting, as it removes the need to negotiate environmental clearance with regulators. Dixon et al. (2008) found that the presence of the MSHCP increased certainty for permitting not only for transportation projects that affected endangered species habitat, but for other transportation projects within the area as well. Interviewees generally praised the HCP for providing regulatory certainty for development projects, and many specifically addressed previous permitting issues for transportation projects.

- *San Joaquin:* In discussing ESA clearance for transportation projects before the development of the San Joaquin MSHCP, a representative of the HCP stated that before “it just took forever and there was no certainty of the standard.” This, in addition to the overburdening of FWS staff, led the county to discuss an HCP with the local jurisdiction to both streamline permitting and ensure a predetermined mitigation strategy.
- *East Contra Costa:* Though Caltrans was not an original signatory to the East Contra Costa plan or part of the development process, they opted in as a “special [participating] entity” by paying an extra fee once they saw the plan working because they valued the certainty it provided.

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- *Placer County:* A representative of the in-development Placer County, California HCP recalled that after many delays and difficulties with planning the Placer Parkway, they valued investing heavily to get certainty for environmental clearance from various agencies, but experienced difficulties with the analysis of indirect effects resulting from growth from the Parkway. An HCP can deliver the effects analysis and provide them with environmental certainty, avoiding similar problems in the future.
- *KBB:* A representative of the Wisconsin Karner Blue HCP asserts that the HCP “provides a tested framework that's vetted and worked out so well there's certainty and no surprises.” The KBB HCP was issued a permit in 1999 (renewed in 2012), and is sufficiently well established that they don't typically have to consult with FWS, but when they do they all know each other well and have good communication.
- *Clark County:* According to a representative, the HCP has helped by providing certainty for developers. According to the interviewee, the HCP works so smoothly to benefit the development community that local developers forget the travails and delays of project-by-project permitting, though non-local builders appreciate the ease of building in Clark County as compared to locations with endangered species habitat but without an HCP.⁸

Other benefits flow directly from this certainty. The ITP given under the HCP is a determination that the development activities and corresponding mitigation requirements are compliant with the ESA. Thus activities that are covered are immune from legal liability as long as they are consistent with the mitigation requirements agreed upon in the HCP. (USFW, 1996).

A representative of the Western Riverside MSHCP cited a reduction of environmental lawsuits under the ESA as the biggest reason they created their MSHCP. Before the HCP, environmental interests sued over almost every development project in the region. Since the

⁸ Representatives from Western Riverside and Bakersfield also noted that the beauty of the HCP is that when it works it practically invisible. The representative from Bakersfield noted that this is also a curse, as this efficiency may actually produce the harm of allowing stakeholders to take for granted the benefits afforded by HCPs, as memories of onerous ESA processes fade. Bakersfield is currently developing a new HCP since the original permit will expire in 2014, and they are finding that many developers have forgotten how difficult permitting was before the HCP, and are less willing to contribute money to the in-development HCP.

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enactment of the HCP, they have had no lawsuits on road projects; lawsuits on other development projects occurred, though less frequently than before the HCP. There has been only one transportation-related lawsuit, brought against a rail line extension, which was ultimately dismissed because the Riverside County Transportation Commission (RCTC) had complied with the guidelines in the MSHCP. These findings are further supported by a survey of a wide range of stakeholders conducted by Dixon et al. (2008), in which a sizeable percentage of those surveyed believed that the adoption of an HCP had reduced potential lawsuits for transportation projects.

C. Facilitates Regional planning

HCPs facilitate the integration of environmental goals in long-term regional planning for both land use and transportation. By forcing coordination among stakeholders in order to create the plan, HCPs avoid the delay and negative environmental consequences that typically accompany “business as usual”. By coordinating the planning stakeholders and requiring them to consider the environmental impact of upcoming projects, potential conflicts can be avoided and environmental impact can be minimized. Transportation planning projects frequently require the coordination of federal, state, and local agencies. Commentators repeatedly note that in the traditional model, the environmental issues are typically addressed late in the planning process, typically during construction. This results in both costly delays and sub-optimal mitigation, and also prevents environmental concerns from being properly provided for in budgeting as part of transportation projects. (Thorne, Girvetz and McCoy, 2009, Venner, 2005, White and Ernst, 2003). The advanced coordination and mitigation strategies required by HCPs ultimately allow conservation efforts to be taken into account at the earliest stages of transportation planning and lead to better mitigation at less time and cost. (White and Ernst, 2003).

Interviewees consistently discussed the integration of HCP planning and regional planning. In keeping with the uniqueness and flexibility of the HCP model, they chose to integrate the planning in a variety of ways that best matched stakeholder needs and the existing regional planning models.

- *Butte County:* A representative of Butte County noted that they were lucky in the timing of HCP planning because the county was currently updating their general plans. They were able to do a biological base mapping of the county and use that information to

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inform the general plan updates and transportation plans.⁹ They coordinated meetings with city and county planning staffs to craft general plans to avoid growth in areas with endangered species habitat, resulting in more compact urban development.

- *Clark County*: Clark County took a long-term holistic approach to HCP planning by considering all land use and comprehensive plans of participating jurisdictions. They looked at all development that could occur based on those projects and set a limit of 145,000 acres of development to ensure coverage by the HCP.
- *Coachella Valley*: The Coachella Valley MSHCP is a hardline boundary plan. They defined boundaries for conservation areas first and substantially limited development in these areas, basing the boundaries on the land use plans of the jurisdiction but making adjustments at the margin to create the HCP plan. They then allocated a certain amount of take to each jurisdiction that is covered under the plan. In the end, 90 percent of the county can build to their general plan boundaries and receive HCP coverage.
- *San Joaquin*: This plan is unique in that it supports the traditional agricultural economy of the region. A representative for the plan specified that it is not a land-use plan and that it avoids urbanized areas within the plan boundaries. The HCP frequently buys easements that ensure continual agricultural use of the land. The current agricultural uses also provide suitable habitat for some of the species covered in the plan.
- *San Diego*: The San Diego Area “umbrella” HCPs are based on emphasizing local land-use control. They view the structure of the HCPs as a way to remove local land-use policy from federal control under FWS and give it back to the municipalities. Under the plans, each jurisdiction within a subarea has the authority to issue its own permits for endangered species issues. The San Diego Association of Governments (SANDAG), complementing its regional role in transportation planning as the MPO, coordinates the land-use between all the jurisdictions and works with all area HCPs. Mitigation is done mostly on a

⁹ Butte County used funding from the Caltrans Regional Blueprint program to gather initial biological data. For more information on the program see <http://calblueprint.dot.ca.gov>.

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jurisdictional level, or by negotiation between multiple entities. In practice, this is less complex since mitigation tends to be in areas of the same habitat types as those in which project occurs, and most habitat types tend to be located within the same plan.

- *Balcones*: Representatives from the BCCP stressed that Texas has a weak tradition of regional planning, with infrastructure planning often being reactive to how development occurs, as opposed to being enumerated in a regional plan. The HCP therefore took it upon itself to plan a minimum number of infrastructure corridors in which transportation and utility ROWs would be pre-mitigated. This was the first regional infrastructure coordination in the area, and also the first planning coordination between different infrastructure agencies.

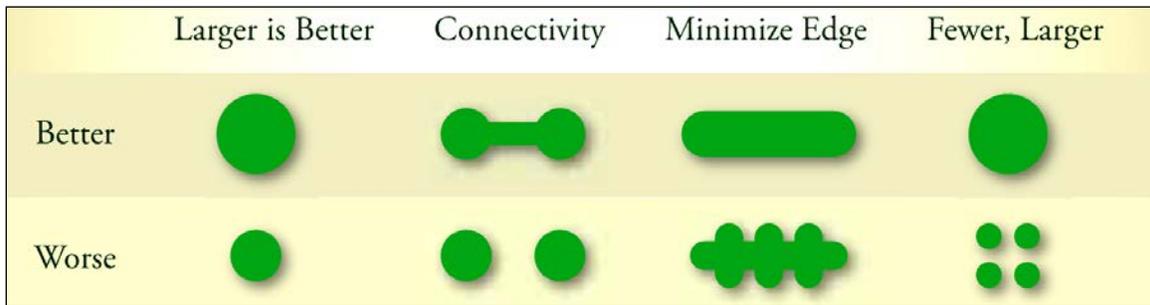
D. Incorporating Environmental Regulations beyond the ESA

Recently, HCP planners have begun seeking a way to incorporate environmental requirements under the Clean Water Act (CWA) into the biological analysis and mitigation requirements of HCPs to further decrease environmental delays. This is complicated, as the Army Corps of Engineers is responsible for issuing the Sec. 404 permits required under the CWA and requires a planning process for permitting that differs from FWS. While these efforts demonstrate the prevalence of the desire for a streamlining of environmental regulations in general and is of interest to those responsible for transportation infrastructure development, it is beyond the scope of this report.

3.3 Biological Benefits

While much has been written on the biological benefits of HCPs, and habitat level-conservation in general, the precise biology is beyond the scope of this report. In general, it is ecologically preferable to have a large, contiguous area of preserved habitat, rather than smaller, disconnected parcels that often result from project-by-project mitigation. (MSI, 2009). A simplified explanation of the biological goals of habitat-level conservation is illustrated below.

FIGURE 3-1: An Introduction to Conservation Biology

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Source: (ECC Informational Booklet.)

Since area-wide HCPs encompass many local stakeholders, they can provide for conservation that spans multiple property boundaries, enabling the integrated habitat conservation recommended by conservation biologists. (Raymond, 2006). For example, county-wide plans allow for the conservation of millions of acres across the county, including large, contiguous conservation preserves. As one commentator observes, HCPs provide “economies of scale” for both conservation and biological studies. (Porter and Salvesen, 1995). Due to the long time horizons of the plans, they force regional planning that integrates conservation biology goals, limiting development in large areas and instead promoting the acquisition of land for permanent conservation. (Raymond, 2006). Since the plans are forward looking, they provide the chance to acquire suitable habitat while it is still available, in advance of development. Without the plans, projects may be built or land privately acquired for other development uses that would have been best suited for conservation. The plans look forward to integrate conservation ideals into planning while the opportunity for large-scale conservation still exists. (Greer, n.d.). Others have noted that the environmental community supports HCPs because they bolster habitat preservation with assured funding and political support (MSI, 2009). According to an independent audit of the HCP program:

The HCP program provides a total conservation package, which includes: landscape-scale conservation and development planning; generation and use of science for HCP development; the ability to leverage significant funding; the collection of vast amounts of scientific data to monitor implementation progress; and the establishment of conservation management structures, which may take the form of non-profit entities, government programs or committees, or multi-organizational task forces. (MSI, 2009).

HCPs provide the additional benefit of allowing conservation for currently unlisted species. Due to the incentives provided by the “no surprises” clause, HCPs will often incorporate species

that may be listed in the future in order to mitigate possible harm to those species, ensuring

the certainty offered by the plan. These large-scale conservation efforts may in fact prevent a future need to list these species. (White and Ernst, 2003). Environmental interests similarly receive assurances and certainty that habitat conservation will occur under the plan. (Porter and Salvesen, 1995).

These concerns are specifically relevant to transportation infrastructure. Transportation infrastructure causes many concerns for endangered species. It can directly harm species through construction activities and road kill. Transportation infrastructure results in significant habitat loss, with one study finding that up to 48 acres of habitat is lost per one mile of interstate highway. Transportation infrastructure also bisects and fragments endangered species habitat, and contributes to secondary harm through enabling sprawl and contributing to air, water, and noise pollution. (White and Ernst, 2003). The planned construction of transportation infrastructure is therefore biologically an important element in HCP, requiring extensive mitigation. Thorne et al. (2009) view the long planning horizon of transportation projects as an opportunity well suited to advanced, comprehensive mitigation strategies. Since transportation agencies typically know what projects are coming up over a long time horizon, they are in a good position to further the biological and economic benefits of approaching mitigation from a regional perspective that better addresses the needs of endangered species.

4. TRANSPORTATION AND HCPs

There are many different reasons for the formation of an HCP. A non-federal actor cannot legally undertake any development that would lead to the incidental taking of an endangered species without an ITP. Unfortunately, full enforcement of the ESA against private actors has been difficult, as the FWS has a very small enforcement branch that is tasked with preventing activities that would harm endangered species, and many development activities, both before and after the invention of the HCP mechanism, have been undertaken illegally. FWS does not have the manpower to monitor all development, and often does not even have the data to be sure of the presence of endangered species in a developing area. (Porter and Salvesen, 1995). According to service representatives, FWS often becomes aware of potential harm to endangered species through a planned construction project, via either mandatory NEPA or state equivalent filings, or from lawsuits brought by environmental interest groups. Such lawsuits are also sometimes sufficient to prompt the applicant's desire to create an HCP to avoid potential liability (MSI, 2009). Transportation construction projects often bring ESA issues to the attention of FWS due to indirect growth effects that may threaten habitat beyond just the area of the road construction itself. The widening of the 101 Freeway in Santa Clara County, for example, brought endangered species issues to the attention of FWS.

One common narrative behind the formation of an HCP is that a species becomes listed during a period of rapid growth and development, resulting in great delay of planned projects. Private developers and public infrastructure agencies alike find themselves in need of an ITP for each project. The FWS is chronically understaffed, however, resulting in long waiting periods just to initiate consultation on a project. This greatly delays planned projects, and projects under construction that must be halted due to the species listing. One interviewee at the Balcones HCP reported that, when the black-capped vireo and six karst invertebrates were listed during a period of rapid growth in Travis County, the line at FWS each morning would extend out the door. A representative from Clark County discussed the listing of the desert tortoise as the impetus for its HCP, recalling that FWS sternly halted all construction and many that people were unclear of project status.

In such situations, FWS will often recommend an HCP to streamline the permitting. This has

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many advantages in areas of rapid development, from both the perspective of the service and the applicants. From the applicants' perspective, large transportation projects will result in much private development that will require take permits, so it is beneficial to negotiate permitting for both the project and corresponding growth at the same time to address rapid growth. From the service's perspective, they know they don't have the manpower to process permits fast enough to meet the needs of the potential applicant jurisdiction, and that the HCP is a better solution for all.

While interviewees at current HCPs and those in development are generally appreciative of the streamlining that HCPs afford, this appreciation sometimes comes only in retrospect. Some interviewees feel that in situations where many permits will be needed, the FWS requires an HCP to lighten their own workload and to gain the biological benefits of large-scale conservation. In some cases, interviewees reported being told directly that an HCP would be necessary, whereas in other situations the necessity for an area-wide HCP was implied due to the delays caused by permitting on a project-by-project basis. This contributes to the perception that HCP planning is an adversarial process.¹⁰

4.1 Transportation is an important element of Area-wide HCPs

Among the area-wide HCPs surveyed, transportation development activities feature prominently among the covered activities, as their construction threatens to "take" an endangered species if not mitigated (MSI, 2009). Among HCP applicants interviewed, environmental clearance for transportation projects has been a motivation for developing many HCPs.

HCPs are often created as the result of the inability to come to agreement on a mitigation strategy for a specific transportation project. For example, the Butte County HCP, currently in development by the Butte County Association of Governments (BCAG), was originally formed after the California State Department of Transportation (Caltrans), had difficulty with ESA permitting for a large regional highway project. According to a BCAG staff member working on the HCP, the Caltrans project was delayed for two years, and costs increased greatly while they struggled to get the ESA permit. BCAG was concerned the project would lose funding, so they

¹⁰ There are few area-wide HCPs that were formed as a solution to local pressure for comprehensive conservation, such as Benton County Oregon and, to some extent, East Contra Costa. But at the time of this report, conservation was not a main driver of HCP creation in most cases.

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enlisted local political leaders to find a way to get the project built. As a result of these struggles, they sought an easier way to get big projects done and decided on an HCP.

The Santa Clara Valley Habitat Plan, in Santa Clara County, California, originated as a requirement by FWS in exchange for permitting local transportation projects, including the widening of US Route 101. FWS's biological opinion on the impacts of the project yielded a recommendation for an area-wide HCP as a condition for approval of the projects, in order to offset the cumulative indirect growth effects on threatened species (Santa Clara Valley Habitat Agency, 2012). Interviews with HCP staff reveal that this recommendation is not unique, with biological opinions leading to the creation of other Northern California HCPs, including in Yuba/Sutter and Placer Counties. A staff member at the Coachella Valley MSHCP cited environmental clearance for transportation infrastructure as a primary impetus for creation of the HCP, saying that the inclusion of transportation projects will allow them to complete 75 years of planned projects within 25 years, and the resulting expedited project delivery enabled them to garner public support for the plan (CVAG, 2013).

Since issuing an ITP is a federal action, FWS is required to meet the procedural requirements of the NEPA, which considers the effects of the federal action more expansively than the ESA. Therefore, the NEPA analysis of an HCP must include direct, indirect and cumulative effects of the covered activities, and FWS is required to address the growth resulting from the transportation projects allowed under the ITP. HCPs respond to the growth-inducing and other indirect effects of transportation infrastructure development that must be considered in the Environmental Impact Statement (or other findings) required under the NEPA and other state environmental laws for issuance of an ITP (Wheeler and Rowberry, 2010). Since an HCP responds to potential development over a long time frame of transportation, other infrastructure projects, and residential and commercial construction, the environmental analysis conducted for purposes of the HCP can be reused for the NEPA analysis of a specific transportation project. These mechanics are illustrated in the San Joaquin County MSHCP (San Joaquin Council of Governments, 2000, Sec. 6.7):

The SJMSCP Permitted Activities include one category which has been determined by the Permitting Agencies to result in indirect effects to SJMSCP Covered Species--Transportation Projects. Specifically, the Permitting Agencies have determined that at least some of the SJMSCP Covered transportation projects are potentially growth-inducing. This potential impact has been considered by the SJMSCP and is addressed by the Plan. This is because the

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Plan assumes that full build-out of the Cities' and County's general plans will occur over the next 50 years, and includes all this development in its habitat compensation program. Thus, any indirect growth-inducing effects of any transportation projects constructed under the SJMSCP is addressed by the Plan and is fully mitigated, since all potential urban development in San Joaquin County (with the exception of Tracy Hills, as described in Section 6.5) is included in its mitigation requirements.

As this quotation demonstrates, HCPs frequently cover the endangered species requirements for many of the planned transportation projects in the given area. One interviewee referred to the ability of HCPs to supply information for the indirect effect analysis as a “get out of jail free card” that is an often-overlooked benefit. This expedites delivery of these projects by removing the need for individual project permitting, and this has increased support for area-wide HCPs.

4.2 HCPs can provide environmental coverage for federal transportation projects

Under the ESA, federal and non-federal activities are subject to different permitting processes, both of which are relevant to transportation planning. Sec. 10 of the ESA, under which HCPs are authorized, applies only to actions by non-federal entities, such as state and local governments and agencies. Actions having a federal nexus, defined as an action “authorized, funded, or carried out” by a federal agency, are evaluated under Sec. 7 of the ESA, which covers interagency cooperation (16 U.S.C 1536(a)(2)). While Sec. 7 and Sec. 10 both require FWS to evaluate the impact of the proposed action and to minimize the harm to endangered species, they are distinguished by both procedural and substantive differences that are beyond the scope of this article. HCPs have successfully integrated transportation projects with a federal nexus, both facilitating the regional environmental planning that is the ultimate goal of the HCP and expediting the review for projects that must undergo a Sec. 7 consultation.

Understanding the interaction of transportation planning and the ESA is complicated by the Sec. 7 vs. Sec. 10 dichotomy, particularly because of the prevalence of federal funding for transportation projects, which is a qualifying “federal nexus.” Many larger transportation projects, even at the county level, receive federal funding that leads to the conclusion that there is a “federal nexus” that places the ESA concerns under a Sec. 7 “consultation” requirement as

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opposed to Sec. 10 (MSI, 2009). Additionally, the Federal Highway Administration (FHWA), whose activities as a federal agency fall under Sec. 7, has delegated its authority under the ESA to some state DOTs, including California. Projects of these state DOTs are thus being evaluated by FWS under Sec. 7 (U.S. DOT, 2002). While Sec. 7 and Sec. 10 both require FWS to evaluate the impact of the proposed action and minimize the harm to endangered species, they are distinguished by both procedural and substantive differences.¹¹

The distinction between Sec. 7 and Sec. 10 notwithstanding, HCPs are increasingly being used to facilitate environmental clearance for transportation projects. As federal and state funding for transportation decreases, more and more counties provide the majority of their transportation funding from local sales taxes dedicated to transportation, leading them to be referred to as “self-help” counties (Goldman and Wachs, 2003).¹² This funding mechanism removes many transportation projects from state control and thus from federal nexus; one county transportation agency interviewed for this report is in the process of forming its own HCP for projects approved under such a local transportation sales tax.

Many HCPs have chosen to include transportation projects having a federal nexus so as to streamline the Sec. 7 consultation process. Although these projects will ultimately be subject to a Sec. 7 consultation, they have been included as a covered activity in most area-wide HCPs. The analysis done for an HCP provides the biological data necessary for the Sec. 7 consultation, reducing the time consumed by the Sec. 7 process. Furthermore, since the project was included in an HCP plan, time has already been spent negotiating with FWS over what is acceptable mitigation, and that mitigation has been approved with the issuance of an ITP for the HCP. HCPs that include federally funded transportation projects often specify the mechanism for this “expedited” Sec. 7 consultation in the HCP. Typically, FWS writes a letter certifying that the project and planned mitigation for its harm to endangered species habitat is consistent with the project details in the already-approved HCP. This presents the same benefits that HCPs do in general, namely cost-efficient mitigation, time savings, certainty, and a better environmental outcome for the species (Bergstein and Mo, 2012). The Western Riverside MSHCP lists “Establishes consistent mitigation standards for MSHCP Covered Species for potential

¹¹ The full procedural differences are beyond the scope of this report, but an illustration can be found in Appendix C.

¹² This practice is currently common in California, but not in other states. It is important to a discussion of transportation and HCPs since many of the current area-wide HCPs are located in California, but its future importance depends on whether transportation sales taxes are more widely adopted in other states.

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application by the USFWS under Section 7...” as one of the enumerated goals of its HCP, and has been able to clear Sec. 7 projects in 45 days that they estimate would have taken three years without the HCP (Riverside County Transportation and Land Management Agency, 2003, Sec. 1.2.3). For further illustration, the Coachella Valley MSHCP states

...any consultation under section 7 ... with regard to Covered Species and Covered Activities, the FWSS shall ensure that the FESA [Federal Endangered Species Act] biological opinion issued in connection with the proposed project that is the subject of the consultation is consistent with the internal FESA biological opinion. Such projects must be consistent with the terms and conditions of the MSHCP and this Agreement. Any terms and conditions included under the reasonable and prudent measures of a FESA biological opinion issued subsequent to the Effective Date with regard to the Covered Species and Covered Activities shall, to the maximum extent appropriate, be consistent with the implementation measures of the MSHCP and this Agreement. (CVAG, 2007, Sec. 6.9).

As illustrated in the example above, the vast majority of transportation projects in the region can be incorporated into an HCP, even if they are required to undergo a Sec. 7 analysis due to federal funding. Interviewees representing both FWS and HCPs have found that the time and cost of the environmental review process for transportation projects is reduced, and agencies are able to approach ESA mitigation with increased certainty of approval as long as the guidelines of the HCP are followed.

HCPs PROVIDE REGION-SPECIFIC SOLUTIONS

5.HCPs PROVIDE REGION-SPECIFIC SOLUTIONS

One of the hallmarks of the HCP process is the great flexibility afforded the applicants and FWS in finding a solution that meets the needs of both. One of the most important findings of this research is that HCPs are not “one size fits all.” In fact, they are more likely to be unique, meeting the specific planning needs of applicants and the biological needs of endangered species in tailored ways. Beyond the basic biological standards required by the ESA, the structure of HCPs allows for the “the creative potential of HCP participants to flourish. As a result, the HCP program has begun to produce some remarkably innovative natural resource use and conservation programs” (FWS, 1996). HCPs provide for unique solutions that both lead to support and pride on the part of stakeholders in completed HCPs, but also to the impenetrability of the model to those on the outside. Its uniqueness makes it hard to generalize in academic studies, and makes it difficult for laypersons to understand the goals and benefits of HCP.

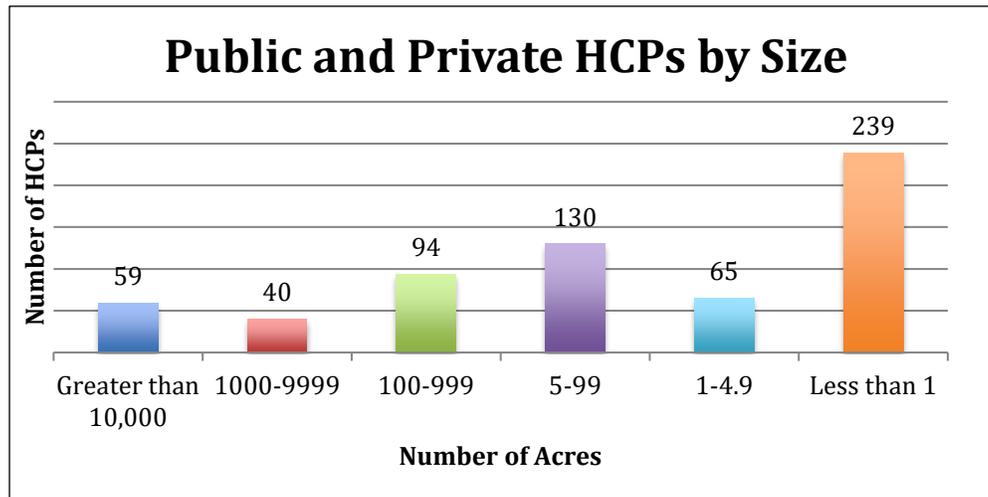
HCP planning is an extremely flexible process that allows both the applicants and the FWS many options from which to find a solution that satisfies the both the legal requirements of the ESA that bind FWS’s decision making and also allows applicants to meet the needs of their stakeholders. Determining the best available development and mitigation options must ultimately be a collaborative process, and applicants who have viewed HCP planning as a collaborative process have had the most success. It was Congress’s intent that the HCP process provide a framework for “creative partnerships” between public and private entities to conserve endangered species. They envisioned that FWS would participate jointly with applicants as a technical advisor in developing HCPs (FWS, 1996).

5.1 Size

One of the greatest sources of variation across HCPs is their size in terms of acres covered. The plans can range in size from coverage of a single residential construction project to a plan that encompasses all foreseeable development over the life of the permit in a county, the latter typically requiring conservation of large amounts of open space to balance development. This report covers those that are area-wide and cover more than 1000 acres. As of 2011, permits had been issued for 670 HCPs, of which 99 covered more than 1,000 acres (Bernstein and Mo, 2012).

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59 cover more than 10,000 acres, and represent over 99% of the total land subject to an HCP (MSI, 2009).¹³

FIGURE 5-1: Public and Private HCPs by Size

Source: (Bergstein and Mo, 2012)¹⁴

5.2 Covered Species

HCPs also range greatly in the number of species covered. Many smaller HCPs (non-area-wides) cover a single species. Area-wide HCPs typically cover multiple endangered species, and are known as Multiple Species Habitat Conservation Plans (MSHCPs). Additionally, many MSHCPs include currently unlisted species that may foreseeably become endangered over the long life of the permit. While this complicates the plan, it allows these plans protection from future mitigation burdens under the “no surprises” clause if the species should become listed.

5.3 Land uses

Covered activities can include any type of legal development activity, and frequently include transportation projects along with commercial and residential development. HCP documents for

¹³ While this report includes HCPs that cover greater than 1000, this statistic is not available for that size range.

¹⁴ The original report notes that “The FWS did not have size data for 43 HCPs. They are not included in this chart but are all individual lots...”

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area-wide plans that are the focus of this report typically run hundreds of pages in length, including descriptions of the applicants, covered activities, potential biological impacts, planned conservation, implementation guidelines, and an outline of funding sources. Though each plan is unique, one FWS region has provided a template outlining what elements should be included (United States Fish and Wildlife Service, 2013).

In order for a transportation project to be a “covered activity” in an HCP, it must be specified in the plan to a level at which FWS can ascertain the effect on endangered species to the legally required degree. Based on a review of area-wide plans that cover transportation projects, there is a variety of ways these projects have been enumerated.

As the HCP process has matured, FWS staff reported that they increased the required specificity for covered activities in order to increase the accuracy of its biological analysis, thereby avoiding potential lawsuits. For example, the original Metropolitan Bakersfield HCP was issued in 1994 and covered county activities in general, including transportation projects. The ITP issued for the MBHCP is expiring in 2014, and they are currently planning a new area-wide HCP. According to an associate planner for the Metropolitan Bakersfield HCP, the new HCP will continue to cover transportation infrastructure, but the FWS now requires a more specific delineation of covered projects. More recent plans include detailed maps of planned transportation projects over the life of the plan. For example, the Western Riverside HCP specified the allowable miles of transportation construction permitted in certain areas under their plan (Riverside County Transportation and Land Management Agency, 2003, Sec. 7).

While it is preferable for the details of planned transportation projects to be as specific as possible to facilitate the biological finding and determination of required mitigation, the achievable degree of specificity is determined by a number of factors. Projects further along in the planning process generally tend to have more definite details, as do projects within more urbanized areas, whereas projects occurring later or in rural areas may still be debating alignment during development of the HCP. The degree of specificity also depends on how information was gathered for planning. Typically, more involvement from regional transportation agencies or state DOTs leads to more specific project definition, and this is a reason why both applicants and FWS encourage the involvement of transportation planning agencies in early HCP planning stages.

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One unique approach was that taken by the BCCP. Due to what an interviewee considered a weak regional planning tradition in Texas, there weren't very explicit plans for future development in Travis County. Rather, infrastructure would typically follow private commercial and residential development. This conflicted with the goals of the long term planning required by the long lives of the HCP permits (in this case, 30 years). The applicants dealt with this problem by determining "infrastructure corridors" in which future transportation capacity can be added and be covered by the plan. These corridors were determined by considering the likelihood of where future growth would occur and where rights-of-way were already located. As stated in the plan

The principle objective is to provide future community services and facilities in a manner consistent with the objectives of habitat conservation, i.e., in a manner which minimizes habitat conversions and fragmentation. A second objective is to reduce overall economic cost of providing public services to the area. Planning in advance of future infrastructure needs and delimiting the number and location of infrastructure corridors in and adjacent to preserve areas will aid in accomplishing these objectives. (City of Austin and Travis County, Texas, 1996).

Transportation development is not explicitly limited to these corridors, but must take place in them to benefit from the structure of the HCP. Outside the corridors, those developing the infrastructure would need to seek FWS approval for individual projects. A city staff member referred to this as "a death sentence for a project," citing neighboring Williamson County's struggle to get approval for a local highway project.

Thus, while providing a high-level of specificity regarding planned transportation projects facilitates the HCP process, the flexibility of the process can accommodate the inclusion of more general transportation planning goals. The examples below further illustrate how plans have incorporated varying types of transportation projects.

- *Coachella Valley:* The Coachella Valley MSHCP lists planned transportation projects over the life of the permit. The list is separated into three groups: interchange projects and associated arterials, Caltrans projects, and regional road projects. Each group of transportation projects is listed in table format with a corresponding map to situate the project within the conservation areas. (Coachella Valley Association of Governments, 2007, Sec. 7)

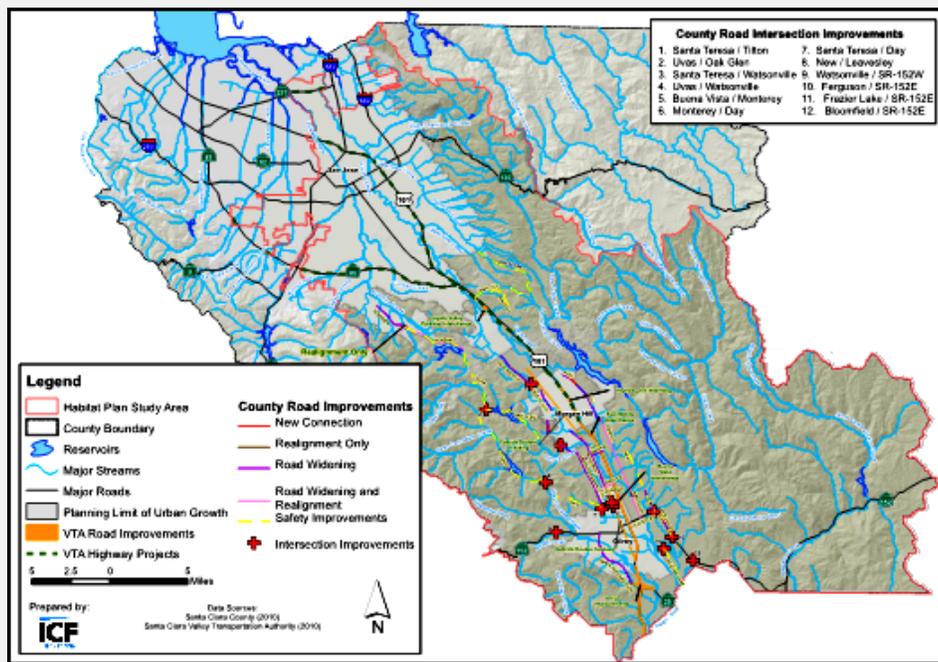
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- *San Joaquin:* According to the San Joaquin MSHCP, “transportation projects were included in the estimates of impacts occurring as a result of open space conversions for the SJMSCP. The list of transportation projects considered were described by the San Joaquin Council of Governments (COG), Caltrans, in the 1998 Regional Transportation Plan (RTP) prepared by the San Joaquin COG and local general plans...Both local and regional transportation projects were included in the assessment of impacts occurring from transportation projects to be mitigated by the SJMSCP.” (San Joaquin Council of Governments, 2000,Sec. 3.3.2)

Case Study: Transportation as a Covered Activity in the Santa Clara Valley MSHCP

The Santa Clara Valley MSHCP depicts covered transportation projects in both table and map format.

FIGURE 5-2: Country Road Intersection Improvements



Source: (SCVMSHCP, Figure 2-7.)

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FIGURE 5-3: Specific Transportation Projects Covered by the MSHCP ⁶

| Project | Approximate Length in Permit Area (miles) | Approximate Width of New Construction (feet) | Lead Agency |
|--|---|--|---|
| Highway Projects | | | |
| U.S. 101 Improvement Project (Monterey Road to SR 129; VTA ID H101-22) includes extending Santa Teresa Boulevard from Castro Valley Road to U.S. 101 (requires a new stream crossing) ¹ | 12.9 | 100 | Santa Clara Valley Transportation Authority |
| U.S. 101 widening between Cochrane Rd. and Monterey Hwy (VTA ID H101-23) | 5.1 | 32 | Santa Clara Valley Transportation Authority |
| S.R. 237 HOV/HOT lane (full length inside the study area) – includes converting the existing median to express lanes | 2.3 | 32 | Santa Clara Valley Transportation Authority |
| S.R. 85 HOV/HOT lane (full length inside the study area) – includes converting the existing median to express lanes | 11.6 | 32 | Santa Clara Valley Transportation Authority |
| U.S. 101 HOV/HOT lane (western study area boundary to Cochrane Road) – includes converting the existing median to express lanes ² | 26.7 | 32 | Santa Clara Valley Transportation Authority |
| U.S. 101 HOV/HOT lane (Cochrane Road to Masten Avenue; VTA ID H6) – includes converting the existing median to express lanes | 7.5 | 32 | Santa Clara Valley Transportation Authority |
| U.S. 101 HOV/HOT lane (Masten Avenue to 10 th Street; VTA ID H7) – includes converting the existing median to express lanes | 4.2 | 32 | Santa Clara Valley Transportation Authority |
| U.S. 101 HOV/HOT lane (10 th Street to SR 25; VTA ID H8) – includes converting the existing median to express lanes | 3.0 | 32 | Santa Clara Valley Transportation Authority |

5.4 Different needs in different regions

The flexibility of HCPs allows for different regions to meet their differing development needs through a single process. The majority of HCPs are located in California, due to frequent conflicts there between high biodiversity and rapid urban growth. This type of conflict is a characteristic shared by other HCPs in the Southwest, including the Clark County HCP, which was created to accommodate the rapid growth of Las Vegas, and the BCCP in Travis County, which includes the city of Austin. It is these HCPs that are the focus of this report since they most prominently feature transportation infrastructure, but other regions have frequently adopted HCPs for other reasons. Many HCPs in the Pacific Northwest were developed by logging companies on forestlands. In the Midwest, HCPs are being developed to reconcile the growing wind-power industry and the endangered Indiana Bat, and similar HCPs in the California desert accommodate other renewable energy sources by private companies.

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While this report focuses on HCPs likely to be concerned with facilitating residential and commercial development and its corresponding infrastructure, other HCPs have been pursued for other specific needs. Some are driven primarily by a public and political desire to preserve the environment, such as the HCP in Benton Count. While the majority of California HCPs face strong opposition from the development community because they are viewed as restricting development, strong environmental interests fearing that an HCP would facilitate development dominated the public dialog in Benton County. The San Joaquin MSHCP, also in California, sought to protect the agricultural economic interests of the county. Others seek to preserve recreation interests in their open spaces, as some have sought to allow for hiking and off-road vehicle usage in conservation spaces, while others have banned access altogether (Porter and Salvesen, 1995).

There is also a wide range of types of minimization and mitigation actions prescribed in HCPs, dictated both by the characteristics of covered species and the land-uses in the area. For example, the state-wide KBB HCP in Wisconsin was able to protect the endangered butterfly without acquiring much land by prohibiting building and road maintenance activities during the butterfly's short mating season. The Clark County HCP is concerned primarily with the desert tortoise, a species with a 50-mile foraging range. Since 90 percent of the land in the county is already federally owned and not suitable for development, the solution was to use HCP revenue from building permits to fund restoration activities on federally owned lands.

Those who have experienced the HCP planning process are aware of the complexity that meeting local needs adds to the process, but they value the flexibility of the model to meet specific needs. When asked about their plan in relation to other HCPs, interviewees gave varying answers, but all were able to identify the unique attributes of their plan that met their local needs.

- *Coachella Valley:* In contrasting their plan to neighboring Western Riverside, located in the same county, a representative from Coachella Valley MSHCP noted that their plan is different from Western Riverside because there was less development in Coachella at the time of planning, so they could put hardline boundaries on where future development would be allowed, which Riverside was unable to do due to already rapid urbanization.
- *Clark County:* The scarce availability of private land for development resulted in an HCP based on recovery of species on federal land. The county staff working on the HCP knew that political and economic pressures would not have allowed for more typical set-aside

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mitigation, as rare auctions for newly-available land for development would reach up to a million dollars per acre. They needed the flexibility afforded by the HCP process as a partnership with FWS to be successful, allowing for the unique solution of managing recovery on federal land as described above.

- *Butte County:* According to a representative of the in-development Butte County HCP, “We didn’t really look at other plans. They are all unique. We have an open area with lots of resources. We have time to plan for growth and want to grow responsibly around current open areas. The county supports this and we have lots of open areas for mitigation. This is a good time for us [to plan an HCP].”

5.5 Permittees

The issuance of an ITP authorizes “take” by any entity under “direct control,” including regulatory jurisdiction (50 CFR 13.25(d)). Thus, an HCP can be developed by any non-federal governmental entity, including county governments or other agencies, or a private landowner with “direct control” over the activities covered in the plan. This often results in countywide partnerships developed to manage growth. These partnerships are expressed in HCPs that include participation by the county, controlling unincorporated lands, and municipalities, exercising land-use control over the permit area. There also are statewide HCPs, as well as some that include only a portion of a county and its member cities (Bergstein and Mo, 2012). In short, the flexibility of the HCP process can accommodate differing political boundaries that best serve to protect endangered species habitat and facilitate development.

HCPs also allow for diverse permitting structures that meet the needs of the applicants. Most area-wide plans have “programmatic” permit structures, in which the permittee or multiple permittees are bound under the HCP plan as it is presented in the application. This is frequently an “all for one and one for all” approach. It is possible to plan an HCP which allows parties to join or leave after the ITP is issued (a feature referred to as “severability”), but this is difficult and time consuming as contingencies must be included in the plan to account for the resulting changes in the development portfolio, biological impact, and funding of the HCP. Allowing for

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severability can also undermine the credibility and certainty offered by the plan, according to FWS representatives.

Another structure is the “umbrella” permit, which allows municipalities to join a previously created HCP and be issued their own ITP. Umbrella HCPs face the same planning difficulties as regular, programmatic HCPs, but are scalable and useful in facilitating the process for cities to join an HCP who may not otherwise. One example are the San Diego area HCPs. San Diego currently has two area HCPs (and two in-development), which, though separate, are related through the involvement of the San Diego Association of Governments (SANDAG) and the usage of a dedicated portion of its county-wide transportation sales tax (TransNet) for advanced mitigation for transportation projects. While the HCP is constructed on a regional level, each municipality that wishes to participate has its own sub-area plan, and the individual municipalities receive ITPs. Because these are some of the earliest HCPs and because of strong jurisdictional politics of the region, one of the primary governance goals of the San Diego area HCPs was to allow municipalities to maintain land-use control. A representative of the environmental mitigation working group views this as intended to be both communicative and collaborative, in contrast to other plans that are more aptly described as “command and control.” This permitting structure also allows the plans to account for cities within the region that are either entirely built out and/or are not expecting growth and therefore don’t see the benefit to large-scale HCP planning.¹⁵

5.6 The Role of Transportation Planning Agencies in HCPs

A growing body of opinion argues for including all relevant stakeholders in the HCP planning process and providing for frequent communication among them. According to interviewees, including the agencies responsible for local transportation facilitates the HCP planning process because involving all parties at the early stages of planning increases long-term cooperation, which reduces the probability of lawsuits and results in a more comprehensive and integrated planning (Marsh and Lallas, 1995). FWS, according to a staff member, has begun

¹⁵ Neither SANDAG nor Caltrans possesses their own ITP, but use the HCP document as both biological background and mitigation guidance for their compliance with the ESA.

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urging the involvement of transportation planning agencies to enhance its ability to expedite the permitting process.

One of the most salient features of HCPs is that they are uniquely constructed to meet both biological needs of endangered species and development and planning needs of the governmental body seeking a permit, meaning that no two plans are identical (Marsh and Lallas, 1995; Bergstein and Mo, 2012). While this makes the HCP process useful to any entity required to address endangered species, it is difficult to generalize in regard to structure across all HCPs. Because of the variation among HCPs and the political environments of the areas they cover, there are many ways in which transportation agencies and projects have been incorporated into HCPs. According to one representative of FWS, each HCP approaches integrating transportation planning uniquely because “they have different tools in their toolbox.” The following sections illustrate different mechanisms by which state and local transportation agencies have been incorporated into HCPs.

i. STATE DOTs

Few state DOTs are the primary permittees under HCPs. State DOTs are most often included as permittees in plans having multiple permittees, including county and local governments and other utility and infrastructure agencies. One example of a state DOT holding its own ITP is the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). Under this HCP, the California Department of Transportation (Caltrans) is responsible for acquiring over 7500 acres of land for mitigation and contributing over \$8.6 million for monitoring and management of land acquired by the MSHCP in exchange for construction of freeway interchanges and arterials under the Plan (Coachella Valley Association of Governments, 2007). Nevada DOT is a permittee under the Clark County MSHCP, but, according to an HCP staff member, has continued to mainly use Sec. 7 consultation for its road construction, using the HCP coverage for its gravel extraction pit activities. The Six-Points Road Interchange HCP in Indiana covers only one federal project, an interchange on I-70 near the Indianapolis Airport, with permittees including the Indiana Department of Transportation and the Federal Highway Administration (FHWA). Although it is not considered an area-wide plan, the applicants chose to use an HCP after the required Sec. 7 consultation with FWS to address the “impacts of the road construction,

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as well as commercial development and airport improvements that will occur in the area following the road construction” (Habitat Conservation Plan for the Six Points Road Interchange and Associated Development, 2002).

Other area-wide HCPs are structured so that there is one or a few direct permittees, but other stakeholders are legally bound under the plan without their own permits. One example is the Karner Blue Butterfly HCP, which covers the entire state but only requires mitigation in areas identified as butterfly habitat. Wisconsin Department of Transportation DOT (WisDOT) is officially designated a “partner” rather than a direct permittee. According to an HCP representative, WisDOT agreed to construction and maintenance activities that conform to the guidelines of the HCP to avoid or minimize hazards to Karner Blue habitat in exchange for the incidental take allowance. The inclusion of WisDOT projects under the HCP provides advantages to all parties, reducing the need for Sec. 7 consultations that can add one to two years to a project, and allows FWS to devote staff time and resources to facilitating other projects (U.S. Department of Transportation, 2002).

While direct participation provides efficiency benefits to state DOTs and other applicants and is the preferred alternative of many interviewees, the interviews revealed inconsistency in state DOT perceptions of HCPs. Some applicants interviewed stated that, for instance, Caltrans has been hesitant to participate in HCPs, choosing instead to continue with the traditional project-by-project Sec. 7 consultation. According to an interviewee at Caltrans, there is no policy or comprehensive approach to HCPs, and the state sometimes is at the table when a specific project is planned. However, even within California, different districts show different levels of comfort and enthusiasm for participation in HCPs; two HCPs in District 8 (Western Riverside and Coachella) include Caltrans as a permittee. According to interviewees, Caltrans additionally funded initial biological data gathering for the Butte County HCP through its Regional Blueprint program.

Even when a state DOT does not participate in the development of the HCP, the applicant municipalities have an interest in providing for mitigation of state DOT projects located in the HCP area. Therefore, many HCPs cover planned transportation projects, including those having a federal nexus, even without DOT participation in the planning process. These projects use the HCP biological findings and mitigation strategy for their Sec. 7 consultation, streamlining the process. According to an HCP representative, the Santa Clara HCP explicitly included Sec. 7

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transportation projects in its list of covered activities with the understanding that Caltrans mitigation will follow the HCP guidelines without State DOT participation in HCP development.

Caltrans, though not a permittee, actively plans for project mitigation with the multiple HCPs located in the San Diego area, attending monthly meetings on environmental mitigation held by SANDAG and working closely with HCP managers. The HCPs include planned Caltrans projects over the life of the plan, and Caltrans works with the HCPs on a project-by-project basis to identify current priorities, with the HCP funding and managing the acquisition of land for advance mitigation according to the Plan. The Caltrans projects fall under Sec. 7, but according to an HCP staff member, the HCP's goal is to work with Caltrans to align the projects and the mitigation with the HCP. Both parties see the benefit of working together, and have been able to expedite projects both by facilitating environmental review and leveraging funding available through the HCP. As the San Diego District Caltrans representative stated, you need "everyone at the table to have great government" (stated at public meeting).

Other HCPs have initially had difficulty coordinating with the State DOT, although they have developed a better working relationship while implementing the plan after the ITP was granted. In East Contra Costa, Caltrans declined to participate, but applicants anticipated local Caltrans projects and included them in the plan. The HCP negotiated with FWS that, even without Caltrans participation, FWS would not require any additional mitigation beyond the HCP requirements during Sec. 7 consultations. Caltrans eventually joined the plan as a participating "special entity," without its own permitting ability after the ITP was issued, when it had difficulty reaching agreement with FWS on a specific project, but was able to come to agreement on mitigation as outlined in the HCP.

The San Joaquin MSHCP began its negotiations with Caltrans as a potential permittee, but Caltrans later dropped out when it felt that there wasn't a sufficient emphasis on transportation projects to make the HCP planning beneficial compared to standard project-by-project permitting. San Joaquin crafted the HCP so that Caltrans projects would be able to use the biological information and mitigation plan to address the impacts of its projects under traditional Sec. 7 review, but Caltrans did so only once in the first six years of the plan – on a particularly environmentally problematic project for which Caltrans was unable to come to agreement with FWS. Otherwise, Caltrans continued to use the traditional Sec. 7 process, and San Joaquin expedited local transportation projects that had a federal nexus under the HCP. San Joaquin has

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recently seen more involvement from Caltrans, a result attributed by an interviewee to multiple factors. First, a change in state leadership has increased the presence of environmental programs within Caltrans in the years since the beginning of the plan, and second, there is growing familiarity with the model. After struggling with FWS on the biological outcomes of a particular project, Caltrans brought the project under the plan and was able to get approval after only 90 days. Caltrans realized it could benefit both from the certainty the plan provided and from the HCP taking responsibility for fulfilling many more environmental obligations, including the acquisition and monitoring of mitigation land.

Even without the listing of state DOT projects in local HCPs, State DOT projects may benefit from the existence of an HCP by using biological information that was gathered in the HCP planning process, even for projects that were not covered. The gathering of biological information on endangered species is both costly and time-consuming (MSI, 2009), and by using this information, state DOTs can shorten the time to review projects even when they are unrelated to the HCP. Using biological information gathered for HCP formation in a Sec. 7 process also alleviates the burden on FWS, which can use the same Biological Opinion issued under the HCP and reduce consultation time, a strategy preferred by FWS staff. Similarly, state DOTs have used existing HCPs to purchase mitigation land for projects not included in the plan at a lower cost due to the economies of scale of the HCP, as reported by representatives of both Bakersfield and San Diego HCPs.

ii. MPOS AND LOCAL TRANSPORTATION PLANNING AGENCIES

Planning and administering HCPs requires a method by which to collect and balance the inputs and desires of municipalities and stakeholders in the covered region, and applicants often find it easier to work with existing regional organizations than to create new ones. Metropolitan Planning Organizations (MPOs) can play a large role in the HCP universe. One challenge in HCP planning is determining a governance structure for the HCP, as well as a process for gathering and meeting the needs of permittees and other stakeholders, such as counties and incorporated municipalities. When possible, applicants find it easier to conduct HCP planning within a pre-existing regional planning entity. This is often a Council of Governments (COG) or an MPO in areas where the MPO overlaps with the HCP planning area. Having the MPO as the

HCPs PROVIDE REGION-SPECIFIC SOLUTIONS

lead agency in HCP planning allows the plans to build on existing inter-governmental relationships while facilitating an integration of transportation and HCP planning.

Among the HCPs interviewed, the San Joaquin Valley MSHCP was developed by the San Joaquin Council of Governments, the local MPO and a direct permittee through the plan, and is administered by a Joint Powers Authority formed specifically for this purpose (San Joaquin Council of Governments, 2000, Sec. 8.1.2). The planning of the in-development Butte County HCP is also being done by the local MPO, and a representative reported that the involvement of the MPO in this case has greatly facilitated the integration of transportation planning into the HCP. The San Diego Multiple HCP (MHCP) was developed and is administered by SANDAG, the local MPO. According to a member of the Environmental Mitigation Program at SANDAG, the placing of environmental planning for the HCP under the control of the local MPO has enabled integration of transportation, land-use planning, and environmental mitigation in the region.

While having an MPO as the governing structure of an HCP is beneficial, it is only possible where there is a physical overlap of transportation planning and HCP areas. Particularly in areas having multi-county MPOs, Regional Transportation Agencies that manage local transportation systems also play a large role in HCPs. These transportation agencies often participate as direct permittees, and in Coachella Valley, the CVAG is both the local transportation planning agency and the agency that led the creation of the HCP. The San Joaquin County Transportation Authority and the Santa Clara Valley Transportation Agency are permittees of their respective plans, and the Riverside County Transportation Commission (RCTC) is a permittee on the Western Riverside MSHCP. According to a staff member of the HCP, RCTC was initially hesitant about the plan's ability to facilitate its transportation projects, but the HCP has helped reduce the time required for their average NEPA analysis by 6 months by using biological data from the HCP, which has also increased regional competitiveness for federal funding. The Placer County Transportation Planning Agency is an intended permittees of HCPs currently under development. In the Balcones Canyonlands Conservation Plan, the Travis County transportation and natural resources department and the city of Austin public works and transportation departments are known as "associated utilities" with respect to the HCP, conferring partner status – without permitting ability – similar to some state DOTs discussed above (City of Austin and Travis County, Texas, 1996, 14: p. 2).

HCPs PROVIDE REGION-SPECIFIC SOLUTIONS

One reason for the involvement of local transportation planning agencies in HCPs is the prevalence of local funding of transportation through county-level transportation-specific sales taxes. The most prominent example of the influence of the county-level transportation sales taxes on the HCP process is the HCP currently in development by the OCTA, a county transportation commission in the Los Angeles Region, as the sole permittee. This HCP will be funded by a county-level transportation-specific sales tax and, according to an OCTA staff member, was included in the ballot measure as environmental mitigation for planned transportation projects (Orange County Transportation Authority, 2009). County-level transportation sales taxes have been an important element for funding HCP planning and administration of plans in California. Similar taxes have been used to partially fund the Western Riverside MSHCP, the Coachella Valley MSHCP, the San Joaquin MSHCP. Measure A in Riverside County (which also provides funding for the Western Riverside MSHCP), is projected to provide \$30 million of funding for the Coachella Valley MSHCP, according to an HCP representative. San Diego County's tax, TransNet, includes funds dedicated to advanced mitigation under the region's HCP plans as part of its Environmental Mitigation Program (Sandag, n.d.).

The flexibility of the HCP planning process allows for the participation of transportation planning agencies at all levels, from state to local. This aids in both providing environmental solutions for these various agencies and in allowing HCP applicants to undertake the planning process with all relevant transportation agencies, regardless of region-specific agency structure.

PROCESS**6. THE HCP PLANNING PROCESS**

While flexibility of outcomes is one of the great assets of the HCP process, it also results in frustration on the part of some applicants. The collaborative process leading to an integrative solution often results in a lengthy and expensive HCP planning process. Awareness of the length of the planning process without complete understanding of its benefits typically leads to a hesitation on the part of applicants and stakeholders to begin planning an HCP, even when that is suggested by FWS as the best solution to meeting ESA challenges. This section explores features of the HCP planning process that contribute to its length, while Section 9 presents recommendations on how to negotiate these roadblocks.

One conclusion from the interviewees is that many stakeholders do not appreciate that without the HCP they would be subject to per-project permitting requirements. While HCPs are helpful in the long run, many interviewees reported early denial and backlash among local development communities when faced with meeting ESA requirements. As one applicant familiar with various HCPs in California said: “There is a huge problem on all levels of skepticism for the value of these plans because they take so long to plan.”

The fact that HCPs take a long time to plan is one of their most familiar characteristics, which perpetuates the daunting feeling on the part of applicants and views of the process as adversarial. But it is important to remember that area-wide HCP planning “frontloads” the costs of the environmental permitting for a large suite of projects, so the time spent planning must be weighed against the cumulative total time that would be required for per-project permitting. The final sections of this report provide guidelines for approaching the process in both a collaborative and expedient mindset.

6.1 HCP Planning Benefits from Cooperative Approach

Many people unfamiliar with the HCP planning process have the impression that it is adversarial. This misconception leads to many of the delays in planning and causes hesitancy to consider HCP planning as opposed to status quo per-project permitting. Many would-be applicants view negotiations with the FWS as a zero-sum game in which they try to get the “best answer” from the service. If they get an answer they dislike, applicants will often choose to shop

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for another answer rather than work with the FWS to meet their goals within the imposed legal requirements. According to interviews with many sources from both the FWS and HCP applicants, it is reluctance to view the process as collaborative as opposed to adversarial that greatly contributes to the duration of HCP planning.

While some involved in planning existing HCPs have found the process to be adversarial (Brachhausen and Garrison, 2003), there have been two important findings from this research involving the planning process. Firstly, applicants have invariably expressed great appreciation for the HCP model. Secondly, those who are newly involved with an HCP are largely unfamiliar with the process, and even those who are involved in a specific HCP do not know much about the mechanics of other HCPs.

At FWS, the process was always envisioned to be collaborative. The introduction to the USFW HCP Handbook stresses that HCPs are intended to be “creative partnerships” and that “Congress was not instituting merely a permit procedure but a process that, at its best, would integrate non-Federal development and land use activities with conservation goals, resolve conflicts between endangered species protection and economic activities on non-Federal lands, and create a climate of partnership and cooperation.”¹⁶ (USFW, 1996, Chp. 1).

Throughout the research we have found that the impressions of an adversarial nature are not the result of intention, but of conflicting mandates between agencies. FWS is mandated by the ESA and instructed by courts that have interpreted the law to meet certain standards, and while they have a wide variety of options available by which to do so, they are ultimately responsible for only issuing ITPs that are consistent with the requirements of the ESA. Transportation agencies (and local governments as well) are driven by policy to deliver projects as cheaply and efficiently as possible, often struggling to find funding to efficiently address environmental objectives.

A more nuanced look at the process reveals one that is not adversarial by nature, but one in which agencies with conflicting goals engage in collaboration to reach integrative solutions. As demonstrated in this report, HCPs can result in “growing the pie” since, by design, applicants receive streamlined permitting while providing biologically preferable conservation.

It is possible to trace the impression of an adversarial nature to the inception of the process, when many applicants felt that FWS was presenting them with no choice but to engage in HCP

¹⁶ For a detailed summary of the creation of the Habitat Conservation Plan Program, see Klyza and Sousa (2008).
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planning or face a practical building moratorium. This feeling stems from the fact that in areas of rapid development, FWS does not possess enough resources to process ITPs on a per-project basis at the pace demanded by local development interests (discussed more fully below). So they offered an HCP as an alternative, but as local interests were unfamiliar with it, they felt like they were being forced into something.

But as the program developed, efforts were made within the FWS to promote a sense of partnership, a message that was continually conveyed at the FWS training course for its staff on HCP planning. As one interviewee stated about the HCP planning process: “On the whole, FWS was incredibly flexible. They've come to understand that they need to be perceived as flexible and not regulatory in order to get people on board. It went a lot smoother than we anticipated from that perspective. Don't be afraid of process because FWS is very flexible.”

Furthermore, there has been a dramatic shift in the last few years towards the general acceptance of the benefits of advanced mitigation, as evidenced by changes in federal transportation policy and adoption of advanced mitigation programs by state DOTs. At the local level, many transportation sales taxes include dedicated funds for advanced mitigation of planned projects, and MPOs are beginning to integrate large-scale conservation into their planning.

6.2 The Lengthy HCP Planning Process

Two of the greatest reasons for resistance to HCPs is that they take a long time to develop and are expensive. An independent audit of the HCP process performed in 2009 for the FWS concluded that “The HCP development and ITP approval process is rated as inefficient for the following reasons...The HCP development process is not well defined and there are no mechanisms to resolve differences between applicants and the Service.” (MSI, 2009, p.32). Additionally, the audit states “the time and cost of developing HCPs is significant and serves as a disincentive to the development of additional agreements, especially for large area-wide plans... The length of development time is due to a combination of factors, including the complexity of the agreements, the need to conduct scientific studies, protracted negotiations over appropriate mitigation strategies, FWS staffing constraints, and the applicant’s sometimes wavering focus on HCP development due to resource constraints and competing demands” (MSI, 2009, iii-iv).

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i. PROCEDURAL NECESSITIES

Legally required procedures for permit issuance from FWS include mandatory waiting periods that lengthen the time between planning initiation and ultimate permitting. Many HCPs, and all of those that are area-wide in nature, require permit applicants to prepare an EIS under NEPA. FWS is responsible for the EIS, since the proposed issuance of an ITP is a federal action that triggers NEPA requirements. While most area-wide applicants hire consulting firms to prepare EIS's, they remain subject to procedurally mandated waiting periods (MSI, 2009). The internal target set by the FWS for processing an HCP with an EIS or a 90-day comment period is 12 months. Information on the actual NEPA processing time is difficult to ascertain, though an external audit of the FWS HCP process found that the actual processing time for ITP applications including an EIS was 13.8 months, slightly over FWS's target. This statistic is based on only 520 of 898 records across HCPs of all sizes that were sufficiently complete to provide data (MSI, 2009).¹⁷

The processing of an ITP also involves a Sec. 7 consultation between the FWS field office staff member who worked with the applicant developing the plan and a regional FWS office staffer to ensure an independent assessment that there is a finding of "no jeopardy." (USFW, 2000)¹⁸ Since the Sec. 7 consultation official occurs after the completion of the HCP and during the permit application, it has in some instances required redrafting of portions of the plan. In its survey of FWS staff, the independent audit found that 40 percent of service staff interviewed thought that the Sec. 7 consultation resulted in "minor" changes. These changes may be minor, but they increase costs, cause delay, and engender frustration on the part of applicants. In one atypical case, necessary changes that became apparent during the Sec. 7 consultation added years to the planning process of the Coachella Valley MSHCP (MSI, 2009).

¹⁷ Additionally the report points out that multiple permits may be issued under one HCP, but the data is collected on a per permit basis, not a per-HCP basis. Additionally, it is possible that the sample was systematically biased by omitting those reviews that took the longest time.

¹⁸ Under the ESA, jeopardy occurs when an action is reasonably expected, directly or indirectly, to diminish a species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced. The statutory requirements for Sec. 7 consultations state "Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical..." 16 U.S.C. 1536(a)(2).

PROCESS**ii. THE MORE COMPLEX, THE LONGER PLANNING WILL TAKE**

Brachausen and Garrison (2003) list the following factors that increase HCP complexity: large geographic size, presence of a public applicant, large number of applicants, high level of community involvement, and high number of species covered. These characteristics describe almost every area-wide HCP. According to FWS senior staff, there is a “sweet spot” for many of these attributes that achieves the goals and scope of the HCP while minimizing the time and complexity of the planning process. This sweet spot is unique to each HCP and can only be ascertained through the planning process. For example, according to FWS representatives, covering a larger area may require including additional development activities, but may also provide more opportunities for acquisition of large mitigation parcels. One interviewee who had participated in the planning process for multiple HCPs noted that one of the most generic problems with large-scale HCPs is that applicants spend too long trying to make them perfect, and “perfection is the enemy of the good.” Another interviewee noted figuratively that the last 10% of the plan details took the majority of planning time.

Some HCPs specifically excluded areas they knew would be problematic and would therefore result in a longer HCP planning process. For example, both East Contra Costa and Santa Clara excluded tidal lands so as not to include additional species. According to FWS staff, the inclusion of additional species is one of the biggest contributors to HCP complexity and planning time (MSI, 2009). Santa Clara also specifically excluded proposed high-speed rail from its list of covered activities to avoid additional mitigation responsibilities that would have complicated the plan. East Contra Costa specifically avoided including wind power as a covered activity, and fish as a covered species, saying that they “picked their battles, which can be frustrating but it’s better to keep it a bit simple.” A representative from Santa Clara stated that it is important to remember that the HCP is an obligation, and therefore the more activities you cover, the more complex it is to address biological effects.

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iii. POLITICAL TURNOVER

Even at their most efficient, area-wide HCPs take a long time to plan. Since HCP planning is inherently a political process, it is vulnerable to delay from political turnover. This not only means reeducating newer stakeholder representatives to get them up to speed, but also the possibility that a newly elected official will not take the same stance on HCP planning as the previous one. Similar disruptions also occur on the part of FWS, where new staff members coming onboard must be brought up to speed and new regional leaders may differ in approach to HCP planning (MSI, 2009).

In order to avoid delays from political turnover, we recommend that HCP planners build trust with the elected officials, stakeholders, and the public of municipalities involved in the plan. A representative of the Butte County HCP stressed that planners must be aware of managing the political environment. By building trust with potential permittees, they were able to minimize delays in the face of elections and staff turnover. Butte County planning staff furthermore met regularly with local congressmen to gain congressional support for the plan, and the Balcones HCP also garnered federal support that greatly aided in its creation. We recommend that HCPs seek support and involvement from larger political bodies, including the state and the federal government. State and federal support can help expedite HCP and ensure its success, and also increase access to state and federal funding sources.

iv. EVOLVING STAKEHOLDER GROUPS

Stakeholders are sometimes left out of the process because of inadequate outreach and lack of awareness on their part until late in the process. If notable stakeholders are not included in the earlier planning stages, they can torpedo a plan at a later stage, after a significant amount of time and money has already been invested. This is most prevalent when environmental interest groups are not included in the planning process and file suits when the plan is made public through NEPA.¹⁹

Elections Delay HCP Planning

The Coachella Valley MSHCP did negotiations city by city, which resulted in council member changes during the project. Since many of the jurisdictions had concerns about the HCP slowing development, it became an election issue, and the newly elected officials fought for development interests, causing further delays.

¹⁹ See, for example, lawsuits against the Natomas Basin HCP brought by environmental groups such as the Sierra Club, the Environmental Council of Sacramento, and the National Wildlife Federation. National Wildlife Federation

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Apart from ultimate damage done by stakeholders left out of the process, early addition of many stakeholder groups can ultimately reduce planning time. For example, gathering biological data is a substantial part of the workload of HCP planning. Interviewees from FWS stressed that early involvement of environmental stakeholders, including academic resources, can increase awareness and access to environmental data necessary for HCP planning.

The addition or subtraction of a major stakeholder during the HCP planning process is a source of disruption that can prolong the planning process. As the pool of applicants changes, so does the biological analysis. When new cities come on board with their suite of intended development projects the required mitigation analysis must be overhauled. The addition of stakeholders during the process is noted to have contributed to delays in the planning of the South Sacramento HCP, which has infamously been in development for 18 years and is an often-cited cautionary tale of area-wide HCP planning. HCPs need similar overhaul if a major stakeholder drops out. The city of Desert Hot Springs dropped out during the planning of the Coachella Valley MSHCP, which was performing negotiations with individual jurisdictions. This required overhaul of the plan and resulted in a delay of almost two years. (Alagona and Pincetl, 2008).

v. INTER-JURISDICTIONAL COMPETITION

Another source of delay is related to difficulties resulting from inter-jurisdictional coordination in regional planning. Since most area-wide HCPs cover land areas that include multiple jurisdictions (typically counties and cities), this presents the opportunity for conflict among jurisdictions. As discussed above, many HCP planning entities do not consider themselves to be involved in land-use planning. HCPs are forums in which municipalities see themselves as having to cede local land-use planning authority to a regional entity. In San Diego, the steadfast demand for local land-use control led to an “umbrella” permitting structure which allowed local municipalities the option to hold out and join the plan later as a “subarea.”

vi. FUNDING CHALLENGES

Funding difficulties can cause major delays. The planning process can be expensive and is most efficiently accomplished with full-time dedicated staff (Porter and Salvesen, 1995).

v. Babbitt, 835 F.Supp. 654 (1993); Environmental Council of Sacramento v. County of Sacramento, 135 Cal.App.3d 428 (1982). For a summary see <http://ice.ucdavis.edu/education/esp179/?q=node/167>.

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Unfortunately, many HCPs are unable to employ full time staff. Especially in smaller counties or portions of counties, difficulty obtaining planning assistance grants can halt the development process, as was the case with both the South Sacramento HCP and the Yuba/Sutter HCP. In order for an HCP to be approved, it must be reasonably assured of funding for implementation. Throughout the planning process, HCPs are usually searching for and refining sources of this funding. The details of funding for HCPs are discussed below in Section 8 of this report.

vii. ANSWER-SHOPPING

According to representatives of FWS, one often-cited source of delay in the planning process is the tendency for applicants to reject biological opinions of the field FWS offices they have been working with. Applicants often take their cases to the regional office or even the national office seeking a more favorable biological opinion. This source of delay is so typical that within the service it is known as “the swirl” and was listed by FWS staff as the greatest cause of delay (MSI, 2009). The MSI audit of FWS found that “HCP applicants often do not have a clear understanding of which mitigation practices will ultimately be acceptable to FWS”. This lack of clarity creates a perception that acceptable mitigation is “whatever can be negotiated.” This can prolong the negotiation process and result in FWS decisions appearing to be arbitrary, while in reality FWS is subject to legal requirements in their decision-making. This creates a cycle where the length of the process perpetuates the opinion that it is adversarial, which in turn encourages further shopping for answers.

While the tendency to shop for answers could be an outgrowth of a misunderstanding of the process by many applicants or stakeholders, the problem is exacerbated by the internal structure of FWS (MSI, 2009). It is the responsibility of the FWS field staff to communicate regularly with the regional office throughout the process, since the regional office will ultimately approve the ITP. In cases where communication is not frequent and consistent between the offices, applicants often assume that they can get a “better” answer from a different office. Responses to the independent audit revealed that since HCP decision-making authorities reside at multiple levels within FWS, applicants would push to a higher-level to win approval for their preferred mitigation strategy, or to speed up the process at the local level. Applicants reported having gone beyond the field office to the regional office, the national office, or to Congressional delegates. (MSI, 2009).

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The HCP Handbook states the need for a consistent framework with respect to permitting decisions as a starting point for all FWS employees, stressing the importance of consistency in mitigation standards across HCPs:

Mitigation measures required by individual FWS or NMFS offices should be as consistent as possible for the same species. This can be challenging when a species encompasses multiple offices or regions, but is essential. The first step is good communication between offices. The next is establishment of specific standards--e.g., for survey methods, buffer zones, or mitigation methods--and consistent implementation of those standards. Field Offices should coordinate these standards between biologists in the same office; Regional Offices should ensure consistency among Field Offices. Mitigation standards should also be developed in coordination with state wildlife agencies. The Service should not apply inconsistent mitigation policies for the same species, unless differences are based on biological or other good reasons and are clearly explained. Consistent mitigation strategies help streamline the HCP development process--especially for smaller HCPs--by providing readily available standards which applicants can adopt in their HCPs. (United States Fish and Wildlife Service, 1996, Sec. 3-23)

Different offices vary in their implementation of details of this guidance. The HCP Handbook was last updated in 2000,²⁰ and since that time planning structure has become differentiated between offices. This can be further compounded by differing legal precedents for the bounds of acceptable HCP standards in different district courts (Addendum to the HCP Handbook, 2000). When FWS is sued, the case is most likely heard in a circuit court, whose rulings apply only to a specific geographic area. It is up to staff biologists to consult with FWS solicitors for legal advice regarding plans, but solicitors also differ in their interpretations of the law. As reported by the audit:

One comment heard from an applicant, and echoed by several others, was: "We never understood what level of mitigation and costs would be acceptable and did not feel there was a clear basis or process for FWS making decisions and judging our plan. FWS seemed unclear as to what they wanted and they adjusted and changed their requirements as the process moved forward. (MSI, 2009, p20)

As HCPs have grown in popularity as a mechanism to ensure ESA compliance, FWS has simultaneously experienced severe staffing cutbacks. This results in many HCP applicants being

²⁰ In 2000 an addendum was added to the HCP Handbook. Known as the "5-point policy," it expanded the use of and further integrated (1) biological goals, (2) adaptive management, (3) monitoring, (4) permit duration, and (5) public participation into the HCP planning process. According to FWS, "the purpose of this addendum is to promote nationwide efficiency, effectiveness, and consistency within and between the Services, and to enhance the HCP program nationwide. These new initiatives are based on current operating conservation programs (i.e., habitat conservation measures) the Services and permittees are incorporating into HCPs, lessons learned, recommendations received, and methods the Services are using to strengthen the HCP process to help ensure species conservation."

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assigned a FWS staff member with little to no experience with HCPs.²¹ But in the planning process, little issues in FWS organizational procedure can result in huge time delays and planning costs for area-wide HCPs, since there are so many stakeholders involved (Alagona and Pincetl, 2008). A representative at the Coachella MSHCP blames much of the delay in their planning process to shopping for answers related to FWS organization, stating that there was too much planning going on with lower level FWS staff members without decision-makers in the room.

Another factor that encourages shopping for answers among applicants is the fact that FWS practices evolve over time as the agency learns what works better, mainly with respect to species protection, but also with respect to the general implementation of an HCP. Because of limited FWS resources and the evolving nature of the HCP process, applicants often look to and communicate with other existing HCPs to establish a baseline for thinking about the process and for solutions to specific problems. As FWS has progressed in understanding of conservation biology, it no longer allows for certain mechanisms that they allowed in earlier plans, understandably frustrating applicants. For example, one of the earliest area-wide HCPs, – in Clark County Nevada, allowed much of the mitigation to occur as conservation efforts on federal lands. Because 90 percent of the land in the county was under federal control, private land was highly sought-after and expensive at that location at that time. One interviewee at the FWS doubts whether they would allow this as a mitigation strategy today because federal land is already protected and the FWS believes that an HCP should require the applicant to set aside additional non-federal land. FWS decisions may also change depending on the staff member assigned to work with the HCP. Due to the long planning process, there often is staff turnover at the FWS, causing delays similar to those caused by political turnover on the applicant's side. According to a representative of the Bakersfield HCP, staff changes at FWS have caused delays in the planning process as new staff members change the biological requirements and ask for additional mitigation. Alagona and Pincetl (2008) documented the frustration of those involved with the Coachella Valley MSHCP as the frequent FWS staff turnover during the HCP planning process generated delay. The Coachella Valley MSHCP was in development when the local FWS was particularly overburdened by other projects. Coachella applicants frequently interacted with newer FWS staff members with either less HCP experience or less familiarity with the region.

²¹ One of the best opportunities for FWS staff to prepare themselves for dealing with HCP applicants efficiently and effectively is a week-long training course offered by the FWS, but recent budget cuts have prevented many staffers from attending the training course.

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Through the course of planning, FWS staff changed several times, and plan participants complained of the “inconsisten[cy] and even capriciousness of these temporary FWS representatives” (Alagona and Pincetl, 2008).

viii. SCARCE FWS RESOURCES

FWS is extremely pressed for resources, which is one of the reasons it is pushing applicants towards area-wide HCPs. While the results are widely acknowledged to be better than a project-by-project approach, many interviewees still felt that the difficulty of accessing FWS staff contributed greatly to the long HCP planning process. Much of this is due to the lack of sufficient resourcing and funding to enable the agency to respond to applicants’ needs quickly (MSI, 2009). According to a Sacramento FWS office staffer, the field office currently has three full time staffers handling 157 HCPs, including seven area-wide HCPs, that are either in development or currently being implemented, a situation that is only getting worse during government budget cuts. The fastest permit processed through his office was five months for a very small HCP in an area that already had a conservation plan. Resource limitations within the FWS have often been blamed for the absence of a top-down approach to HCP planning that would produce across the board consistency, though taking the time to adopt such an approach would also likely ultimately save staff time and reduce costs.

Another roadblock in the HCP planning process is the lack of available biological data. In order to issue an ITP, FWS is required by the ESA to prove that the taking will not appreciably reduce the likelihood of the survival and recovery of an endangered species in the wild, or it could be exposed to legal challenges (ESA Section 10(a)(2)(B)(iv)). Obtaining the necessary data is often a laborious process, and FWS is required to use the “best available science.” While a full discussion of this requirement is beyond the scope of this report, scientific determinations are often contentious (Alagona and Pincetl, 2008; Doremus, 2004).

Case Study: Planning the South Sacramento HCP

The South Sacramento HCP is currently in its 18th year of planning, aiming to produce a draft EIR for public review by Summer 2014. According to interviewees, the HCP applicants encountered many of the difficulties described above during the planning process, some of which are listed below. Many of the difficulties came about because the applicants submitted drafts of

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the plan early, before the agencies had perfected their collaboration process nor fully enumerated their approach to an area-wide HCP

- Most HCPs hire consultants to do tasks for which agency planners are not equipped, such as biological analysis and writing of the plan and EIR. But because of the early timing of the work in this case, unfamiliarity with the process, and political pressures, the HCP has employed three different consulting firms and this resulted in duplicative work after each new hiring. The first consultants hired were unfamiliar with the type of conservation biology necessary for an HCP. The second consultants were lawyers who pursued a strategy of appealing to higher up officials for favorable answers as opposed to negotiating with stakeholders. This angered local FWS staff and created an adversarial environment that plagued the planning process even after their dismissal. Before the hiring of the third and final consultants, the HCP hired a project manager to shepherd the project and manage the consultants. The inclusion of the project manager gave the HCP the leader it needed to manage consultants and divergent stakeholder groups, leading to a complete draft document within three years.

- The absence of someone to focus the project and the ensuing delays led to local and resource agency staff turnover, which caused further delays as new staff learned rules and procedures. New agency staff members sometimes disagreed with the opinions of staff members who had earlier been working on the plan, resulting in the need to redo earlier work.
- Insufficient available funds for planning led to a hiatus in the planning process, causing the project to lose momentum.
- For a long period during the planning, there was little negotiation between stakeholders, including environmental interests, and difficult questions were avoided. In 2011, the parties became deadlocked over a development included in the General plan that was drafted before the HCP planning had begun and that almost killed the plan. In addition, a new city was incorporated within the plan area and wanted to maximize development but had vernal pools within its boundaries that had to be addressed as planning proceeded.

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- Even with these complications and the many delays caused by them, South Sacramento has not given up on its HCP planning. When asked why, a representative noted that everyone –local governments, developers, environmentalists – all want the plan. He notes that without a champion, there was no one to keep the plan on track while negotiating between parties. He also noted that, even though the plan lacked a champion, the particular personalities involved didn't want to quit.

7. FINANCING

As discussed above, obtaining adequate funding for land acquisition, operations, and maintenance is one of the biggest challenges to the planning and implementation of an area-wide HCP. Although overall cumulative permitting costs are reduced relative to project-by-project permitting, area-wide HCPs are large investments, and interest in them is growing during a period of serious resource constraints. Expenditures over the life of the HCP include land acquisition, land monitoring and management, and administrative costs. HCPs must demonstrate that they will raise enough revenue to cover these projected costs in order to receive an ITP. The costs and revenues of HCPs are discussed in greater depth in this chapter, but Figure 8.1 provides an illustration of the breakdown of projected costs and revenues over the life of one of the largest area-wide HCP. ((Coachella Valley Association of Governments, 2007, Table 5-2).

Two main financing challenges typically arise at different points in the process of forming HCPs. The first is obtaining funding for the often lengthy and costly planning phase, and the second is financing the required assured funding for the implementation of the plan. The expense of both the planning process and the plan implementation often require area-wide applicants to cobble together funding from many sources, including local, state, and federal funds. In keeping with the finding that each HCP is unique, no two HCPs interviewed reported identical funding strategies. There are certain financing trends that are prevalent among all of those interviewed, however.

7.1 Cost of the Planning Process

Due to the length of time and the many involved parties, HCP planning is an expensive undertaking. Costs of the planning process are hard to estimate, in part because HCP planning often takes longer than anticipated and often includes unpredictable pauses and periods of activity (Butte County Association of Governments, 2008).²² A large component of the cost is personnel man-hours at applicant agencies, but additional costs can include preparation of NEPA related documents and the hiring of consultants or facilitators to aid in the planning process.

²² The in-development Butte County HCP estimates the cost of HCP planning to be \$988,375. For a breakdown of this estimate see Butte County Association of Governments, 2008, p. 54.

FIGURE 7-1: Coachella Valley MSHCP Expenditures and Revenues²³

| <u>Summary of Permittee Expenditures over Life of Permit</u> | |
|---|--|
| <i>Amount</i> | <i>Item</i> |
| \$115,414,000 | Non-acquisition program administration costs (from Table 5-3b) |
| \$254,294,000 | Monitoring Program (from Table 5-3b) |
| \$221,252,000 | Management Program (from Table 5-3b) |
| \$14,903,000 | Adaptive Management (from Table 5-3b) |
| \$526,705,000 | Land acquisition costs (from Table 5-3c 1) |
| \$9,080,000 | Land improvement costs (from Table 5-3c) |
| \$24,565,000 | Acquisition program administrative costs (from Table 5-3c) |
| \$5,000,000 | Management Contingency Fund (from Table 5-3b) |
| \$1,171,213,000 | TOTAL Expenditures |
| \$860,741,000 | Endowment Fund balance in Year 75 (from Table 5-3d) |
| \$5,386,000 | Fund balance in Operating Fund in Year 75 (from Table 5-3b) |
| \$1,200,000 | Repayment of Conservation Trust Fund advance to complete Plan |
| \$2,038,540,000 | TOTAL |

| <u>Summary of Revenue Services</u> | |
|---|--|
| <i>Amount</i> | <i>Revenue Source</i> |
| \$516,802,000 | Local Development Mitigation Fee (from Table 5-3c) |
| \$227,604,000 | Conservation Trust Fund (from Table 5-3b) |
| \$31,077,000 | Regional Road Projects Mitigation (Measure A Sales Tax total contribution to acquisition and endowment; and freeway interchange/associated arterials contribution to endowment) |
| \$60,208,000 | Regional Infrastructure Mitigation (Caltrans, CVWD, and IID contributions to acquisition and endowment) |
| \$247,500,000 | Eagle Mountain Environmental Mitigation Trust Fund (from Table 5-3b) |
| \$3,200,000 | Transfer from CVFTL HCP Endowment |
| \$952,149,000 | Interest on Investments (from Tables 5-3b, 5-3c, and 5-3d; interest generated on money in the Operating Fund, the Land Acquisition and Improvement Fund, and the Endowment Fund) |
| \$2,038,540,000 | TOTAL Revenues |

²³ These tables are taken from Final Recirculated Coachella Valley MSHCP, Sec. 5.1.6, and refer to other tables within that section of the HCP.

While it is difficult to reliably predict costs of future HCPs, it is clear from the interviews conducted that continuous funding during the planning period is one of the most important aspects of planning process and that most HCPs rely heavily on Sec. 6 grants and money from other – often local – sources to enable continual and directed planning efforts.

7.2 Sec. 6 Funding

Sec. 6 of the ESA provides for the Cooperative Endangered Species Conservation fund. Under Sec. 6, the federal government, pursuant to its interests in preserving Endangered Species, offers several types of grants for Conservation Activities. These grants are one of the most common sources of funding for HCP planning and are also used for recovery activities that go beyond mitigation for incidental take during HCP implementation. The grants are competitive and are awarded yearly to HCPs based on the strength of their application. The types of grants available are described in Figure 8.2.

FIGURE 7-2: Types of Section 6 Grants²⁴

| Grant Program | Purpose | Species Benefiting | Applicants | Competition | Financial Match Requirement ²⁵ |
|--|--|---|---|----------------------|--|
| Conservation Grants | implementation of conservation projects | federally listed threatened or endangered species | States or Territories that have entered into cooperative agreements with the Service for endangered and threatened species conservation | formula | 25% of estimated project cost; or 10% when two or more States or Territories implement a joint project |
| Recovery Land Acquisition | acquisition of habitat in support of approved recovery goals or objectives | federally listed threatened or endangered species | States or Territories that have entered into cooperative agreements with the Service for endangered and threatened species conservation | regional competition | 25% of estimated project cost; or 10% when two or more States or Territories implement a joint project |
| Habitat Conservation Planning Assistance | support development of Habitat Conservation Plans (HCPs) | federally listed threatened or endangered species, proposed and candidate species, and unlisted species proposed to be covered by the HCP | States or Territories that have entered into cooperative agreements with the Service for endangered and threatened species conservation | national competition | 25% of estimated project cost; or 10% when two or more States or Territories implement a joint project |
| Habitat Conservation Plan (HCP) Land Acquisition | acquisition of land associated with approved HCPs | federally listed threatened or endangered species, unlisted (including State-listed species), proposed and candidate species covered by the HCP | States or Territories that have entered into cooperative agreements with the Service for endangered and threatened species conservation | national competition | 25% of estimated project cost; or 10% when two or more States or Territories implement a joint project |

*As required under Section 6 of the Endangered Species Act, grants to states and territories must include a minimum contribution by the project's non-Federal partners. These contributions can be in-kind, through staff time or use of non-Federal equipment, or financial assistance. (USWF, 2013b)

²⁴ This table was taken directly from the FWS website. Conservation grants are referred to as “traditional” grants. HCP and Recovery grants are referred to as “non-traditional” grants and were authorized by Congress under the ESA in 2001.

²⁵ Section 6 requires that grants must include a minimum contribution by the project's non-Federal partners. These contributions can be in-kind, through staff time or use of non-Federal equipment, or financial assistance.

Of the grants offered, Habitat Conservation Planning Assistance and Habitat Conservation Plan Land Acquisition provide funds for HCPs. FWS provides the following description of HCP assistance grants and land acquisition grants. (United States Fish and Wildlife Service, 2013).

Habitat Conservation Planning (HCP) Assistance Grants

Through the development of regional Habitat Conservation Plans (HCPs), local governments incorporate species conservation into local land use planning, which streamlines the project approval process and facilitates economic development. The Habitat Conservation Planning Assistance Grants program provides funding to States to support the development of HCPs. Planning assistance grants may support planning activities such as document preparation, outreach, and baseline surveys, and inventories. The funding for the Habitat Conservation Planning Assistance Grants is competed for at the National level. (United States Fish and Wildlife Service, 2013).

FIGURE 7-3: National and California Habitat Conservation Planning Assistance Grants

| Year | Nationally Available (millions) | California Awards (millions) | Percentage of Total |
|------|---------------------------------|------------------------------|---------------------|
| 2001 | \$7.0 | \$0.6 | 8% |
| 2002 | \$6.6 | \$1.2 | 18% |
| 2003 | \$6.6 | \$1.5 | 23% |
| 2004 | \$8.6 | \$1.9 | 22% |
| 2005 | \$8.5 | \$2.3 | 27% |
| 2006 | \$7.5 | \$1.4 | 19% |
| 2007 | \$7.5 | \$1.8 | 24% |
| 2008 | \$7.5 | \$1.6 | 21% |
| 2009 | \$7.6 | \$1.8 | 24% |
| 2010 | \$10.0 | \$1.7 | 17% |
| 2011 | \$10.8 | \$4.9 | 45% |
| 2012 | \$9.5 | \$4.2 | 44% |
| 2013 | \$8.0 | \$2.5 | 31% |

Source: (California Department of Fish and Wildlife (n.d.))

Habitat Conservation Plan (HCP) Land Acquisition Grants

This program was designed to reduce conflicts between the conservation of listed species and land uses on specific parcels of land. Under this program, the Service provides grants

to States for land acquisitions that are associated with approved HCPs. The Service considers the use of Federal acquisition dollars by States for habitat protection within and adjacent to HCP areas to be an important and effective mechanism to promote the recovery of threatened and endangered species.

The HCP Land Acquisition program has three primary purposes: 1) to fund land acquisitions that complement, but do not replace, private mitigation responsibilities contained in HCPs, 2) to fund land acquisitions that have important benefits for listed, proposed, and candidate species, and 3) to fund land acquisitions that have important benefits for ecosystems that support listed, proposed and candidate species. (United States Fish and Wildlife Service, 2013).

FIGURE 7-4: National and California HCP Land Acquisition Grants

| Year | Nationally Available (millions) | California Awards (millions) | Percentage of Total |
|------|---------------------------------|------------------------------|---------------------|
| 1997 | | \$3.8 | |
| 1998 | | \$2.0 | |
| 1999 | | \$2.0 | |
| 2000 | \$15.0 | \$5.6 | 37% |
| 2001 | \$68.0 | \$30.8 | 45% |
| 2002 | \$61.3 | \$23.7 | 39% |
| 2003 | \$51.1 | \$17.1 | 34% |
| 2004 | \$49.3 | \$20.1 | 41% |
| 2005 | \$48.6 | \$20.1 | 41% |
| 2006 | \$46.1 | \$21.6 | 47% |
| 2007 | \$47.0 | \$31.6 | 67% |
| 2008 | \$35.0 | \$10.9 | 31% |
| 2009 | \$36.0 | \$22 | 61% |
| 2010 | \$40.9 | \$18 | 44% |
| 2011 | \$28.6 | \$16.5 | 58% |
| 2012 | \$15.0 | \$7 | 47% |
| 2013 | \$14.2 | \$8.8 | 62% |

Source: (California Department of Fish and Wildlife, (n.d.))

Sec. 6 HCP Land Acquisition Grants cannot be used for compensatory mitigation, which is land acquisition that merely offsets the effects of covered projects. Land acquisition grants must be used to fund acquisition of land that goes beyond compensation, either complementing the mitigation required by the HCP or contributing to species recovery. Such acquisitions are part of

the biological plan of many area-wide HCPs, and recovery programs are required under California's Natural Community Conservation Planning Act (NCCP) NCCPs are typically implemented jointly with California HCPs (California Fish and Game Code, Section 2800; Pollack, 2001).²⁶ While this has been an important source of funding for both planning and land acquisition, the overall funding available under Sec. 6 has been decreasing while the number of HCPs that compete for the grants has been increasing (Land Trust Alliance, 2013; Johnson, 2012).²⁷ According to one interviewee participating in development of a new HCP, "I don't want everyone to have one [HCP] until mine is done because I want funding".

Of the HCPs at which staffs were interviewed, the majority received Sec. 6 grants to aid in HCP planning.²⁸ Further details on the Sec. 6 funding received by interviewed HCPs can be found in Appendix F.

- *Bakersfield*: The original Metropolitan Bakersfield HCP was funded by a combination of local government sources and contributions from development interests. For the current in-development larger-scale HCP, the city of Bakersfield received a Sec. 6 planning grant and is taking the lead in development.
- *Butte County*: The Butte COG estimates that it will need \$3 million to develop its HCP and that 80 percent of the planning funding will come from Sec. 6 planning grants, with the rest coming from local agencies. In addition, the Butte COG has a federal lobbying program as part of HCP planning which sends an HCP representative to Washington twice yearly to thank the National FWS office for funding and update officials with planning progress.
- *Placer County*: The HCP planning funds come mostly from the county general fund. They received a Sec. 6 grant that they estimate will provide two percent of the necessary funding for HCP planning.
- *San Joaquin*: The SJMSHCP used both a Sec. 6 grant and seed money contributed by developers whose projects would benefit from the HCP.

²⁶For general information on the NCCP program see <http://www.library.ca.gov/crb/01/02/01-002.pdf>.

²⁷ While exact figures are difficult to find, there is general agreement that Sec. 6 funding has been decreasing. According to the Land Trust Alliance, "Total enacted funding for FY10, 11 and 12 was \$85 m, \$59.9 m, and \$47.8 m respectively." Compare this to a high of \$104.7 million in funding in 2001.

²⁸ The data on Sec. 6 grants starts in 2004, so earlier HCPs may not be included.

7.3 Implementation Funding

In order to grant an ITP, the FWS requires that an HCP have assured funding, one of the above issuance criteria under 10(a)(2)(B). This requirement resulted from lawsuit against FWS brought by the National Wildlife Federation over the Natomas Basin HCP in Northern California. The court held that the funding plan was inadequate for initial land acquisition and long-term endowment under the HCP, and that funding must be “reasonably secure” (National Wildlife Federation v. Babbitt, 2000). As a result, HCPs must now include detailed funding information for the life of the permit in order to receive an ITP. The applicant is required to provide funding, either directly or by assembling external funding.²⁹ Typical sources of HCP implementation funding include development impact fees, local dedicated tax revenue, and external grant funding from varied sources.

²⁹ Sec. 6 grants cannot be included in the calculations since they are competitive and applied for on an annual basis.

East Contra Costa Funding Case Study

Funding for HCP implementation must cover a variety of required costs. For example, a summary of costs for the East Contra Costa MSHCP includes the following categories. (East Contra Costa County Habitat Conservation Plan Association, 2006).

- Program administration,
- Land acquisition,
- Planning and design of management, restoration and recreational facilities,
- Habitat restoration/compliance,
- HCP/NCCP preserve management and maintenance,
- Monitoring, research, and adaptive management,
- Remedial measures

The East Contra Costa HCP provides a more detailed breakdown of the projected costs of implementing and managing the HCP. The HCP projects costs between \$297,090,000 and \$350,040,000 depending on the extent of development over the course of the permit lifespan (East Contra Costa County Habitat Conservation Plan Association, 2006, Table 9.8).

In order to cover such large costs, the East Contra Costa HCP relies on funding from several sources, including federal and state grants (~30 percent of total funding) and local development impact fees (~70 percent of total funding).¹ Federal grants include grants from FWS, including Sec. 6 grants, a grant from the North American Wetlands Conservation Act Grant Program, and the Central Valley Project Improvement Act Habitat Restoration Program. Other federal funding sources include grants from the Federal Aviation Administration, the Natural Resource Conservation Service, and low-interest loans from the Environmental Protection Agency's Clean Water State Revolving Fund. State sources of funding are varied, and many come from state proposition funding through various agencies, including the California Department of Parks and Recreation, the California Department of Fish and Game, The California Coastal Conservancy, the California Department of Conservation, and the California Bay Delta Authority (East Contra Costa County Habitat Conservation Plan Association, 2006, Table 9-3)

The example above shows the wide variety of funding sources that can be used to support HCP implementation, as well as the great deal of work that must go into providing assured funding for HCPs. While HCP funding sources are unique to the regions they cover, the above example is illustrative of the diversity of funding sources that must be tapped. This example also illustrates why funding for each HCP is situational and cannot be duplicated by others. Some sources are particular to specific types of conservation efforts – for example, the California Farmland Conservancy program –and other sources are specific to certain areas – for example, a grant from the California Bay Delta Authority. (California Department of Conservation, 2013, CALFED Bay-Delta Program, 2007).

i. GRANT FUNDING

According to a representative of the East Contra Costa HCP, access to specific conservation grant money was one of the motivations to create an HCP. While finding the funding required for HCPs is challenging, applicants have access to grants specifically available to HCPs and similar types of environmental conservation plans, in addition to Sec. 6 federal funds. For example, California’s Proposition 84 (California Department of Public Health, 2013)³⁰ authorized \$450 million for the protection and conservation of forests and wildlife habitat, and the California Parks Department offers grants under its Habitat Conservation Fund. (California Department of Parks and Recreation, 2013).

ii. LAND ACQUISITION

The largest category of costs for area-wide HCP implementation covers land acquisition. While the final costs may vary due to many factors, the budgets for land acquisition of three of the largest area-wide HCPs are Coachella Valley at \$2.4 billion, East Contra Costa at \$297 million, and San Joaquin at \$160 million over the life of the respective permits (MSI, 2009.) Santa Clara Valley MSHCP estimates that land acquisition will represent 72 percent of all capital costs associated with the HCP, or approximately \$238 million (Santa Clara Valley Habitat Agency, 2012). Western Riverside MSHCP projects land acquisition costs to total \$812 million, of which \$733.6 million will be the responsibility of local permittees and \$78.6 million will be the responsibility of state permittees (Riverside County Transportation and Land Management Agency, 2003). Many HCPs also incorporate current dedicated open lands that are owned by the

³⁰ The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act was passed by California voters in the November 2006 general election.

applicant, as well as state or federal conservation lands that are committed to the HCP and included in the biological analysis of the HCP.

The primary local mechanism for funding land acquisition is development impact fees, in which developers pay a fee when applying for a local building permit. These fees are determined according to a variety of factors and, like the HCPs themselves, depend heavily on their specific goals and location. The following (non-exhaustive) discussion gives an overview of the types of development fees used to fund HCPs and highlights various issues that emerge when constructing fee schedules.

A. *Who Pays*

In most plans, every development project that needs a local permit must pay a per-acre fee, even if the project does not directly affect endangered species habitat. This spreads the cost among the entire development community, since there are both region-wide benefits from the HCP and cumulative effects from development. In other plans, only development that affects endangered species habitat is required to pay. At least one HCP, East Contra Costa, has extended the equity concept to a temporal “fair share” by allocating costs between future development (those projects covered by the HCP) and the public based on the premise that past development has contributed to the impact on endangered species habitat. (East Contra Costa County Habitat Conservation Plan Association, 2006, Sec. 9.3.1).³¹

This analysis considers the amount of open space acquisition relative to the amount of development before and after adoption of the HCP/NCCP and assigns the costs of the HCP/NCCP according to the premise that future development should pay a share of the costs of habitat conservation in the inventory area proportionate to its share of the overall habitat impacts on the inventory area...Because the pace of habitat protection relative to development before Plan adoption was significantly lower than will be required under the HCP/NCCP, new development will pay a share of the costs of implementing the HCP/NCCP, and existing development (i.e., the public) will also pay a share.

B. *Fee Determination*

Development fee determination varies among HCPs, and a single HCP will often include multiple types of fee structures simultaneously. Development fees can be flat fees (typically per acre), based on the type of habitat, based on the type of land use by pre-determined zone, or imposed as special impact fees that address other attributes. Of the HCPs studied, WRMSHCP

³¹ This approach resulted in a 52/48 cost split, with new development paying 52% (with fees of \$6K to \$24k/acre, depending on location).

had one of the simplest structures, charging a flat fee to new development of \$1,500 per residential unit (or an equivalent fee per acre) and \$4,800 per acre of commercial or industrial Development (Riverside County Transportation and Land Management Agency, 2003, Sec. 8.5).

Fees Dependent On Land Type

Some HCPs vary development fees according to the location of the land or the type of land use. For example, in the San Joaquin MSHCP, different types of habitat require different ratios for mitigation, and therefore require different fees. According to a representative of the HCP, one of their goals was to simplify the fee structure so that there would only be 4 types of land categories.³²

³² According to a representative of FWS, different types or amounts of mitigation are typically required according to different biological properties of the land being developed. Fee structures are often related to these mitigation requirements, but the development fees are balanced against the philosophy that specific property owners should not be unduly burdened for owning land with endangered species habitat.

Case Study: San Joaquin MSHCP Mitigation Ratios³³

FIGURE 7-5: San Joaquin Mitigation Ratios

| HABITAT TYPE CONVERTED FROM OPEN SPACE USE | REQUIRED COMPENSATION RATIO | DESCRIPTION |
|---|---|--|
| Agricultural Habitat Lands | 1:1 | One acre of Preserve acquired, enhanced and managed in perpetuity for each acre of habitat Converted from Open Space use |
| Natural Lands - Non-Wetlands (e.g., oak woodlands) | 3:1 | Three acres of Preserve acquired, enhanced and managed in perpetuity for each acre of habitat Converted from Open Space use |
| Natural Lands - Vernal Pools within <i>Vernal Pool Zone</i> | 2:1 Preservation plus 1:1 Creation (3:1 total) | Create one acre of habitat and preserve two acres of existing habitat for each acre Converted from Open Space use—resulting in three total acres of Preserve. Preserves include both wetted surface area and upland grasslands surrounding vernal pools and protecting their watersheds. Creation component shall emphasize restoration of pre-existing vernal pools, wherever feasible. |
| Natural Lands - Wetlands Other than Vernal Pools | At least 1:1 Creation Plus 2:1 Preservation (3:1 total) | SJMSCP may: (1) create one acre habitat, preserve two existing acres of habitat; (2) create two acres habitat, preserve one acre existing habitat; or (3) create three acres of habitat, preserve zero acres of existing habitat. All options result in three acres of Preserve. |

5.3.2.1 Fees

As described in SJMSHCP Sec 5.3.2.1, the fees to individuals opting for coverage under the HCP according to land type are as follows:

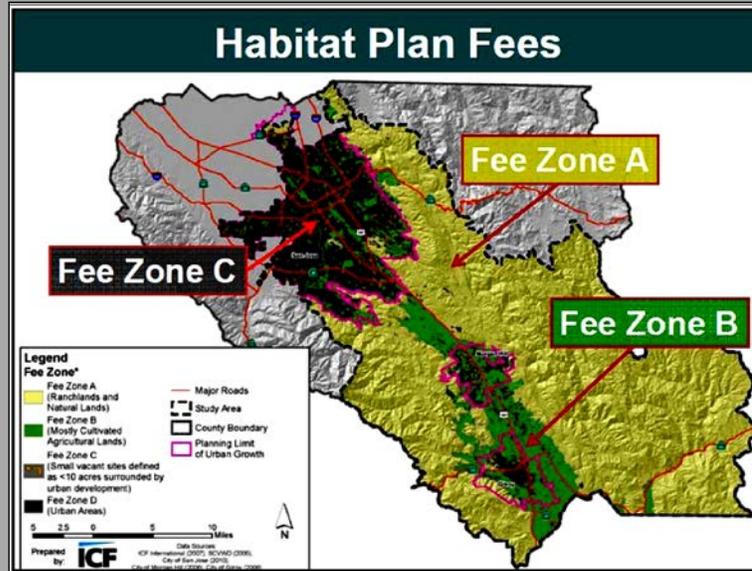
- A. \$750 per acre for Conversion of Multi-Purpose Open Space Lands,
- B. \$1,500 per acre for Conversion of Agricultural Habitat Lands and Natural Lands (except for vernal pools); and,
- C. \$30,000 per acre for the wetted surface area of vernal pools and \$5,000 per acre for the upland grasslands surrounding vernal pools. The SJMSCP assumes a 12% wetted surface area for vernal pool grasslands. This translates into an overall average cost per acre for vernal pool grasslands of \$8,000 per acre.

Other plans may include more land categories, as well as other variable fees due to specific impacts that interact with the basic land categorizations. For example, the Santa Clara Plan includes detailed examples that help determine development impact fees, mostly due to the diversity of both habitat and land uses in the region, which is more heavily urbanized than San Joaquin (Santa Clara Valley Association of Governments, 2013).

³³ San Joaquin Council of Governments, 2007, Table 1.3
TRANSPORTATION & HABITAT CONSERVATION PLANS

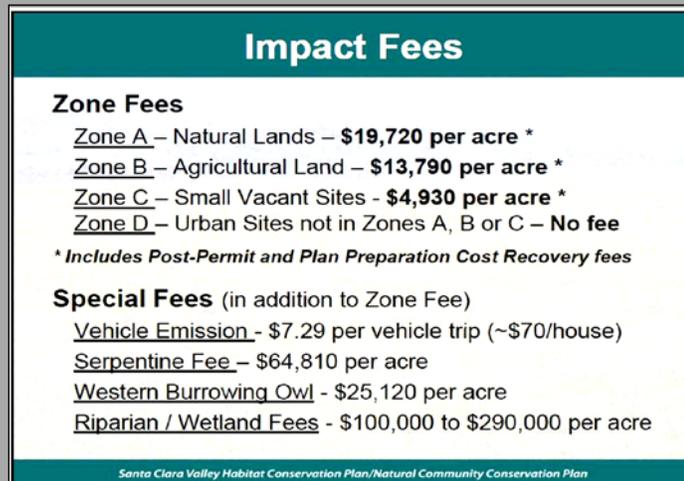
Case Study: Santa Clara Fees Structure

FIGURE 7-6: Map of Santa Clara HCP Fee Zones



Source: (Santa Clara Valley MSHCP Figure 9.1)

FIGURE 7-7: Santa Clara HCP Impact Fee Summary



*Source: Special Study of the Implementation of Santa Clara Valley Habitat Plan, 2011

The interaction between zone and special fees is complex. The Santa Clara Valley MSHCP offers the following illustrative examples (Santa Clara Valley Association of Governments, 2013, Sec 9.4).

Example 1 (urban project 1): A project is located in an area mapped by the Habitat Plan as “urban-suburban” (i.e., existing developed area). The project site does not contain,

and is not adjacent to, streams, riparian areas, wetlands, ponds, or serpentine. The site is also not in burrowing owl nesting habitat. Because the project is located on an exempt land cover type, it does not pay the land cover fee. The nitrogen deposition fee is calculated by multiplying the estimated new vehicle trips (i.e., daily trips generated above the pre-project condition) by the per-vehicle-trip nitrogen deposition fee in Table 9-7b.

Example 2 (urban project 2): A landowner of a 1.2-acre parcel in Gilroy wants to build a new single-family home on most, but not all, of the parcel. The parcel is within Zone B (Figure 9-1). The land cover fee is calculated by multiplying the total parcel size, 1.2 acres, by the Zone B per-acre fee in Table 9-7a. Because the project is new, it will generate new vehicle trips. The nitrogen deposition fee is calculated by multiplying the estimated new daily vehicle trips by the per-vehicle-trip nitrogen deposition fee in Table 9-7b. The two fees are added to arrive at the total Habitat Plan fee for the project, as long as wetlands are avoided (see below). Additional Habitat Plan fees may be assessed as a result of temporary impacts (e.g., leach field construction) and/or impacts to streams and wetlands, as described below.

Example 3 (rural project): A landowner of a 40-acre parcel proposes to build a single-family home on 1.5 acres of this parcel. The parcel is located entirely within Fee Zone A (Figure 9-1). The base development fee is calculated by multiplying the base fee in Zone A (Table 9-7a) times the development area of the project. The development area will be slightly larger than the 1.5-acre project footprint because of the buffer added to the project footprint that accounts for indirect impacts (Figure 6-1). Because the project is new, it will generate new vehicle trips. The nitrogen deposition fee is calculated by multiplying the estimated new daily vehicle trips by the per-vehicle-trip nitrogen deposition fee in Table 9-7b. The two fees are added to arrive at the Habitat Plan development fee for the project. Additional Habitat Plan fees may be assessed as a result of temporary impacts (e.g., leach field construction) and/or impacts to streams and wetlands, as described below.

While development impact fees are the main mechanism by which HCPs are funded, it is important to note that FWS requires that the amount of land preserved by the HCP at any given

time is greater than the land for which development permits have been issued. This requirement exists to ensure proper conservation in the case that the HCP fails to meet its requirements and the ITP is revoked.³⁴ Thus, HCPs must begin to acquire land using other funding sources or agreements in advance of development impact fees.

iii. VARYING PRICE OF LAND OVER TIME

Most recent plans include mechanisms to adjust fees, indexing them to changes in the price of land. The San Joaquin HCP had to go through a lengthy amendment process to increase fees as land prices rapidly escalated in the mid-2000s, as original fee-levels would have resulted in an underfunded HCP. As a result of this type of situation, a fee-indexing feature is included in the plans for Western Riverside, Butte County and other recent area-wide HCPs.³⁵

The varying price of land over time leads to a “Catch-22” among HCPs that rely heavily on development fees for their funding. During economic downturns, development activity slows, along with corresponding development fee and other revenues (MSI, 2009). Thus, revenue for land acquisition is lowest just as the cost of the land acquisition is lowest, resulting in missed opportunities for low-cost land procurement. This has been a major concern of HCPs, who have been lobbying the federal government to allow interest-free loans for advanced mitigation under TIFIA and water infrastructure bills so governments can acquire land more rapidly when prices are lowest (Regional Conservation Authority, 2013).

HCPs can only acquire land from willing sellers, so they must be opportunistic. Fluctuations the price of land and corresponding fluctuations in revenue from development fees lead to different land acquisition strategies across HCPs interviewed.

- *ECC*: According to a representative of the East Contra Costa HCP, the recession has virtually halted development, and therefore income from development fees. They have been relying on revenue from grants during the recession (comprising as much as 90 percent of total revenue), supplemented mainly by fees paid by infrastructure agencies to be covered by the plan (including but not limited to transportation). The availability of grant funding combined with the low land prices has resulted in acquisition of land at twice the pace necessary to meet

³⁴ According the FWS representatives, such a revocation is extremely rare, and has never happened with an area-wide HCP.

³⁵ For an example of fee-index calculations, see East Contra Costa County Habitat Conservation Plan Association, (2006), Table 9-7, replicated in Appendix D of this report.

acquisition goals by year 30 of the plan. This will allow the use of development fees later to fund HCP operations.

- *Coachella Valley*: The Coachella Valley MSHCP made the strategic decision to purchase more expensive target land before prices rose, in advance of the transportation projects that they were mitigating.
- *OCTA*: According to a representative of the in-development Orange County Transportation Authority HCP, it made a policy decision to take advantage of the low price of land during the economic downturn by initiating purchases before the plan had been permitted using sales tax revenues through an “early action plan.” By leveraging money from a transportation-specific local sales tax measure, they have been able to purchase 1000 acres of mitigation land and initiate five restoration projects as of Spring 2013.

7.4 Transportation-Specific Funding for HCPs

In exchange for streamlined permitting, regulatory certainty, and mitigation cost reductions that flow from the inclusion of transportation projects in an HCP, transportation agencies regularly contribute to HCP funding. There is no formalized method by which transportation agencies contribute to HCP funding, with these contributions depending upon numerous factors, including the number and type of transportation projects covered by the HCP, whether the agency is chartered by the state or is local, the existence of a local transportation sales tax, and the relationship between the relevant transportation agencies and the HCP governing entity.

i. STATE DOT FUNDING

As discussed above, state DOTs outside of California have played a small role in HCPs, and within California participation by Caltrans has been inconsistent. According to interviewees, Caltrans’ decision to participate in an HCP has depended upon whether it felt planned projects will work to its benefit, but also on the personal relationship between the parties. Certain districts, specifically Caltrans District 8 in Southern California, have been more proactive in HCP planning and implementation, and are ultimately committed to large investments in HCPs in this region.

- *Western Riverside:* The Western Riverside MSHCP has leveraged various sources of transportation funding and participation to implement the HCP, which in turn facilitates transportation projects in the area. Caltrans is a permittee and contributes directly to the acquisition, monitoring, and management of mitigation land. In the first eight years of the plan, Caltrans will acquire approximately 3000 acres of land suitable to mitigate planned transportation projects for \$36 million. Caltrans will also either provide the salaries for three positions for management and monitoring of conservation reserve lands, or fund an endowment to support monitoring and management. Caltrans funds come from the State Transportation Improvement Program (Riverside County Transportation Land Management Agency, 2003, Section 8.4.4).
- *Coachella Valley:* Caltrans is a permittee under the Coachella Valley MSHCP and pledged both funding and land contribution to cover the mitigation required for its planned projects in the region. In exchange for permitting for interstate improvements, Caltrans acquired 1795 acres of mitigation land and contributed \$1,077,000 for monitoring and management of this land. Over the life of the HCP, Caltrans is also required to provide 5791 acres and \$7.6 million for monitoring and management for regional road projects (Coachella Valley Association of Governments, 2013).

While there has been less Caltrans participation in the established HCPs in Northern California, there is evidence that Caltrans is beginning to proactively involve themselves in HCPs, as the model becomes more familiar. Caltrans is also internally pursuing advanced mitigation strategies. (California Department of Transportation, 2012).

- *ECC:* In ECC Caltrans was not part of the planning process, but the HCP was structured so that agencies that were not part of the planning process could become “participating special entities” to gain the coverage benefits of the HCP by paying an additional fee beyond the per-acre development fee. (East Contra Costa County Habitat Conservation Plan Association, 2006, Sec. 8.4). According to a Plan representative, during the recent economic downturn, development fees have contributed little to the land acquisition fund, and the HCP has relied both on grant

funding and fees from participating infrastructure development agencies, such as Caltrans, to acquire land at twice their goal pace.

- *Butte*: According to an HCP representative, the HCP relied upon a grant from Caltrans through its Regional Blueprint program. The timing of the blueprint funds allowed Butte County to gather biological data and establish environmental baseline information to be used in HCP planning before local general plans were updated.

ii. SALES TAX AND BOND MEASURES³⁶

Devolution of transportation funding from the federal and state governments to the regional and local levels is a prevalent trend in transportation finance, particularly in California. As a result, many regional transportation agencies receive the bulk of their funding from local sources, most often county-wide voter-approved local sales tax measures dedicate to transportation. These measures include a list of specific projects to be funded, and increasingly include dedicated funding for environmental mitigation. The inclusion of measure-funded projects in HCPs has enabled them to utilize sales tax revenues for mitigation. This provides a number of benefits for the HCPs. Sales tax revenues are large and provide a comparatively consistent stream of funding even in a development downturn. Additionally, counties have used bond issuances to borrow against future sales tax revenue, giving the HCPs in these areas a substantial upfront allocation of funds to acquire lands. This is advantageous because it enabled HCPs to purchase land while it is cheaper, and also allows them to maintain the required advanced land acquisition needed for development permitting.

- *Western Riverside*: Transportation (and other types of) local infrastructure projects also contribute to the implementation of the HCP in exchange for streamlining. Over the first 25 years of the Western Riverside Plan, \$12 billion worth of transportation projects are expected to provide \$371 million in contribution to the MSHCP (Riverside County Transportation and Land Management Agency, 2003, Section

³⁶ While this report's focus is on the role of transportation in HCPs, it should be noted that local sales tax and local bond measures have contributed to HCPs through other mechanisms aside from transportation infrastructure delivery. For example, Austin voted to approve \$22 million in bonds for "the acquisition and improvement of land to protect water quality, conserve endangered species . . . and providing open space for passive public use. . ." that was used to begin purchasing properties for the BCCP. (City of Austin, Texas, n.d.).

8.5.1).³⁷ \$121 million of this funding comes as a result of Riverside County's voter-approved local sales tax measure (Measure A) to fund local transportation projects. As a condition for local transportation agencies to receive funding from the measure, they are required, among other things, to "participate in the Multi-Species Habitat Conservation Plan (MSHCP) currently under development by the County of Riverside by endorsing the Permit Application and signing the Implementation Agreement". (Ordinance No. 02-001, 2002).

- *San Diego*: The TransNet half-cent sales tax was originally passed in 1974 and dedicated to transportation infrastructure. When it was put on the ballot for a forty-year extension in 2004, environmental groups leveraged their political power for the tax to include a revenue stream for advanced mitigation reserved for HCPs. In this way it is both a tool for environmental mitigation for the projects included in the tax, but it is also an implementation tool for the region's HCPs.
- *OCTA*: The OCTA HCP is a new model of an area-wide HCP that is specific to mitigation for transportation projects and is being planned and administered by the local transportation agency. Orange County, like other counties in California and elsewhere, has a voter-approved sales tax measure, Measure M, which dedicates revenue to specific transportation projects. (Orange County Transportation Authority, n.d.). In order to pass the measure, OCTA needed the support of environmental interests in the county. To this end, they allocated 5 percent of Measure M funds for freeway projects for programmatic advanced mitigation, and included further representation for environmental interests on the Environmental Oversight Committee that is part of the mitigation program. As a result of the continual inclusion of environmental interest groups in the planning stages of the Measure and the HCP, OCTA considers themselves to have formed a cooperative relationship with environmental interests that have traditionally opposed transportation projects.

Transportation agencies that are involved in the HCP planning processes often agree to invest funding in the HCP in exchange for the benefit of project facilitation. The inclusion of

³⁷ The other funding comes from the county and the local transportation agency, Riverside County Transportation Commission. The funding estimate is taken from the fact that local transportation projects have historically allocated 3-5% of their budgets to environmental mitigation and an estimated \$12 billion in new transportation infrastructure construction over the life of the plan.

transportation projects allows HCPs access to a variety of federal, state, and local funding sources, and provides an income stream to fund mitigation that is not directly related to the current development climate in the area.

7.5 Conclusions

Large costs and difficult access to funding are major challenges to successful HCP implementation. Like other large-scale governmental programs, assembling necessary funding is a laborious process that involves both political acumen and creativity. This chapter explained the dynamics of HCP costs and revenues, exploring the usage of development impact fees and conservation grants. It demonstrates the role that transportation agencies at all governmental levels can play in providing funding to area-wide HCPs, promoting stability while allowing agencies to reap the benefits of economies of scale in mitigation.

RECOMMENDATIONS**8. CONCLUSIONS AND RECOMMENDATIONS**

There is national interest in environmental streamlining, reflecting a growing consensus that environmental protection is accepted as a responsibility by organizations responsible for planning and building infrastructure. These agencies also share the hope that they can meet their responsibilities at lower cost in time and money than has been the case in the past. Area-wide habitat conservation planning, sometimes called landscape scale habitat planning, is relatively new, but is growing rapidly in popularity as a form of environmental streamlining that appears to hold great promise in many contexts to improve protection for endangered species while facilitating the construction of new transportation infrastructure.

This section presents the findings and policy recommendations that have emerged from the research presented in this report. Based on dozens of interviews with those engaged in HCP planning, it offers guidelines useful to those seeking to enter into or improve HCP planning, and demonstrates potential solutions for those who consider HCPs too large, too time consuming, too costly, and too daunting, and prefer to continue with project-by-project mitigation. In addition, this concluding chapter discusses promising policy recommendations and proposals for future research which emerge from the interviews, the literature and analyses of proposed and pending changes in public policy. This study found that both FWS and applicants contribute to delays in HCP planning, but the majority of our recommendations are geared towards applicants. They have the responsibility for planning and have more flexibility than FWS, and are better positioned to implement innovative HCP solutions.

Many of the conclusions and much of the advice emerging from the interviews will seem familiar to scholars of planning and policymaking. It was observed, for example, that it is important to involve competing interests early in planning processes, that success often depends upon charismatic leaders and effective facilitators, and that widely shared principles of good planning are often ignored in the face of deadlines and budget limitations. It was also frequently reported that what started as adversarial relationships became much smoother as shared experiences led to increasing trust among the parties. The fact that these principles are familiar does not make them unimportant and illustrates the truism that the most useful principles for planning and political leadership are easily overlooked when organizations are under pressure or are experimenting with new forms of governance.

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8.1 Recommendations for Transportation Agencies

i. SHIFT SOME OF THE MITIGATION PLANNING BURDEN TO THE HCP

The most important recommendation is that state and local transportation agencies should seek opportunities to participate in HCPs. Transportation agencies have traditionally found it difficult to secure funding streams for advanced mitigation because of mitigation funding is often tied to a specific project. In addition, representatives from Caltrans have noted further agency restrictions on holding land in perpetuity that has further frustrated advanced mitigation attempts.

By participating in an HCP, state agencies would be shifting much of the burden of planning advanced mitigation to the HCP and would be strengthening the role of HCPs in their states. Instead of piecing together “just-in-time” mitigation for a project, the HCP provides a specific program governing where and how to mitigate. Furthermore, if the HCP is being implemented efficiently, land for mitigation will already have been acquired by the time the transportation project seeks environmental clearance. HCP guidance also provides transportation agencies with certainty regarding the extent and nature of the mitigation that will be required of them for a given project.

HCPs typically require substantial funding from transportation agencies for their participation, but the agencies often receive value for money. They are able to take advantage of the economies of scale in conservation that HCPs afford. Transportation agencies also save time dedicated to satisfying mitigation requirements, since the process is streamlined under the HCP. Thus transportation agencies are able to satisfy mitigation requirements more efficiently and at lower costs compared to project-by-project permitting

ii. INCLUDING TRANSPORTATION AGENCIES EARLY BENEFITS AGENCIES AND APPLICANTS

It is particularly important that stakeholders responsible for transportation projects be identified early in the process. This often includes state DOTs and regional and local transportation agencies. Transportation agencies plan projects using long time-horizons, and there are many benefits to incorporating them as early as possible. The earlier a transportation agency is engaged, the more likely it will be able to alter upcoming project planning in its early stages to

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find more ecologically preferable alignments or mitigation strategies. The inclusion of transportation agencies also allows HCPs to have more accurate information regarding planned transportation projects, which can help with growth assumptions in HCP planning.

One difficulty for transportation agencies is that their project-planning time frame may conflict with the time necessary to plan an HCP. As discussed above, many transportation agencies originally participated in HCPs to solve mitigation problems for a planned project, but eventually pursued project specific status-quo mitigation strategies when HCP planning took too long for their project scale. It is recommended that transportation agencies consider the long permit term of HCPs and the ultimate long-term value of being involved beyond immediate project needs. It is possible to incorporate mitigation for current projects into ultimate HCP planning, as was done in the Santa Clara Valley HCP, and thereby to allow transportation agencies to gain coverage for indirect effects of projects under the eventual HCP permit.

iii. INCLUDING TRANSPORTATION PROJECTS IN HCPs TO GAIN POPULAR SUPPORT

The inclusion of transportation projects has been integral to gaining support from the public for many area-wide HCPs. The ability to deliver transportation projects efficiently through environmental streamlining provides time and cost savings for the transportation agencies and tangible benefits by which to sell the plan to the public and included municipalities. Thus, the relationship between area-wide HCPs and transportation agencies can often be mutually beneficial.

- *Coachella*: According to a representative of the Coachella Valley MSHCP, transportation was critical in garnering both public and political support for the HCP. There was a widely shared perception of a need for transportation infrastructure to accommodate growth in the region. CVAG, the local transportation agency, had worked with Caltrans on advanced mitigation for local freeway projects, and was able to demonstrate to elected officials and political decision makers that HCP planning provided many benefits. The ability to expedite transportation infrastructure became the primary reason that the plan was supported. In addition, the inclusion of transportation projects in the MSHCP allowed the HCP access to county transportation sales tax revenues, which have provided much of the initial revenue for the HCP and allowed it to buy land while prices were low.

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- *Western Riverside*: In Western Riverside, the ability to facilitate infrastructure development persuaded the public to support the plan. The local transportation agency, RCTC, originally resisted the plan, though they grew to embrace it as they saw its benefits. Due to the benefits for Sec. 7 transportation projects discussed in Sec. 5 of this report, RCTC saves about six months on project delivery, since the EIS is already subsumed in the MSHCP. This has additionally made them more competitive for funding under the Transportation Infrastructure Finance and Innovation Act (TIFIA).

Transportation agencies should welcome opportunities to participate in area-wide HCPs, as they have much to gain by working with both existing and in-development HCPs on all types of products. By including upcoming transportation projects in HCPs, transportation agencies benefit from clear guidelines for mitigation that provide certainty and streamlining of the ESA permitting process, and that additionally allow them to gain from economies of scale in mitigation. Participation in the HCP planning process furthermore shifts the burden of mitigation from the transportation agency to a larger, collaborative community, often resulting in increased benefits and costs savings, for habitat conservation and transportation planning.

8.2 Applicants must have a rush mentality from the get-go

Very important advice given by interviewees is that, in order to reduce both the time and cost of the HCP planning process, participants have to consistently work to make the process as expedient as possible. The commitment to do so is evident in many of the more recent area-wide HCPs, which have learned from South Sacramento, whose HCP is in its 18th year of planning. People involved in HCP planning must be mindful of the myriad challenges discussed in prior sections, many of which flow directly from the long planning time. For example, Algona and Pincetl (2008) report that delays in the Coachella Valley MSHCP planning process allowed the process to stretch over multiple election cycles, resulting in a comparative loss of trust and a breakdown of communication between newly elected officials. Simultaneously, as the planning process dragged on, land prices increased greatly, and development continued, some in the proposed conservation areas. In retrospect, many interviewees cited instances in which more organized and proactive approaches would have avoided many roadblocks.

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- *ECC*: Getting the HCP approved quickly was a big concern, according to a representative, and everyone involved had to believe that the process was a “rush from the get-go.” This minimized problems with both applicant and FWS staff turnover, making the planning process much smoother. The interviewee also reported that many in the HCP community thought that the planning process would eventually become routine, but have now accepted that it never will.
- *Placer County*: The Placer County HCP has officially been in-development by the county since 2008, but was conceived in 2000, with background studies completed in 2004 (The Placer County Conservation Plan, 2013). According to a representative, the county spent too long on internal discussions between local governments on what land should be conserved before presenting the draft plan to public stakeholders in 2011.

8.3 A Cooperative Planning Process Reduces Delays

As discussed in prior sections, one of the largest sources of delay in HCP planning comes from applicants approaching the process as adversarial as opposed to cooperative. The foremost recommendation from our research is that stakeholders should view the HCP planning process as a collaborative cooperative process. Applicants should approach their communications with the FWS as a collaborative process from which both parties can benefit, “growing the pie” by providing superior biological outcomes while reducing the time, cost, and uncertainty of the environmental permitting process.

i. PROCESS MANAGEMENT AND COMMUNICATION

One of the most frequent responses from interviewees on what can expedite HCP planning is that careful management of the process and frequent communication between parties is essential to avoiding conflict and other planning roadblocks. As observed by Alagona and Pincetl (2008), “Process management matters, especially through the political arena.” Related to this is the reduction of “answer shopping” among applicants. Applicants need to provide biological information, but they should understand the limits on the discretion of the FWS and looking for more favorable determinations within FWS once biological findings have been made.

- *Santa Clara*: In addition to biweekly meetings, the applicants kept a detailed monthly schedule available to all stakeholders to demonstrate that HCP planning was

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progressing. This not only helped keep stakeholders committed to the plan, but increased their sense of involvement and teamwork.

- *Coachella*: County supervisors were the driving political force behind getting the plan accepted by local jurisdictions. They organized monthly meetings between local jurisdictions and stakeholders to keep the plan moving forward. Process management not only helps expedite planning, but can also facilitate implementation of the HCP as well. Implementation of collaborative environmental programs, including HCPs, is more successful when stakeholders continue to feel invested and involved in the process.
- *San Diego*: According to a representative, the San Diego area HCPs have developed an expedited process for plan implementation. They hold monthly meetings for member jurisdictions, resource agencies, and other stakeholders (including transportation agencies), at which they discuss upcoming projects, setting deadlines and deciding on actions for moving forward under the plan.
- *KBB*: Communication has continued during the implementation phase of the plan, as stakeholders have annual meetings and communication has been kept open, causing developers to feel that the state Department of Natural Resources (the managing agency) is their partner and “not trying to get them in trouble.”

In order to ensure timely biological determinations and avoid answer shopping, we recommend that both parties should involve decision-makers more frequently throughout the process.

Further drawing upon concepts firmly entrenched in policy and plan making, we recommend that the HCP planning process could benefit by including the Critical Path Method of project Management. The CPM uses an algorithm to schedule the activities included in a complex project with interdependent activities or resources. Using this technique forces the parties involved to plan ahead, identifying the steps and the resources necessary to accomplish the project (Kelley, 1963, 347-365). The approach is commonly used in large construction projects, but had been noted for its applicability to other types of project management, including public policy, governance and urban planning (Best, 2008, 1583-1587; Ramsey, 1993; Ward, 1971).

RECOMMENDATIONS**ii. NEED FOR RESOLUTION PROCESS**

It is important to include a formal dispute resolution process for the decision making team. The specification of a resolution process is highly recommended for the plan implementation phase as new staff members for both the permit-holder and the FWS inevitably become involved over the long permit duration. For implementation, this could be included in the plan itself or in a separate implementing agreement, a contract between the parties that serves as a guideline for the roles each party will play in HCP implementation. FWS has recently included a resolution process as an “other measure” in agreements between the resource agencies, all potential permittees, and other pertinent stakeholders.³⁸

iii. RECOGNITION OF SPECIFICITY

Foremost to making HCP planning a collaborative process is the recognition that each HCP is unique due to specifics in biology, the development needs and structure of the applicants, and the governance structure of the region. Applicants can look to other HCPs for guidance but not “gospel.” A feature included in an existing HCP may or may not be a workable solution for a different HCP, especially as FWS learns more about how to best implement HCPs. According to a representative of the Western Riverside MSHCP, “When I talk to other plans, we talk past each other. We all have different reasons why we did [an HCP]. It is difficult to generalize lessons learned.”

Similarly, FWS increasingly recognizes that governmental and political structures and development needs of applicants differ, and innovative solutions may not be transferrable. Understanding that each HCP is a new collaborative process which will yield a unique solution best-suited to the place involved can foster a collaborative planning environment. An applicant’s insistence on getting the same terms as other HCPs leads to answer shopping and a stalled process. An example of this is an HCP seeking a mitigation ratio for its plan based on a ratio incorporated into another approved plan. According to a representative of the ECC HCP, that plan required less mitigation land per acre of development compared to other plans because of the amount of conserved parkland included within the plan area from previous initiatives, and imitation of that ratio by others would not be appropriate.

³⁸ For an example of a dispute resolution process, see Santa Clara HCP Implementing Agreement Sec 6.6, included in Appendix G.

RECOMMENDATIONSHCP planning is a learning process

Strategies employed by both applicants and resource agencies have developed as the HCP planning process has matured. The Metropolitan Bakersfield HCP expires in 2014, and Bakersfield is currently working on a new HCP that will cover the same geographic area. A member of the city planning staff stated that the original MBHCP was an experiment since the presiding resource agencies were relatively inexperienced at HCP planning. Since receiving the original ITP in 1994, the resource agencies have clarified and refined the process. As a result, Bakersfield cannot extend the original HCP and must create a new one that meets current FWS standards. For example, the original did not specify particular projects, only implied coverage of city and county activities, and left too much room for interpretation. Similarly, general language in the original HCP resulted in disagreement as to whether the school district could use the plan as mitigation, since they were a separate entity from the city and county. In the new plan, the school district is enumerated as a potential permittee according to the interviewee.

Both FWS staff and many applicants emphasize that each HCP is unique, and must be evaluated in its entirety. Therefore while it is useful to look to other HCPs for ideas, an insistence on employing the terms of another HCP by either party may stall the planning process.

iv. INSTITUTIONAL EDUCATION

Regardless of how efficiently the HCP process is managed, staff turnover during the life of the project is likely. Apart from coordination issues with FWS, applicants can promote continuity of staff and institutional knowledge. Many interviewees placed emphasis on the value of investing in training their staff to be internal experts. The value of this institutional model continues through the implementation phase. The Western Riverside implementing authority invests in permittee training each year to keep themselves up to speed on developments with resource agencies. One staff member of the Clark County HCP attended a training course on Habitat Conservation Plans given to FWS staff, saying it was valuable to understanding what is going on from FWS's perspective and to learning how to communicate with them. In Santa Clara, the planning department ensured that their predecessors trained new hires.

It would be desirable for HCP planning agencies to retain planning staff members for longer time periods to maximize consistency. Recognizing that this is often beyond their control, HCP planning agencies should institute policies and methods to retain institutional knowledge

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despite staff turnover. We recommend frequent staff training in various areas. During the planning phases, greater staff understanding the legal framework for HCPs and FWS perspective can be immensely helpful in facilitating the process. We recommend that planning staff attend the USFW course. Additionally, there should be a standardized training within each agency on the HCP itself for all new staff in the implementation phase, as well as training or other methods of communication on changes with the resource agencies.

v. COMMUNICATION WITH RESOURCE AGENCIES

In addition to managing relationships between stakeholders and elected officials, the HCP planning process can be much more efficient if relationships with state and federal agencies are conducted with the same goals. Applicants frequently reported that they experienced delays when they gave drafts to FWS for comment and no staff member was available. Interviewees also reported that it was sometimes difficult to get the attention of decision-makers at the FWS at critical junctures in the planning process. One HCP representative expressed frustration that it doesn't matter how much work is done by an applicant, "it only matters what is on their desk at FWS." FWS employees, who were often unaware of timing and progress on the applicant side, also shared this sentiment.

One interviewee reported that one "really needs to be aggressive with FWS and get their attention." He noted that, before the rise in popularity of area-wide HCPs, FWS regulatory strategy had been strongly oriented to "command and control" and that he found that they were having trouble switching modes as an institution to the collaboration model of area-wide HCPs. An HCP greatly facilitates permitting, but the permittee should proactively communicate with FWS. A representative of the Western Riverside HCP reported that they haven't had any permitting delays since the HCP began, but that they must engage in significant process management after they received the permit, noting that "how you apply the process is just as important as the HCP itself." They engage FWS as early as possible when they need FWS clearance for something under the HCP, typically having between two and four meetings ahead of any formal submission for clearance.

In order to prevent such delays, it is recommended that applicants manage relations with FWS as they do among stakeholders. It would benefit both parties to set a mutual calendar of progress goals about which they can schedule meetings and consultations. While this does not solve the problem of scarce FWS resources, it does help target those resources efficiently.

RECOMMENDATIONS**vi. RECOMMENDATIONS FOR A COOPERATIVE PLANNING PROCESS**

Overall, our research found that there were many elements that helped build a collaborative environment that facilitated HCP planning. Taking a larger view, we recommend that the HCP program moves forward with a combination of top-down encouragement and bottom-up experimentation. FWS should increase its institutional encouragement of HCP planning by providing additional HCP training for employees, continuing Sec. 6 funding for planning and development to the extent possible, and developing service-wide guidelines (hopefully through an HCP Handbook update) that reflect developments in HCP planning over the last 15 years. This must be balanced with allowing for experimentation at the individual HCP level. Responding to the uniqueness of each HCP, innovative ideas have been employed by individual HCPs to push through roadblocks and such experimentation should be encouraged by the Service framework. More so, the Service should facilitate, through training and consolidation of communication among HCP biologists, the dissemination of innovative ideas employed by specific HCPs throughout the program. It could be useful for the head office to produce a yearly summary of HCP developments across the country.

Secondly, we recommend that stakeholders take time in the beginning of HCP planning to build relationships and develop language to communicate with each other. There are many ways this can be accomplished, and HCPs beginning the planning process should employ any combination that is practical. Ideally, stakeholders including local government officials, infrastructure agencies, FWS and Army Corps³⁹ personnel, and any relevant members of the local development and environmental communities could attend a multi-day training session that would both familiarize parties with one another's goals and procedures, and contribute to building a collaborative relationship. If this is impractical, we recommend that stakeholders attend training sessions currently offered by FWS and the Army Corps on their permitting processes. Similarly, we recommend that local government officials and participating local agencies, including transportation agencies, hold training sessions for resource agencies' staff members that explain their goals and political limitations. This recommendation complements other recommendations. For example, the impact of these "training sessions" can be increased if they are well managed by a "champion" or by a facilitator who has mediation experience.

³⁹ The Army Corps of Engineers is responsible for permitting under Section 404 of the Clean Water Act.. Though outside the scope of this research, many HCPs are looking to secure both HCP permits and 404 permits from the Army Corps simultaneously to streamline environmental planning.

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8.4 Plans Need A Champion

When asked about planning efficiency, one of the most frequent responses from interviewees was that the presence of a “charismatic leader” was instrumental in efficient HCP development. In order to keep the many stakeholders focused and on an expedient planning schedule, the plan needed a champion who was skilled at managing disparate interests and keeping focus on the ultimate goal, convincing those in the community of the ultimate benefits of the plan. This leader may come from within the planning group or may be a local elected political figure. In many cases, charismatic leaders maintained momentum during periods of personnel turnover and helped maintain consistent institutional knowledge during the planning process.

i. POLITICAL LEADERSHIP

In a review of the collaborative planning process that led to the Six Points Interchange HCP, Raymond (2006) found that political leadership, from both the mayor and the governor, played an important role in the creation of the plan. Raymond states, “...external political figures (both elected officials and agency personnel) assumed many of the important costs of this second-order collective action problem. Together, local politicians and agency personnel spent significant time, energy, and political capital organizing the group and promoting an effective framework for collaboration, rather than the applicants themselves” (Raymond, 2006, p. 52). Janet Fairbanks, Regional Planner for the San Diego Association of Governments, similarly observed "There needs to be a champion at the elected [official] level; preferably someone with name recognition who understands the importance of the process, as well as the product" (Greer, 2004). Similarly, Layzer (2008) found that collaborative ecosystem management is more biologically successful when strongly supported through conventional political channels. Applicant interviewees frequently responded that the tireless involvement of a plan champion greatly facilitated their HCP planning and helped determine its overall success.

- *San Diego*: A representative of the SANDAG environmental mitigation working group also credits strong political support and leadership with facilitating the creation and implementation of the area HCPs, referring to such support as a “driver” of progress. Recounting the creation of the San Diego County Multiple Species

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Conservation Program, the plan faced strong objections from the development community that was only overcome by dedicated elected officials. The mayor at the time strongly supported the HCPs, issuing “policy points” to focus their goals. The city council’s approval of the policy points gave the plan sufficient political backing and direction to overpower objections by the local development community.

- *Santa Clara*: According to an interviewee from the Santa Clara HCP, having one person drive the process is really important. In their case, he credits Don Gage as a committed local elected official who aggressively pushed HCP planning forward, saying it is crucial to aggressively manage the process and maintain stakeholders’ attention for funding and support.
- *Coachella*: In Coachella Valley, the local county supervisors were personally involved in the creation of the area HCP, and were instrumental in keeping planning on track and ultimately permitted. In addition to organizing monthly meetings among stakeholders, they had a regional vision of the plan’s benefits and invested much time and energy into getting the local jurisdictions on board.

ii. LEADERSHIP WITHIN THE PLANNING ORGANIZATION

Some plans benefitted by having a leader within the planning department that was skillful at politicking, managing, and facilitating negotiations between stakeholders and resource agencies.

- *KBB*: A representative of the Karner Blue Butterfly HCP credited much of the success of their plan to Dave Lentz of the Wisconsin Department of Natural Resources, the agency that was ultimately issued the ITP. The interviewee credited Lentz’s ability as a trained facilitator. According to the interviewee, the initial meetings were tense, as they sought to bring together competing forestry companies and disparate stakeholders. “Dave really built it up and he made people feel they were in it together and that turned around the entire tone of the conversation. [He put] emphasis on partnership and communication, conveying that the DNR was not leading the HCP, but was working for the stakeholders to meet their goals.”
- *Santa Clara*: A representative of the Santa Clara plan also credited much of its success to a Don Gage, a local elected official, who was committed and who aggressively managed the planning process. The representative reported that having someone drive the process is extremely important, and without Don Gage, the planning

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process would have taken longer and the resulting HCP would not have been as strong.

iii. EXTERNAL FACILITATORS

A study by Brachhausen and Garrison (2003) noted the value that third party facilitators can add to the HCP planning process, especially for area-wide HCPs. They found that

Successful facilitators structure group interactions to elicit constructive feedback. They identify key issues and follow them through the process to resolution. They prevent any one interest group from dominating the process, and focus the group on a common goal. In an environment of competing interests, they offer a crucial element of neutrality and ensure that each stakeholder feels represented. Inside and outside meetings, they build relationships among the group and cultivate a crucial environment of trust. Good facilitators turn bad situations into successful ones. (Brachhausen and Garrison, 2003, pg. 18).

But they also cautioned against the possible negative consequences of hiring a facilitator who is inexperienced with HCPs or unprepared to handle the scale and complexity of area-wide plans. To protect against this possibility, it is recommended that potential applicants communicate with other HCPs to find suitable facilitators. This advice extends beyond the hiring of professional facilitators to the hiring of outside consultants and legal counsel, which is typical for most plans. According to a representative of the Clark County HCP, “Hiring the right consultants with the right expertise is a big deal. They need to know about HCPs and have experience.” Clark County hired outside legal counsel with experience working for FWS and expertise in HCPs, whom they credited for their ability to keep up on legislative and legal developments relating to HCPs, greatly facilitating the process.

Lastly, Brachhausen and Garrison (2003) caution that in the era of shrinking government budgets, many applicants choose to direct limited resources to land acquisition as opposed to planning facilitation. But it is important to remember that in the HCP planning process, time is money, and that the hiring of outside professionals with the right experience is cost effective. A representative of the Santa Clara Valley HCP credits the lead biological consultant for “managing

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the hell” out of the process in the face of political turnover. The consultant created a sense of teamwork between the jurisdictions and the agencies, holding meetings every other week. The interviewee also placed much importance on the early inclusion of attorneys for each partner agency, ensuring the ability to develop mutual familiarity and address legal issues smoothly. In contrast, bringing in attorneys only at later stages when major issues arise leads to a misunderstanding of the collaborative nature of the process and can threaten to derail planning, as had happened on an earlier flood control project in the region.

Interviewees reported that consultants, including facilitators, lawyers, and environmental and biological consultants, can help expedite the planning process. HCP planning agencies should consider their needs and resources at the beginning of the planning process, and investigate the hiring of consultants. It is beneficial to engage consultants early in the planning process as they can often provide knowledge from previous HCP experiences and focus the planning process to prevent costly missteps that would later cause delays and increase costs.

8.5 Identify Stakeholders Early and Comprehensively

In order to facilitate the HCP planning process, it is critically important to identify stakeholders, such as potential permittees, environmental and transportation agencies, and local environmental interests, including academia, early in the planning process.

Identifying potential permittees provides a joint understanding of what land will be included, and what proposed activities will be covered. According to a representative of the Bakersfield HCP, this enables agencies to frame the approach with everyone on the same page, minimizing the likelihood that the approach will change during the planning process, which would cause delays and perhaps exhaust financial resources. For example, the interviewee listed establishing a base of what species will be covered, what the coverage area will be, and who will participate. Another interviewee cited the importance of participant municipalities “buying into the big picture of the region” over their own interests.

While it was widely noted by interviewees that adding a stakeholder in the later stages of the planning process can lead to many disruptive changes to the HCP, as additional lands and proposed projects are added to the analysis, it is also delay-causing to lose a potential participant well into the process. According to an interviewee, Coachella Valley MSHCP experienced

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substantial delays after the city of Desert Hot Springs dropped out of the plan close to the purported end of the planning process. Coachella also undertook negotiations on a jurisdiction-by-jurisdiction basis, instead of engaging all of the participating cities simultaneously, which likely contributed greatly to the delays in their planning process by not providing a shared basis from which to work.

A full discussion of the dynamics of the political structure of the various HCP regions is beyond the scope of this report, but the flexibility of permitting structures available to applicants can provide a solution to ease power struggles between counties and included municipalities. Recognizing the flexibility available in permitting structures could help create a shared framework from which to work. For example, the umbrella permitting structure of the San Diego-area plans resulted from local municipalities refusing to cede any land-use planning power to the regional governing agency. In regions where it proves difficult to achieve cooperation between municipalities for regional goals, it may behoove HCP planners to explore alternate permitting structures early in the process.

Other benefits that flow from early and comprehensive identification of stakeholders include increased access to biological data. As discussed above, many delays are caused by lack of agreement on biological conditions, often stemming from absence of comprehensive third-party information. By involving environmental and academic communities, HCP planners can gain access to the widest possible pool of available biological data. Similarly, HCPs benefit from including state wildlife agencies, which may require the addition of state-listed endangered species or require additional mitigation efforts, such as the recovery requirements of California's NCCP program. In addition, the ESA requires cooperation with states, and, as described in Sec. 8 of this report, states are the gateway through which Sec. 6 grants are distributed to HCPs which are still under development.

Lastly, according to a FWS representative, "Not including a potential stakeholder is the best way for an HCP to get sued." This is especially true when environmental stakeholders are excluded from the HCP planning process, as was the case with the Natomas Basin HCP, which had specifically excluded environmental interests who brought suits. Both ECC and OCTA have taken a more proactive approach including local environmental interests as signatories to the plan.⁴⁰

⁴⁰ Since the OCTA HCP is still in-development, environmental interests are signatories on the planning agreement.

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Overall, the aim of a productive HCP planning process according to many interviewees is to have everyone present and committed to a collaborative process who has a stake in the outcome. We recommend that HCPs strive early and continuously to identify potential stakeholders for the reasons stated above. An additional benefit of soliciting potential stakeholders early in the planning process is that it allows HCPs an early opportunity to define what areas and activities will be covered in the plan. As discussed in Sec. 6.2 of this report, it is important that HCPs balance the breadth of covered activities and areas with what is efficiently achievable. Early inclusion of potential stakeholders can provide information to HCP planners at early stages that aid in defining the boundaries of the plan.

8.6 Use Existing Governance Structures

One area in which efficiency can be improved in the HCP planning process is in determining the structure of both the planning and implementation agencies. In some cases, these are the same bodies, but in other cases they are not because of governance structures in the area or requirements of other entities or special districts participating in HCP implementation. In many cases, interviewees attributed much of the success of their planning process to the ability to use successful existing collaborative planning organizations.

FIGURE 8-1: Governance Structure

| Governance Structure | | | | |
|-----------------------------|----------------------------------|---|---|---------------------------|
| HCP | Planning Entity | Implementing Agency | Type | Notes |
| Balcones | City of Austin and Travis County | City of Austin and Travis County | County and City by Interlocal Agreement | |
| Clark County | County | Clark County | County | |
| Coachella | CVAG (COG) | Coachella Valley Conservation Commission (CVCC) | JPA | CVAG plus water districts |

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| ECC | | East Contra Costa Country Habitat Conservancy | JPA | “The East Contra Costa County Habitat Conservancy is a joint exercise of powers authority formed by the Cities of Brentwood, Clayton, Oakley and Pittsburg and Contra Costa County to implement the East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP or Plan). The HCP/NCCP provides a framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species. The Plan will allow Contra Costa County, the Contra Costa County Flood Control and Water Conservation District, the East Bay Regional Park District and the Cities of Brentwood, Clayton, Oakley, and Pittsburg (collectively, the Permittees) to control endangered species permitting for activities and projects in the region that they perform or approve.” ⁴¹ |
| KBB | Wisconsin Department of Natural Resources | Wisconsin Department of Natural Resources | State Agency | “USFWS staff challenged DNR personnel to ‘take the lead in the Wisconsin HCP process.’ DNR staff then met internally to determine which interested parties might be involved. A series of meetings to discuss what procedures and objectives could be outlined to complete the HCP followed. These meetings, involving forest products companies, several utilities, conservation organizations, and state and federal agencies led to the establishment of the HCP Articles of Partnership. These articles served as the process rules for the series of meetings at which the issues involving completion of the HCP were discussed and decided. Beginning in the fall of 1994 and extending into 1998, HCP partnership meetings were held on a regular basis to provide direction for the development and drafting of the HCP, implementing agreement, individual partner species and habitat conservation agreements, appropriate guidelines and protocols, and other associated documents. On September 27, 1999 the HCP was approved and the DNR along with 25 other partners began to implement the HCP.” ⁴² |
| San Diego Multiple Habitat Conservation Program | SANDAG | SANDAG | MPO | |
| San Diego Multiple Species Conservation Program (MSCP) | County of San Diego | County and Cities | County | |

⁴¹ <http://www.co.contra-costa.ca.us/depart/cd/water/HCP/>

⁴² http://www.fws.gov/midwest/endangered/permits/hcp/kbb_wi/pdf/AppendixC_History.pdf

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| San Joaquin | SJCOG (MPO) | SJMSCP JOINT POWERS AUTHORITY | JPA | <p>“The SJMSCP will be administered on behalf of the Plan Participants by a Joint Powers Authority that has adequate authority to carry out the Plan. The JPA shall be formed within 120 calendar days of the issuance of SJMSCP Permits. The San Joaquin Council of Governments (COG) shall contact each participating jurisdiction which shall name an elected official to the JPA. The COG shall organize the first meeting of the JPA representatives to formally establish the JPA and adopt governing rules for that organization consistent with the California Government Code as it applies to JPAs. The JPA shall consist of one representative from each of the cities that adopts the Plan, except that two representatives shall serve from the City of Stockton, and two representatives from the San Joaquin County Board of Supervisors, if the County adopts the Plan. Representatives on the JPA shall be elected officials from the participating local jurisdictions. Permitting Agency and Plan Participants who are not elected officials may serve in an advisory capacity, at their agency's discretion...”⁴³</p> |
| Santa Clara | | Santa Clara Valley Habitat Agency | JPA | <p>“The Habitat Agency is a joint powers authority (JPA) composed of the Cities of Gilroy, Morgan Hill, and San José, and the County. The JPA is limited to the four participating jurisdictions because the Joint Exercise of Powers Act requires that a JPA can only exercise powers held by all the participating agencies—and of the six participating agencies, only the four jurisdictions have the authority to adopt the Habitat Plan development fees. However, because all six agencies are responsible for implementing the Habitat Plan, each has a role in the Habitat Agency”⁴⁴</p> |
| Western Riverside | | Western Riverside County Regional Conservation Authority (RCA). | JPA | <p>“The RCA Board of Directors shall consist of the designated members of the Riverside County Board of Supervisors and an elected official from each of the Cities.”⁴⁵</p> <p>“The County has had previous experience with single-species habitat conservation planning including the Fringe Toed Lizard HCP in the Coachella Valley in 1985 and later with the 1996 HCP for the Stephens' kangaroo rat in Western Riverside County. During the Stephens' kangaroo rat HCP planning process, multiple-species planning efforts occurred through the Riverside County Habitat Conservation Agency (RCHCA) and through the Riverside County Regional Parks and Open Space District (RCRPOSD). In June 1992, RCHCA, RCRPOSD, and the Western</p> |

⁴³ San Joaquin plan, Sec 1.1.11.

⁴⁴ Santa clara plan, sec []

⁴⁵ WRMSHCP **11.2.2**

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| | | | | Riverside Council of Governments (WRCOG) initiated a program to develop a regional multiple-species plan for Western Riverside County.” ⁴⁶ |
| San Diego MHCP | | SANDAG | MPO | |
| San Diego MSCP | | County of San Diego | | |
| Butte | BCAG | | MPO | |
| Placer | Placer County | | County | |
| OCTA | OCTA | | Regional Transportation Agency | |
| Yuba/Sutter | Yuba County | | County | One county has taken the planning lead on an in-development HCP that will cover two counties. |
| San Diego North County | County of San Diego | | County | |
| Bakersfield | | | | |

*Shaded boxes indicate in-development HCPs. For these, the planning entity has been listed.

In order for the governing structure of an HCP to be successful, it must allow for smooth collaboration and cooperation among many stakeholders in the HCP planning process. The Western Riverside Plan outlines the features necessary for successful implementation:

Successful implementation of the MSHCP requires both a local administrative structure and effective coordination with state and federal partners. Such implementation includes executing, monitoring and reporting coordinated MSHCP Conservation Area System Assembly activities, accumulating and distributing funds, managing and monitoring MSHCP Conservation Area Lands and ensuring Permittee compliance with the MSHCP. Towards that end, the Parties have established an organizational structure for implementation and management of the MSHCP ("Cooperative Organizational Structure"). The Cooperative Organizational Structure facilitates cooperation among the Permittees and the Wildlife Agencies and assures that MSHCP Conservation Area management and monitoring shall be consistent across jurisdictional boundaries. The Cooperative Organizational Structure also creates roles and responsibilities for elected officials. (Riverside County Transportation and Land Management Agency, 2003, Sec. 6)

While determining the proper governing structure is of utmost importance to the success of HCP planning and implementation, the decision process can lead to delays that slow the momentum.

- Balcones – The BCCP was ultimately planned and run jointly by the City of Austin and Travis County through an inter-local agreement delegating permit applications by government agencies under the HCP to the city, while the county handled private

⁴⁶ Wrmshcp 1.2.3

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applicants. According to a representative of the county, the city and county are now “married with no possibility of divorce and work very closely together.” But it was not always that way, as the city and the county had a traditionally weak relationship before the BCCP, with Austin a “900 pound gorilla and counties hav[ing] very little power in Texas.” The city and county established a BCCP coordinating committee that includes elected officials from the city and the county, as well as FWS staff. But they had to learn to work together. In the beginning, it took over three years to write land management plans, and they had to go to the city council to resolve disagreements. The county representative concedes that much of their Success has to do with personalities and learning to communicate with each other. Other joint projects between the city and the county are not working as smoothly as the BCCP.

- *Yuba/Sutter* – The in-development Yuba/Sutter HCP is unique because it spans two counties because a state highway runs between both counties and FWS insistence that they participate in a single HCP. Planning was started in 2001 and has struggled with inconsistent funding. Also complicating planning is the fact that the two counties have little experience coordinating planning and have had a difficult time working out the process, having yet to work out a governing structure. Yuba County is technically the lead, but Sutter County manages consultants and grants. Additionally, area cities only became involved in the process between 2006 and 2008, and they are just beginning to get elected officials involved in planning. Neither county has the resources to form a JPA, so they are looking at either third party management of easements or management assistance from neighboring Natomas Basin HCP.

As these cases demonstrate, working out the planning and governance structure for an HCP can be a time-consuming process that leads to delays for many reasons. It is therefore highly beneficial for HCPs to use an existing collaborative government structure for HCP planning and management, whether this be an existing COG or a JPA that exists from a previous collaborative effort. This removes the time burden associated with figuring out the structure and leads to confidence that previous successes can generate more support and trust among stakeholders.

- *Santa Clara*: A representative of the Santa Clara Valley MSHCP reiterates that all HCPs are distinct and that ultimate governing structure depends on what local elected

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officials are comfortable with. Their local strategy was to create a JPA between the six permitted partners: the cities of Gilroy, Morgan Hill and San Jose, the County of Santa Clara, the Santa Clara Valley Transportation Authority, and the Santa Clara Valley Water District. The JPA, The Santa Clara Valley Habitat Agency, includes as voting members elected officials from each of the municipalities.⁴⁷

- *Western Riverside*: Western Riverside had previous experience with a smaller, single-species HCP undertaken by the Riverside County Habitat Conservation Agency (RCHCA) and the Riverside County Regional Parks and Open Space District (RCRPOSD). When it became apparent that an MSHCP was necessary to deal with growth in the region, RCHCA, RCRPOSD, and the Western Riverside Council of Governments (WRCOG) initiated the program together. The HCP is currently managed by the Western Riverside County Regional Conservation Authority (RCA), a JPA that includes voting members from the Riverside County Board of Supervisors and an elected official from each of the cities covered by the plan. (Riverside County Transportation and Land Management Agency, 2003, Sec. 1.2.3).
- *Coachella Valley*: Similar to Western Riverside, Coachella Valley MSHCP began the planning process with a coalition of stakeholders that had previously worked together on the smaller Fringe-Toed Lizard HCP in the area and therefore had already developed trust, credibility, and a shared sense of mutual accomplishment.⁴⁸
- *ECC*: The creation of the ECC HCP grew out of a pilot study in the mid-1990s done as a mapping project of local biodiversity, which led to a public discussion of the merits of comprehensive conservation. The original pilot study participants had been adversarial towards one another. They had painful monthly meetings for two years where “everyone threw rocks at each other.” But the participants gradually developed trust in one another as the pilot study progressed, and formed the basis for a smooth, cooperative process for HCP planning. The HCP was planned and implemented by a JPA formed for the purpose, and the pilot study had already shown the need for cities and the county at the center of HCP management. The outreach that had been done

⁴⁷ Area-wides are most often managed by some combination of local governments, which is generally necessary due to local land use powers of local government (Greer, 2004).

⁴⁸ Note that this coalition didn’t ultimately survive political turnover (Alagona and Pincetl, 2008).

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under the pilot study had built up trust in the community to the point that HCP planning received a letter of support signed by developers and conservation groups.

- *KBB*: The HCP is managed by the state Department of Natural Resources because it is their responsibility to conduct public land management activities throughout the state, and they can do the reporting that is compiled each year and sent to FWS.

Specific to the needs of transportation agencies, it is advantageous for the involvement of either the MPO or the regional COG who oversees transportation planning to be part of the HCP governance structure.

- *Butte*: The Butte County HCP is being developed by the local MPO, the Butte County Association of Governments. A representative stated that the BCAG has traditionally been an efficient agency that has worked well to coordinate local transportation planning in the area and is therefore an established regional agency to manage the HCP.
- *Coachella*: Coachella MSHCP is managed by a JPA known as the Coachella Valley Conservation Commission (CVCC). The JPA was necessary to incorporate the local water agencies into the HCP governance structure, and the JPA is staffed by CVAG. While RCTC is the CTC that received Measure A funding and the local transportation uniform mitigation fee, CVAG is also the local transportation agency. The management of the plan by the local transportation agency made it easier for them to sell the plan based on transportation infrastructure improvements, something they credit with garnering public support for the plan.
- *Western Riverside*: A representative of Western Riverside stressed the importance of managing from an existing county body, since you need unanimity between all of the cities involved, or it can delay or even torpedo the plan. Therefore, “If you don’t have the political body buy into the plan, it can go away.” Western Riverside was forward-looking in its governance considerations, anticipating the possibility of additional municipal incorporations during the life of the permit and conditioning transportation funding for the new municipalities on joining the existing HCP.
- *San Diego*: SANDAG is the regional transportation agency. It manages one of the area HCPs, but it is the entity that receives TransNet revenues dedicated to environmental

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mitigation for transportation projects, so it works with all area HCPs to coordinate mitigation. A representative of the Environmental Working Group at SANDAG noted that the revenue stream makes it both a mitigation tool and also an implementation mechanism for the regional plan. SANDAG is a permittee for only one of the two plans, and they use the other HCP as guidance documents for mitigation as the lead agency on projects. With access to the TransNet funds, SANDAG is essentially “the banker,” working within the regional plan on a project-by-project basis to purchase mitigation land in advance under the HCP. Caltrans is not a permittee on any of the San Diego-area HCPs, but similarly uses the HCP as guidance for mitigation.

- *OCTA*: The in-development OCTA HCP is directly funded by the local transportation sales tax and implemented by the regional transportation agency. The creation of an HCP for mitigation of area freeway projects was included in the measure and gives direct control of the HCP to OCTA, who is mitigating for included projects that take place on Caltrans ROW.

8.7 Resource Agency Solutions

Interviewees stressed that the HCP planning process would be greatly improved if the local FWS offices had a specific staff member dedicated to each HCP, increasing both efficiency and the continuity of the planning process. Applicants feel that FWS must start working in a “triage” fashion, prioritizing tasks that cause the greatest delays for applicants, since great delay can lead to a plan dying. Interviewees are aware of federal budgeting constraints on the agency, and more than one has raised the idea of funding the hiring of a dedicated FWS staff with planning knowledge for specific HCPs. While this may at seem to make the process vulnerable to regulatory capture, when a regulatory agency begins to advance the interests of those it regulates, it has been done successfully by the FHWA, which has funded a transportation liaison position at FWS offices. It has been observed by applicants that planners are trained to view problems on a larger scale compared to biologists, and this has often contributed to communication problems between applicants and FWS. While both views are necessary for successful HCP implementation, the absence of a participant skilled in translating communications between planners and biologists adds difficulty to the planning process.

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We recommend that resource agencies strive to maintain consistency in their communications with HCPs. FWS and other agencies should strive to provide a dedicated person with either decision making capacity or frequent communication with decision makers for each area-wide HCP. For larger HCPs, it may be necessary to appoint one staff member to work full time on a specific HCP. While it may be impossible to prevent staff turnover during the HCP planning process, resource agencies should strive to maintain institutional continuity in their dealings with HCPs, ensuring that decisions made by a staff member cannot be overturned by a replacement. By making these changes, good communication and trust between the parties can be more easily established, reducing costly delays.

Acknowledging that resource agencies maintain that they are under-funded and cannot provide dedicated staff to HCPs, the FHWA transportation liaison model should be expanded. HCP's should be allowed to contribute funding to resources agencies to ensure the availability of staff members to expedite their plans. This idea has been gaining traction in the larger transportation community and fears of regulatory capture have been largely allayed. For example, the California High Speed Rail Authority funded a full time position at the Strategic Growth Council to coordinate mitigation options between multiple infrastructure agencies (Strategic Growth Council, 2013).

The above discussion suggested that many of the delays and corresponding costs of HCP may be due to resource allocation. Counties developing larger plans have the money to support a FWS staff member and this would reduce costs in the long run. We recommend that legal barriers to the implementation of such resource reallocation be loosened, and that this is a fertile area for further research.

Appendix A. Endangered Species Act

Endangered Species Act - 16 U.S.C. Sections 1539 (Section 10).⁴⁹

(a) PERMITS.—(1) The Secretary may permit, under such terms and conditions as he shall prescribe— (A) any act otherwise prohibited by section 9 for scientific purposes or to enhance the propagation or survival of the affected species, including, but not limited to, acts necessary for the establishment and maintenance of experimental populations pursuant to subsection (j); or (B) any taking otherwise prohibited by section 9(a)(1)(B) if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. (2)(A) No permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless the applicant therefor submits to the Secretary a conservation plan that specifies— (i) the impact which will likely result from such taking; (ii) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and (iv) such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan. (B) If the Secretary finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that— (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will ensure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) the measures, if any, required under subparagraph (A)(iv) will be met; and he has received such other assurances as he may require that the plan will be implemented, the Secretary shall issue the permit. The permit shall contain such terms and conditions as the Secretary deems necessary or appropriate to carry out the purposes of this paragraph, including, but not limited to, such reporting requirements as the Secretary deems necessary for determining whether such terms and conditions are being complied with.(C) The Secretary shall revoke a permit issued under this paragraph if he finds that the permittee is not complying with the terms and conditions of the permit.

(b) HARDSHIP EXEMPTIONS.—(1) If any person enters into a contract with respect to a species of fish or wildlife or plant before the date of the publication in the Federal Register of notice of consideration of that species as an endangered species and the subsequent listing of that species as an endangered species pursuant to section 4 of this Act will cause undue economic hardship to such person under the contract, the Secretary, in order to minimize such hardship, may exempt such person from the application of section 9(a) of this Act to the extent the Secretary deems appropriate if such person applies to him for such exemption and includes with such application such information as the Secretary may require to prove such hardship; except that (A) no such exemption shall be for a duration of more than one year from the date of publication in the Federal Register of notice of consideration of the species concerned, or shall apply to a quantity of fish or wildlife or plants in excess of that specified by the Secretary; (B) the one-year period for those species of fish or wildlife listed by the Secretary as endangered prior to the effective date of this Act shall expire in accordance with the terms of section 3 of the Act of December 5, 1969 (83 Stat. 275); and (C) no such exemption may be granted for the importation or exportation of a specimen listed in Appendix I of the Convention which is to be used in a commercial activity. (2) As used in this subsection, the term “undue economic hardship” shall include, but not be limited to: (A) substantial economic loss resulting from inability caused by this Act to perform contracts with respect to species of fish and wildlife entered into prior to the date of publication in the Federal Register of a notice of consideration of such species as an endangered species; (B) substantial economic loss to persons who, for the year prior to the notice of consideration of such species as an endangered species, derived a substantial portion of their income from the lawful taking of any listed species, which taking would be made unlawful under this Act; or (C) curtailment of subsistence taking made unlawful under this Act by persons (i) not reasonably able to secure other sources of subsistence; and (ii) dependent to a substantial extent upon hunting and fishing for subsistence; and (iii) who must engage in such curtailed taking for subsistence purposes. (3) The Secretary may make further requirements for a showing of undue economic hardship as he deems fit. Exceptions granted under this section may be limited by the Secretary in his discretion as to time, area, or other factor of applicability.

(c) NOTICE AND REVIEW.—The Secretary shall publish notice in the Federal Register of each application for an exemption or permit which is made under this section. Each notice shall invite the submission from interested parties, within thirty days after the date of the notice, of written data, views, or arguments with respect to the application; except that such thirty-day period may be waived by the Secretary in an emergency situation where the health or life of an endangered animal is threatened and no reasonable alternative is available to the applicant, but notice of any

⁴⁹ For entire Act, see <http://www.fws.gov/endangered/esa-library/pdf/ESAall.pdf>.

such waiver shall be published by the Secretary in the Federal Register within ten days following the issuance of the exemption or permit. Information received by the Secretary as a part of any application shall be available to the public as a matter of public record at every stage of the proceeding.

(d) PERMIT AND EXEMPTION POLICY.—The Secretary may grant exceptions under subsections (a)(1)(A) and (b) of this section only if he finds and publishes his finding in the Federal Register that (1) such exceptions were applied for in good faith, (2) if granted and exercised will not operate to the disadvantage of such endangered species, and (3) will be consistent with the purposes and policy set forth in section 2 of this Act.

(e) ALASKA NATIVES.—(1) Except as provided in paragraph (4) of this subsection the provisions of this Act shall not apply with respect to the taking of any endangered species or threatened species, or the importation of any such species taken pursuant to this section, by— (A) any Indian, Aleut, or Eskimo who is an Alaskan Native who resides in Alaska; or (B) any non-native permanent resident of an Alaskan native village; if such taking is primarily for subsistence purposes. Non-edible byproducts of species taken pursuant to this section may be sold in interstate commerce when made into authentic native articles of handicrafts and clothing; except that the provisions of this subsection shall not apply to any non-native resident of an Alaskan native village found by the Secretary to be not primarily dependent upon the taking of fish and wildlife for consumption or for the creation and sale of authentic native articles of handicrafts and clothing. (2) Any taking under this subsection may not be accomplished in a wasteful manner. (3) As used in this subsection— (i) The term “subsistence” includes selling any edible portion of fish or wildlife in native villages and towns in Alaska for native consumption within native villages or towns; and (ii) The term “authentic native articles of handicrafts and clothing” means items composed wholly or in some significant respect of natural materials, and which are produced, decorated, or fashioned in the exercise of traditional native handicrafts without the use of pantographs, multiple carvers, or other mass copying devices. Traditional native handicrafts include, but are not limited to, weaving, carving, stitching, sewing, lacing, beading, drawing, and painting. (4) Notwithstanding the provisions of paragraph (1) of this subsection, whenever the Secretary determines that any species of fish or wildlife which is subject to taking under the provisions of this subsection is an endangered species or threatened species, and that such taking materially and negatively affects the threatened or endangered species, he may prescribe regulations upon the taking of such species by any such Indian, Aleut, Eskimo, or non-Native Alaskan resident of an Alaskan native village. Such regulations may be established with reference to species, geographical description of the area included, the season for taking, or any other factors related to the reason for establishing such regulations and consistent with the policy of this Act. Such regulations shall be prescribed after a notice and hearings in the affected judicial districts of Alaska and as otherwise required by section 103 of the Marine Mammal Protection Act of 1972, and shall be removed as soon as the Secretary determines that the need for their impositions has disappeared.

(f)(1) As used in this subsection— (A) The term “pre-Act endangered species part” means— (i) any sperm whale oil, including derivatives thereof, which was lawfully held within the United States on December 28, 1973, in the course of a commercial activity; or (ii) any finished scrimshaw product, if such product or the raw material for such product was lawfully held within the United States on December 28, 1973, in the course of a commercial activity. (B) The term “scrimshaw product” means any art form which involves the substantial etching or engraving of designs upon, or the substantial carving of figures, patterns, or designs from, any bone or tooth of any marine mammal of the order Cetacea. For purposes of this subsection, polishing or the adding of minor superficial markings does not constitute substantial etching, engraving, or carving. (2) The Secretary, pursuant to the provisions of this subsection, may exempt, if such exemption is not in violation of the Convention, any pre-Act endangered species part from one or more of the following prohibitions: (A) The prohibition on exportation from the United States set forth in section 9(a)(1)(A) of this Act. (B) Any prohibition set forth in section 9(a)(1)(E) or (F) of this Act. (3) Any person seeking an exemption described in paragraph (2) of this subsection shall make application therefor to the Secretary in such form and manner as he shall prescribe, but no such application may be considered by the Secretary unless the application— (A) is received by the Secretary before the close of the one-year period beginning on the date on which regulations promulgated by the Secretary to carry out this subsection first take effect; (B) contains a complete and detailed inventory of all pre-Act endangered species parts for which the applicant seeks exemption; (C) is accompanied by such documentation as the Secretary may require to prove that any endangered species part or product claimed by the applicant to be a pre-Act endangered species part is in fact such a part; and (D) contains such other information as the Secretary deems necessary and appropriate to carry out the purposes of this subsection. (4) If the Secretary approves any application for exemption made under this subsection, he shall issue to the applicant a certificate of exemption which shall specify— (A) any prohibition in section 9(a) of this Act which is exempted; (B) the pre-Act endangered species parts to which the exemption applies; (C) the period of time during which the exemption is in effect, but no exemption made under this subsection shall have force and effect after the close of the three-year period beginning on the date of issuance of the certificate unless such exemption is renewed under paragraph (8); and (D) any term or condition prescribed pursuant to paragraph (5)(A) or (B), or both, which the

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Secretary deems necessary or appropriate. (5) The Secretary shall prescribe such regulations as he deems necessary and appropriate to carry out the purposes of this subsection. Such regulations may set forth— (A) terms and conditions which may be imposed on applicants for exemptions under this subsection (including, but not limited to, requirements that applicants register inventories, keep complete sales records, permit duly authorized agents of the Secretary to inspect such inventories and records, and periodically file appropriate reports with the Secretary); and (B) terms and conditions which may be imposed on any subsequent purchaser of any pre-Act endangered species part covered by an exemption granted under this subsection; to insure that any such part so exempted is adequately accounted for and not disposed of contrary to the provisions of this Act. No regulation prescribed by the Secretary to carry out the purposes of this subsection shall be subject to section 4(f)(2)(A)(i) of this Act. (6)(A) Any contract for the sale of pre-Act endangered species parts which is entered into by the Administrator of General Services prior to the effective date of this subsection and pursuant to the notice published in the Federal Register on January 9, 1973, shall not be rendered invalid by virtue of the fact that fulfillment of such contract may be prohibited under section 9(a)(1)(F). (B) In the event that this paragraph is held invalid, the validity of the remainder of the Act, including the remainder of this subsection, shall not be affected. (7) Nothing in this subsection shall be construed to— (A) exonerate any person from any act committed in violation of paragraphs (1)(A), (1)(E), or (1)(F) of section 9(a) prior to the date of enactment of this subsection; or (B) immunize any person from prosecution for any such act. (8)(A)(i) Any valid certificate of exemption which was renewed after October 13, 1982, and was in effect on March 31, 1988, shall be deemed to be renewed for a six month period beginning on the date of enactment of the Endangered Species Act Amendments of 1988. Any person holding such a certificate may apply to the Secretary for one additional renewal of such certificate for a period not to exceed 5 years beginning on the date of such enactment. (B) If the Secretary approves any application for renewal of an exemption under this paragraph, he shall issue to the applicant a certificate of renewal of such exemption which shall provide that all terms, conditions, prohibitions, and other regulations made applicable by the previous certificate shall remain in effect during the period of the renewal. (C) No exemption or renewal of such exemption made under this subsection shall have force and effect after the expiration date of the certificate of renewal of such exemption issued under this paragraph. (D) No person may, after January 31, 1984, sell or offer for sale in interstate or foreign commerce, any pre-Act finished scrimshaw product unless such person holds a valid certificate of exemption issued by the Secretary under this subsection, and unless such product or the raw material for such product was held by such person on October 13, 1982.

(g) In connection with any action alleging a violation of section 9, any person claiming the benefit of any exemption or permit under this Act shall have the burden of proving that the exemption or permit is applicable, has been granted, and was valid and in force at the time of the alleged violation.

(h) CERTAIN ANTIQUE ARTICLES.—(1) Sections 4(d), 9(a), and 9(c) do not apply to any article which— (A) is not less than 100 years of age; (B) is composed in whole or in part of any endangered species or threatened species listed under section 4; (C) has not been repaired or modified with any part of any such species on or after the date of the enactment of this Act; and (D) is entered at a port designated under paragraph (3). (2) Any person who wishes to import an article under the exception provided by this subsection shall submit to the customs officer concerned at the time of entry of the article such documentation as the Secretary of the Treasury, after consultation with the Secretary of the Interior, shall by regulation require as being necessary to establish that the article meets the requirements set forth in paragraph (1)(A), (B), and (C). (3) The Secretary of the Treasury, after consultation with the Secretary of the Interior, shall designate one port within each customs region at which articles described in paragraph (1)(A), (B), and (C) must be entered into the customs territory of the United States. (4) Any person who imported, after December 27, 1973, and on or before the date of the enactment of the Endangered Species Act Amendments of 1978, any article described in paragraph (1) which— (A) was not repaired or modified after the date of importation with any part of any endangered species or threatened species listed under section 4; (B) was forfeited to the United States before such date of the enactment, or is subject to forfeiture to the United States on such date of enactment, pursuant to the assessment of a civil penalty under section 11; and (C) is in the custody of the United States on such date of enactment; may, before the close of the one-year period beginning on such date of enactment, make application to the Secretary for return of the article. Application shall be made in such form and manner, and contain such documentation, as the Secretary prescribes. If on the basis of any such application which is timely filed, the Secretary is satisfied that the requirements of this paragraph are met with respect to the article concerned, the Secretary shall return the article to the applicant and the importation of such article shall, on and after the date of return, be deemed to be a lawful importation under this Act.

(i) NONCOMMERCIAL TRANSSHIPMENTS.—Any importation into the United States of fish or wildlife shall, if— (1) such fish or wildlife was lawfully taken and exported from the country of origin and country of reexport, if any; (2) such fish or wildlife is in transit or transshipment through any place subject to the jurisdiction of the United States en route to a country where such fish or wildlife may be lawfully imported and received; (3) the exporter or owner of such fish or wildlife gave explicit instructions not to ship such fish or wildlife through any place subject to

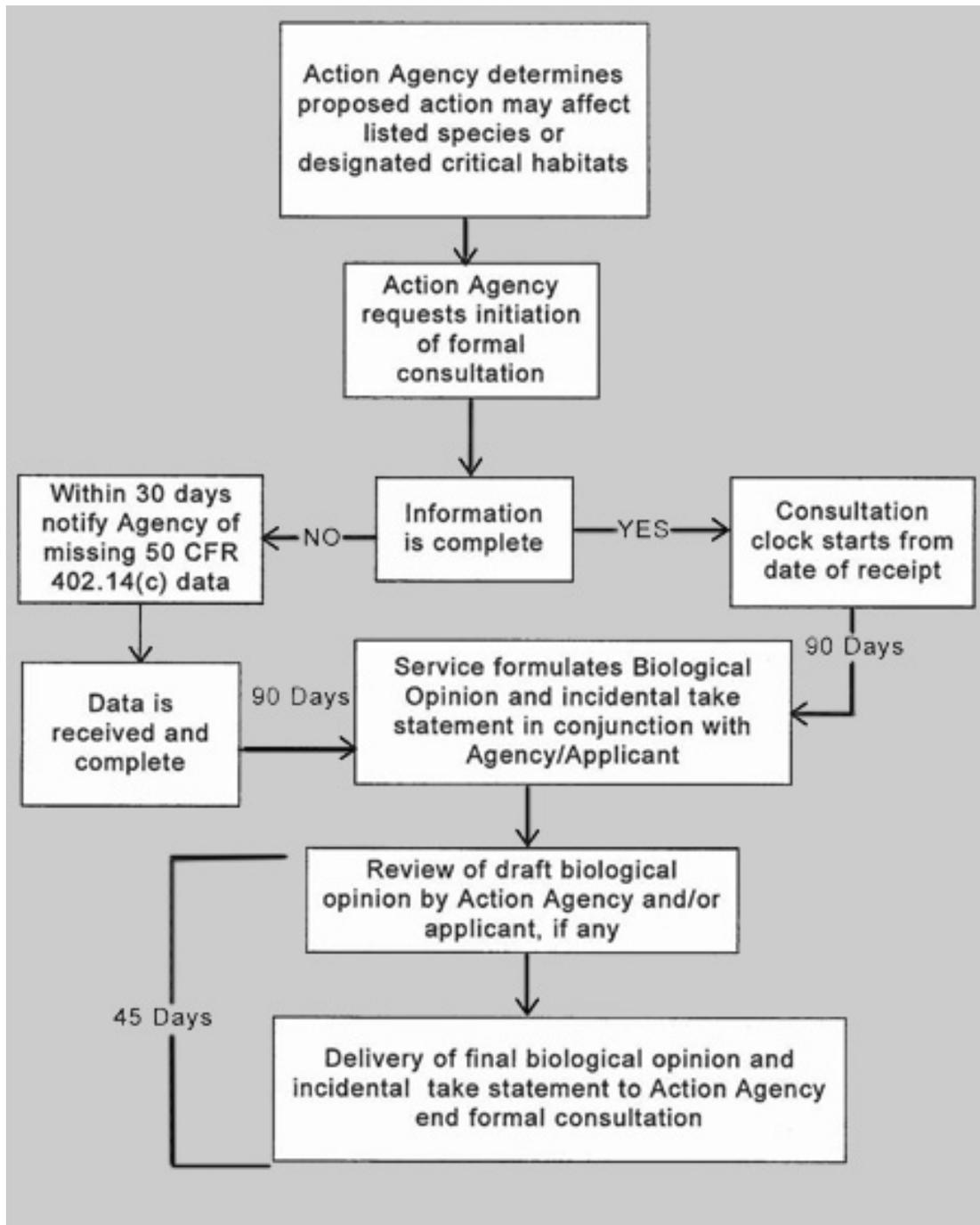
the jurisdiction of the United States, or did all that could have reasonably been done to prevent transshipment, and the circumstances leading to the transshipment were beyond the exporter's or owner's control; (4) the applicable requirements of the Convention have been satisfied; and (5) such importation is not made in the course of a commercial activity, be an importation not in violation of any provision of this Act or any regulation issued pursuant to this Act while such fish or wildlife remains in the control of the United States Customs Service.

(j) EXPERIMENTAL POPULATIONS.—(1) For purposes of this subsection, the term “experimental population” means any population (including any offspring arising solely therefrom) authorized by the Secretary for release under paragraph (2), but only when, and at such times as, the population is wholly separate geographically from nonexperimental populations of the same species. (2)(A) The Secretary may authorize the release (and the related transportation) of any population (including eggs, propagules, or individuals) of an endangered species or a threatened species outside the current range of such species if the Secretary determines that such release will further the conservation of such species. (B) Before authorizing the release of any population under subparagraph (A), the Secretary shall by regulation identify the population and determine, on the basis of the best available information, whether or not such population is essential to the continued existence of an endangered species or a threatened species. (C) For the purposes of this Act, each member of an experimental population shall be treated as a threatened species; except that— (i) solely for purposes of section 7 (other than subsection (a)(1) thereof), an experimental population determined under subparagraph (B) to be not essential to the continued existence of a species shall be treated, except when it occurs in an area within the National Wildlife Refuge System or the National Park System, as a species proposed to be listed under section 4; and (ii) critical habitat shall not be designated under this Act for any experimental population determined under subparagraph (B) to be not essential to the continued existence of a species. (3) The Secretary, with respect to populations of endangered species or threatened species that the Secretary authorized, before the date of the enactment of this subsection, for release in geographical areas separate from the other populations of such species, shall determine by regulation which of such populations are an experimental population for the purposes of this subsection and whether or not each is essential to the continued existence of an endangered species or a threatened species.

Appendix B. HCP Statistics

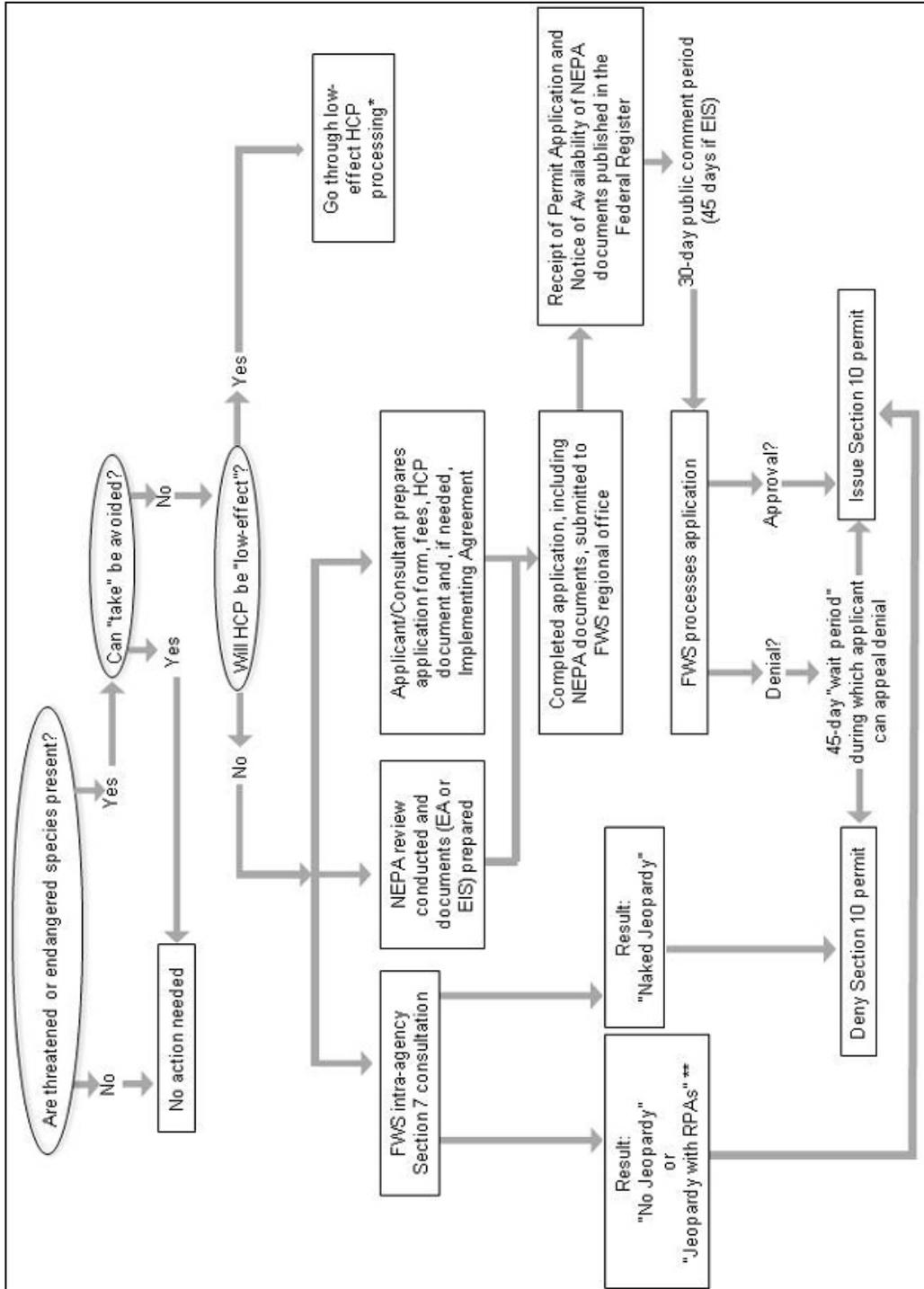
| HCP STATISTICS | | | | | | | |
|--|---------------|-----------------|--------------------|-----------------------|--|-----------------|-----------|
| Full Name | Permit issued | Planning Length | Permit Length | Permittees | Transportation Permittees | Species Covered | Acreage |
| Balcones Canyonlands Conservation Plan | 5/2/1996 | 8 | 30 | 2 (City and County) | none | 35 | 633,000 |
| Clark County Multiple Species Habitat Conservation Plan | 1/9/2001 | 5 | 30 | 7 | Nevada DOT | 75 | 5,000,000 |
| Coachella Valley Multiple Species Habitat Conservation Plan | 2008 | 16 | 75 | 14 | Caltrans, CVAG | 27 | 1,206,578 |
| East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan | Aug-07 | 6 | 30 | 7 | none | 26 | 175,435 |
| Metropolitan Bakersfield | 8/24/1994 | 3 | 20 (being renewed) | 2 (County and City) | none | 4 | 262,000 |
| San Diego Multiple Habitat Conservaiton Plan (MHCP)* | 11/12/2004 | 12 | 50 | 7 cities | none** | 61 | 111,908 |
| San Diego Multiple Species Conservation Plan (MSCP)* | 3/17/1998 | 7 | 50 | 6 (County and Cities) | None | 85 | 582,000 |
| San Joaquin County Multi-Species Habitat Conservation and Open Space Plan | 5/31/2001 | 7 | 50 | 8 (7 + JPA) | Caltrans, SJCOG (MPO) | 42 | 896,000 |
| Santa Clara Valley Habitat Plan | 7/30/2013 | 8 | 50 | 6 | Santa Clara Valley Transportation Authority (VTA) | 18 | 508,669 |
| Western Riverside County Multiple Species Habitat Conservation Plan | 6/22/2004 | 5 | 75 | 22 | Caltrans, Riverside County Transportation Commission | 146 | 1,300,000 |
| Wisconsin Karner Blue Butterfly Habitat Conservation Plan | 9/27/1999 | 5 | 20 (being renewed) | 1 + 26 Partners | Wisconsin Department of Transportation (Partner) | 1 | Statewide |

Appendix C. Section 7 Formal Consultation Process Flowchart⁵⁰



⁵⁰ USFW 1998. (With the National Marine Fisheries Service). *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 8 of the Endangered Species Act*. March 1998 Final.

Section 10 Permit Application and Processing Steps



* The FWS has developed a streamlined processing procedure for "low-effect HCPs," which usually involve a small parcel of land or limited acres of habitat. We do not elaborate on the process for low-effect HCPs here, since our research focuses on more complex HCPs involving large tracts of land and habitat.

*** RPA = Reasonable and Prudent Alternative

Appendix D. East Contra Costa Fee Adjustment Indices

| Fee Index ¹ | Annual Adjustment | Average Annual Rate (1991–2001) Example |
|---|--|---|
| Development Fee, Rural Road Fee, and Temporary Impact Fee | | |
| Portion for Land Acquisition ² (60 % initially ³) | Change in the annual Home Price Index (HPI) for the Oakland-Fremont-Hayward, CA Metropolitan Division (MSAD) for the prior calendar year (Office of Federal Housing Enterprise Oversight) ⁴ | 5.19% |
| Portion for Preserve System Operation, Restoration, and Maintenance (40% initially ³) | Change in the Consumer Price Index for the San Francisco-Oakland-San Jose Combined Statistical Area for all urban consumers for the prior calendar year (U.S. Bureau of Labor Statistics) ⁵ | 3.25% |
| Wetland Fee | Same as above | 3.25% |

Notes:

- ¹ HCP/NCCP fees to be adjusted automatically by March 15 of every year based on the indices for the prior calendar year.
- ² Direct land acquisition costs only. Excludes costs associated with land transaction, site improvements, and due diligence (e.g., pre-acquisition surveys).
- ³ The portion of the development fees, rural road fees, and temporary impact fees that will be adjusted according to the HPI and CPI will vary over time. For the first annual automatic adjustment, 60% of the initial fees will be adjusted according to the HPI and 40% will be adjusted according to the CPI. The apportionment in subsequent years will depend on the relative values of the indices. The following formula will be used to calculate the adjustments to the development fee, rural road fee, and temporary impact fee:

$$Fee_n = [(L_{n-1} * (HPI_{n-1}/HPI_{n-2})) + (S_{n-1} * (CPI_{n-1}/CPI_{n-2}))] * Z$$

Where:

- n= year of HCP/NCCP Implementation [year 1 (n=1) is 2006, the first calendar year in which HCP/NCCP Implementation occurs; year 2 (n = 2) is 2007; etc. Year 0 (n=0) is 2005.]
- Fee_n = Development Fee for year n (the Development Fee for year n applies from March 15 of year n through March 14 of the following year)
- Fee₁ = \$23,838 for Zone II, \$11,919 for Zone I, and \$5,960 for Zone III
- L_{n-1} = Land acquisition portion of development fee for the year prior to year n
- L₁ = 60% of \$23,838 = \$14,303
- HPI_{n-1} = Home Price Index (HPI) for the Oakland-Fremont-Hayward, CA Metropolitan Division (MSAD) at the end of the calendar year prior to year n as published by the Office of Federal Housing Enterprise Oversight
- S_{n-1} = Non-land acquisition portion of development fee for the year prior to year n
- S₁ = 40% of \$23,838 = \$9,535
- CPI_{n-1} = Consumer Price Index for the San Francisco-Oakland-San Jose Combined Statistical Area for all

urban consumers at the end of the calendar year prior to year n as published by U.S. Bureau of Labor Statistics

Z = Fee zone factor (based on which fee zone the project is in (see Figure 9-1 in the HCP)). The fee zone factors for the three zones are as follows:

- Z =1 for Zone II, the Natural Lands Zone;
- Z=0.5 for Zone I, the agricultural lands zone;
- Z=0.25 for Zone III, the infill zone

The above formula applies for every fee adjustment except for the first fee adjustment to calculate the fees for Year 2. Because the Year 1 fees were calculated without access to Home Price Index data for the fourth quarter of 2005, the fee adjustment for Year 2 will rely on a different formula. The following formula will be used to calculate the fee adjustment for year 2 and will be used to calculate the fees that apply from March 15, 2007

through March 14, 2008:

$$\text{Fee}_{2007} = [\$14,303 * (\text{HPI}_{2006}/\text{HPI}_x)] + [\$9,535 * (\text{CPI}_{2006}/\text{CPI}_{2005})] *$$

Z Where:

HPI_x = Home Price Index (HPI) for the Oakland-Fremont-Hayward, CA Metropolitan Division (MSAD) through the third quarter of 2005 as published by the Office of Federal Housing Enterprise Oversight

- ⁴ See <http://www.ofheo.gov/HPI.asp>. Data for the prior calendar year are published in March. For the first annual automatic adjustment, the change in the HPI from the end of the third quarter of 2005 through the end of fourth quarter of 2006 will be used. In all subsequent automatic adjustments, the change in the HPI for the prior calendar year will be used. The exception for the first automatic annual adjustment is needed because estimated land acquisitions costs from the Draft HCP/NCCP were adjusted for the Final HCP/NCCP by the change in the HPI during the first three quarters of 2005 because data for the fourth quarter of 2005 were not available in time.
- ⁵ Consumer Price Index, All Items, with base data year of 1982-1984 (i.e., 1982-1984 = 100), for all urban consumers (CPI-U), not seasonally adjusted. See http://www.bls.gov/eag/eag.ca_sanfrancisco_msa.htm

Appendix E. Breakdown of HCPs by numbers and size

Table 3. Breakdown of HCPs by numbers and size

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program.

al acres covered under the

Source: MSI, 2009, p.13

Appendix F. Grants Received by Interviewed HCPs since 2004

| Sec 6 Grants Received by Interviewed HCPs since 2004 | | | |
|---|------|-------------|---|
| Habitat Conservation Plan Land Acquisition Grants | | | |
| HCP | Year | Amount | Purpose |
| City of San Diego and County of San Diego Multiple Species Conservation Program NCCP/HCP (San Diego County, CA) | 2004 | \$4,402,238 | The grant will be used to acquire parcels of land on Otay Mesa that make up a large part of the southern portion of lands within the Multi- Habitat Planning Area (MHPA), the City of San Diego's targeted preserve area under the Multiple Species Conservation Program (MSCP). Because of their size and location, the parcels are crucial for protecting the integrity of the MHPA along the U.S./Mexico border and for connecting the southern portion to other MHPA areas to the north. The parcels support a number of listed and rare habitats and species, including the threatened coastal California gnatcatcher, burrowing owl, cactus wren, and species endemic to the San Diego region such as San Diego barrel cactus and snake chollas. There are several vernal pools on the parcels, some of which support the federally listed endangered San Diego fairy shrimp, California orcutt grass and San Diego button celery. Acquisition of the Crest Tract is a high priority for San Diego County's MSCP. The Crest Tract supports threatened California gnatcatcher and San Diego thornmint, and provides upland habitat for the federally listed arroyo toad. In addition, numerous other MSCP covered species are known in the area. The Crest tract provides a key linkage between the San Diego National Wildlife Refuge to the south and the State-owned Crestridge Preserve. This approximately 1,400 acre tract includes numerous parcels, which if allowed to develop, would result in a fragmented landscape that will preclude connectivity between two large conserved areas. |
| Balcones Canyonlands Preserve (Travis County, TX) | 2004 | \$3,375,000 | . Grant funds will be used for the acquisition of new preserve tracts vital for the ecological viability of the Balcones Canyonlands Preserve. This preserve was designed to encompass high quality habitat for the golden-cheeked warbler, black-capped vireo, and the entire known range of three endangered karst invertebrates. |
| Utah Division of Wildlife Resources, Mojave desert tortoise (Washington County, UT) | 2004 | \$4,422,459 | This grant will be used to acquire parcels of Mojave desert tortoise habitat key to the viability of a reserve created under the Washington County HCP. The reserve is vital to the long term survival and recovery of the desert tortoise and will benefit a suite of other species, including six federally listed species (the bald eagle, southwestern willow flycatcher, Virgin River chub, woundfin, dwarf bear poppy, and Silar pincushion cactus), one proposed endangered plant (Shivwits milkvetch), and at least two dozen BLM species of concern and State of Utah sensitive species. Purchase of the parcels proposed for acquisition will significantly reduce habitat fragmentation in the reserve. |
| Western Riverside County Multiple Species Habitat Conservation Plan (Riverside County, CA): | 2005 | \$5,000,000 | This grant will contribute to the acquisition and conservation of habitat that complements the on-going conservation efforts in the Western Riverside County Multiple Species Habitat Conservation Plan. Parcels in four areas are being considered for acquisition, including Wilson and Cactus Valleys, Interstate 15 Corridor (Corona to Murrieta), Colton Sand Dunes, and Badlands and Pass Area. These areas are important habitat linkages and support key populations |

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| | | | of several federally listed animals and plants including Stephens' kangaroo rat, San Bernardino kangaroo rat, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, arroyo toad, Quino checkerspot butterfly, Delhi Sands flower-loving fly, Munz's onion, Nevin's barberry and thread-leaved brodiaea. |
| San Diego County Multi-Species Habitat Conservation Program (San Diego County, CA): \$5,000,000. | 2005 | \$5,000,000 | Acquisition and conservation of lands purchased in part by this grant will complement the on-going conservation efforts of the San Diego County Multi-species Habitat Conservation Plan in seven northwestern San Diego County cities. Conservation of these lands will aid in the establishment of a contiguous preserve system that will sustain populations of federally listed and sensitive animals and plants, including the coastal California gnatcatcher, and least Bell's vireo, San Diego horned lizard, western spadefoot toad, and Encinitas baccharis plant. |
| San Diego County Subarea Multiple Species Conservation Program (San Diego County, CA): \$5,000,000. | 2005 | \$5,000,000 | This grant will contribute to the acquisition and conservation of land that complements the on-going conservation efforts in the San Diego County Subarea Multiple Species Conservation Program. Lands being considered for acquisition or easements are located at Monte Vista Ranch and Ramona Grasslands. Land protection in both areas would significantly complement the County of San Diego's Multiple Species Conservation Program reserve design and improve opportunities for wildlife movement along San Vicente Creek and Santa Maria Creek. Conservation of land at Monte Vista Ranch and Ramona Grasslands would benefit numerous federally listed animals and plants, including least Bell's vireo, San Diego thornmint, arroyo toad, coastal California gnatcatcher, southwestern willow flycatcher, Quino checkerspot butterfly, San Diego fairy shrimp, Stephens' kangaroo rat, and spreading navarretia plant. These lands also contain the largest population of wintering ferruginous hawks, a sensitive species, in San Diego County. |
| Balcones Canyonlands Preserve, Lucas Tract (Travis County, TX): | 2005 | \$6,890,000 | This project will protect 140 acres of habitat for two endangered songbirds, the golden-cheeked warbler and black-capped vireo. Additionally it will protect the New Comanche Trail Cave which provides habitat for 2 endangered karst invertebrates, the Tooth Cave spider and Bone Cave harvestman. The cave is one of only two confirmed localities where the Tooth Cave spider exists and is integral to the recovery of this species. Protection of this tract also provides critical connectivity between previously protected adjacent lands. |
| Washington County HCP Land Acquisition (Washington County, UT): | 2005 | \$10,000,000 | Washington County, located in southwestern Utah, is one of the nation's fastest growing counties. A large portion of the county lies within the Mojave Desert ecosystem in the Virgin River drainage and provides habitat for nine federally-listed threatened or endangered species. The resulting conflicts between economic development and protection of threatened and endangered species have motivated local citizens and county government to join federal and state agencies and environmental groups in preparing the Washington County HCP. Land acquisition strategies include land exchanges and purchase of private lands from willing sellers. |
| *San Joaquin Multi-species HCP (San Joaquin County, CA): | 2006 | \$6,531,054 | This project will acquire ecologically valuable habitat for eight federally listed species, including San Joaquin kit fox, California red legged frog, three vernal pool shrimp species and 24 unlisted, but at-risk species. The parcels are part of the largest contiguous annual grassland remaining in the area, and contain more alkali grassland, alkali wetland, and vernal pools than any other portion of San Joaquin County or adjacent east Contra Costa County. The land will play a pivotal role in establishing a northwest-southeast movement corridor for the endangered San Joaquin kit |

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| | | | fox , and protect habitat of regional importance for the threatened California red-legged frog and other species covered by the HCP. |
| Western Riverside County MSHCP (Riverside County, CA): | 2006 | \$12,000,000 | This grant will fund the acquisition of approximately 450 acres in the San Jacinto River area and 128 acres in the Santa Rosa Plateau area to benefit 18 federally listed species. The acquisition of land in the San Jacinto River area will conserve core populations of several federally listed plants, including spreading navarretia, San Jacinto Valley crowscale, thread-leaved brodiaea, and slender-horned spineflower. Conservation of these lands along the San Jacinto River will also protect one of three major populations of the federally endangered San Bernardino kangaroo rat. The acquisition of land in the Santa Rosa Plateau area will protect one of the most ecologically significant complexes of vernal pools in southern California that supports populations of the Riverside fairy shrimp. Other species that will benefit from acquisition of these lands include California Orcutt grass, Munz's onion, least Bell's vireo, and the coastal California gnatcatcher. |
| *San Diego County Multiple Species Conservation Plan (San Diego County, CA): | 2006 | \$23,103,592 | The grant will aid in the acquisition of 8,000 acres of land, benefiting numerous federally listed species, including the coastal California gnatcatcher, arroyo toad, San Diego fairy shrimp and Stephens' kangaroo rat. This acquisition will complement the County of San Diego MSCP's reserve design by securing key regional wildlife linkages and preserving core areas of habitat. These areas of coastal sage scrub, chaparral, oak woodlands, grasslands, riparian habitat, and vernal wetlands constitute an exceptional concentration of regionally and globally significant resources. |
| San Joaquin Multi-Species HCP (San Joaquin County, CA): | 2006 | \$7,000,000 | This project will acquire 2,000 acres of ecologically valuable habitat for federally listed species, including San Joaquin kit fox, California red-legged frog, three vernal pool shrimp species, and numerous sensitive species. The parcels are part the largest contiguous annual grassland remaining in the area, and contain more alkali grassland, alkali wetland, and vernal pools than does any other portion of San Joaquin County or adjacent East Contra Costa County. The land will play a pivotal role in securing a northwest-southeast movement corridor for the endangered San Joaquin kit fox, and protect habitat of regional importance for the threatened California red-legged frog. This acquisition is also a cooperative effort between two adjoining counties. |
| *Karner Blue Butterfly HCP Land Acquisition Wisconsin (Waupaca and Burnett Counties, WI): | 2006 | \$192,000 | Wisconsin Department of Natural Resources is awarded \$192,000 to partially fund the acquisition of a 97 acre parcel and a 320 acre parcel located within Waupaca and Burnett Counties, respectively. Each of the parcels is located within Wisconsin State Natural Area acquisition boundaries. Purchase of the Sawyer property significantly benefits the restoration and management of the prairie/savanna/barrens ecosystem present on the complex of lands owned by the DNR in central Wisconsin. The Plum Creek property as well as Crex Meadows and Fish Lake State Wildlife Areas lie within the Northwest Sands Ecological Landscape, a globally imperiled ecosystem. Acquisition of this parcel will enhance restoration and management of this rare ecosystem. |
| City of San Diego Multiple Species Conservation Plan (San Diego County, CA): | 2008 | \$4,918,000 | The grant will aid in the acquisition of 230 acres of land in the East Elliot and Otay Mesa areas, benefiting numerous federally listed species, including the coastal California gnatcatcher, least Bell's vireo, San Diego fairy shrimp and Riverside fairy shrimp. This acquisition will complement the County of San Diego MSCP's reserve design by securing key regional wildlife linkages and preserving core areas of habitat. These areas of coastal sage scrub, chaparral, oak woodlands, grasslands, |

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| | | | riparian habitat, and vernal wetlands constitute an exceptional concentration of regionally and globally significant resources. |
| East Contra Costa County Habitat Conservation Plan (Contra Costa County, CA): | 2008 | \$6,000,000 | The grant will contribute to the acquisition and conservation of 2,000 acres in eastern Contra Costa County, benefiting a number of federally listed species, including California red-legged frog, California tiger salamander, San Joaquin kit fox and vernal pool fairy shrimp. This acquisition will protect a mosaic of habitat types such as chaparral, oak woodland and savanna, grasslands, ponds, seasonal wetlands, and stream and riparian areas. The acquisition will also unite an assembly of larger and more interconnected core preserves that will benefit species such as the San Joaquin kit fox, who are dependent on regional habitat connectivity. |
| Balcones Canyonlands Preserve/Purcell Tract (Travis County, TX): | 2008 | \$5,250,000 | . The project will result in the purchase of two tracts of land (5.6 acres and 1.2 acres) within the Balcones Canyonlands to protect habitat for seven endangered species and three karst species of concern. The target tracts are adjacent to or near the 17.3 acre tract acquisition funded in FY07. One tract includes caves that may benefit endangered karst species, including the Bone Cave harvestman, Tooth Cave ground beetle, Tooth Cave spider, Tooth Cave pseudoscorpion, and Kretschmarr Cave mold beetle; the other is high-quality golden-cheeked warbler habitat. Both tracts are of critical biological value to these species. These tracts are adjacent to preserve land owned by Travis County and will provide critical connectivity between adjacent protected lands. |
| Coachella Valley Multiple Species Habitat Conservation Plan (Riverside County, CA) | 2009 | \$6,000,000 | This will purchase lands that will greatly enhance the existing Coachella Valley MSHCP by securing key regional wildlife linkages, sand transport areas, and preserving core habitat areas. The land acquisition will benefit 20 species, including seven federally listed species such as Coachella Valley fringe-toed lizard, desert tortoise and peninsular bighorn sheep. The proposed acquisition will complement and greatly enhance the ecological value of the many other acquisitions that have previously occurred in these areas in the last few years. |
| East Contra Costa County Habitat Conservation Plan: Upper Marsh Creek Watershed* | 2009 | \$2,407,200 | This project would acquire up to 900 acres that provide essential habitat and connectivity for multiple species. The habitat acquisition area supports the largest concentration of ponds, seasonal wetlands, and ephemeral streams in the HCP area and is crucial habitat for wetland-dependent species such as California Red-legged frog and California tiger salamander. In addition, acquisition focus area also supports the vast majority of the chaparral habitat that remains in the area, essential habitat for Alameda whipsnake and several covered plant species. |
| Karner blue butterfly HCP land acquisition –Quincy Bluff (Adams County): | 2009 | \$1,533,000 | Wisconsin Department of Natural Resources is awarded \$1,533,000 to fund the acquisition of a 240-acre parcel and an 870-acre parcel located within the Quincy Bluff and Wetlands State Natural Area. Purchase of these properties substantially benefits the restoration and management of the ecosystem present on the complex of lands owned in central Wisconsin. Once acquired, they will be permanently protected and managed for the Karner blue butterfly to assist in the recovery of the Glacial Lake Wisconsin KBB Recovery Unit. The acquisition of these parcels will help connect State Natural Area lands owned by The Nature Conservancy with those owned by the Wisconsin Department of Natural Resources, which currently total over 5,000 acres. |
| East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP): Byron to Black Diamond Conservation Corridor (Contra Costa County, CA) | 2010 | \$6,000,000 | These funds will purchase 1800 acres that will provide important habitat and wildlife corridors for many of the 28 covered species contained in the HCP/NCCP, including 8 federally listed species such as the San Joaquin kit fox, California red-legged frog, and vernal pool tadpole shrimp. The acquisition of these properties adds to the approximately 4,800 |

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| | | | acres that have been, or are in the process of being acquired, and provide protection for lands that have rich on-site resources and support a diverse mosaic of habitat types. |
| San Diego Multiple Species Conservation Program (MSCP) (San Diego County, CA) | 2010 | \$6,000,000 | This project will result in the acquisition of 250-600 acres of land that will greatly enhance the existing San Diego MSCP by securing key regional wildlife linkages and preserving core habitat in four targeted areas. The acquisitions will benefit 31 listed and unlisted species, including the San Diego fairy shrimp, arroyo toad, least Bell's vireo, coastal California gnatcatcher, southwestern willow flycatcher, and bald eagle. The acquisition areas support a mosaic of high quality riparian, vernal pool, and upland habitats that support numerous listed and unlisted species covered by the San Diego MSCP. The acquisition supports a larger landscape conservation initiative and will greatly enhance the conservation goals of the San Diego MSCP by connecting one of the largest intact blocks of publicly-owned and managed land within San Diego County. |
| Balcones Canyonlands – Spezia Tract* (Travis County, TX) | 2010 | \$1,330,243 | This grant will enable the acquisition of an approximately 109-acre in-holding in the Cypress Creek macrosite. The area contains high-quality habitat for the golden-cheeked warbler, black-capped vireo, and Jollyville Plateau Salamander, and are surrounded by preserved lands. The BCCP has been a successful regional HCP since 1996. The work by Service partners, primarily Travis County and the City of Austin, has resulted in 28,426 acres of protected lands mainly for the golden-cheeked warbler (spotlight species), with some lands also benefiting the black-capped vireo (spotlight species), and the Bone Cave harvestman (spotlight species). The acquisition of the this priority tract will provide high benefits to the golden-cheeked warbler, some benefits to the black-capped vireo, and will move the BCCP closer to the ultimate conservation goal of protecting 30,428 acres, with 93 percent of the BCCP already protected. |
| Karner blue butterfly HCP Land Acquisition – Quincy Bluff and Wetlands SNA and Karner Blue Meadow SNA (Adams and Waushara Counties, Wisconsin) | 2010 | \$452,000 | The Wisconsin Department of Natural Resources will protect 298 acres within the Quincy Bluff and Wetlands State Natural Area located in Adams County, and 64 acres at Karner Blue Meadow State Natural Area in Waushara County with this \$452,000 award. The acquisition at Quincy will assist recovery of the Karner blue butterfly in Wisconsin by permanently protecting and managing habitat for the population within the Glacial Lake Wisconsin Recovery Unit. Likewise, the Karner Blue Meadow acquisition helps recover the Morainal Sands Recovery Unit. Addition of the two parcels at Quincy will connect State Natural Area lands owned by The Nature Conservancy with those owned by the Wisconsin Department of Natural Resources, which currently totals over 6,400 acres. |
| Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP) (Riverside County, CA) \$6,000,000 | 2011 | | This grant will result in the acquisition of land that will greatly enhance the existing Coachella Valley MSHCP by securing key regional wildlife linkages and sand transport areas as well as preserving core habitat areas. The land acquisition will benefit 20 species, including seven federally listed species such as Coachella Valley fringe-toed lizard, desert tortoise, and peninsular bighorn sheep. The proposed acquisition will complement and greatly enhance the ecological value of the many other acquisitions that have previously occurred in these areas in the last few years. |
| San Diego Multiple Species Conservation Program (MSCP) (San Diego County, CA) \$6,000,000 | 2011 | | This project will result in the acquisition of 250-600 acres of land that will greatly enhance the existing San Diego MSCP by securing key regional wildlife linkages and preserving core habitat in four targeted areas. The acquisitions will benefit 31 listed and unlisted species, including the San Diego fairy shrimp, arroyo toad, least Bell's vireo, coastal California gnatcatcher, southwestern willow flycatcher, and bald eagle. The proposed |

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| | | | acquisition areas support a mosaic of high quality riparian, vernal pool, and upland habitats that support numerous listed and unlisted species covered by the San Diego MSCP. The proposed acquisition supports a larger landscape conservation initiative and will greatly enhance the conservation goals of the San Diego MSCP through the connection of the largest intact blocks of publicly-owned and managed land within San Diego County. |
| East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) * (Contra Costa County, CA) \$4,463,936 | 2011 | | These funds will purchase lands that will provide important habitat and wildlife corridors for many of the 28 covered species covered in the HCP/NCCP, including 8 federally listed species such as the San Joaquin kit fox, California red-legged frog, and vernal pool tadpole shrimp. The acquisition of these properties adds to the approximately 1,800 acres that have been, or are in the process of, being acquired and provides protection for lands that have rich on-site resources and support a diverse mosaic of habitat types. |
| East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP)* (Contra Costa County, CA) | 2012 | \$1,000,000 | These funds will purchase approximately 1,800 acres of important habitat and wildlife corridors for many of the 28 covered species covered by the HCP/NCCP, including eight federally listed species, such as the San Joaquin kit fox, California red-legged frog, and vernal pool tadpole shrimp. The acquisition of these properties adds to the approximately 1,800 acres that have been, or are in the process of, being acquired and provide protection for lands that have rich on-site resources and supports a diversity of habitat types. |
| Western Riverside Multispecies Habitat Conservation Plan (MSHCP)* (Riverside County, CA) | 2012 | \$4,000,000 | This grant will support the acquisition of approximately 900 acres of land in Riverside County. This acquisition will benefit 13 federally listed species, including California gnatcatcher, Arroyo southwestern toad, and Quino checkerspot butterfly. The acquisition will support the assembly of a 500,000-acre preserve that is part of the Western Riverside MSHCP by protecting large blocks of coastal sage scrub, chaparral, and grassland habitats. |
| Karner Blue Butterfly and Kirtland's Warbler HCP Land Acquisition – Central Sands* (Adams County, WI) | 2012 | \$497,600 | This grant will be used to acquire a permanent conservation easement on 3,326 acres within a 9,048- acre easement area from Plum Creek Timberlands. Acquisition of this conservation easement will assist in the recovery of the Karner blue butterfly in Wisconsin by permanently protecting and managing habitat necessary to a Karner blue butterfly metapopulation within the Glacial Lake Wisconsin Recovery Unit. The easement area also supports a viable breeding population of Kirtland's warbler and this area's permanent protection and management is expected to maintain and expand the Kirtland's warbler population in the future. The easement will also benefit associated barrens species. |
| Coachella Valley Multiple Species Habitat Conservation Plan (Riverside County) | 2013 | \$3,000,000 | This grant will result in the acquisition of up to 3,114 acres that will greatly enhance the existing Coachella Valley MSHCP by securing key regional wildlife linkages, sand transport areas, and preserving core habitat areas. The land acquisition will benefit 20 species, including federally listed species such as the Coachella Valley fringe-toed lizard, desert tortoise, and peninsular bighorn sheep. The acquisition will complement and greatly enhance the ecological value of the many other acquisitions that have previously occurred in these areas in the last few years. |
| San Diego County Water Authority Subregional NCCP/HCP (San Diego County) | 2013 | \$3,000,000 | These funds will purchase up to 300 acres that provide important habitat for the federally listed species covered by the HCP, including southwestern willow flycatcher, least Bell's vireo, and coastal California gnatcatcher. The SDCWA NCCP/HCP is the most recently approved regional plan in southern California. The HCP area encompasses approximately 922,000 acres of land within western San Diego County and southwestern Riverside County. The acquisition of these lands will complement the areas already protected by the HCP and are critically important to |

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| Western Riverside County Multispecies Habitat Conservation Plan (Riverside County) | 2013 | \$2,773,398 | <p>many listed species.</p> <p>This grant will support the acquisition of approximately 483 acres of land in Riverside County. This acquisition will benefit numerous sensitive species including federally listed species like the California gnatcatcher, Arroyo southwestern toad, and Quino checkerspot butterfly. The acquisition will support the assembly of the 500,000-acre preserve that is part of the Western Riverside MSHCP by protecting large blocks of coastal sage scrub, chaparral, and grassland habitats.</p> |
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Sec 6 Grants Received by Interviewed HCPs since 2014

Habitat Conservation Planning Assistance Grants

| HCP | Year | Amount | Purpose |
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| East Contra Costa County HCP (Contra Costa County, CA) | 2004 | \$358,000 | The endangered San Joaquin fox, the threatened California red-legged frog and many other declining species, are found in this area and their ability to persist in this rapidly developing area depends upon the protection of large blocks of contiguous habitat. This is an opportunity to plan urban development in such a manner that will provide habitat for sensitive species and open space for residents. In addition, the HCP/Natural Community Conservation Plan (NCCP) will allow Contra Costa Water District to utilize its full contractual allotment of federal water (Bureau of Reclamation) from the Sacramento-San Joaquin Delta by addressing the indirect effects resulting from water deliveries. |
| Placer County Phase 2 Area HCP/NCCP (Placer County, CA) | 2004 | \$349,000 | In partnership with other local agencies and state government, Placer County's open space and agricultural conservation effort known as Placer Legacy is currently developing a comprehensive, multi-species HCP and NCCP that will address listed and non-listed species, including Lahontan cutthroat trout and the mountain yellow-legged frog. The plan is to be developed in three phases. This 2004 grant will allow Placer County to begin developing an Adaptive Management/Monitoring program through the purchase of the HabiTrak system, development of the Phase 2 Land Cover and Habitat Inventory, allow for the funding of the Phase 2 Science Advisors for two years, and allow for half-time participation of a Department of Fish and Game environmental scientist. These project tasks are fundamental to further implementing a successful Phase 1 and initiating Phase 2 of the HCP/NCCP. The Phase 2 area, particularly the Martis Valley, is currently experiencing intense development pressure, which makes the timing of this project crucial to the preparation of the HCP/NCCP. |
| Santa Clara County HCP/NCCP (Santa Clara County, CA) | 2004 | \$300,000 | Santa Clara County has initiated a county-wide HCP/NCCP program which proposes to cover most of the 841,000-acre county. The project is being undertaken in partnership with the City of San Jose, Santa Clara Valley Transportation Agency, and the Santa Clara Valley Water District, with potential involvement from other cities in the southern portion of the county. Santa Clara County has experienced enormous amounts of population growth over the past 50 years and is continuing to experience growth pressures which pose a threat to more than 100 endangered, threatened, and other rare species. This HCP/NCCP will provide a comprehensive approach to conservation and management of multiple species countywide, including preservation of much of the remaining habitat for several federally listed species, establishment of habitat preserves, habitat restoration, and streamlined regulatory permitting processes. |
| South Sacramento HCP (Sacramento County, CA) | 2004 | \$308,000 | The grant will help local officials in South Sacramento continue the planning phase of a regional HCP. This HCP is expected to cover 45 species, including seven federally threatened and endangered species, within a planning area of approximately 490 square miles. This HCP proposes to cover two species of Orcutt grass that are restricted to Sacramento County or for which this is the southernmost extent of its range. The development community is actively involved in this HCP because of their desire to streamline the regulatory process in an area that has intense development pressure. Environmental groups are also actively involved due to the wide variety of biological resources in the planning area and because this is an opportunity to preserve large, contiguous areas of habitat on a landscape level. |
| • Yuba and Sutter Counties HCP/NCCP (Yuba and Sutter Counties, CA) | 2004 | \$178,000 | The grant will help local officials in portions of Yuba and Sutter Counties initiate the planning phase of a regional HCP/NCCP. Since many land use plans within the HCP/NCCP planning area are still being developed by the local jurisdictions, there are significant opportunities to provide for natural resource conservation at this time. There is an opportunity, through this HCP/NCCP effort to promote the development of a comprehensive, multi-species conservation plan that will address both listed and non-listed species including: California tiger salamander, Swainson's hawk, giant garter snake, steelhead, and tricolored blackbird. The Counties will partner with other local agencies, as well as federal and state agencies, to develop this HCP/NCCP. |
| East San Diego | 2005 | \$184,000 | This grant will help the County of San Diego continue preparation of a regional |

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| County Multiple Species Conservation Program Plan (San Diego County, CA): | | | Habitat Conservation Plan/Natural Communities Conservation Plan in the eastern portion of the County. The East San Diego County Plan will cover about 1,551,600 acres and presents a significant opportunity to provide for conservation of numerous listed and non-listed species, including the bald eagle, least Bell's vireo, Laguna Mountain skipper, Quino checkerspot butterfly, and Stephens' kangaroo rat. Through development of this multiple species plan, urban development may be planned in such a manner that will provide habitat for species and open space for residents. The County of San Diego is partnering with other local agencies, as well as various federal and state agencies, to develop this plan. |
| Placer County, Phase I, Habitat Conservation Plan/Natural Communities Conservation Plan | 2005 | \$193,000 | Placer County currently is developing the first of three comprehensive, multi-species Habitat Conservation Plans and state Natural Community Conservation Plans to help resolve potential conflicts between development and the conservation of state and federally-listed and sensitive species. This grant will allow the County to complete the Phase 1 of the multi-species plan which covers over 221,000 acres in western Placer County and will address five plant and 28 animal species, including vernal pool species, salmon, and the California red-legged frog. |
| Yolo County Habitat Conservation Plan/Natural Communities Conservation Plan (Yolo County, CA): | 2005 | \$605,000 | The grant will allow Yolo County and several of its cities (Davis, West Sacramento, Woodland and Winters) to continue preparation of a regional Habitat Conservation Plan and state Natural Communities Conservation Plan. The development of the plan is in response to the escalating urban growth in Yolo County and an attempt to reconcile growth with agriculture and habitat conservation. The native perennial grasslands, natural wetlands, and riparian forests that once existed in Yolo County have been reduced by agricultural and urban development, invasions of non-native annual grasses, and water diversion programs. The plan will address the need for broad-based planning to provide for the protection and conservation of the region's biodiversity while preserving agriculture and allowing appropriate development and growth to occur. |
| Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (Santa Clara County, CA): | 2005 | \$487,000 | Santa Clara County has initiated a Habitat Conservation Plan/Natural Communities Conservation Plan program which proposes to cover approximately 440,000 acres within the county. Funding provided by the grant will allow the county and its partnersto evaluate and draft conservation strategies for the county's natural areas that will result in a more efficient and less costly comprehensive local project permitting process and also provide a more thorough approach to conserving and contributing to the recovery of many special status species, including the San Joaquin kit fox, the bay checkerspot butterfly, the California red-legged frog, steelhead and salmon, and several plants. |
| Butte County HCP/NCCP (Butte County, CA): | 2006 | \$500,990 | At the northern end of the Sacramento Valley, Butte County was largely untouched by the rapid urban growth in much of California until recently. Now however, it is being hit by an unprecedented surge of growth. The Butte County Association of Governments, the county, and its four incorporated communities have agreed to develop a HCP that potentially will cover 330,000 acres with up to 11 different vegetation communities, that are home to 15 federally listed species, including all known populations of the endangered Butte County meadowfoam, plus 15 other species at risk. |
| East Bay Regional Parks District HCP/NCCP (Contra Costa County, CA): | 2006 | \$297,500 | The East Bay Regional Park District (EBRPD) will utilize this funding to develop a plan for managing its 13,000 acres of preserves consistent with and linked to the 30,000 acres of preserves that will be created by the neighboring East Contra Costa County HCP. The EBRPD HCP/NCCP will cover 7 listed and 18 sensitive species. Filling a key void, it will target critical corridors and habitat for San Joaquin kit fox, Alameda whipsnake, and California tiger salamander in a regional preservation strategy. EBRPD's Vasco Caves Preserve includes 50% of the critical habitat for the listed longhorn fairy shrimp. |
| South Sacramento County HCP (Sacramento County, CA): | 2006 | \$240,975 | This HCP will cover 345,000 acres near an urbanized area that is under intense development pressure. It will cover 41 species, 8 of which are federally listed threatened and endangered. Vernal pool habitat exists in a large portion of the area and is under threat of development. Listed Sacramento Orcutt grass is found only within the boundaries of this planned HCP. In addition, this HCP may provide some protection for the Cosumnes River watershed, important spawning habitat for anadromous fish. Funding will be used to develop the first draft of a plan. The HCP will be coordinated with similar habitat planning efforts in 5 adjacent counties. |
| Yuba & Sutter | 2006 | \$450,000 | Two adjacent counties have joined to plan protection for open space in the valley |

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| Counties HCP/NCCP (Yuba and Sutter Counties, CA): | | | and lower foothill portion of both counties, covering 26 species on 200,078 acres. The boundaries were drawn in order to address the majority of the growth that will occur along the Highway 70/99 corridor. The proposed plan area includes portions of the Bear, Feather and Yuba river and the Honcut Creek watersheds, primarily agricultural lands, and significant vernal pool/grasslands, riparian and riverine habitats, wintering habitat for a variety of migrant bird species, wetland habitats and, potentially, small patch ecosystems. The HCP/NCCP will be coordinated with similar habitat planning efforts in adjacent counties. |
| Butte County HCP/NCCP (Butte County, CA): | 2007 | \$319,200 | At the northern end of the Sacramento Valley, Butte County is on the threshold of unprecedented growth. The Butte County Association of Governments, the county, and its five incorporated communities are developing a regional HCP. Potentially it will cover 330,000 acres that are home to federally listed species, including all known populations of the endangered Butte County meadowfoam, plus other species at risk. This second successive grant for the Butte HCP/NCCP will be used to continue the planning process. |
| Santa Clara County HCP/NCCP (Santa Clara County, CA): | 2007 | \$222,000 | The grant will complete the planning effort that has been underway since 2003. Santa Clara County, three cities and two other regional agencies have joined to develop this HCP. The plan will cover 520,000 acres, which is 70 percent of the acreage expected to be affected by the county's projected population increase of 500,000 people by 2030. The HCP will cover 29 federally listed and sensitive species, including 75 percent of the remaining San Francisco Bay Area's serpentine soils that are home to 7 unique species, including the threatened bay checkerspot butterfly. |
| Yolo County HCP/NCCP (Yolo County, CA): | 2007 | \$349,785 | Covering all 653,663 acres of Yolo County, this HCP is vital to integrate the projected growth in the County with preserving species. Yolo County is located between the rapidly growing San Francisco Bay area and Sacramento area. The HCP will be designed to conserve numerous federally listed and sensitive species. The funding will be used to continue preparation of environmental documents and outreach efforts. |
| Butte County CP/NCCP (Butte County, CA): | 2008 | \$378,600 | At the northern end of the Sacramento Valley, Butte County is on the threshold of unprecedented growth. The Butte County Association of Governments, the county, and its five incorporated communities are developing a regional HCP. The plan will potentially cover 330,000 acres that are home to federally listed species, including all known populations of the endangered Butte County meadowfoam. This will be third successive grant for the Butte HCP/NCCP and will be used to continue its planning process. |
| Yuba & Sutter Counties HCP/NCCP (Yuba and Sutter Counties, CA): | 2008 | \$360,696 | Two adjacent counties have joined to plan protection for open space in the valley and lower foothill portion of Yuba County and Sutter counties, covering 26 species on 450,000 acres. The boundaries were drawn in order to address the majority of the growth that will occur, along the Highway 70/99 corridor. It includes portions of the Bear, Feather and Yuba river and the Honcut Creek watersheds, primarily agricultural lands, and significant vernal pool/grasslands, aquatic, riparian and riverine habitats, wintering habitat for a variety of migrant bird species, wetland habitats and, potentially, small patch ecosystems. The HCP will be developed in coordination with similar habitat planning efforts in adjacent counties. |
| City of San Diego Vernal Pool Species Habitat Conservation Plan (San Diego County, CA) | 2009 | \$615,000 | This project would support the development of and HCP for Vernal Pools in the San Diego Region. This HCP would be developed in response to legal challenges to the MSCP. The Vernal Pool HCP would encompass a significant portion of the range and existing habitat of 8 federally listed and rare species. The types of vernal pools evaluated for this HCP are geographically restricted and exhibit high rates of endemism; therefore, protecting a large portion of their extant habitat will contribute directly to their long-term preservation. |
| Butte Regional Habitat/Natural Community Conservation Plan (Butte County, CA) | 2009 | \$536,588 | This project would support the development of an HCP/NCCP for Butte County to provide for the protection and conservation of the region's biodiversity while allowing for appropriate development and growth to occur. Butte County has recently been experiencing rapid growth that could degrade and fragment Butte County's sensitive habitats and species. The Butte Regional HCP/NCCP will permanently protect habitat, establish preserves, and establish management guidelines for the conservation and recovery of at least 41 sensitive species. |
| Yolo County Habitat Conservation | 2009 | \$634,988 | This project would fund the continued work on the Yolo County HCP/NCCP. The HCP/NCCP will address the need for broad-based planning to provide for the protection and conservation of the region's biodiversity while allowing for |

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| Plan/Natural Community Conservation Plan (Yolo County, CA) | | | appropriate development and growth to occur. Fifteen federally listed and fifty-four other sensitive species will benefit from implementation of the HCP/NCCP. The Plan will also provide conservation benefits to crop and vernal pool pollinators. |
| South Sacramento Habitat Conservation Plan (Sacramento County, CA) | 2010 | \$489,646 | This grant funds the completion of the HCP document and will result in the permanent protection of over 48,000 additional acres of high-quality species habitat. It will establish large, intact, and interconnected vernal-pool and riparian preserves managed for the conservation of at least 40 listed and at-risk sensitive species. The SSHCP will provide conservation benefits to seven federally endangered and threatened species including the Giant Garter Snake (<i>Thamnophis gigas</i>), California Tiger Salamander (<i>Ambystoma californiense</i>), Valley Elderberry Longhorn Beetle (<i>Desmocerus californicus dimorphus</i>), Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>), Vernal Pool Tadpole Shrimp (<i>Lepidurus packardii</i>), Sacramento Orcutt Grass (<i>Orcuttia viscida</i>) and the Slender Orcutt Grass (<i>Orcuttia tenuis</i>). By establishing large interconnected preserves, the Plan will maintain intact watersheds and sub watersheds to maintain the hydrological regimes that many covered species, especially vernal pool and riparian species, depend upon. |
| Orange County Transportation Authority (OCTA)/Measure M2 NCCP/HCP (Orange County, CA) | 2011 | \$732,000 | This grant supports the development of a comprehensive holistic, rather than piecemeal, conservation program in order to provide higher-value environmental benefits, while allowing freeway projects to be implemented. The plan will conserve and enhance key connections between existing conservation areas and provide additional live-in habitat, buffering proposed covered species from natural and stochastic variation. The plan also includes maintaining opportunities for dispersal and genetic exchange and provides wildlife and plants the opportunity to shift their distribution in response to climate change and other disturbances such as fire. The Measure M2 NCCP/HCP will cover an estimated 22 plant and animal species, including coastal California gnatcatcher, Santa Ana sucker, pallid bat, and Coulter's matilija poppy. |
| Placer County Conservation Plan HCP/NCCP (Placer County, CA) \$537,195 | 2011 | | The project will support the completion of the Placer County Conservation Plan (PCCP). The primary objective of the PCCP is to balance development with conservation of the county's natural resources and provide for protection of sensitive species and their respective habitats. The PCCP will permanently protect habitat, establish preserve designs, and establish management guidelines for the conservation and recovery of 31 sensitive species, including 7 listed species such as California red-legged frog, conservancy fairy shrimp, and vernal pool tadpole shrimp. The land cover types upon which they depend include agricultural cropland, annual grassland savannah, aquatic environments, chaparral, emergent wetlands, oak woodlands, riparian, and vernal pools. These eight major land cover types are unlikely to withstand the external pressures of urbanization and climate change. |
| Yuba & Sutter Counties Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) (Yuba & Sutter Counties, CA) | 2011 | \$807,390 | This project will support the continued development of a multispecies HCP and NCCP in both Yuba and Sutter Counties by protecting and enhancing the ecological diversity and function within the rapidly urbanizing region of Sutter County and the more slowly urbanizing region of Yuba County. This Plan addresses 23 listed and non-listed species, including six federally listed species and ten state listed species. The plan will serve to ensure comprehensive species and ecosystem conservation and contribute to the recovery of threatened, endangered, and special status species in northern California and their habitats. A few species that will benefit from this HCP include Hartweg's golden sunburst, vernal pool fairy shrimp, vernal pool tadpole shrimp, giant garter snake, and the western yellow-billed cuckoo. |
| Metropolitan Bakersfield Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) (Kern County, CA) | 2011 | \$427,000 | In response to escalating growth pressure, the City of Bakersfield and Kern Counties working to balance the need for prime agricultural land preservation and habitat conservation. Therefore, a multi-species HCP and NCCP is being developed in order to conserve sensitive species and their habitats within the Metropolitan Bakersfield study area while allowing for the orderly and necessary progression of urban growth and development. This Plan addresses 38 species of concern, including 15 state and federally-listed threatened, endangered, or fully protected species and the vegetation communities upon which they depend. These species include the Bakersfield cactus, kangaroo rat, San Joaquin woolly threads, and the blunt-nosed leopard lizard. |
| South Sacramento | 2011 | \$994,500 | |

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| Habitat Conservation Plan (Sacramento County, CA) | | | This grant funds the completion of the HCP document and will result in the permanent protection of over 48,000 additional acres of high-quality species habitat. The plan will establish large, intact, and interconnected vernal-pool and riparian preserves managed for the conservation of at least 40 listed and at-risk sensitive species. The SSHCP will provide conservation benefits to seven federally endangered and threatened species, including the giant garter snake, California tiger salamander, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, Sacramento orcutt grass, and slender orcutt grass. By establishing large, interconnected preserves, the plan will maintain intact watersheds and sub watersheds to maintain the hydrological regimes that many covered species, especially vernal pool and riparian species, depend upon. |
| Bakersfield Regional Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) (Kern County, CA) | 2012 | \$945,000 | In response to escalating growth pressures, the City of Bakersfield and Kern County are striking a balance for the need for prime agricultural land preservation and habitat conservation. Therefore, a multi-species HCP and NCCP is being developed in order to conserve sensitive species and their habitats within the Metropolitan Bakersfield study area while allowing for the orderly and necessary progression of urban growth and development. This plan addresses 38 species of concern, including 15 state and federally listed threatened, endangered, or fully protected species, such as the San Joaquin kit fox, giant kangaroo rat, and blunt-nosed leopard lizard. An existing Metropolitan Bakersfield HCP is currently set to expire in 2014. |
| Butte Regional Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) (Butte County, CA) | 2012 | \$999,999 | In Butte County, to reconcile increasing growth pressures with the need for agricultural preservation and habitat conservation, the Butte County Association of Governments is pursuing the development of an HCP/NCCP on behalf of the County of Butte, the cities of Biggs, Chico, Gridley and Oroville, the California Department of Transportation District 3, and four water and irrigation districts. This HCP/NCCP will provide for the protection and conservation of the region's biodiversity while allowing appropriate development and growth to occur. The plan, encompassing 567,225 acres, will permanently protect habitat, establish preserves, and establish management guidelines for the conservation and recovery of at least 41 sensitive species, such as the Central Valley steelhead, greater sandhill crane, Swainson's hawk, and Western burrowing owl. |
| Placer County Conservation Plan (Placer County) | 2013 | \$911,500 | This funding will support the planning phase of the Placer County Conservation Plan in northern California. The county has partnered with other local, state, and federal agencies to develop the plan. Participating local agencies include unincorporated Placer County, the City of Lincoln, and the Placer County Water Agency. The primary objective of the plan is to balance development with the conservation of the county's natural resources and provide for the protection of sensitive species and their respective habitats. Numerous listed and sensitive species will benefit from this plan including vernal pool fairy shrimp, giant garter snake, and American peregrine falcon. |
| Yolo County Habitat Conservation Plan (Yolo County) | 2013 | \$999,000 | This funding will support the planning phase of the Yolo Natural Heritage Program (Yolo County HCP/NCCP) in northern California. The Yolo County Habitat Conservation Plan, comprised of Yolo County and all four incorporated cities (Davis, Woodland, Winters, and West Sacramento) is collaboratively developing a plan to protect habitat and agricultural land countywide while allowing for effective coordination between development agencies and conservation agencies to ensure conservation occurs through an effective, collaborative, and cost-effective process. The plan will also direct growth within cities while preserving open space to ensure important species habitat remains undeveloped. Numerous listed and sensitive species will benefit from this plan including vernal pool tadpole shrimp, giant garter snake, California tiger salamander, and least Bell's vireo. |

Appendix G. Santa Clara Valley HCP Dispute Resolution Clause

Santa Clara Valley HCP Dispute Resolution Clause (Sec 6.6)

6.6. Dispute Resolution

The Parties recognize that disputes concerning implementation or interpretation of this Agreement, the SCVHP, and the Permits may arise from time to time. The Parties intend to resolve most disputes at the staff or field personnel level. However, the Parties recognize that some disputes might not be resolved at the staff or field personnel level. The Parties agree to work together in good faith to resolve such disputes using the informal dispute resolution procedure set forth in this Section. Any Party may seek any available remedy without regard to this Section if the Party concludes that circumstances so warrant. However, unless the Parties agree upon another dispute resolution process, or unless a Party has initiated administrative proceedings or litigation related to the subject of the dispute in federal or state court, the Parties agree to use the following procedures to attempt to resolve disputes.

6.6.1. Notice of Dispute; Meet and Confer

If a Wildlife Agency objects to any action or inaction by any Permittee on the basis that the action or inaction is inconsistent with the SCVHP, the Permits, or this Agreement, it will so notify the Permittee and the Implementing Entity and when appropriate, other Wildlife Agencies, in writing, explaining the basis of such objection. The Permittee or Implementing Entity will respond to the notice within thirty (30) days of receiving it, stating what actions the Permittee or Implementing Entity proposes to take to resolve the objection or, alternatively, explaining why the objection is unfounded. If the response resolves the objection to the satisfaction of the Wildlife Agency, the agency will so notify the Permittee and the Implementing Entity, and the Permittee or Implementing Entity, as appropriate, will implement the actions, if any, proposed in the response to the agency. If the response does not resolve the objection to the Wildlife Agency's satisfaction, the agency will notify the Permittee or Implementing Entity accordingly, and the agency, the Permittee and the Implementing Entity will meet and confer to attempt to resolve the dispute. The meeting will occur within thirty (30) days after the Permittee or Implementing Entity receives the Wildlife Agency's response, or at such later time as the Permittee, the Implementing Entity and the Wildlife Agency may agree. A representative of the Implementing Entity will take notes at the meeting, summarize the outcome, and distribute meeting notes to each Party in attendance. The Implementing Entity or any other Permittee will use the same procedure to raise and to resolve objections to any action or inaction of a Wildlife Agency, and the Wildlife Agency will respond in the same manner to notices delivered by any Permittee.

6.6.2. Elevation of Dispute

If the Parties do not resolve a dispute after completing the dispute resolution procedure in Agreement Section 6.6.1, any one of the Parties may elevate the dispute to a meeting of the chief executives of the involved Parties. For purposes of this provision, "chief executive" means the city manager of a city, the county executive of the County, the chief executive officer of the Water District, the general manager of the VTA, the executive director of the Implementing Entity, the CDFG Regional Manager, and the USFWS Field Supervisor. Each Party will be represented by its chief executive in person or by telephone at the meeting, and the meeting will occur within forty-five (45) days of a request by any Party following completion of the dispute resolution procedure.

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