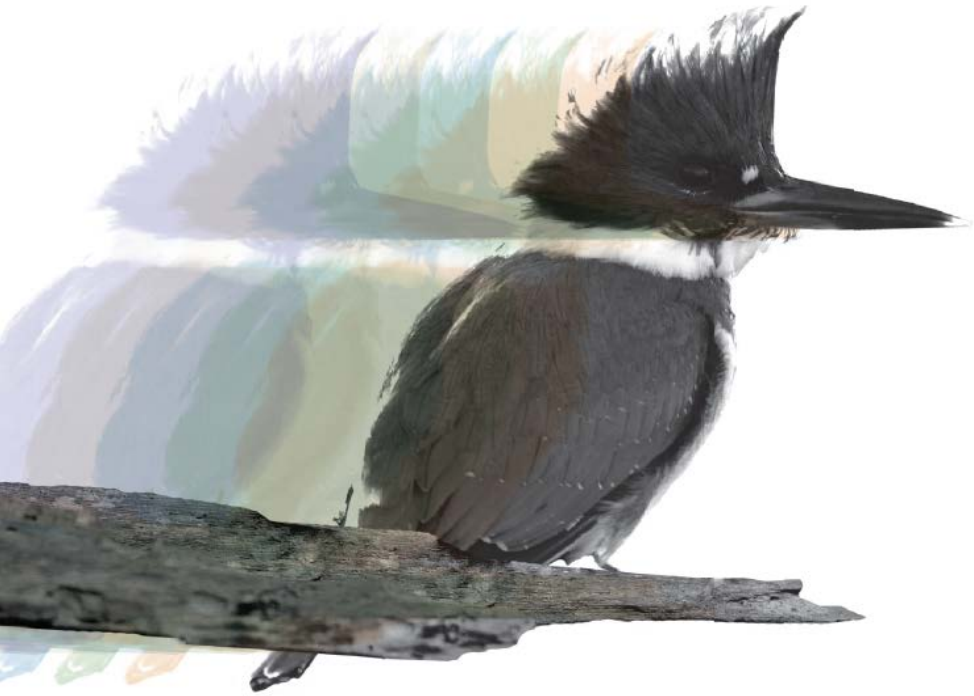

California
State Wildlife Action Plan
Implementation Evaluation 2005-2014

Evaluation Report

PREPARED BY BLUE EARTH CONSULTANTS, LLC
JANUARY 2015

BLUE EARTH CONSULTANTS

Photograph:

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List of Acronyms

ABMP	Area Based Management Plan
AFWA	Association of Fish and Wildlife Agencies
BCAG	Butte County Association of Governments
BIOS	Biogeographic Information and Observation System
Blue Earth	Blue Earth Consultants, LLC
CA LCC	California Landscape Conservation Cooperative
Caltrans	California Department of Transportation
CBC	California Biodiversity Council
CDFW	California Department of Fish and Wildlife
CNRA	California Natural Resources Agency
DWR	Department of Water Resources
ESA	Endangered Species Act
FGC	California Fish and Game Commission
HCP	Habitat Conservation Plan
HUC	Hydrologic Unit Code
MLPA	Marine Life Protection Act
MPA	Marine Protected Area
MSHCP	Multi- Species Habitat Conservation Plan
NCCP	Natural Community Conservation Plan
NGO	Non-governmental Organization
OPC	California Ocean Protection Council
Open Standards	Open Standards for the Practice of Conservation
RAMP	Regional Advanced Mitigation Program
RCA	Regional Conservation Authority
SGCN	Species of Greatest Conservation Need
SWAP	State Wildlife Action Plan
SWAP 2005	California's SWAP; California Wildlife Conservation Challenges: California's Wildlife Action Plan
SWAP 2015	2015 revised and updated California SWAP
SWAP 2005 Stressors	Stressors identified under "major wildlife stressors identified by region" in the SWAP 2005

SWG	State Wildlife Grant
UCD	University of California Davis
U.S.	United States of America
USDA-FS	United States Department of Agriculture -Forest Service
USFWS	United States Fish and Wildlife Service
2014 Water Bond	Proposition 1 Water Bond
WCB	California Wildlife Conservation Board
Wildlife TRACS	Wildlife Tracking and Reporting on Actions for Conservation of Species

SWAP 2005 Background and SWAP 2015 Update Process

SWAP 2005 Background

In 2000, Congress enacted the State Wildlife Grant (SWG) program to support state government projects that broadly benefit wildlife and habitats, but particularly species of greatest conservation need (SGCN).[1] As a trustee agency focused on safeguarding natural resources in California, the California Department of Fish and Wildlife (CDFW) manages funding from the Federal SWG program. To receive funding from this program, the United States Fish and Wildlife Service (USFWS) requires each state government to develop a comprehensive wildlife conservation strategy outlined in a State Wildlife Action Plan (SWAP). Each state wildlife agency was required to submit the first SWAP to the USFWS by October 2005.[2]

The CDFW, in partnership with the Plan Development Team at the University of California Davis (UCD), led development of the California SWAP titled *California Wildlife Conservation Challenges: California's Wildlife Action Plan* (SWAP 2005). The plan also relied on consultation with wildlife professionals, stakeholders, and the public. The SWAP 2005 highlights California's commitment to conserving key species and includes recommended conservation actions at a statewide scale as well as at nine regional scales (*Text Box 1; See Appendix 1 and 2 for maps of the CDFW and SWAP 2005 regions*).

Text Box 1: SWAP 2005 Regions

- Mojave Desert
- Colorado Desert
- South Coast
- Central Coast
- North Coast–Klamath
- Modoc Plateau
- Sierra Nevada and Cascades
- Central Valley and Bay-Delta
- Marine

The CDFW oversaw the development of the plan and its implementation because "it has public trust responsibility and jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species."[3] As part of the USFWS requirements for developing a SWAP, the CDFW set out to address three primary questions in the plan:

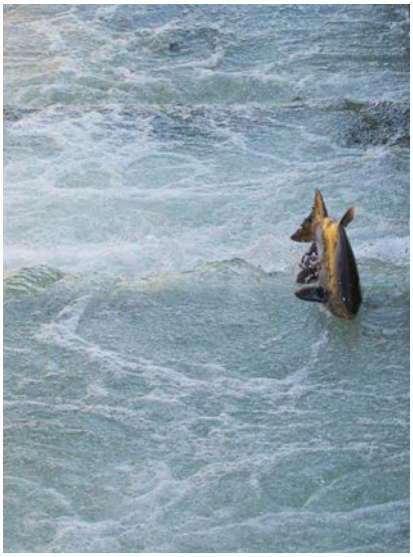
- What are the species and habitats of greatest conservation need?
- What are the major stressors affecting California's native wildlife habitats? (see *Appendix 3 for a complete list of identified stressors)*

[1] The CDFW defines the SGCN list as identifying "those species that are deemed most rare, imperiled and in need of conservation actions." For more information on SGCN please visit: CDFW, "State Wildlife Action Plan: Species of Greatest Conservation Need," California Department of Fish and Wildlife, 29 Jan. 2015 http://www.dfg.ca.gov/SWAP/SGCN/.
[2] David Bunn, et al., "California Wildlife Conservation Challenges: California's Wildlife Action Plan," University of California Davis Wildlife Health Center, California Department of Fish and Wildlife, 2007, 29 Jan. 2015 http://www.dfg.ca.gov/SWAP/2005/.
[3] *Ibid*.

- What are the actions needed to restore and conserve California's wildlife, thereby reducing the likelihood that more species will approach the condition of threatened or endangered?

SWAP 2015 Update

In accordance with the USFWS requirement to update SWAP at least every 10 years, the CDFW began the update process in 2012 to meet the deadline of submission on October 1, 2015 (SWAP 2015).[4] Specific objectives the CDFW outlines for the SWAP 2015 update are:



Photography Perspectives

- Create a vision for fish and wildlife conservation in California;
- Track and record accomplishments;
- Analyze impacts and stressors by United States Department of Agriculture Forest Service (USDA-FS) ecoregions, hydrologic unit code (HUC) 4 watersheds, and Marine Life Protection Act (MLPA) marine study regions;
- Incorporate climate change impacts and adaptation strategies;
- Update species at risk, vulnerable species, and SGCN lists; and
- Recommend conservation actions consistent with and that compliment planning documents developed by other agencies.[5]

Each SWAP update must address eight required elements, provided in *Text Box 2*. The elements include sharing a set of appropriate measures to monitor, evaluate, and share State government's effectiveness in implementing SWG funded projects and the SWAP, changes in species and habitat health, and adaptive management with the USFWS, stakeholders, and the public.

[4] The term SWAP 2005 or SWAP 2005 planning document refers to the document titled "California Wildlife Conservation Challenges: California's Wildlife Action Plan," which was developed to fulfill requirements for accessing USFWS SWG program funding. SWAP 2005 implementation refers to implementation of SWAP 2005 recommended conservation actions and implementation of SWG funded conservation grants to meet the recommended conservation actions outlined in the SWAP 2005.The SWG program provides Federal funds for developing and implementing programs that benefit wildlife and their habitats at risk, including species not listed under Federal or State Endangered Species Act (ESA). State wildlife agencies, such as the CDFW, with approved SWAPs apply for SWG grant funding from the SWG program to implement projects that address conservation needs identified within a State's SWAP. For more information on the California SWAP and the SWAP 2015, please see: CDFW, "State Wildlife Action Plan: A Plan for Conserving California's Wildlife Resources while Responding to Environmental Challenges," California Department of Fish and Wildlife, 29 Jan. 2015 http://www.dfg.ca.gov/SWAP/.

[5] CDFW, "State Wildlife Action Plan: A Plan for Conserving California's Wildlife Resources while Responding to Environmental Challenges," California Department of Fish and Wildlife, 22 Oct. 2014 http://www.dfg.ca.gov/SWAP/.

Text Box 2: SWAP Eight Required Elements[6]

According to the AFWA, "Congress identified eight required elements to be addressed in each State's wildlife action plan." The eight required elements described on the AFWA's Teaming with Wildlife website are:

1. "Information on the distribution and abundance of species of wildlife, including low and declining populations as the State fish and wildlife agency deems appropriate, that are indicative of the diversity and health of the State's wildlife;
2. Descriptions of extent and condition of habitats and community types essential to conservation of species identified in (1);
3. Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats;
4. Descriptions of conservation actions proposed to conserve the identified species and habitats and priorities for implementing such actions;
5. Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions;
6. Descriptions of procedures to review the plan at intervals not to exceed 10 years;
7. Plans for coordinating the development, implementation, review, and revision of the plan with Federal, State, and local agencies and Indian tribes that manage significant land and water areas within the state or administer programs that significantly affect the conservation of identified species and habitats; and
8. Broad public participation is an essential element of developing and implementing these plans, the projects that are carried out while these plans are developed, and the species in greatest need of conservation."

In addition, the Association of Fish and Wildlife Agencies' (AFWA) Teaming With Wildlife Committee's Best Practices Working Group developed a guiding document titled *Best Practices for State Wildlife Action Plans: Voluntary Guidance to States for Revision and Implementation*, which suggests a wide range of best practices to develop SWAP documents and meet the required eight elements. Examples of best practices identified include utilizing Open Standards for the Practice of Conservation (Open Standards) for strategic planning, engaging partners, and adopting threat and habitat classification standards that are consistent with requirements established by USFWS for the SWAP, the Wildlife Tracking and Reporting on Actions for Conservation of Species (Wildlife TRACS) reporting system, and the framework for measuring the effectiveness of SWG.[7]

As part of implementing these best practices in California, the CDFW employed the Open Standards process for the 2015 update and moving forward will utilize the USFWS Wildlife TRACS system for

[6] AFWA, "State Wildlife Action Plans (SWAPs) Overview," Teaming With Wildlife, Association of Fish & Wildlife Agencies, 2004, 24 Oct. 2014 http://www.teaming.com/state-wildlife-action-plans-swaps. Photo adapted from Flickr/USCDyer.
[7] *Ibid.*

reporting on USFWS Wildlife and Sport Fish Restoration program grants.[8] In addition, the CDFW commissioned this evaluation to inform the SWAP 2015 update and help improve future SWAP implementation. The evaluation assessed SWAP implementation and SWG funded projects, key accomplishments, challenges encountered, and lessons learned. It also provides recommendations for how to improve the SWAP 2015 design and implementation effectiveness. Blue Earth Consultants, LLC (Blue Earth) performed a neutral, third party independent evaluation that addresses the update objectives above and evaluation outcomes outlined in the section *Purpose and Methodology* below.

One required element, and a CDFW update objective, supports and encourages coordination and alignment with other partners and groups throughout the State that manage or administer programs affecting conservation of identified species and habitats. The need for broader engagement and alignment provides an opportunity to leverage the SWAP for broader coordination and collaboration across agencies, organizations, partners, and the public. With this in mind, the CDFW partnered and engaged other agencies and groups throughout the update process, which helped them seek greater alignment with other ongoing efforts. To address and go beyond this requirement, the CDFW chose to develop nine sector specific companion plans. Development of nine companion plans will help ensure greater SWAP 2015 implementation engagement of key sectors (Text Box 3). Each plan will supplement the SWAP 2015 by elaborating on how the recommended conservation strategies and conservation actions could be implemented, prioritizing specific actions and strategies, and developing key action steps with support from relevant sectors. Other examples of ways to increase collaboration include reviewing and aligning with other wildlife and management strategies and plans (such as, the Department of Water Resources (DWR) Water Plan environmental stewardship and resource management strategies) as well as participation in multi-agency collaboratives such as the California Biodiversity Council, Strategic Growth Council, Ocean Protection Council (OPC), and California Landscape Conservation Coalition.

Text Box 3: Companion Plan Sectors

Agriculture • Consumptive and Recreational Uses • Energy Development • Forests and Rangelands • Land-use Planning • Transportation Planning • Tribal Lands • Water Management • Marine Resources

The SWAP 2015 and future companion plans will outline prioritized strategies for conservation and restoration efforts throughout California and within each region based on broad agency and partner engagement.[9] Because of this cooperation and the need for alignment across the California, the SWAP 2015 and associated companion plans could help set the context and strategic direction of habitat and wildlife conservation and restoration efforts more broadly and help inform use of funding to support these efforts for the State government, as well as among partners. For example, the SWAP 2015 and associated companion plans could inform how the Proposition 1 Water Bond (2014 Water Bond) funds, Wildlife Conservation Board (WCB), or other sources of funding are allocated.

[8] For more information on Wildlife TRACS: USFWS, "About TRACS," US Fish and Wildlife Service, 29 Jan. 2015 https://tracs.fws.gov/wiki/display/AT/About+TRACS.

[9] Please note, the SWAP 2015 region boundaries do not align with CDFW regions or the SWAP 2005 region boundaries.

Evaluation Purpose and Methodology

Evaluation Purpose and Evaluation Outcomes

Based on the recommendations and best practices AFWA identified, the CDFW commissioned an evaluation of SWAP 2005 implementation and SWG portfolio to inform the SWAP 2015 update process. To provide a neutral assessment, the CDFW hired Blue Earth to perform a third party, independent evaluation of SWAP implementation during the period of 2005 to 2014. The evaluation assessed a wide range of criteria that measured the progress and effectiveness of SWAP implementation; identified major outcomes, key challenges, and areas for improvement; and, delivered recommendations to inform the development of the SWAP 2015 update and its later implementation. The evaluation is critical in that the results will help the CDFW's strategic-planning and alignment of its conservation efforts to achieve intended outcomes expressed in the SWAP with high efficacy. This report shares findings from research conducted for this evaluation and provides an opportunity to reflect on accomplishments, identifies areas of improvement, and recommends adjustments to improve design and implementation of the SWAP 2015. The overarching goal of the evaluation and Blue Earth's role was to perform a robust evaluation of SWAP 2005 implementation between 2005 and 2014 and produce a report that presents evaluation findings for each of the following evaluation outcomes:

- **Evaluation Outcome 1**: Progress and results of the SWAP 2005 implementation from 2005-2014.[10]
- **Evaluation Outcome 2**: Analysis of SWG portfolio spending between 2005- 2014 by region, taxa, and conservation action category (see *page 8* for more detail on conservation action categories).
- **Evaluation Outcome 3**: Assess State government's effectiveness in implementing SWAP 2005 actions, including the human and financial capacity, ability to leverage additional human and financial resources, efficiency, strengths, opportunities for improvement, and gaps and obstacles for effective implementation.
- **Evaluation Outcome 4**: Describe overarching SWAP 2005 implementation challenges and identify areas where improvement could be made.
- **Evaluation Outcome 5**: Provide recommendations for the SWAP 2015 update and steps forward.

Blue Earth recognizes that the SWAP 2005 was an ambitious plan that recommended many conservation actions at a statewide scale as well as for each region described in the plan.[11] Although the plan was ambitious, we provide a comprehensive assessment of the SWAP 2005 and SWG implementation between 2005 and June 2014 below.

Evaluation Audience

The consultant team developed this report for multiple audiences, both with and without jurisdictional authority for implementing the SWAP 2005 and SWAP 2015. These audiences include CDFW leadership

[10] Please note the SWAP 2005 evaluation covers the period between 2005 and June 2014.
[11] The SWAP 2005 regions did not align to the CDFW jurisdictional boundaries and thus Blue Earth performed analysis on both the CDFW and SWAP 2005 regions for the SWG funded grants.

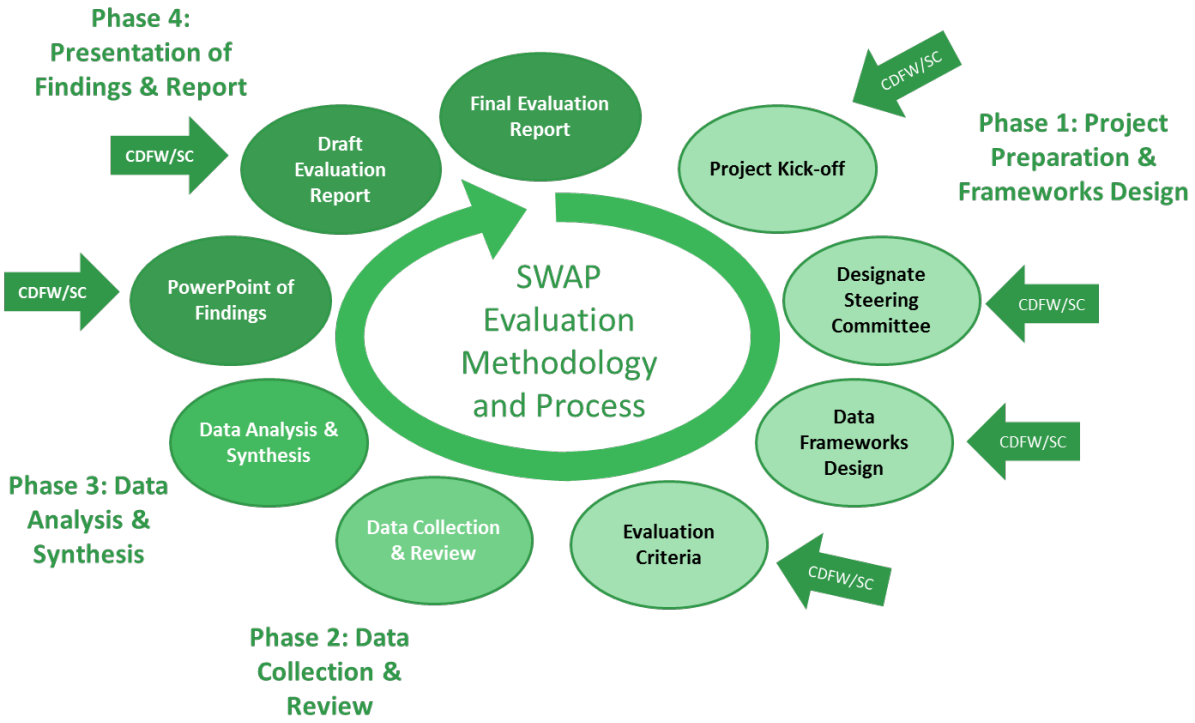
team and staff, California Fish and Game Commission (FGC), cooperating State, Federal, and local government agencies and organizations, California tribes and tribal governments, and partners (such as non-governmental organizations (NGOs) and academic or research institutions).

Methodology

Blue Earth undertook five primary activities to inform the evaluation. These activities included **1) convened an evaluation steering committee**, **2) reviewed SWG documents**, **3) conducted interviews with key interviewees**, **4) conducted additional web-based research and document review**, and **5) synthesized and analyzed gathered information**. The consultants utilized this information to draw the conclusions and recommendations provided throughout this report.

Figure 1 illustrates the evaluation process that consists of four overarching phases and sub-activities, as well as key points that the CDFW and steering committee were engaged, noted by grey arrows. The evaluation commenced in June 2014 and ended in late 2014.

Figure 1: SWAP Evaluation Phases and Tasks



Convened Evaluation Steering Committee

To help inform the SWAP evaluation, Blue Earth and the CDFW convened an evaluation steering committee. The committee was comprised of members from the California Biodiversity Council;

California Natural Resources Agency (CNRA); CDFW; FGC; California Landscape Conservation Cooperative (CA LCC), Pacific Southwest Region USFWS; DWR; and National Fish and Wildlife Foundation (member names and titles may be found in *Appendix 4)*. Steering committee members participated in three steering committee meetings held in August, October, and November 2014. Steering committee membered helped:

- **Refine the evaluation key questions, scale, methodology, and approach**,
- **Review and provide input on the evaluation preliminary findings and SWAP 2015 recommendations and considerations, and**
- **Provide feedback on the draft evaluation report**.

Reviewed State Wildlife Grant Documents

Blue Earth reviewed SWG funded documents for 81 grants provided by the CDFW that includes grant proposals, mid-term and final reports, financial reports, and amendments. SWG documents provided information and insights to address Evaluation Objectives 1 and 2, as well as gain background information, examine progress and results of implementation, and assess spending by region (CDFW and SWAP 2005), taxa, and key SWAP 2005 action topics.

Conducted Interviews

Between August and September 2014, Blue Earth staff conducted semi-structured phone interviews using the survey tool provided in *Appendix 5*.[12] Blue Earth interviewed 51 interviewees (28 CDFW staff including SWG recipients, five NGO representatives, five non-CDFW government staff, four non-CDFW proposal partners, four SWAP evaluation steering committee members, four private funders, and one tribal member). Semi-structured interviews provided insights on Evaluation Objectives 1, 3, 4, and 5.

Conducted Additional Web-based Research and Document Review

Blue Earth performed web-based research and reviewed documents identified during semi-structured interviews to bolster information gathered during SWG document review and interviews. Examples of web-based research and documents reviewed include identification of key Habitat Conservation Plans (HCPs), Natural Community Conservation Plans (NCCPs), Water Plan drafts, and publications from research, as well as identifying linkages between SWG efforts and conservation outcomes.[13]

Synthesized and Analyzed Gathered Information

To develop this evaluation, Blue Earth synthesized information gathered from four information sources: SWG documents, semi-structured interviews with key interviewees, web-based research, and

[12] By semi-structured, we mean that the consultants tailored the multiple-choice and open-ended questions in the survey for each interviewee based on their knowledge of the SWAP 2005 document, SWAP 2005 implementation, SWAP 2015 update, SWG, or conservation efforts implemented in the State; see *Appendix 6* for the full list of interviewees. Again, informants were not asked all questions outlined in the survey, rather were asked targeted questions outlined in *Appendix 5* and then additional follow-up questions based on their responses.

[13] We define "outcomes" as achievements that can be measured in terms of changes in behavior, management action, policy, and ecosystem or species health. We define "outputs" as what an organization does (activities) and delivers (outputs) in the short-term to achieve outcomes.

documents identified during semi-structured interviews. Unless otherwise stated, we used all four of these information sources to develop the evaluation findings and recommendations presented in this report.

Conservation Action Categories Used to Evaluate SWAP Implementation Progress

The SWAP 2005 identified statewide and regional conservation actions based on stressors found at the statewide and regional scales (see *Text Box 1 above for* a list of SWAP 2005 regions). To determine if the CDFW achieved specific conservation actions, Blue Earth synthesized both regional and statewide stressors into 14 overarching conservation action categories as found below (*Appendix 7* provides examples for each type of conservation action category).

Policies and Management Actions includes activities such as facilitating integration of wildlife conservation needs into local or regional land-use planning, developing agricultural and rangeland best management practice protocols that are compatible with ecosystem needs, assisting in the implementation of best management practices on working landscapes, and implementing conservation actions recommended in management plans and policies.

Enforcement includes activities such as increasing funding and staffing (CDFW and non-CDFW agencies) to enforce regulations that protect or prevent negative impacts to natural resources. Please note: Although we include the enforcement category in our assessment of the SWAP 2005 implementation, for SWG analyses we do not include this category because SWG funding cannot be utilized for enforcement activities.

Infrastructure, Land-use, and Permitting includes activities such as permitting agencies, county planners, and land management agencies working together to ensure infrastructure and development projects avoid or minimize negative impacts on native species and habitats.

CalPhotos/Howard Orman Clark Jr.

Habitat Conservation and Restoration involves securing, restoring, or enhancing sensitive wildlife habitats or preserving key habitat linkages. Examples include restoring groundwater levels to support riparian vegetation as well as protecting and restoring critical habitat linkages that assist wildlife movements or vegetation distribution shifts due to climate change.

Species Conservation and Restoration involves protecting and recovering sensitive species. Examples include the CDFW and other agencies and organizations working together to implement region-wide recovery plans.

Coordination, Collaboration, and Stakeholder Engagement involves partners working together to conserve natural resources and implement recommended conservation actions. Examples include securing co-funding for priority conservation actions, streamlining permitting processes, supporting data sharing, or implementing aligned management plans together to directly protect and restore wildlife and habitats.

Addressing Conservation Priorities and Stressors in the SWAP 2005 includes efforts to address identified SWAP 2005 recommended conservation action priorities and emerging stressors directly. Examples of stressors identified under "major wildlife stressors identified by region" in the SWAP 2005 (SWAP 2005 stressors) include Growth and Development, Climate Change, Invasive Species, and Water Management Conflicts (for a full list of stressors identified in the SWAP 2005 please see *Appendix 3*).[14] Examples include coordinated control and eradication of invasive species and implementation of conservation plans that incorporate best management practices for addressing growth and development.

Education, Outreach, and Capacity-building includes offering education on wildlife and habitat conservation, building capacity to implement conservation actions through staff training and new hires, and assisting local agencies and landowners in their planning and implementation of wildlife and habitat conservation efforts. Please note that the SWG program sets limitations on funding activities under this category, meaning only a small portion of SWG funding can be used to address Education, Outreach, and Capacity-building activities.

Wildlife Resource Assessment involves scientific activities, for example, gathering baseline information on species or habitats, and identifying critical wildlife corridors to prioritize activities for habitat connectivity enhancement.

Conservation Planning/ Plans involves planning efforts and plans to conserve species, habitats, and ecosystem functions. Examples include development and implementation of regional plans such as HCPs, NCCPs, and species and habitat recovery plans.

Funding and Leveraged Funding includes allocating adequate funding for conservation activities or working together to co-fund and/or leverage funding for shared priority projects to conserve natural resources.

Knowledge to Implement SWAP 2005 involves activities performed that increase relevant and applied science and information relevant to effective SWAP 2005 implementation. For example, conducting scientific studies to perform restoration activities and increasing available information for improving management efforts to recover species addressed under SWAP 2005. Many past activities focused on gathering baseline information on wildlife and associated habitats to support development of species and habitat conservation plans. Please note that this category also includes science and information collected through wildlife resource assessments.

Monitoring and Evaluation involves having evaluation processes and tools in place for collecting relevant data and analyzing information to assess and understand trends in natural resource conditions

[14] Please note, in the SWAP 2015 the term stressors will not be utilized and will be replaced with the terms stress or pressure.

and effectiveness of SWAP implementation. For example, Federal, State, and local agencies continue to collect and evaluate monitoring information to inform conservation action plans and decision-making.

Adaptive Management involves having processes in place for strategically adjusting activities, conservation priorities, expectations, management activities, and decision-making to address SWAP 2005 recommended conservation actions more effectively as new information is acquired. For example, State and Federal wildlife agencies and land managers seek to select the most scientifically defensible projections of climate change impacts, identify responses to adapt their program activities, and achieve their program goals based on these adaptations.

Enabling Conditions and Implementing Actions

Conservation action categories can be further separated into enabling conditions and implementing actions (see *Table 1* below). Although some conservation action categories may address both enabling conditions and implementation actions, we have grouped them based on the category with which they most align.

Table 1: Classification of Conservation Action Categories as Enabling Conditions or Implementation Actions

Theme	Conservation Action Category
Enabling Conditions	• Coordination, Collaboration, and Stakeholder Engagement • Education, Outreach, and Capacity-building • Wildlife Resource Assessment • Funding and Leveraged Funding • Knowledge to Implement the SWAP 2005
Implementation Actions	• Policies and Management Actions • Enforcement • Infrastructure, Land-use, and Permitting • Habitat Conservation and Restoration • Species Conservation and Restoration • Addressing Conservation Priorities and Stressors in the SWAP 2005 • Conservation Planning/Plans • Monitoring and Evaluation • Adaptive Management

Evaluation Limiting Factors

During the SWAP 2005 implementation evaluation, specific information gaps arose that complicated the assessment process. Below we share a few overarching challenges that affected the completeness of the SWAP 2005 implementation and SWGs that we base our recommendations.

Lack of Prioritized Goals, Objectives, and Metrics to Measure Progress in the SWAP 2005

One of the greatest challenges encountered during the evaluation was the absence of clearly described and prioritized 10-year goals, objectives, and metrics to measure progress in the SWAP 2005 as well as SWG funded project proposals. Rather, the SWAP 2005 presented steps for developing a monitoring and evaluation program to support adaptive management. Steps included identifying conservation goals and objectives, developing a management-oriented conceptual model, and creating a strategy for implementing monitoring; however, those items were never developed for SWAP 2005.

The SWAP 2005 also outlined recommended conservation actions, but the descriptions were broad and without specific priorities or steps to achieve those recommendations. Thus, evaluating the implementation of the SWAP 2005 proved difficult and relied heavily on perception, assessment of SWAP 2005 stated recommended conservation actions, and review of SWG funded grant implementation. For example, to assess SWG funded grants, we reviewed information that was provided in SWG proposals and reports; however, SWG proposals and reports, like the SWAP 2005, often lacked set objectives and metrics with which to evaluate progress. Similarly, when interviewees identified progress and success, they consistently referenced the lack of goals, objectives, and metrics to measure progress as a key challenge for effectively evaluating the implementation of the SWAP 2005.

Interviewee Challenges Differentiating SWAP 2005 Recommended Conservation Actions and CDFW Day-to-Day Actions

Because recommended conservation actions were broad, most activities that the CDFW or other partners could take to support wildlife conservation and restoration for SGCN fit within the broad scope of actions described in the SWAP 2005. Interviewees highlighted that it was difficult to distinguish between SWAP specific actions and general actions the CDFW undertakes as part of addressing their mandate. In addition, interviewees highlighted that other organizations perform work that is complementary to the SWAP 2005, but not guided by the SWAP 2005. They also highlighted that despite this lack of guidance, the work performed by others helped and continues to help advance specific conservation actions or conservation action categories.

Inadequate and Inconsistent SWG Proposal and Reporting Documentation

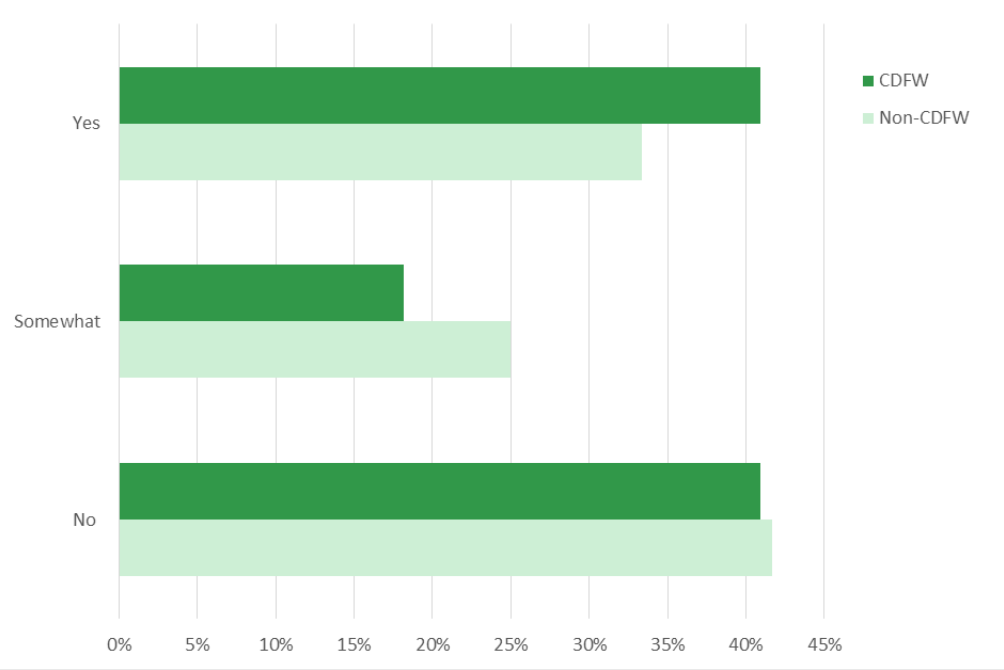
Blue Earth received and reviewed documentation on 81 SWG projects for this evaluation. Sixty-nine of these grants were completed and the remainder are still being executed. When evaluating the SWG proposals and reports, the consultant team identified limitations in the SWG documentation such as, variations in the level of information provided, and for some grants, little or no information (e.g., gaps in financial information, proposals, or reports). Moreover, SWG documentation appears to have not only changed proposal and reporting requirements, but also changed how grants are labeled, stored, and recorded on the CDFW's servers over the course of the SWAP 2005's implementation. Therefore, the consultant team could not verify whether we received all grant documents. Although the consultant team recognizes there are gaps (e.g., missing proposals, mid-term and final reports), SWG information presented in the evaluation reflects all information provided to the consultant team during document collection, review, and follow-up requests. Since 2013, the cloud-based USFWS Wildlife TRACS system has been used for tracking and reporting on USFW Wildlife and Sport Fish Restoration program grants.

Moving forward, CDFW is committed and required to provide its reports to the USFWS through this system.

Lack of SWAP Awareness Across CDFW and non-CDFW Staff and Partners

Blue Earth interviewed 51 interviewees, predominantly from within the CDFW. Interviewees' understanding and awareness of the SWAP 2005 and implementation of its recommended conservation actions varied significantly; nearly 60% stated they were familiar or somewhat familiar with the SWAP 2005 (*Figure 2* presents more detail on the percent of CDFW and non-CDFW interviewees' awareness). In addition, more regional interviewees (CDFW and non-CDFW) indicated familiarity with the SWAP 2005 and its recommended conservation actions than statewide interviewees (CDFW and non-CDFW). Interviewees indicated that they had infrequently utilized the SWAP 2005 as a reference for SWG funded grant proposals. Although interviewees used the SWAP document for the development of SWG proposals, interviewees mentioned the limited education regarding the importance of the SWAP 2005, implementation of its recommended conservation actions, its use, its connection to the SWG program, and connection to the CDFW's priorities and daily activities for internal staff and external contractors and partners. Confusion also exists regarding the presence of a SWAP program; if and where the SWAP program or staff are housed (e.g., within which CDFW division or branch); what mandate the CDFW, SWAP program, or SWAP staff had for implementing the SWAP 2005 recommended conservation actions; and what granting or funding processes supported the implementation of the SWAP 2005 recommended conservation actions. Some interviewees identified SWAP 2005 related implementation progress as implementation of the SWG funded grants, while others asked if it was a program with staff that operated beyond implementation of SWG funded grants. Together, lack of awareness and understanding about the SWAP 2005's implementation, staffing, mandate, and funding limited CDFW and non-CDFW interviewee understanding and perception of progress.

Figure 2: Interviewee Familiarity with SWAP 2005 and Its Conservation Actions



Limited Information Available on Funds Leveraged for SWAP 2005 Implementation

Although Blue Earth based funding calculations on SWG funding and CDFW State government match provided for implementing SWG funded grants, clear linkages regarding funding leveraged from other partners and State government for SWAP implementation activities could not be identified. Furthermore, unless interviewees mentioned funding from sources other than the SWG program funds, we did not perform separate research to quantify or assess the level to which these other sources contributed to the SWAP 2005 implementation. We do recognize that other sources of funding supported the overall implementation of the SWAP 2005 and led to progress; however, they are not quantified in this evaluation because their contribution to SWAP implementation has not been directly linked or clearly articulated.

Lack of Explicit Descriptions of SWG Outcomes in Grant Documents

It was often difficult to assess SWG outcomes based on annual and final grant performance report narratives, as well as interviewee responses. Current grantee reporting typically identified project outputs (e.g., numbers of surveys, publications, reports written, etc.) rather than project outcomes (e.g., changes in policies, management actions, behavior, or ecosystem and species health); therefore, strong connections between implementation of SWG funded activities and SWAP-relevant outcomes could not always be identified through reviewing grant reports and interviewee responses. In addition to our analysis of outcomes stated in grant documents and interviews, we performed deeper web-based research on select species and multi-year grants. Finding from this research are presented in later sections in the form of case studies.

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SWAP 2005 Evaluation Results

This section provides an overview of the SWAP 2005 implementation at the statewide and regional scales based on interviewee perspectives, review of grants, web-based information, and other documents. Because the information below reflects themes gleaned from interviewees and documents, it does not necessarily reflect the opinions of the CDFW. Furthermore, any misconceptions or incomplete understanding of the SWAP 2005, SWAP planning, SWAP related work, and SWG on the part of some interviewees may have led to suggestions that do not reflect the CDFW's actual progress to date. Below we provide findings based on each of the evaluation outcomes. We first share information on progress and results at the statewide and regional scales focused on categories described by the SWAP 2005 recommended conservation actions, conservation capabilities, and monitoring and evaluation. Following the overall progress and results, we present findings regarding State government's effectiveness implementing the SWAP 2005 including strengths, areas of improvement, opportunities, and challenges.

Throughout this section, we provide general introductory paragraphs to introduce the topic discussed in each evaluation outcome sub-section below.

Evaluation Outcome 1: SWAP 2005 Implementation Progress and Results

This section shares our findings on key achievements, impact, and overall progress and results of implementing the SWAP 2005, which is based on document review, interviews, and web-based research. The key achievements, impacts, and other findings provided below were informed by interviewee perceptions and SWG funded grant report information. See *Text Box 4* at the end of this section for a summary of key findings presented in this section.

Key Achievements and Impacts

Through our research and analysis interviewee responses and documents, we identified and highlight below the most significant outcomes and achievements realized through the implementation of the SWAP 2005. This section describes the overall SWAP 2005 implementation achievements and presents case studies to illustrate outcomes.

Table 2 shows SWAP 2005 implementation progress according to CDFW (internal) and non-CDFW (external) statewide and regional interviewees. Together, interviewees identified examples of progress for each conservation action category; however, interviewees identified the least amount of progress for Monitoring and Evaluation and Adaptive Management. Blue indicates that interviewees indicated conservation action category **progress**; yellow indicates **some progress**, and orange indicates little or **no progress**.

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Table 2: Perceived SWAP 2005 Implementation Progress by Conservation Action Category

Conservation Action Category	Interviewees Indicated Progress	
	Statewide	Regional
Policies And Management Actions		
Enforcement		
Infrastructure, Land-use, Permitting		
Habitat Conservation and Restoration		
Species Conservation and Restoration		
Coordination, Collaboration, and Stakeholder Engagement		
Addressing Conservation Priorities and Stressors in the SWAP 2005		
Education, Outreach, and Capacity-building		
Wildlife Resource Assessment		
Conservation Planning/ Plans		
Funding and Leveraged Funds		
Knowledge to Implement SWAP 2005		
Monitoring and Evaluation		
Adaptive Management		

Key: Blue indicates **progress made**; yellow indicates **some progress made**, and orange indicates **little or no progress made**.

Alignment of SWAP 2005 and SWG Stated Objectives and Perceived Progress

To assess the level of progress made towards implementing the SWAP 2005 recommended conservation actions and how the progress has been perceived, Blue Earth reviewed three components:

- Recommended conservation actions in the SWAP 2005 to determine the overall focus of stated actions,
- Objectives of SWG funded projects, and
- Interviewees' perceptions on progress made.

For each, we analyzed collected data using the conservation action categories described above (see *page 8* for more detail).[15] *Figure 3* shows the level of alignment (and discrepancy) among these three analyses.

The two categories most closely aligned with interviewee perceived progress were Coordination, Collaboration, and Stakeholder Engagement (highlighted in 59% of the SWAP 2005 recommended conservation actions, 78% of CDFW, and 28% of non-CDFW interviewees indicated progress) and Habitat Conservation and Restoration (highlighted in 63% of the recommended conservation actions, 72% of CDFW, and 11% of non-CDFW interviewees indicated progress).

When averaging interviewee responses regarding specific recommended conservation actions, both CDFW and non-CDFW interviewees indicated that overall progress had been limited and they did not consistently attribute successes to the SWAP 2005 implementation. Typically, CDFW interviewees indicated more progress made in all 13 categories (excluding Enforcement) than non-CDFW interviewees did. Interviewees identified the most progress for Conservation Planning/Plans; Coordination, Collaboration, and Stakeholder Engagement; and Habitat Conservation and Restoration. Non-CDFW staff expressed more progress made in Coordination, Collaboration, and Stakeholder Engagement; Wildlife Resource Assessment; and Conservation Planning/Plans than in other conservation action categories.

In addition, the highest alignment found between progress identified by interviewees, conservation action categories identified in the SWAP 2005, and SWG projects occurred for the following categories:

- Coordination, Collaboration, and Stakeholder Engagement
- Conservation Planning/Plans
- Addressing Conservation Priorities and Stressors in the SWAP 2005

The most misalignment between the focus of SWG funded grants (more than 74%) and SWAP 2005 stated recommended conservation actions (less than 10%) was Knowledge to Implement SWAP 2005.

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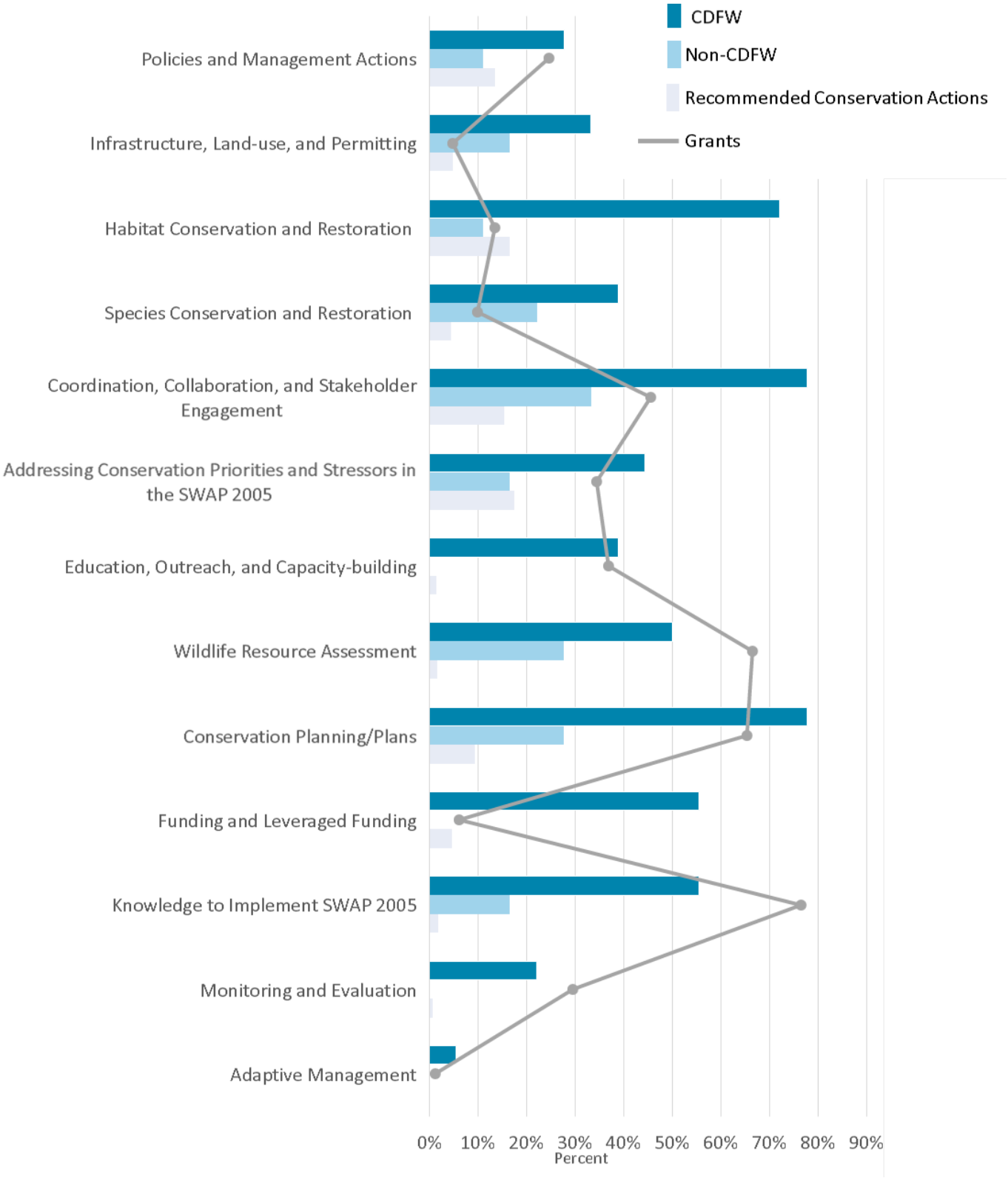
[15] Please note, some recommended conservation actions and grant objectives address more than one of the conservation action categories that Blue Earth developed.

Figure 3: Comparison between Percent Interviewees Indicating Progress, Percent Focus of SWAP 2005 Conservation Actions, and Percent of SWG Funded Grants by Conservation Action Category



Progress Towards Implementing Statewide and Regional Conservation Actions

Although interviewees identified results in each conservation action category, most interviewees identified progress in three categories: Coordination, Collaboration, and Stakeholder Engagement; Conservation Plans/Planning; and Knowledge to Implement SWAP 2005. Below we present regional and statewide examples of progress from CDFW interviewees, non-CDFW interviewees, and SWG funded grants.

- **Policies and Management Actions:** Interviewees indicated progress made with regard to policies, but could not identify specific examples of policies resulting from SWAP 2005 implementation and SWG funded projects. Moreover, despite budget constraints, interviewees indicated management action progress has occurred, specifically in the Bay Delta system where management efforts including conservation and restoration relied on money provided through Proposition 84, The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, funding. Interviewees also highlighted the WCB's financial support for land acquisition and restoration and mentioned progress made at the statewide scale, but were uncertain which efforts were tied to the SWAP 2005 implementation. Out of the 69 grants active between 2005-2014, nine, or 13% of, SWG funded grants, emphasized results related to policy and management actions. For example, one grant informed major revisions to the draft Pleasant Valley Ecological Reserve management plan. In addition, results from some grants inform ongoing management of human activity in NCCP reserves and support future decisions regarding public access.

- **Enforcement:** Few SWAP 2005 recommended conservation actions focused on enforcement and SWG funding cannot support enforcement actions, hence it was not included in *Figure 3* above. Despite significant staffing shortages, interviewees generally identified progress within the CDFW to strengthen enforcement efforts statewide. Although not directly a result of SWG funding, one interviewee highlighted the Memorandum of Understanding signed between the CDFW and the United States Coast Guard as a key enforcement success that also highlighted collaboration for increasing marine protected area enforcement. Also, one SWG funded grant mentioned enforcement and increasing compliance by specifically enhancing security to reduce off-road vehicles, trash, and debris dumping.

- **Infrastructure, Land-use, Permitting:** Interviewees indicated progress for permitting through increased capacity and streamlining and simplification of the conservation and permitting processes. Additionally, interviewees cited connections to HCP/NCCPs and the guidelines that these documents outlined with regard to development. SWG funded grants mentioned progress towards Infrastructure, Land-use, and Permitting in just 10, or 14% of, SWG funded grants. Progress included installing and repairing fences to control the spread of invasive plants, installing pitfall traps to trap adult California tiger salamanders, and purchasing equipment and native vegetation rootstock to plant visual barriers that minimize disturbances to roosting sandhill cranes.

- **Conservation and Restoration:**
    - *Habitat:* Over the last 10 years, there has been a gradual increase in funds for State government to acquire more land for the purpose of protection. Interviewees highlighted collaborative efforts between Federal, State, and local agencies, NGOs, and landowners for conservation and restoration efforts, specifically those in the Bay Area and the San Joaquin Valley. Interviewees also highlighted leveraged funding from the Coastal Conservancy for coastal restoration work and the WCB for riparian restoration. Just four, or 6% of, SWG funded grants mentioned habitat conservation or restoration as an outcome. For example, one grant included habitat enhancement for the desert pupfish by clearing vegetation in and around springs on CDFW lands.

    - *Species:* Interviewees highlighted, increased species conservation and restoration efforts. Specific species highlighted include the riparian brush rabbit, which has almost been delisted, as well as the fisher, marten, sage grouse, salmon species such as Chinook and Coho, and red-legged frog. One interviewee mentioned that foundation money directed towards species conservation increased over the past 10 years; although, the interviewee did not indicateby how much. Similar to habitat conservation, five, or 7% of, SWG funded grants mentioned direct species conservation outcomes. One example of a SWG funded grant included conservation of mountain yellow-legged frog populations through the removal and translocation of predatory fish at six project sites (Inland Desert CDFW region – Matlock and Slim lakes restoration area; Badger lakes restoration area; Gable lakes restoration area; Eastern Brook lakes restoration area; Tamarack; and Ralston and Cagwin restoration within North Central CDFW region).

- **Coordination, Collaboration, and Stakeholder Engagement:** CDFW and non-CDFW interviewees highlighted the CDFW's increased focus on coordination, collaboration, and stakeholder engagement. Interviewees cited greater engagement with landowners, ranchers, farmers, Federal agencies, State agencies, local agencies, and NGOs. For example, one interviewee mentioned the successful mapping of habitat corridors in the Sierra Foothills, which included significant collaboration and engagement with private landowners, ranchers, county government, and other local, State, and Federal agencies. Interviewees also mentioned the engagement in the Landscape Conservation Cooperatives, SWAP update process, and future SWAP companion plans as key examples of increased engagement and focus on collaboration. Forty-eight percent of, or 33, SWG funded grants highlighted coordination, collaboration, and stakeholder engagement results. For example, one project involved coordination with non-profit reserve managers on annual activities including habitat restoration and invasive species treatments, as well as coordination with local agencies to conduct vegetation management and debris removal.

- **Addressing Conservation Priorities and Stressors in the SWAP 2005**: Interviewees indicated progress towards addressing emerging stressors; however, they also emphasized the significant difficulties associated with addressing such big issues. Interviewees generally cited progress and increased focus on climate change (including the CNRA *Safeguarding California: Reducing Climate Risk An Update to the 2009 California Climate Adaptation Strategy*) and water management conflicts (including new water regulations for changing how water transfers occur), as well as progress addressing forest management conflicts and livestock grazing. Thirty

percent of, or 21, SWG funded grants made progress towards addressing SWAP 2005 stressors. Progress towards climate change was the most frequently mentioned stressor and appeared in 10 SWG funded grants.

- **Education, Outreach, and Capacity-building***:* Interviewees mentioned that the CDFW has an education and outreach program; however, the program was viewed as grossly underfunded. Despite limited resources, interviewees indicated that there had been progress towards education, outreach, and capacity-building over the last 10 years, specifically related to direct involvement with public stakeholders. Twenty-three percent of, or 16, SWG funded grants mentioned progress towards education, outreach, and capacity-building. Examples include training on deployment of automated bird song recorders; public outreach through a website, monthly newsletters, web-ready public scoping information, and development and maintenance of a list serve; and presentation of work at annual meetings, such as the Western Section of The Wildlife Society.

Progress Towards Improving Conservation Capabilities

Three conservation actions categories were also defined as conservation capabilities including: Wildlife Resource Assessments, Conservation Planning/Plans, and Funding and Leveraged Funds. The SWAP 2005 described conservation capabilities as fundamental for implementing effective conservation, restoration, and management. Below we provide examples of progress made towards each conservation capability.

- **Wildlife Resource Assessment**: Interviewees indicated a significant use of SWG funding for wildlife resources assessment. Interviewees highlighted successful wildlife resource assessments in the Sierra Nevada, specifically related to monitoring of the yellow-billed cuckoo, burrowing owl, and the American pica, as well as long-term video monitoring projects that are now expanding to additional CDFW regions. Forty-eight percent of, or 33, SWG funded grants implemented wildlife resource assessment activities. Specific examples include conducting surveys and field research in the Sierra National Forest, conducting camera trapping surveys in the Mojave Desert and Sierra Nevada and Cascades regions.

- **Conservation Planning/ Plans**: Interviewees indicated that the most progress made of any recommended conservation action occurred through conservation planning and plan development, while 22, or 32% of, SWG funded grants identified outcomes related to Conservation Planning/Plans. The progress made towards such plans is directly related to information gathered through the conservation action categories Wildlife Resource Assessment and Knowledge to Implement SWAP 2005. Interviewees and SWG reports indicated specific progress related to Conservation Planning/Plans including incorporating knowledge and learning into the development and implementation of HCP/NCCPs throughout the State. Interviewees indicated that the CDFW has incorporated information, research, and knowledge into regional plans such as the San Joaquin Multi-Species HCP, Placer County HCP/NCCP, Yolo County HCP/NCCP, Butte County HCP/NCCP, Bay- Delta HCP/NCCP, Yuba-Sutter HCP/NCCP, and Western Riverside County Multi-species HCP.

- **Funding and Leveraged Funding**: Specific progress related to funding and leveraging funds was associated with an increase in external partnerships, which have substantially increased the

CDFW's ability to perform assessments and increase scientific knowledge about sensitive habitats. Interviewees identified specific funding from the WCB and ESA Section 6 grants, as well as other parallel efforts of NGOs such as The Nature Conservancy and Audubon Society. Twelve percent of, or eight, SWG funded grants mentioned results related to Funding and Leveraged Funding through the Imperial Irrigation District, Pasadena Audubon, USDA-FS, State of California Off Highway Vehicle Fund, and Federal Assistance funds.

Monitoring and Adaptive Management

In addition to the conservation action categories highlighted above, the SWAP 2005 included information on the steps for developing and implementing a monitoring and evaluation system that not only would track habitat and species health, but would also help assess progress and adaptive management. Although the system was not implemented between 2005 and 2014, interviewees highlighted increases in relevant science and identified a growing interest in tracking adaptive management outcomes.

- **Knowledge to Implement SWAP 2005**: Interviewees in the Northern and North Central regions, indicated progress for research and assessment. In the North Central region, interviewees shared that scientific data and information has helped identify species conservation needs. In addition, interviewees also highlighted increases in the relevant science for desert tortoise, bank swallow, burrowing owl, Swainson's hawk, and tiger salamander. Furthermore, numerous interviewees identified a successful collaborative wildlife connectivity identification and mapping effort between the California Department of Transportation (Caltrans) and the CDFW to inform transportation planning including the California Transportation Plan 2035 and regional transportation plans.[16] Results related to Knowledge to Implement SWAP 2005 were most frequently mentioned in SWG funded grants, appearing in 39, or 57% of, SWG grants. Results include digitization of previously hand drawn maps, surveys to identify native populations of arroyo chub, and use of remotely triggered digital cameras to survey multiple species.

- **Adaptive Management**: Interviewees indicated that they were aware that greater support for adaptive management exists, but could not identify specific examples of adaptive management implementation or monitoring. In addition, because the SWAP 2005 lacked defined metrics to measure progress, interviewees indicated it was difficult to assess progress. One interviewee did mention that monitoring efforts focused on adaptive management were gradually increasing and being incorporated in conservation plans across the State. Twenty-two percent of, or 15 SWG funded grants highlighted results related to adaptive management, which included refining survey protocols and testing auditory monitoring protocols at the same locations to detect changes in bird communication and inform management decisions.

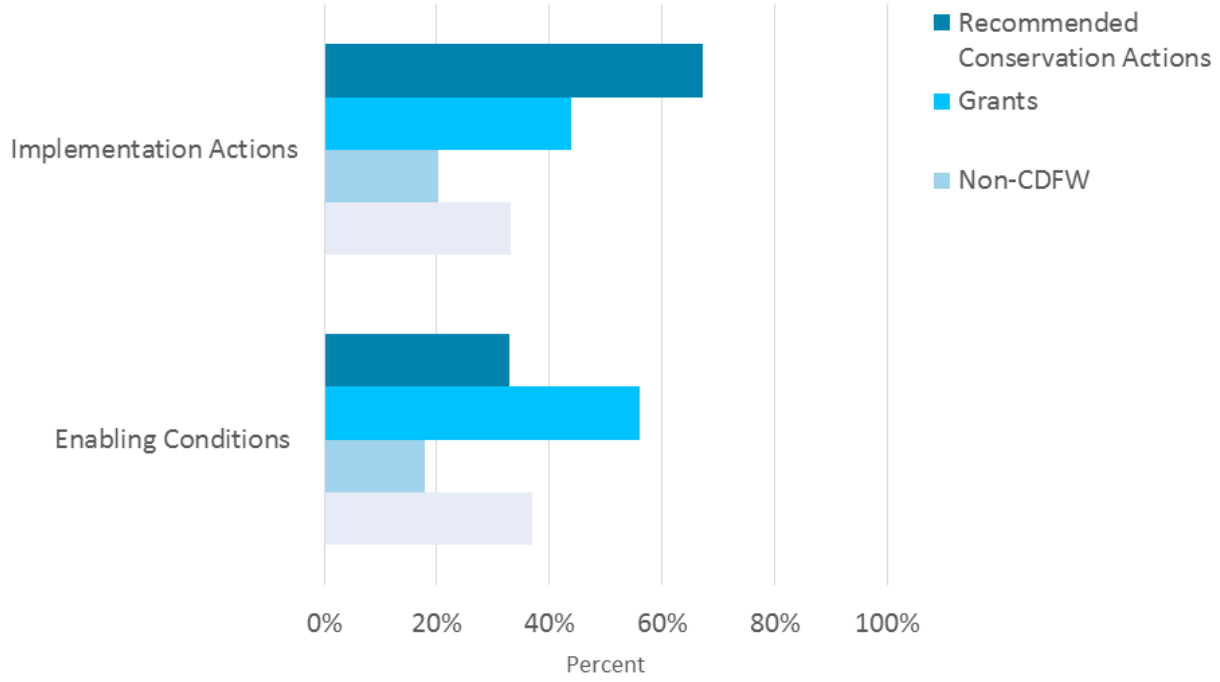
[16] In the PowerPoint *California Essential Habitat Connectivity Project: Multidisciplinary Team Meeting Four*, the habitat mapping project and its legislative, planning, key collaborations, approach, and results are described. Dangermond Group, SC Wildlands, and Conservation Biology Institute, "California Essential Habitat Connectivity Project: Multidisciplinary Team Meeting Four," California Department of Fish and Wildlife and California Department of Transportation, Feb. 2010, 29 Jan. 2015 http://www.dot.ca.gov/hq/env/bio/files/ppt_mdtmtg4.pdf.

Progress Towards Enabling Conditions, Implementation Actions, and Reducing Wildlife Stressors

As described above, SWAP 2005 recommended conservation actions can be grouped into two high-level categories: enabling conditions and implementation actions (see *Table 1* to review how conservation action categories are classified). Enabling conditions are conditions that support or strengthen implementation of the SWAP 2005, for example having sufficient scientific information to inform decision-making or collaboration with other partners to ensure sufficient resources are in place to support implementation. Implementation actions include those actions that are more direct, such as conservation and restoration of species or habitat, enforcement, and implementation of conservation plans.

To compare interviewee perception, stated SWAP 2005 recommended conservation actions, and SWG funded grants' focus, *Figure 4* combines findings from each of these three information sources using the **enabling condition** (e.g., human and financial resources available to implement activities or collection of baseline data and information available to inform decisions) and **implementation action** (e.g., Policies and Management Activities, Habitat Conservation and Restoration, or Adaptive Management) classification that were shared above. *Figure 4* presents the percentage of interviewees indicating progress for enabling conditions and implementation actions, alongside the percent of SWG funded grants that mention enabling conditions and implementation actions (please note some grants address more than one category) and the focus of recommended conservation actions mentioned in the SWAP 2005. In general, both CDFW and non-CDFW interviewees indicated progress made towards enabling conditions and implementation actions. The difference between CDFW and non-CDFW interviewees typically resulted from a lack of non-CDFW interviewee's awareness of how results could be directly linked to the SWAP 2005 implementation. To implement effectively, enabling conditions must be in place. The discrepancy identified between SWG grant implementation and SWAP 2005 recommended conservation actions may reflect the need for California to set the stage for success by focusing most of the 2005-2014 funding on enabling conditions.

Figure 4: Comparison between Perceived Progress, SWG Funded Activities, and SWAP 2005 Recommended Conservation Actions by Enabling Conditions and Implementation Actions



We also examined the types of stressor addressed during SWAP 2005 implementation. Twenty-eight out of 81 grants sought to address SWAP 2005 stressors. SWG grant proposals identified nine different SWAP 2005 stressors, shown in *Table 3*. The most commonly addressed stressors were climate change (directly mentioned in 10 grants), growth and land development (directly mentioned in six grants), and water management conflict and invasive species, which were both directly mentioned in four grants.

Table 3: SWAP 2005 Stressors Addressed in SWG Funded Grants

28 Grants out of 81 Addressed SWAP 2005 Stressors
Climate Change (10)
Growth and Land Development (6)
Water Management Conflict (4)
Invasive Species (4)
Multiple uses conflicting with wildlife on public lands (3)
Altered Fire Regimes (2)
Forest Management Conflicts (2)
Recreational Pressures (2)
Excessive Livestock Grazing (1)

Text Box 4: Evaluation Outcome 1 Summary: SWAP Implementation Progress and Results

Evaluation Outcome 1 Summary: SWAP Implementation Progress and Results

- More regional interviewees indicated familiarity with the SWAP 2005 and its recommended conservation actions than statewide interviewees.
- Interviewees indicated and evaluators found limited overall progress towards conservation action categories.
- Both statewide and regional interviewees specified progress made towards three categories in particular: Habitat Conservation and Restoration; Coordination, Collaboration, and Stakeholder Engagement; and Increasing Knowledge to Implement SWAP 2005.
- Forty-five percent of CDFW and non-CDFW interviewees highlighted progress towards enabling conditions.
- The most common stressor addressed under the SWAP 2005 was climate change followed by growth and land development.
- CDFW staff indicated more progress made in all 13 categories (excluding Enforcement) than non-CDFW staff, with the most progress made in the following three categories: Conservation Planning/Plans; Coordination, Collaboration, and Stakeholder Engagement; and, Habitat Conservation and Restoration.
- Most SWAP 2005 recommended conservation actions related to the category Addressing Conservation Priorities and Stressors in the SWAP 2005. However, only 44% of CDFW staff and 17% of non-CDFW staff indicated progress made for this category.

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State Wildlife Grant Case Studies

Below we share two case studies to help illustrate the linkage between SWG funded grants, SWAP 2005 identified wildlife stressors, and overall progress outcomes and outputs. To develop the first case study we identified a taxa type that received significant SWG focus between 2005-2014 (birds) and identified a key taxa species, which received multiple single species grants in the same period. For the second case study, we identified multi-species, multi-year grants that specifically sought to address key statewide stressors. For both case studies, we not only reviewed the key outputs and outcomes that were identified in the grant reports, but also integrated interviewee insights where relevant and sought to find linkages with other statewide or regional planning efforts (HCP/NCCPs), mapping, and policy changes through follow-up web-based research and literature review. Although we sought to make strong linkages between SWG funded grants and outcomes, some linkages were not clearly defined (please see section *Correlation of SWG Funding Amount to SWG Outputs and Outcomes* on *page 33* below for more detail, as well as *Appendix 8*, which lists publications identified as outputs in SWG grant documents and *Appendix 9*, which presents outputs described in 15 final grant performance reports). In addition to these two case studies, in the *Evaluation Outcome 2* section below we provide three additional case studies focused on single grants for species representing three taxa addressed most often by SWG funded grants—mammals, birds, and reptiles.

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Case Study 1—SWAP 2005 Implementation Outcome Synthesis for Western Burrowing Owl [17]

Number of Single and Multi-species Grants: Two single species grants (nine multi-species grants)

Total Value of Single Species and Multi-species Grants for the Western Burrowing Owl: $671,398 in grants supporting specifically Western burrowing owl projects (Total value of Western burrowing owl-specific grants and multi-species grants that included the Western burrowing owl, $14,020,797. Multi-species grants addressed more than 20 additional species and all taxa types.)

Objectives: Project objectives varied, with some of the most common themes including the following:

- Knowledge to implement SWAP 2005 (nine grants)
- Wildlife resource assessments (nine grants)
- Coordination, collaboration, and stakeholder engagement (eight grants)
- Develop conservation plans (eight grants)
- Education, outreach, and capacity-building (eight grants)

SWAP 2005 Stressors Addressed:

- Growth and land development (urban, residential, and agricultural)
- Climate change
- Inappropriate off-road vehicle use
- Water management

Examples of Western Burrowing Owl Grants with Direct Conservation Action:

Yolo County HCP/NCCP – Research on Western burrowing owl habitat and the impacts of human encroachment, degradation of native habitats, and fragmentation of habitats performed by Gervias et al. 2008 through SWG used in development of the Yolo County Natural Heritage Program (NHP) Plan first administrative draft in 2013. A CDFW 2012 staff report on Western burrowing owl mitigation also informed the NHP Planning and Preconstruction surveys for the Western burrowing owl.

Butte County HCP/NCCP – CDFW data on the Western burrowing owl was used to inform conservation efforts within the "Butte Regional Conservation Plan, Preliminary Public Draft. November 30, 2012." Specifically, 2012 CDFW information helped update the current guidance on impact assessments, as well as Western burrowing owl avoidance and mitigation actions of covered activities. Moving forward the Butte County Association of Governments (BCAG) Board of Directors (the Implementing Entity of the conservation plan) will also coordinate the design of practicable techniques for improving habitat availability for the Western burrowing owl with the CDFW (and the USFWS and species experts).

[17] In addition to the publications listed in the text box, other documents referenced in grant reports were not publically available.

Other HCP/NCCP plans that SWG grants informed regarding burrowing owl include:

- Bay - Delta HCP/NCCP
- East Contra Costa HCP/NCCP
- Natomas Basin HCP
- Sacramento Municipal Utility District HCP
- San Joaquin Multi-Species HCP
- Santa Clara HCP/NCCP
- South Sacramento HCP
- Yuba-Sutter HCP/NCCP

Key Grant Outcomes:

- A conservation strategy was drafted, and an existing CDFW Western burrowing owl conservation guidance document was revised
- CDFW worked with the Burrowing Owl Conservation Network, Defenders of Wildlife, and USFWS to integrate science into the species conservation strategy
- Added 233 new Western burrowing owl California Natural Diversity Database records collected, which have been integrated into State planning tools, including a statewide distribution map
- Described the numbers of Western burrowing owls on a breeding bird survey route in California increased significantly from 1968-2004
- Identified that in addition to substantial populations existing in the Western Mojave Desert, Palo Verde Valley in the Sonoran Desert region, and eastern San Luis Obispo County, large populations persist in agricultural areas
- Assisted in developing and implementing appropriate Western burrowing owl conservation strategies into HCP and NCCP documents (e.g., San Joaquin, Placer, Yolo HCP/NCCPs)
- Grant reports included recommendations, such as creating artificial burrows, conserving large tracts of grassland, controlling off-road vehicles, creating buffer zones around habited burrows, including private land-owners in conservation efforts, and protecting man-made structures that Western burrowing owls are using for habitat

Publications: More than 22 publications produced in connection with 11 grants, including:

- Gervais JA, Rosenberg DK, Comrack LA. 2008. *II - Species Accounts – Burrowing Owl (Athene cunicularia)*. Studies of Western Birds 1: 218-226.
- California Department of Fish and Wildlife. 2008. *Guidance for Burrowing Owl Conservation*. Habitat Conservation Planning Branch, Wildlife Branch, and Bay Delta Region. Sacramento, CA. 25 pages.
- Wilkerson, R. L., and R. B. Siegel. 2010. *Assessing changes in the distribution and abundance of Burrowing Owls in California, 1993-2007*. Institute for Bird Populations: Bird Populations 10: 1-36.
- Wilkerson, R. L., and R. B. Siegel. 2011. *Distribution and Abundance of Western Burrowing Owls (Athene cunicularia hypugaea) in Southeastern California*. The Southwestern Naturalist 56: 378-384.

Case Study 2—SWAP 2005 Implementation Multi-Species, Multi-Year Grant Addressing Statewide Stressors

Grant Title: Colonial Waterbirds a multi-partner, statewide and regional assessment to inform conservation of a suite of wetland-dependent species (Grant #: F10AF00647)

Grant Period: January 19, 2010 – September 30, 2013

Location of Work: Statewide

Grant Value: Total: $200,000 (*SWG Funds: $100,000, State Government Match: $100,000)*

Part of a Larger Project: USFWS coordinated a comprehensive survey of colonial-nesting waterbirds throughout 11 of the U.S.'s Western states. The survey's short-term goals were to document the species composition, size, and location of waterbird colonies throughout this region and to produce an atlas of colonies. These surveys were intended to establish a baseline for the development of a long-term monitoring program to track population size, trends, and locations of colonial waterbirds in the Western United States. The CDFW's project contributed to this larger USFWS project by completing an inventory of waterbird species in the State of California.

Species Addressed: The 17 species of colonial waterbirds nesting in California include: eared grebe, Western grebe, Clark's grebe, American white pelican, double-crested cormorant, great blue heron, great egret, snowy egret, cattle egret, black-crowned night-heron, white-faced ibis, Franklin's gull, ring-billed gull, California gull, Caspian tern, black tern, and Forster's tern.

Objective: To serve the conservation needs of colonial waterbirds by:

1. Conducting comprehensive surveys of 17 species of colonial waterbirds throughout their breeding ranges in California;
2. Documenting the size, location, and broad-scale habitat parameters of all breeding colonies;
3. Estimating the minimum State population size of each species;
4. Contributing data to a regional database and atlas for 11 Western states and thereby enabling easy access to information pertinent to conservation planning; and
5. Leveraging stakeholder efforts.

SWAP 2005 Stressors Addressed: Because colonial waterbirds breed statewide, they are subject to the overarching stressors of human growth and development, water management conflicts, invasive species, and the effects of climate change. In the more populated regions of the State, additional major stressors, including pollution, urban or agricultural runoff, recreation pressure and human disturbance. To attempt to counteract these stressors, colonial waterbird surveys will serve to identify the important stressors for particular colonies, foraging habitats, and roost sites and remedies to identified stressors. For example, these surveys help address the climate change needs expressed in Boere et al. 2007, specifically "There is a need for wide-scale planning, at landscape and flyway scales, to reduce or mitigate the impacts on waterbird populations and their habitats. Research that explores a range of potential future scenarios will be required to underpin this planning and will need data from long-term monitoring and surveillance."

Project Outcomes:

Report Period, January 19, 2010 – June 29, 2011: Indicated that the grant was meeting its objectives. CDFW coordinated with the USFWS to set overall goals and objectives, to develop a project methodology for the field season, and to prepare a scope of work. Also, a CDFW grant was developed and awarded to Point Blue Conservation Science.

Reports Period, July 1, 2011 – June 30, 2012: Fieldwork during this period focused on the Sacramento Valley and greater Central Valley Delta, including foothill drainages of the adjacent Coast Range, Sierra Nevada, coastal slope, and outer Coast Ranges of northern and central California (Del Norte County south through San Luis Obispo County).

Sacramento Valley and Delta

- Surveyed 142 active colonies in 2011.

Coastal Northern California

- Surveyed 134 active colonies on the coastal slope in 2011.

Reports Period, July 1, 2012 – June 30, 2013: Fieldwork during this period focused on the southern portion of the State, including the San Joaquin Valley, the coastal slope of southern California, and the Salton Sea and other desert sites.

Salton Sea and Adjacent Imperial Valley

- Surveys conducted for the following target species: Western grebe, Clark's grebe, double-crested cormorant, great blue heron, great egret, snowy egret, cattle egret, black-crowned night-heron, white-faced ibis, California gull, Caspian tern, and Forster's tern.

Coastal Southern California

- Target species included cattle egret, snowy egret, great egret, great blue heron, black-crowned night-heron, and double-crested cormorant.
- 2012 work provided the first-ever comprehensive surveys on the coastal slope of Southern California, which focused on the target species, including the cattle egret, snowy egret, great egret, great blue heron, and black-crowned night-heron.
- Leveraged project funds with other stakeholder efforts including surveys funded by the Imperial Irrigation District and Pasadena Audubon.
- Intend to incorporate all survey results into the USFWS' database and contributed to the inventory of 11 Western U.S. states.

Publications:

- Cooper, D. and D. Shuford. 2012. Memo from Cooper, D. and D. Shuford to Pasadena Audubon Society regarding completion of work on colonial waterbird surveys in coastal southern California in 2012, 3 pp.
- Molina, K. and D. Shuford. 2013. Memo from Molina, K. and D. Shuford to Imperial Irrigation District regarding completion of work on colonial waterbird surveys at the Salton Sea and adjacent Imperial Valley in 2012, 11 pp.

Evaluation Outcome 2: State Wildlife Grant Implementation

This section presents Blue Earth's analysis of SWG portfolio spending between 2005-2014 by region (SWAP 2005 and CDFW), ecosystem and associated topics, taxa, and conservation action categories. CDFW staff provided Blue Earth with documentation for 81 different SWG proposals and projects implemented during the SWAP 2005 implementation. Grants amounted to nearly $37 million dollars in SWG funds and were matched with approximately $19 million in State government funds between the 2005-2014 evaluation period. The average grant amount per year per grant for the 81 grants analyzed was $193,100, while the average grant amount per grant was $729,500. See *Text Box 5* at the end of this section for a summary of key findings presented in this section.

Correlation of SWG Funding Amount to SWG Outputs and Outcomes

We could locate just 15 final performance reports for the 69 completed grants provided to Blue Earth that documented grant outcomes, outputs, and publications. Of these 15 grants, one grant did not report any outcomes and four grants did not provide total funding amounts. Grant funding amounts ranged from $88,001 to $3,314,000 and grant length varied from one to six years. Regardless of funding level and length, reported grant outputs and outcomes varied significantly. Below we provide examples of low, medium, and high-level outputs for four- or five-year grants (please see *Appendix 9* for more detailed examples of other grants and outputs stated in their final performance reports).

- **Low-Level Outputs**: A five-year, $413,075 grant. No reported outputs in its final performance report.

- **Medium-Level Outputs**: A four-year, $182,116 grant. Reported outputs included two draft management plans; development, coordination, and planning of four additional management plans with the USDA-FS and USFWS; consultation of three USDA-FS trout removal projects conducted in the CDFW North Central region; and development and implementation of monitoring plans.

- **High-Level Outputs**: A five-year, $655,000 grant. Reported outputs included conducting an inventory, distribution, and status assessment of 146 covered species on accessible conserved land; conducting surveys for all taxa covered under the Multi-Species HCP (MSHCP); developing survey protocols; testing and refining long-term monitoring protocols; developing and implementing a long-term monitoring strategy; providing data for an adaptive management program; hosting a monthly meeting with land managers, representatives from affiliates, partner organizations, and other wildlife agencies; and developing a summary report of all surveys conducted.

Grant Analysis by Region

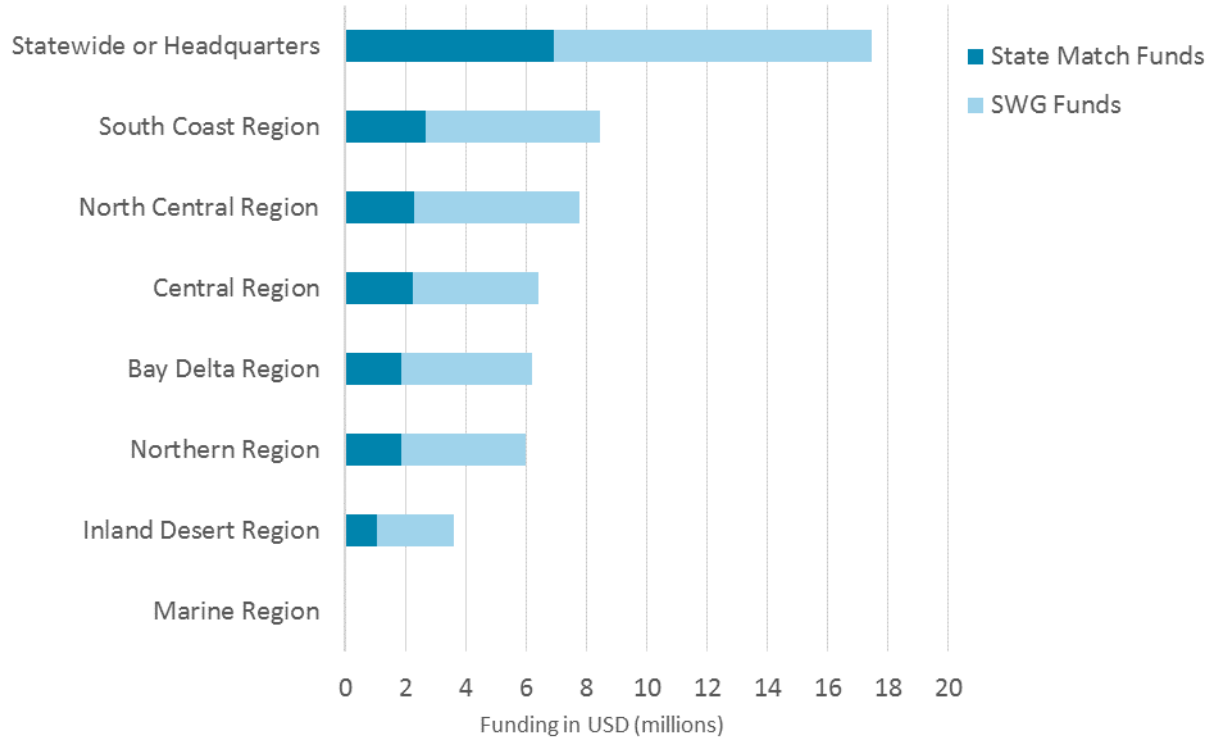
Over the last 10 years, SWG funds have been used to support conservation efforts throughout the State. For the regional grant analysis, we present both the CDFW region analysis and the SWAP 2005 region analysis. The SWAP 2005 regions did not align to the CDFW jurisdictional boundaries. According to the SWAP 2005, "these regional divisions were based on the state's physiographic characteristics (i.e.,

watersheds and vegetation communities) coupled with consideration of wildlife and natural resources management areas of responsibility."[18]

CDFW Region Analysis

The CDFW divides the State of California into seven regions: Northern, North Central, Bay Delta, Central, South Coast, Inland Deserts, and Marine. *Figure 5* shows the amount of SWG funds and State government match allocated to CDFW regions for the 81 grants. When grants addressed more than one region, we divided the amount of funding evenly among regions since SWG funded grant budgets did not specify allocations to each region.

Figure 5: SWG and State Government Match Funding by CDFW Region



During the evaluation period, most CDFW region grants supported Statewide or Headquarters interventions, which accounted for 27 grants and totaled $16,261,983 in funding. These grants include statewide grants, as well as grants carried out through the CDFW headquarters in Sacramento and at laboratories and universities such as UCD. Furthermore, the Northern region received 24 grants, the highest number of grants (aside from the Statewide or Headquarters CDFW regions); however, the Northern region received approximately $90,000 less per grant than the majority of the other CDFW regions. The South Coast CDFW region on the other hand received the highest amount of funding (aside from the Statewide or Headquarters CDFW regions), despite being allocated 30% fewer grants than the

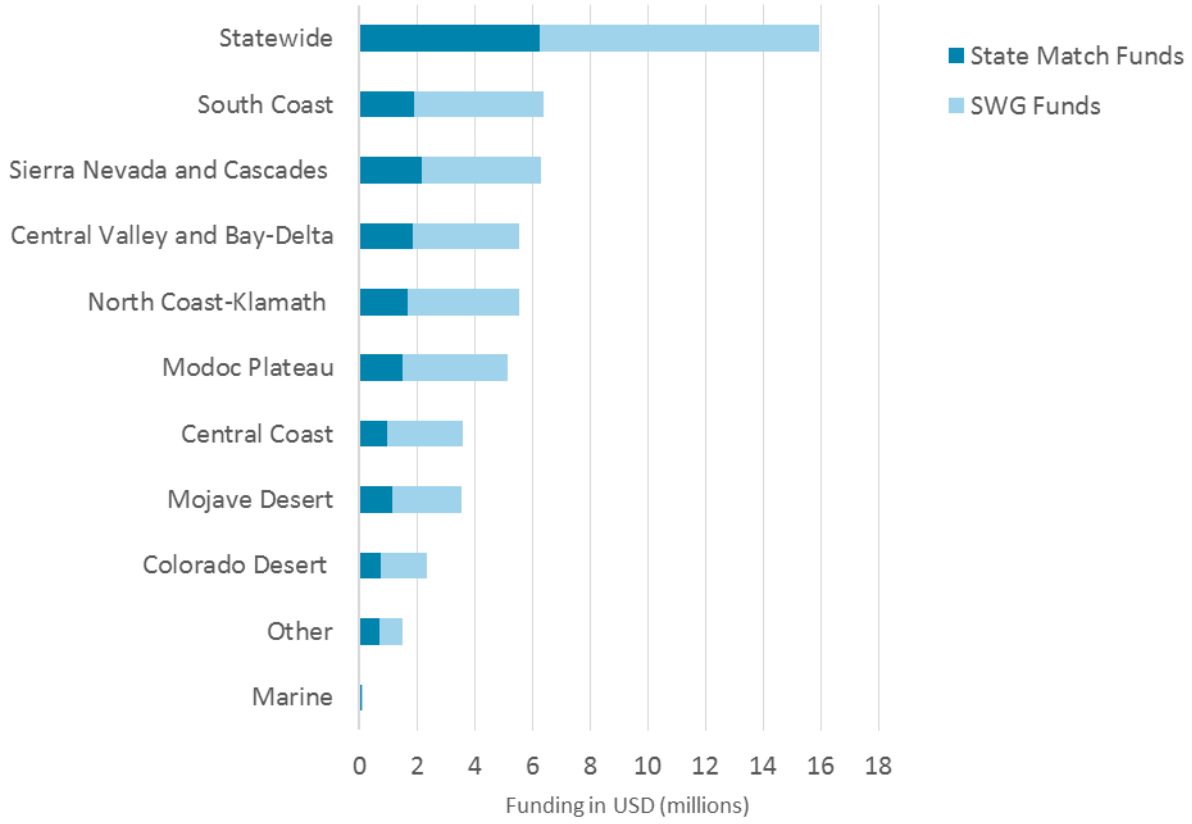
[18] David Bunn, et al., "California Wildlife Conservation Challenges: California's Wildlife Action Plan," University of California Davis Wildlife Health Center, California Department of Fish and Wildlife, 2007, 29 Jan. 2015 http://www.dfg.ca.gov/SWAP/2005/.

Northern region. On average, the South Coast region received $244,000 more per grant than the Northern region. Conversely, few grants supported the SWAP 2005 Marine region.

SWAP 2005 Region Analysis

The SWAP 2005 divided the State into nine regions: Mojave Desert, Colorado Desert, South Coast, Central Coast, North Coast-Klamath, Modoc Plateau, Sierra Nevada and Cascades, Central Valley and Bay-Delta, and Marine. *Figure 6* shares the amount of SWG funds and State government match allocated to each SWAP 2005 region. The SWAP 2005 region to receive the most funding was the Statewide region, while the Sierra Nevada and Cascades region received funding for the most number of grants. The Marine region received the fewest grants and funding.

Figure 6: SWG and State Match Funding by SWAP 2005 Region



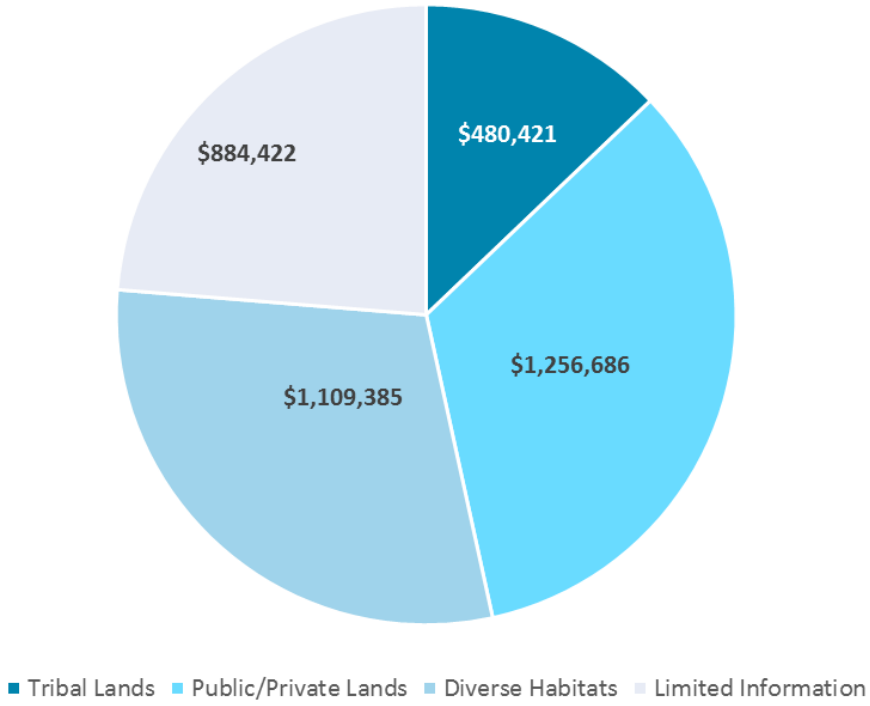
During the evaluation time period, the Sierra Nevada and Cascades region received funding for 26 grants, the highest number of grants, despite receiving almost $10 million less in funding than Statewide grants. It is important to note that the SWAP 2005 Sierra Nevada and Cascades region overlaps with four CDFW regions, specifically the Northern region, the North Central region, the Central region, and the Inland Deserts region. Additionally, the South Coast region received a similar level of funding to that of the Sierra Nevada and Cascades region, but received eight fewer grants, meaning on average Sierra Nevada and Cascade region grants received less funding than South Coast region grants. Based on the

SWAP 2005 Marine region, which differs from the CDFW Marine region, the SWAP 2005 Marine region received two grants, one specifically focused on the SWAP 2005 Marine region for $90,000 and the other within a larger statewide project. The SWAP 2005 Colorado Desert region, which received the second lowest amount of regional funding, received over $2 million dollars more than the SWAP 2005 Marine region.

Grant Analysis by Ecosystem Category

In the following sub-section, we provide grant analysis by a number of ecosystem categories developed by CDFW staff for this evaluation. Ecosystem categories include habitat type, management unit, landscape type, natural community base, biodiversity, ecosystem function, climate change, and invasive species. Grant documents do not always specify ecosystem information; therefore, Blue Earth relied on CDFW staff support to identify and provide information on each grant. When grant information was limited or when information addressed multiple categories, CDFW staff identified grants as addressing "various" or indicated that the grant had "Limited Information."

Figure 7: SWG Funding by Habitat Land-use Types



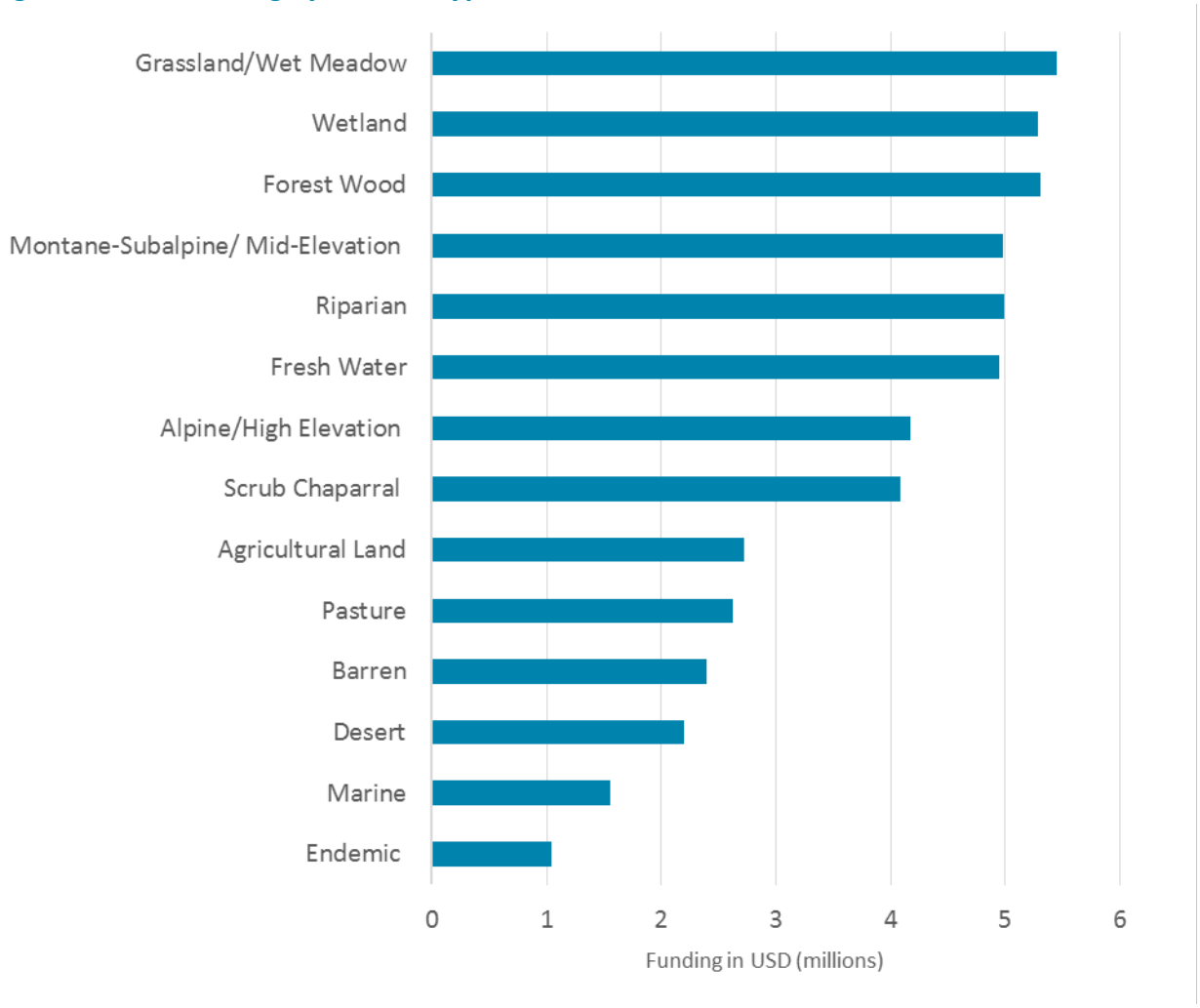
Habitat Type

Figure 7 shares habitat land-use types broadly classified by CDFW staff as Tribal Lands, Public and Private Lands, Diverse Habitats, and Limited Information.[19] *Figure 8* presents the amount of grant funding allocated by habitat type across California.[20] On average, each of these listed habitat types received approximately $2,921,777 in funding over the last 10 years.

[19] Grants activities addressed a number of land use types including Tribal Lands (lands owned or managed by California's tribes and tribal governments), Public and Private Lands (lands under multiple classifications including private and public management), Diverse Habitats (project inclusive of diverse types of habitats beyond CDFW's typical classification, e.g., caves), and those with limited Information (lands which could not be defined by the information shared in a grant).

[20] Please note some grants classified as marine related under habitat type are not necessarily categorized as "marine" for the CDFW and SWAP 2005 regions. For more detailed information on each habitat type, please refer to the following sources, which describes each habitat type in more detail: NatureServe Explorer, "Ecological Classifications," NatureServe, 2014, 29 Jan. 2015 http://explorer.natureserve.org/classeco.htm; Michael Barber, et al., 3rd ed. Terrestrial Vegetation of California (University California Press, 2007), 29 Jan. 2015 http://www.ucpress.edu/book.php?isbn=9780520249554; CNPS, "Manual of California Vegetation," California Native Plant Society, 2009, 29 Jan. 2015 http://www.cnps.org/cnps/vegetation/manual.php.

Figure 8: SWG Funding by Habitat Type



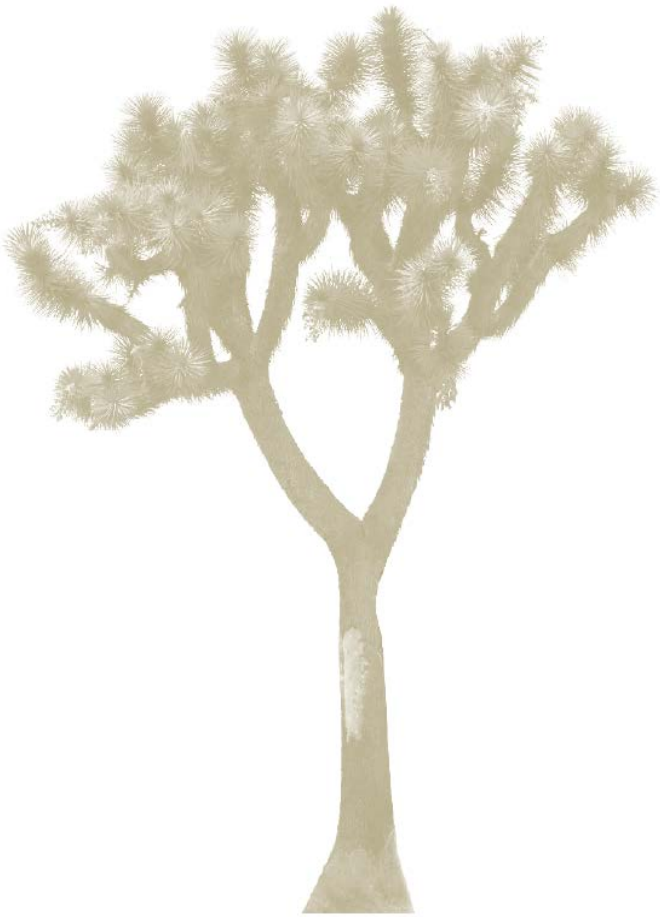
Management Unit

CDFW staff also indicated that grants addressed either Single (managed by one entity) or Multiple Management Units (managed by more than one entity). The vast majority of grants are Multiple Management Units, 94%, with 5% Single Management Unit, and 1% Not Related to a management unit classification.

Landscape Type and Natural Community Base

CDFW staff also categorized grants as Regional, Watershed, or Landscape based, which coincide with differing spatial scales of the grant activities. Ninety-two percent of the 81 grants were Regional, Watershed, or Landscape oriented. Six grants, or 7%, did not address one of these larger scale landscape types; five proposed in 2010 or earlier and another proposed in 2014. The change in focus may indicate a trend towards more regional, watershed, and landscape-based interventions rather than site-specific activities. Additionally, five grants did not have sufficient information to be classified.

CDFW staff indicated that the majority of grants, 83%, had a Natural Community Base, while 17% did not. Four of the grants that did not have Natural Community Base, also were not Regional, Watershed, and Landscape oriented (31%).

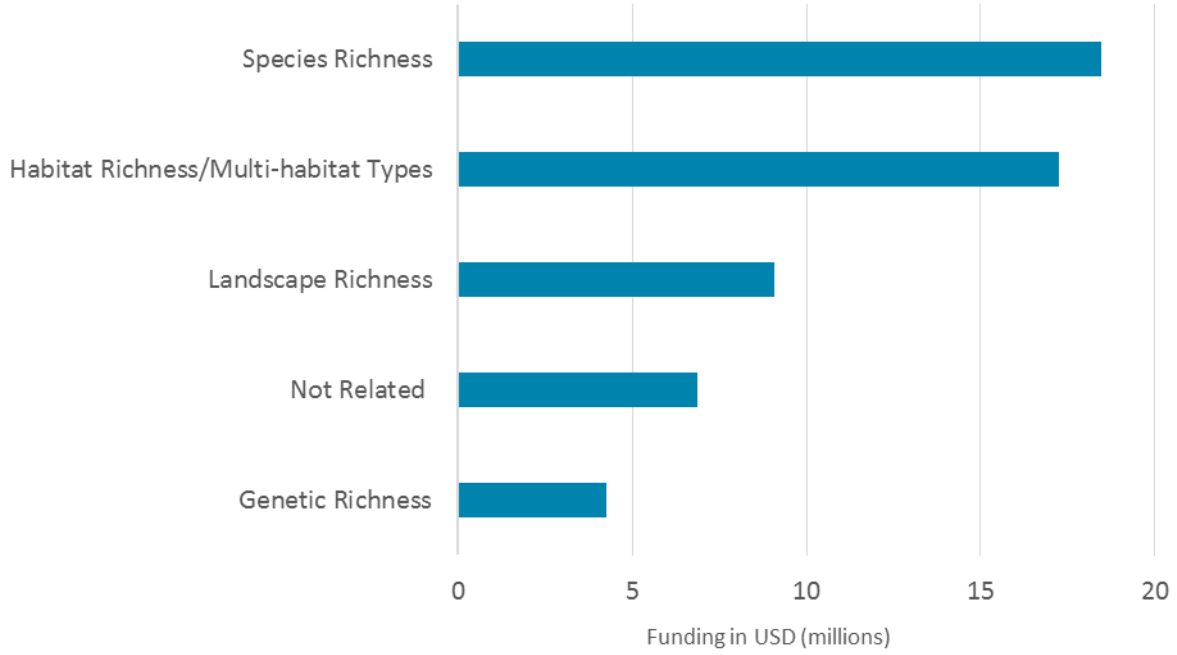


Wikimedia/Wattewyl

Biodiversity

Figure 9 shows the amount of funding by each of the biodiversity categories CDFW staff identified.[21] These two categories together account for roughly 64% of the total funding allocated between 2005 and 2014. Although only six grants were Not Related to biodiversity classifications, this category received roughly 30% more funding than Genetic Richness, which had 35 grants.

Figure 9: SWG Funding by Biodiversity Category

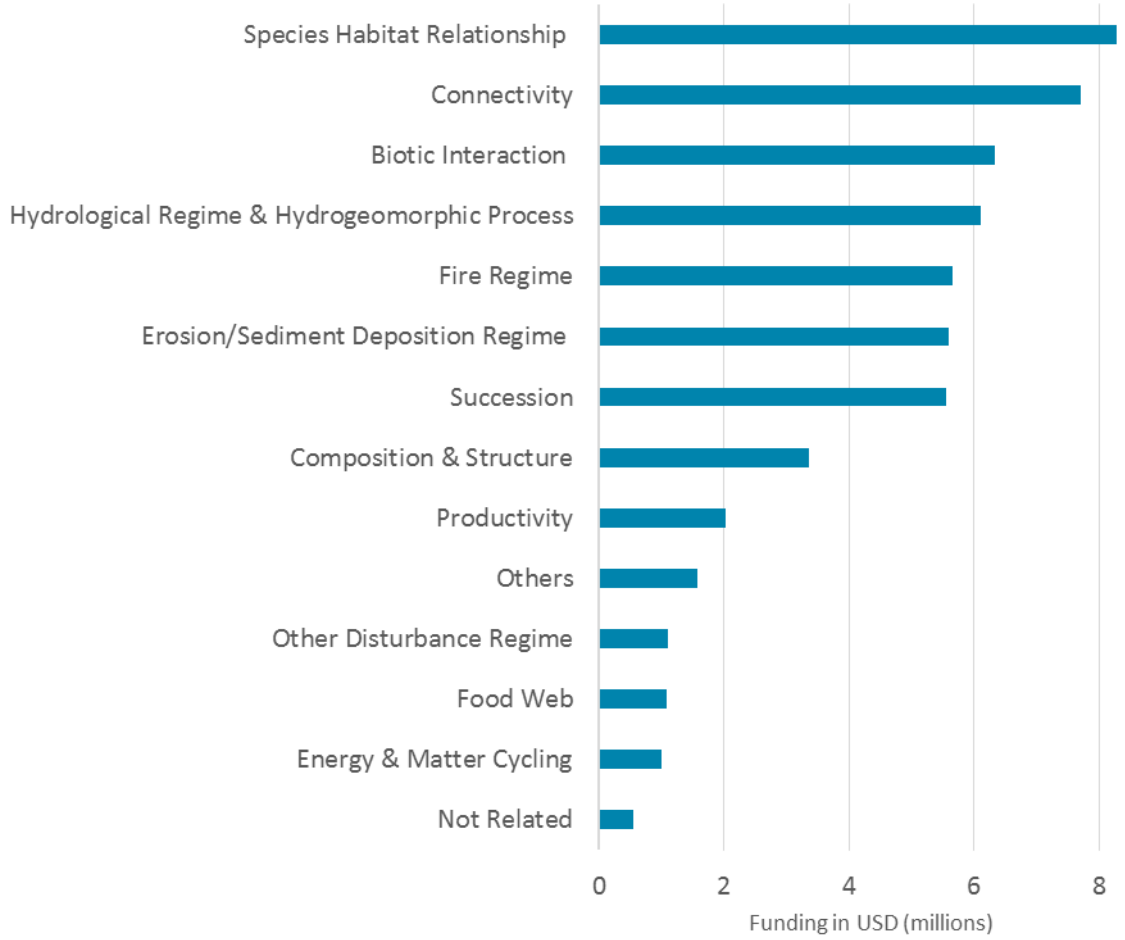


[21] According to Biology Online, ecosystem function can be defined as "The collective intraspecific and interspecific interactions of the biota, such as primary and secondary production and mutualistic relationships. The interactions between organisms and the physical environment, such as nutrient cycling, soil development, water budgeting, and flammability". Biology Online, "Ecosystem Function," Biology Online: Answers to All Your Biology Questions, 2005, 29 Jan. 2015 http://www.biology-online.org/dictionary/Ecosystem_function. In addition, CDFW broadly defined each component of Biodiversity as: **Species Richness**-how many species occur in a specific unit of concern; **Habitat Richness/Multi-habitat Types**-the habitat diversity often expressed within a specific management unit such as structural heterogeneity found within a riparian vegetation or intermingled vegetation within a wetland system; **Landscape Richness**-the level of diversity of divergent communities at a regional scale (e.g., a county or larger) often distinguishable in a satellite image, such as grassland, forest, dune and so on; **Genetic Richness**-the diversity and variation at the genomic level within a species or taxa group; and **Not Related**-grants did not refer to one of the biodiversity components.

Ecosystem Function

Figure 10 shows the amount of funding by ecosystem function, process, and condition categories developed by CDFW staff.[22] Although, the funding level for Composition and Structure is a modest $3,361,161, every 2014 grant touched on this category.

Figure 10: SWG Funding by Ecosystem Function, Process, and Condition Category

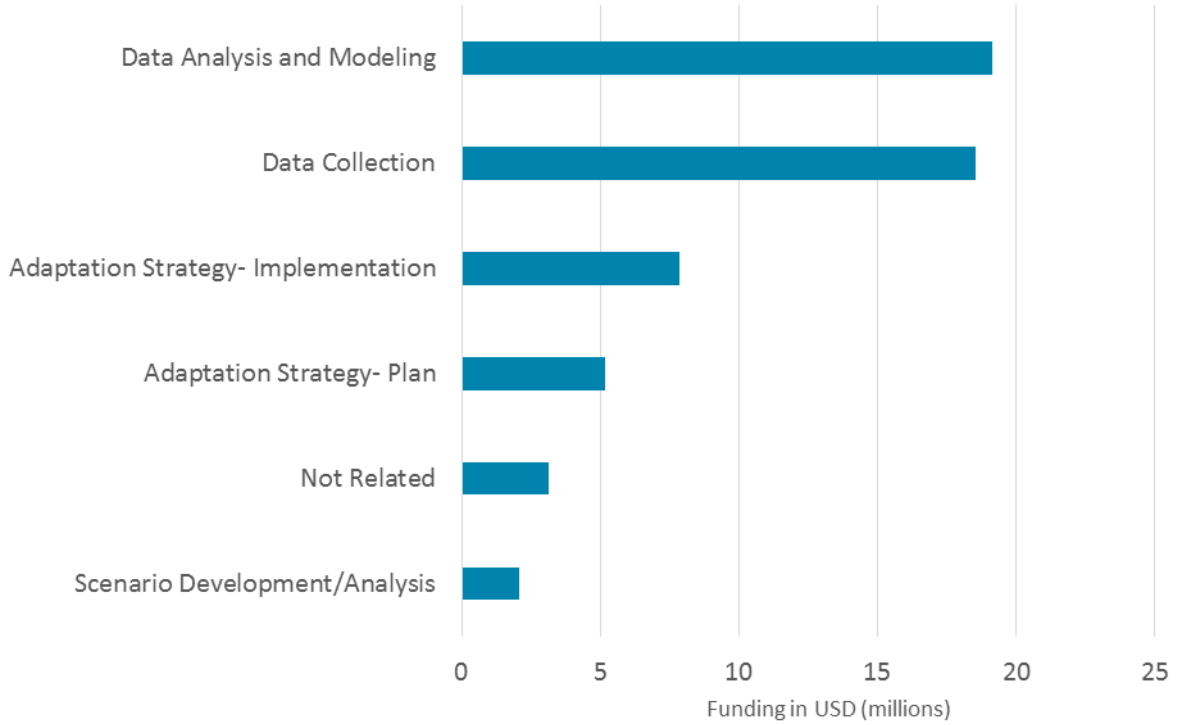


[22]To classify grants by the ecosystem function they addressed, CDFW used the following definition from Biology Online "The collective intraspecific and interspecific interactions of the biota, such as primary and secondary production and mutualistic relationships. The interactions between organisms and the physical environment, such as nutrient cycling, soil development, water budgeting, and flammability". Biology Online, "Ecosystem Function," Biology Online: Answers to All Your Biology Questions, 2005, 29 Jan. 2015 http://www.biology-online.org/dictionary/Ecosystem_function.

Climate Change

Climate change is an important category for the 2015 update and therefore the CDFW wanted to assess how past grant funding increased understanding of or addressed climate change. *Figure 11* shows the amount of funding by climate change categories developed by CDFW staff.

Figure 11: SWG Funding by Climate Change Category



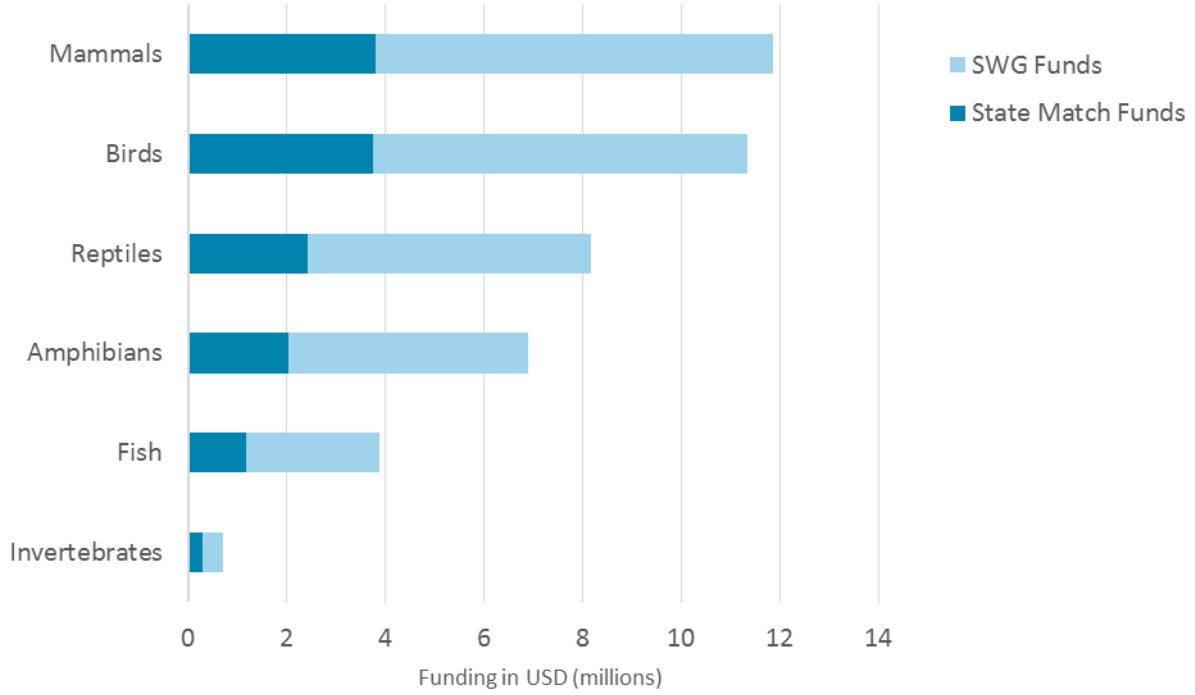
Invasive Species

In addition to climate change, another area of interest for the CDFW is invasive species. Of the grants examined, half of them addressed or involved invasive species. Of the total grants implemented in each period, proportionally more grants addressing invasive species were proposed after 2010 (approximately 50% of grants implemented in the period) than prior to 2010 (approximately 40% of grants implemented in the period).

Grant Analysis by Taxa

In addition to analyzing grants by region and ecosystem, grants were also reviewed as Multiple or Single Species and for specific target taxa groups. Fifty-seven percent of the grants implemented between 2005-2014 focused on Multiple Species, meaning that there was more than one target species that the grant sought to address, while 29% of grants focused on Single Species (for example, targeting Western burrowing owls or Pacific fishers). The remaining 14% of grants could not be classified as Single or Multiple Species because they were not species focused, meaning that they did not identify a specific species. Grant funding for Multiple Species grants was almost $39,370,786 over the last 10 years, which was $34,909,766 more than Single Species grants and $27,236,741 more than non-species specific grants. Twenty-four percent of the grants mentioned other benefiting species in their proposals, meaning that their project might target a single species but may, through implementation of project activities, benefit other species. For example by improving habitat for one species or taxa, other species or taxa may also benefit. *Figure 12* depicts the number of grants and funding by taxa.

Figure 12: SWG and State Match Funding by Taxa



Grant Analysis by Conservation Action Category

As we shared in the *Purpose and Methodology* section and referenced in the *Evaluation Outcome 1* section, we categorized the SWAP 2005 recommended conservation actions into broader categories, because they were wide ranging, but fall under higher level themes. *Figure 13* presents SWG and State government funding by conservation action category.

Figure 13: SWG and State Match Funding Allocated by Grant Topic within Conservation Action Categories

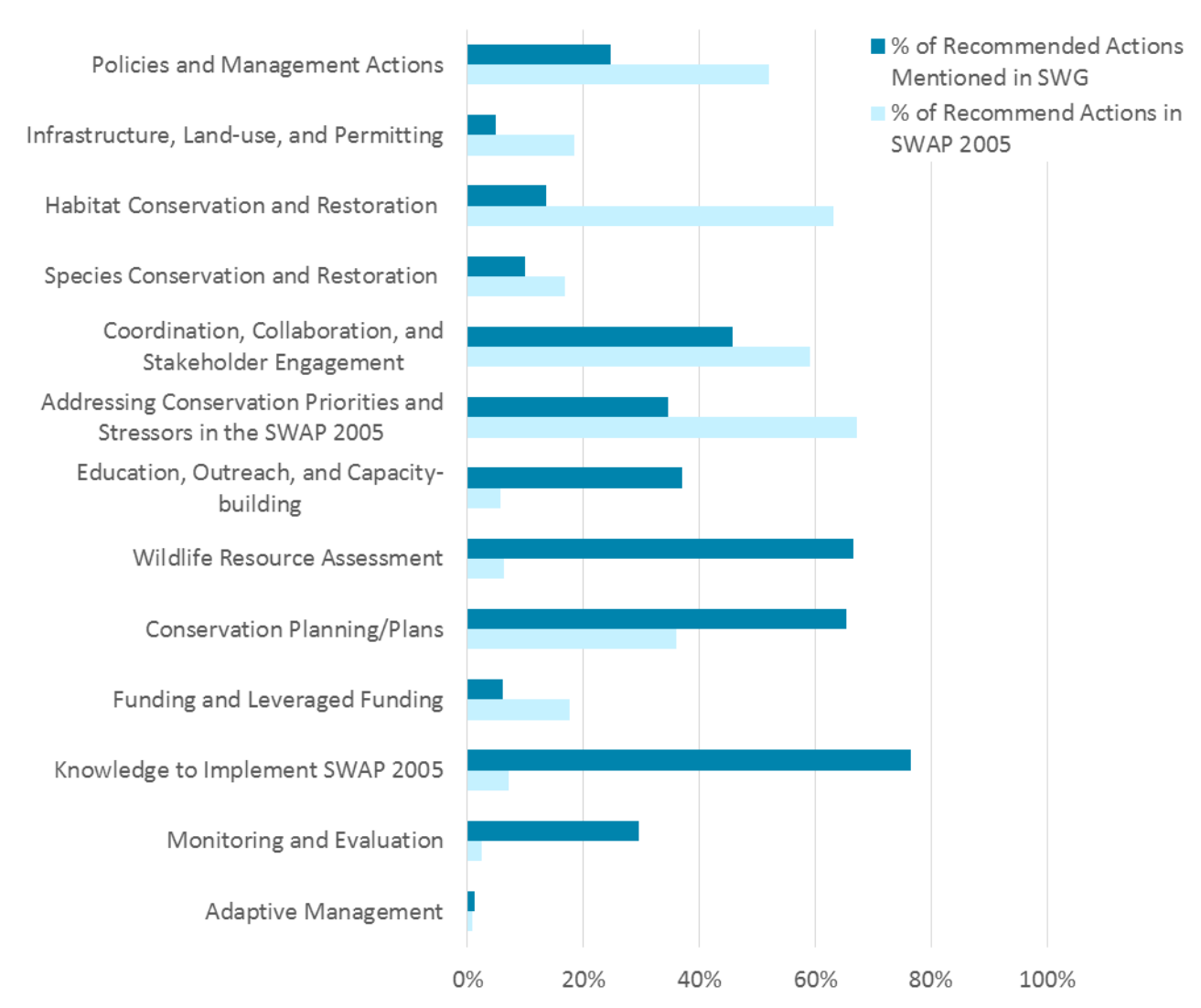
Comparison of SWAP 2005 Conservation Action Categories Addressed by SWG Funded Grants

To analyze conservation actions each SWG funded grant addressed, Blue Earth compared the focus of SWG funded grants against the focus of SWAP 2005 statewide and regional recommended conservation actions. *Figure 14,* shows the percent of recommended conservation actions mentioned in SWG funded grants against the percentage identified in the SWAP 2005. During the evaluation time period, recommended conservation action categories most aligned between SWG funded grants and the SWAP 2005 recommended conservation actions include Coordination, Collaboration, and Stakeholder Engagement, and Adaptive Management (although Adaptive Management was not highlighted as a significant focus for SWG funded grants nor the SWAP 2005).

Little alignment identified between SWG grants' focus and the most recommended conservation action categories—Policies and Management Actions; Habitat Conservation and Restoration; and Addressing Conservation Priorities and Stressors in the SWAP 2005.The biggest discrepancies between the SWAP 2005 and SWG funded grants, noted in *Figure 14*, were Habitat Conservation and Restoration; Education, Outreach, and Capacity-building; Wildlife Resource Assessment; Knowledge to Implement SWAP 2005; and Monitoring and Evaluation.

Although discrepancies exist, some activities such as Wildlife Resource Assessment, Knowledge to Implement SWAP 2005, and Coordination, Collaboration, and Stakeholder Engagement are key enabling actions that were needed to set the stage for State government to implement actions that address conservation priorities and stressors or inform policies and management actions. For example, a number of grants focused on obtaining baseline data that was needed for making informed decisions about specific species and wildlife resources and for developing conservation plans.

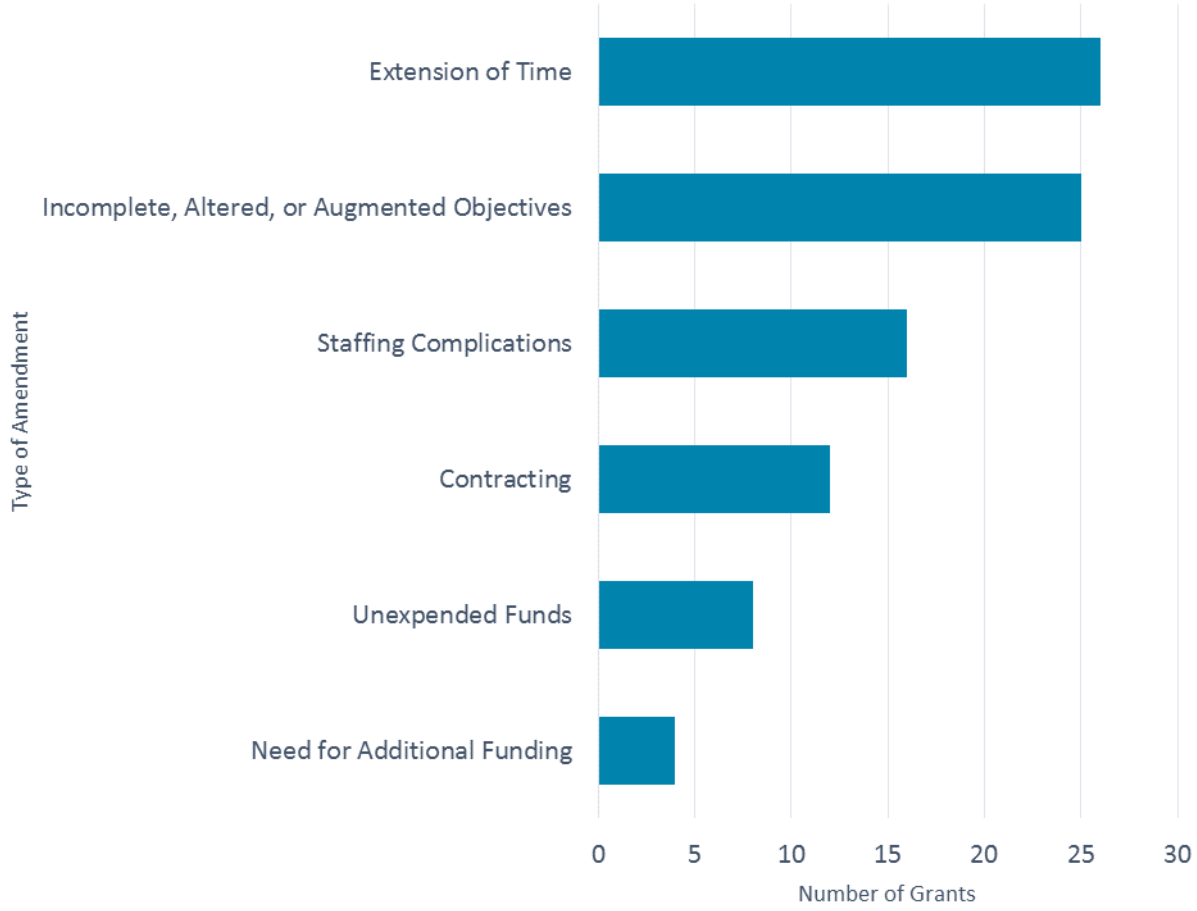
Figure 14: SWAP 2005 Conservation Actions and the Conservation Action Categories Addressed by SWG Projects



Amendments from Original Grant Making

During the SWAP 2005 implementation, a number of grants were amended from their planned objective and timeline. Because no progress reports exist for 2014 grants, we excluded them from our analysis. Out of 69 grants active between 2005 and 2014, 62% received amendments. *Figure 15* shares the number of grants and type of amendment received. Time extensions comprised 60% of all amendments and often resulted from delays in contracting or allocation of budget funds. Altered objectives included shifting the focus of the grant from species to habitat vulnerability, amending objectives to increase project efficiency by including species monitored under multiple projects under one grant, and switching from baited animal trapping to camera monitoring.

Figure 15: Number of Grants by Grant Amendment Type



Text Box 5: Evaluation Outcome 2 Summary: Statewide and Regional State Wildlife Grant Implementation

Evaluation Outcome 2 Summary: Statewide and Regional State Wildlife Grant Implementation

- State government match amount remained relatively consistent across years and grants, despite changes in total SWG funds.
- Thirty-one percent of the SWG funded grants had a statewide focus and received 41% of the total SWG funds.
- Majority of grants (57%) was multi-species focused.
- Grant Analysis by Region:
  - The Statewide or Headquarters CDFW region received consistent funding and grants throughout all regional analysis.
  - Aside from Statewide grants, the Northern CDFW region (Sierra Nevada and Cascade SWAP 2005 region) received the most grants from 2001-2013, while the South Coast and North Central CDFW regions received the most funding.
  - The Marine region (both CDFW and SWAP 2005) received the least amount of funding and number of grants.
- Grant Analysis by Ecosystem: Grassland and Wet Meadow habitats received the most funding, totaling $5.3 million, while a variety of habitat types received approximately $5 million in funding, including Wetland, Forest Wood, Montane-Subalpine/Mid-elevation, Riparian, and Fresh Water.
- Grant Analysis by Taxa: The majority of grants focused on mammals and birds, while invertebrates received the least focus. *Figure 2* shows the SWG and State government match funding allocation by taxa.
- Grant Analysis by Conservation Actions:
  - Strong correlation was identified between activities related to the conservation action categories Wildlife Resource Assessment, Increasing Knowledge to Implement SWAP 2005, and Conservation Planning/Plans. These topics also received the most grants and funding.
  - Activities related to the category Adaptive Management received the least funding and number of grants.
  - Weak correlation was found between conservation actions addressed in SWG objectives and conservation actions mentioned in the SWAP 2005.
- Amendments: The most common amendments included time extensions and incomplete or altered objectives.

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SWAP 2005 Implementation Progress and Outcome Case Studies

Below we present three case studies that share information on three separate species representing taxa groups that received the most SWG funding. Case studies provide information on the Pacific fisher, sage grouse, and Western pond turtle. With these case studies, we seek to show how SWG funded grants are linked to the SWAP 2005 identified wildlife stressors and overall progress outcomes and outputs for each. To select the case studies we identified which taxa received significant SWG funding between 2005-2014 (mammals, birds, and reptiles), identified grants that focused on a representative species within each taxa, and sought to identify key outputs, as well as outcomes from each grant. For each case study we not only reviewed the key outputs and outcomes that were identified in the grant reports, but also sought to find linkages with other statewide or regional planning efforts (HCP/NCCPs), mapping, and policy changes. Our follow-up research included web-based and literature searches and integration of verified interviewee insights. Although we sought to identify outcomes based on SWG funded grants, we could determine resulting activities and outputs, but could not find significant outcomes. For each case study we share, the number of single and multi-species grants implemented, value of implemented grants, objectives, SWAP 2005 stressors addressed, publications, outputs, and key outcomes. The three case studies below provide examples of the types of activities and outcomes performed under SWG funded grants to support each taxa type.

Dreamtime/JSteve Byland

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Case Study 3—SWAP 2005 Implementation Outcome Synthesis for Pacific Fisher

Number of Single and Multi-species Grants: Two single species grants (six multi-species grants)

Total Value of Single Species Grants for the Pacific Fisher: $262,220 in grants supporting specifically Pacific fisher projects (Total value of Pacific fisher grants and multi-species grants that included the Pacific fisher, $22,773,880. Multi-species grants addressed more than 80 additional species and all taxa types.)

Objective: Grant objectives varied among projects, with some common themes including:

- Increase knowledge to implement SWAP 2005 through surveys to inform conservation planning (nine grants)
- Wildlife resource assessments, such as collection of genetic samples to better understand the historical and contemporary connectivity of Pacific fisher populations in California (eight grants)
- Development of species conservation and management plans (eight grants)
- Coordination, collaboration, and stakeholder engagement (six grants)

SWAP 2005 Stressors Addressed:

- Climate change
- Forest management conflicts (North Coast – Klamath; denning trees)

Publications/Outputs: Four publications produced in connection with 10 grants addressing Pacific fisher:

- Facka, A.N., and R.A. Powell. 2010. Fishers released in the Northern Sierra Nevada of California: First year summary and observations. Martens Working Group Newsletter. Volume 17(1): 7-12.
- *Central Coast Lands Inventory Project Report and Biogeographic Information and Observation System (BIOS) Range Map*
- *North Central Region Lands Assessment. Final Report.**
- *Facka, A.N. and R.A. Powell. Reintroduction of fishers into the northern Sierra Nevada of California, Poster presentation, American Society of Mammologists National Meeting, Laramie WY, 2010.**

SWG Informed Outcomes:

- Range and distribution maps updated and made available in BIOS to inform planning and management
- Population status baselines completed
- Samples collected in Humboldt and Mendocino counties for future analysis of genetic diversity and population connectivity of California populations
- Assessment and ongoing (thru 2019) implementation of translocation project to test potential new sites, reproductive success, survival, and mortality of Pacific fisher
- Data collected to potentially inform HCP/NCCP plans in the North Coast-Klamath and Sierra Nevada and Cascades regions
- Reproductive success identified as a potential outcome on Hoopa reservation; however, a report was not produced resulting from the grant to indicate whether success has been achieved
- Development of agency and private landowner partnership within project areas to secure access to lands for the placement of camera stations

* Italics indicate additional documents referenced in grants that were not publically available.

Case Study 4—SWAP 2005 Implementation Outcome Synthesis for Sage Grouse

Number of Single and Multi-species Grants: Two single species grants (three multi-species grants)

Total Value of Single Species Grants for the Sage Grouse: $601,499 in grants supporting specifically sage grouse (Total value of sage grouse grants and multi-species grants that included the sage grouse, $7,298,637. Multi-species grants addressed more than 50 additional species and all but two taxa types.)

Objective: Grant objectives varied among grant projects, with some common themes including:

- Increase knowledge to implement SWAP 2005 through inventory assessments and monitoring efforts (five grants)
- Develop sage grouse habitat management and conservation recommendations for use in conservation planning (four grants)
- Perform wildlife resource assessments including collection of important data, such as nest success, survival seasonal movements, and habitat use, on resident and translocated sage grouse (four grants)

SWAP 2005 Stressors Addressed:

- Growth and land development, altered fire regimes, excessive livestock grazing (Sierra Nevada and Cascades)
- Forest management conflicts (Modoc Plateau)
- Multiple uses conflicting with wildlife on public lands (Mojave Desert)
- Western juniper expansion (Modoc Plateau)

Publications: Two publications produced in connection with five grants, including:

- Davis, D. M., and K. P. Reese. 2012. *Population Structure of Greater Sage Grouse: A Study of Dispersal and Genetic Variation in California*. June, 2012 Final Progress Report. 154pp.
- Tebbenkamp, J., K. P. Reese, and L. P. Waits. 2011. *Landscape effects on genetic structure and vital rates of greater Sage Grouse in Mono County, California*. December, 2011 Annual Progress Report. 25pp.

SWG Informed Outcomes:

- Collected information needed to objectively develop and assess conservation efforts, guide management and restoration activities, and understand the relative importance of conservation actions in the face of an emerging disease impacting isolated populations of genetically-unique sage grouse.
- Provided guidelines for habitat characteristics that increase the likelihood of survival and reproductive success for the species.
- Enabled better integration, coordination, and communication of conservation actions and monitoring priorities within the South Coast Region between CDFW programs, wildlife agencies, stakeholders, and the public and at multiple spatial scales (e.g., reserves, regional preserves, and entire ecoregions).
- Used information generated to evaluate and implement HCP/NCCPs throughout the State.

Case Study 5—SWAP 2005 Implementation Outcome Synthesis for Western Pond Turtle

Number of Single and Multi-species Grants: One single species grants (seven multi-species grants)

Total Value of Single Species Grants for the Western Pond Turtle: $271,507 in grants supporting specifically Western pond turtle (Total value of Western pond turtle grants and multi-species grants that included the Western pond turtle, $11,638,247. Multi-species grants addressed more than 40 additional species and all taxa types.)

Objective: Grant objectives varied among grant projects, with some common themes including:

- Supported education, outreach, and capacity-building by educating the public about the importance of Western pond turtle conservation and by providing resource managers and researchers with current information on the distribution status, ecology, and conservation/management needs for populations of Western pond turtles (five grants)
- Developed conservation plans, such as a comprehensive Western Pond Turtle Conservation Strategy for California (five grants)
- Increased knowledge to implement SWAP 2005 through the collection of wildlife survey data that can inform conservation decisions (four grants)
- Implemented an evaluation process and put tools in place to assess progress by integrating monitoring results and other learnings into decision-making through the development of a systematic data collection and assessment reporting protocol and data management procedures (four grants)

SWAP 2005 Stressors Addressed:

- Multiple uses conflicting with wildlife on public lands (Mojave Desert)
- Growth and land development, altered fire regimes, excessive livestock grazing (Sierra Nevada and Cascades)
- Climate change (Sierra Nevada and Cascades)

Publications/Outputs: No Publications

Challenges: Grants related to the Western pond turtle provide a good example of grants that did not meet their stated objectives. For example, the grant "Development of a Conservation Strategy for the Western Pond Turtle" intended to create a comprehensive conservation strategy; however, due to performance issues with the CDFW contractor a draft final version was delivered almost a year late, which limited the CDFW's ability to provide input into the development of the document. Because of the delay, the CDFW altered the focus of the final document from a formal conservation strategy to an informal informational document titled "California's Western Pond Turtle: Conservation Issues and Options." Blue Earth's attempts to locate the document on the CDFW website have been unsuccessful.

SWG Informed Outcomes:

- CDFW biologists and regional turtle experts provided input into the development of the document.
- Information generated from these grants supported HCP/NCCPs evaluation and implementation throughout the State.
- Increased awareness and understanding of the Western pond turtle's biology and resource requirements; provided standardized methods for investigating, monitoring, and reporting the Western pond turtle's success; and described research needs related to turtle conservation.

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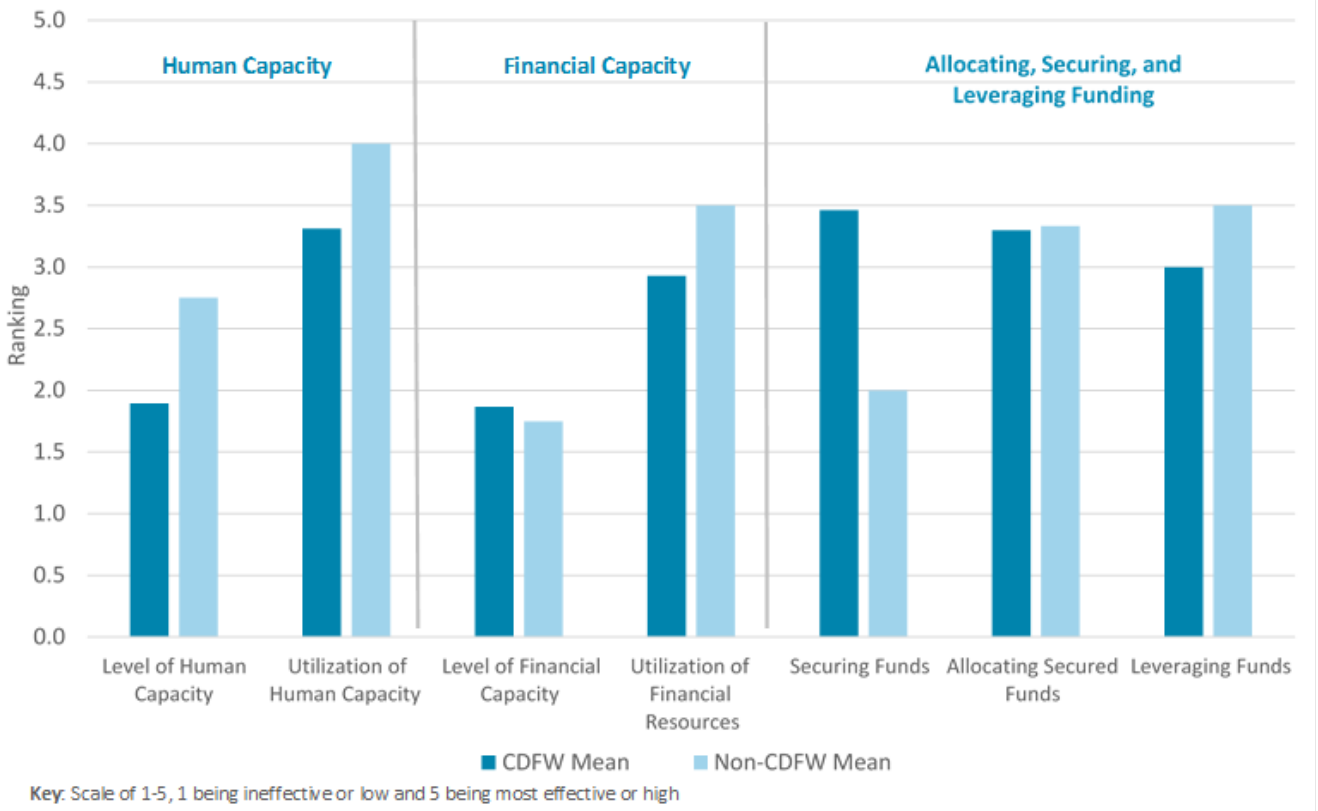
Evaluation Outcome 3 and 4: SWAP Implementation Effectiveness, Strengths, and Areas for Improvement

In this section we present findings regarding how effective and successful interviewees perceived State government was in implementing SWAP 2005 recommended conservation actions, including its human and financial capacity, ability to leverage additional human and financial resources, efficiency, strengths, areas for improvement, opportunities, gaps for effective implementation, and obstacles for implementation. See Text Box 6 at the end of this section for a summary of key findings presented in this section.

Effectiveness Implementing the SWAP 2005

This section shares our findings on effectiveness including the CDFW's human and financial capacity, strengths, areas of improvement, opportunities, and challenges, based on document review, interviews, and web-based research. Blue Earth asked interviewees seven questions focused on evaluating State government's effectiveness in implementing the SWAP 2005 on a scale of 1-5, **1 being ineffective and 5 being most effective**. In *Figure 16*, we show the average ranking CDFW and non-CDFW interviewee provided for each of these questions. Overall, CDFW and non-CDFW interviewee responses were similar, with an average effectiveness ranking across all effectiveness categories of just below 3 out of 5 (CDFW averaging a 2.8 and non-CDFW averaging a 3.0).

Figure 16: Mean CDFW and Non-CDFW Staff Perception of State Government's Effectiveness Implementing the SWAP 2005



Human Capacity

A strong majority of CDFW and non-CDFW interviewees indicated State government's level of human capacity was ineffective. CDFW interviewees' mean ranking for the level of human capacity was 1.9, while non-CDFW interviewees' mean was 2.8. Both CDFW and non-CDFW interviewees stated that while the CDFW has some big picture ideas, they have an inadequate number of staff to implement actions, often citing the recent recession and limited State government funding for increasing staff numbers. Interviewees also stressed that the CDFW consists of very dedicated staff who do the best with their resources, but given the size and complexity of a state like California, staffing is insufficient to implement conservation actions.

When asked how efficiently State government utilized its available human resources and capacity, interviewees were positive, particularly non-CDFW interviewees who had a mean response of 4, the highest of any category. CDFW interviewees indicated State government has been moderately effective, with a mean ranking of 3.3. In general, interviewees explained that State government has performed relatively well in terms of utilizing its available human capacity to implement the SWAP 2005, especially given the implementation coincided with an economic recession, which limited the ability to increase human capacity. Again, interviewees stressed that the high level of commitment of CDFW staff and a strong drive to implement important natural resource management actions coincided with more effective utilization of limited staff resources and capacity.

Financial Capacity

Dreamtime/Lunamarina

Both CDFW and non-CDFW interviewees ranked State government's level of financial capacity just below a mean of 2, which was the lowest of any category, and indicates the level of financial capacity was insufficient. Interviewees explained that the CDFW struggles to obtain funding each year and described the financial capacity as low and just "squeaking" along, making it challenging to manage the State's natural resources properly. Conversely, when interviewees' were asked how efficiently State government utilized its available financial resources, CDFW interviewees ranked State government's effectiveness just below 3 out of 5, or moderately effective, while non-CDFW interviewees ranked effectiveness at 3.5 out of 5, indicating State government has been somewhat effective. Interviewees stated that utilization of financial resources was decent, but could be improved by developing strategic planning for the use of funds for specific gaps and needs, rather than based on opportunity.

Allocating, Securing, and Leveraging Funding

A divergence existed between CDFW and non-CDFW interviewees' views on the effectiveness of State government securing funds. The majority of CDFW interviewees thought State government has been effective in securing funds, ranking effectiveness at a mean of 3.5 out of 5, while non-CDFW

interviewees ranked effectiveness at a mean of 2, which indicates a lack of effectiveness. One non-CDFW interviewee expressed that securing funds had been inconsistent and had been specifically difficult to obtain for certain habitats and species and also noted that there was likely more consistent funding for terrestrial habitats and species than marine species. A CDFW interviewee stressed that the CDFW has done a good job securing funds for needed projects, despite severe limitations in staff capacity and available time.

CDFW and non-CDFW interviewees' had very similar responses to State government's effectiveness in allocating secured funds to support the implementation of the SWAP 2005, both groups of interviewees ranked State government at a 3.3 out of 5, indicating State government was moderately effective allocating secured funds. Interviewees mentioned that there was a need for a more holistic vision of how the SWAP is utilized across the State and aligned with other plans and activities in the State so that the CDFW and other partners could allocate funds effectively for priority issues across the State. Furthermore, several interviewees provided general feedback on how to improve allocation of secured funds identifying significant bottlenecks in terms of allocating secured SWG funds for implementation of SWG projects, hiring temporary or permanent staff, securing matching funds, obtaining necessary equipment for research, contracting, and general deployment of resources.

In addition to State government's effectiveness leveraging and allocating funding, interviewees ranked how effective State government was at leveraging funding. Non-CDFW interviewees had a slightly more positive response to the State's effectiveness leveraging funds with a mean of 3.5, than CDFW staff whose mean was 3 out of 5. One interviewee identified the great grey owl project as very successful leveraging and distributing ESA Section 6 grant funds every year evenly across the Klamath region. Alternatively, another interviewee highlighted that State government was not effective at leveraging funds, but rather specific programs and colleagues had done a very good job at leveraging and securing outside funds to support the implementation of the SWAP.

Implementation Strengths, Areas of Improvement, Opportunities, and Challenges

In this section, we share interviewees' perception of State government's key strengths, areas of improvement, opportunities, and challenges for implementing SWAP 2005. For each topic, informants spoke more generally about the CDFW's effectiveness and the implementation of the SWAP 2005. *Figure 17* provides a summary of this analysis and is followed by more in-depth descriptions of each category.

Figure 17: State's Strengths, Areas of Improvement, Opportunities, and Challenges for Implementing the SWAP

Strengths (Current)

- Development of Applied Science and Research
- Dedicated Staff with Topical Knowledge and Expertise
- SWAP 2005 Implemented Through Internal and External Collaboration
- Federal Funding Accessed Successfully

Areas of Improvement (Current)

- Limited Financial Capacity
- Lack Sufficient Human Capacity
- Lack Clear Conservation Priorities, Objectives, and Metrics to Measure Progress
- Complex and Inefficient Bureaucratic Process Including SWG Application and Administration

Opportunities (Future)

- Develop Clear Achievable Priorities, Objectives, and Metrics to Measure Progress
- Streamline Grant-Making Process
- Improve Education about SWAP
- Increase Collaboration and Communication with Other Partners
- Use SWAP to Guide and Leverage New Sources of Funding

Challenges (Future)

- Limited/Insufficient Human and Financial Resources to Implement SWAP
- Political Opposition
- Policy Reform
- Adverse Environmental Changes Outside Of CDFW Control
- Potential Interagency Conflicts or Lack of Engagement

SWAP 2005 Implementation Strengths (Current)

Blue Earth collected input on the overall strengths of the SWAP 2005 implementation from interviewees. In general, interviewees indicated strengths related to science and research, dedicated CDFW staff, strong internal and external collaboration, and the CDFW's ability to access Federal funding. Below we share several overarching strengths interviewees expressed related to the implementation of the SWAP 2005.

Development of Applied Science and Research

One of the dominant strengths identified for the SWAP 2005 implementation was the development of applied science and research. Interviewees indicated that the CDFW focused support for applied science and research related to conservation in California, and in many cases is leading other states in terms of data analysis related to biodiversity and connectivity despite the size and relatively high biodiversity in California. For example, interviewees identified research and surveys focused on bank swallow and yellow-billed cuckoo populations. Even with funding, staffing, and contractual limitations mentioned in the areas of improvement below, interviewees identified important conservation science and research developed through the SWAP that informs the CDFW and other conservation planning and decision-making.

Dedicated Staff with Topical Knowledge and Expertise

Related to the development of applied science and research, interviewees stressed the level of dedicated staff with topical knowledge and expertise as a significant strength of the CDFW and the SWAP 2005 implementation. CDFW staffs' expansive regional and statewide expertise and knowledge of species and habitats has enabled effective implementation of a variety of grants. Interviewees also emphasized that CDFW staff and its partners were dedicated individuals performing effective and relevant conservation science.

SWAP 2005 Implemented Through Internal and External Collaboration

Interviewees mentioned that one of the most effective ways the CDFW implemented the SWAP 2005 was through collaborative efforts, both internally and externally. They enabled successful implementation of grants even with limited available resources. Internally, interviewees highlighted successful collaboration across branches. Externally, interviewees indicated strong interagency and inter-state collaboration between California and Federal agencies, which resulted in effective knowledge sharing. Interviewees also stressed that the SWAP 2005 took into account current restoration or conservation projects, plans, and activities already in place. One interviewee specifically mentioned the SWAP 2005 successfully built off previous restoration plans, such as the Southern California Wetlands Recovery Project, that was already in place before the development of SWAP 2005. Furthermore, since the implementation of the SWAP 2005, SWAP related projects have supported development of NCCPs/HCPs throughout the State. In addition, other planning efforts and plans identified the SWAP 2005 as a key planning document, such as the California Water Plan and the Forest and Rangeland Assessment.

Federal Funding Accessed Successfully

Most interviewees indicated progress made for funding availability, specifically through Federal funding opportunities under the SWG program to support conservation projects. Furthermore, interviewees indicated that there are many other sources supporting identified recommended conservation actions including, but not limited to, ESA Section 6 grants, Pittman-Robertson Federal Aid in Wildlife Restoration Act, and USFWS Wildlife and Sport Fish Restoration program grants.

SWAP 2005 Implementation Areas of Improvement (Current)

While the implementation of the SWAP 2005 did have some overarching strengths, Blue Earth also collected input on specific areas of improvement that may have limited the successful implementation of the SWAP. In general, interviewees mentioned challenges related to funding, staff capacity, lack of defined SWAP 2005 priorities and objectives, and lack of metrics to measure progress.

Limited Financial Capacity

One of the primary factors limiting the success of the SWAP 2005 implementation was a lack of sufficient funds to meet the ambitious set of recommended conservation actions identified in the SWAP 2005. Interviewees indicated that adequate budgets were continuously a limiting factor, specifically match requirements for State government to access Federal funding through the SWG. While it was recognized that some of the grants were administered during a recession, some changes in funding use, such as limitations on vehicle purchases and hiring staff, inhibited implementation success. In addition, lack of awareness regarding SWAP 2005 recommended conservation actions and opportunities to partner with State government may have limited engagement with external agencies, potential funders, and NGOs.

Lack Sufficient Human Capacity

Similar to funding limitations, interviewees indicated a lack of sufficient staff and human capacity for implementing the SWAP 2005, as well as other CDFW programs. Moreover, interviewees indicated California's size and significant conservation needs, stressed already limited human resources. In addition, limitations on how funding could be utilized did not allow SWG funding to hire staff to fulfill certain positions, and contracting limitations for personnel services further reduced implementation success.

Lack Clear Conservation Priorities, Objectives, and Metrics to Measure Progress

Interviewees thought the intent of SWAP 2005 was good, but frequently struggled to articulate the success or failure of the SWAP 2005 implementation because it lacked clear conservation priorities, objectives, and metrics to measure progress. Interviewees also stated the conservation actions were often general and poorly defined. Staff at the regional scale articulated that the SWAP 2005 had limited utility for day-to-day work and for guiding long-range regional actions. Similarly, interviewees found it difficult to evaluate the implementation of the SWAP 2005 because it lacked objectives or metrics to measure progress for assessing success over the last decade. Interviewees indicated that challenges related to a lack of clear conservation priorities and objectives may have been the result of not having a SWAP program home or champion within CDFW leadership, to foster greater uptake and support accountability for implementing recommended conservation actions.

Complex and Inefficient Bureaucratic Process Including SWG Application and Administration

Interviewees repeatedly cited general bureaucratic processes as an implementation weakness of the SWAP 2005 implementation. Specific government inefficiencies and institutional barriers mentioned by interviewees included contracts between government agencies and NGOs, legal documentation, permitting, working across jurisdictions, granting, and funding processes. One interviewee indicated that it was relatively easy to obtain grant funding, but the process of allocating and spending those funds was difficult. In some situations, delayed contracting resulted in amendments to SWG funded grants, and in some rare cases, resulted in the CDFW returning funding to the USFWS that could not be spent. In one instance, due to government inefficiencies, volunteers administered one grant almost entirely.

SWAP 2015 Update Opportunities (Future)

Moving forward there are several opportunities for the SWAP 2015 update to improve upon previous implementation efforts. Key overarching opportunities include developing more refined and clear priorities and metrics to measure progress, streamlining the grant-making process, improving education opportunities and knowledge about the SWAP, and further improving collaboration and communication with partners.

Develop Clear Achievable Priorities, Objectives, and Metrics to Measure Progress

While monitoring and evaluation has occurred within some regions of the State, many interviewees were unfamiliar with such efforts. Therefore, to better assess the implementation of the SWAP in the future, nearly all interviewees stressed the need to develop specific SWAP 2015 goals, priorities, objectives, and metrics to measure progress that are tracked to determine the effectiveness of the SWAP 2015 implementation. Once clear metrics to measure progress and regular evaluation of grants are established, the CDFW could regularly evaluate the effectiveness of grants and adaptively manage implementation accordingly. To implement SWAP 2015 and strengthen accountability, interviewees stressed the need for a leadership champion, which could direct resources towards priority projects and ensure SWAP 2015 statewide and regional implementation.

Streamline Grant-Making Process

Interviewees stressed the need and opportunity to improve the grant-making process. Interviewees specifically mentioned a need to increase awareness about available grants, provide sufficient training to develop robust proposals, and provide feedback on rejected grants. Moreover, the grant proposals could make applicants identify metrics to measure progress for grant activities and identify project partners or leveraged funding to support implementation.

Improve Education about SWAP

Because SWAP updates occur every 10 years, a potential gap in knowledge and awareness of the SWAP could develop between updates. One way CDFW staff knowledge could improve is through routine education and outreach or annual progress updates that show progress, success, and benefits of implementing SWAP recommended conservation actions. Updates could demonstrate how the SWAP is used, examples of how it links with other conservation efforts, and any successful SWG projects.

Increase Collaboration and Communication with Other Partners

Because resource limitations inhibit implementation, interviewees identified increasing collaboration and communication within the CDFW and externally with other agencies, partners, and stakeholders as a significant opportunity for improving future SWAP 2015 implementation. While the CDFW developed the SWAP 2005 and its update, because of its scope, many agencies and groups could play a role in its implementation. Interviewees indicates strong support for developing and implementing the SWAP 2015 companion plans, which will help align and leverage similar local, State, regional, and Federal conservation efforts in California, such as the WCB efforts, HCPs, and NCCPs.

Use SWAP to Guide and Leverage New Sources of Funding

In addition to increasing collaboration, the updated SWAP could also be used to help set the context and strategic direction of habitat and wildlife conservation and restoration efforts more broadly and help inform use of funding to support these efforts for the State, as well as among partners (both government and non-government). For example, strategies and priorities set in the SWAP 2015 could guide allocations of the 2014 Water Bond wildlife and habitat conservation and restoration funding. In addition, by articulating the goals and objectives of the SWAP 2015 and aligning it with other ongoing efforts, the SWAP 2015 could help others identify how their support could foster implementation moving forward.

SWAP 2015 Update Challenges (Future)

Interviewees identified a number of potential challenges, which could affect the implementation of the SWAP 2015. Specific challenges mentioned include insufficient human and financial resources, political opposition, policy reform, adverse environmental changes, and interagency conflicts. While some of the challenges highlighted may be out of the control of the CDFW, it is important to acknowledge these challenges and develop ways to adapt and address them as they arise.

Limited/Insufficient Human and Financial Resources to Implement SWAP

As mentioned previously, one area of improvement from the SWAP 2005 implementation was a lack of sufficient human and financial capacity and resources to meet the broad scale objectives of the SWAP 2005. Similarly, moving forward, lack of sufficient human and financial resources could impede the successful implementation of the SWAP 2015 by further limiting the CDFW's ability to implement conservation actions as well as limiting its ability to engage and leverage partner support for implementation successfully.

Political Opposition

Interviewees identified political opposition as potential risks for implementing the SWAP 2015 because public opposition to certain conservation actions and activities may hinder implementation or reduce the effectiveness of implementing recommended conservation actions. Interviewees indicated that California is particularly sensitive to political opposition.

Policy Reform

Interviewees identified policy reform as potential risks for implementing the SWAP 2015 because reforms that relax existing regulations may hinder implementation or reduce the effectiveness of implementing recommended conservation actions. Furthermore, approval of regulations or policies that are not in the best interest of conservation, could negatively affect the implementation of the SWAP 2015. Interviewees indicated that California is particularly sensitive to reforms that weaken environmental regulations, such as potential reforms to the California Environmental Quality Act, because of the demand for growth and development as well as its link to economic development.

Adverse Environmental Changes Outside Of CDFW Control

Numerous environmental changes outside of the CDFW and other agencies' control, such as wildfires, drought, and climate change, pose a risk to wildlife and habitats. The increased risk of adverse environmental changes could impede the efficacy of conservation actions, including Species and Habitat Conservation and Restoration.

Potential Interagency Conflicts or Lack of Engagement

Given that conservation actions often intersect other State and Federal agency jurisdictions (for example, Caltrans, United States Bureau of Land Management, United States Army Corps of Engineers, and U.S. Department of Energy), engagement and collaboration is important for implementing the SWAP 2015 as well as ensuring that key enabling conditions are in place to support success. Moving forward it will be important to foster communication and engagement with these agencies to implement the broad range of conservation strategies outlined in the SWAP 2015.

Ways to Address Key Areas of Improvement and Challenges

Interviewees mentioned a variety of challenges and bottlenecks associated with the implementation of the SWAP 2005. Below we share these overarching challenges and potential solutions for overcoming these challenges moving forward.

Limited Staff Capacity and Human Resources Limitations: To overcome staff capacity and human resource limitations, interviewees stated that CDFW leadership could encourage and potentially mandate implementation and integration of the SWAP 2015 actions in day-to-day operations. In addition, leadership could increase staff accountability by assigning specific staff to drive implementation, act as a point person for grant proposal development and administration, as well as oversee monitoring and evaluation activities related to grants, conservation actions, and overall implementation of the SWAP 2015 in accordance with the eight required SWAP elements (see page 3 for more detail). Furthermore, where priorities align with the CDFW's overall mandate, there is an opportunity to reallocate resources (financial and human) towards priorities to focus and more efficiently utilize the CDFW's resources. Given that human resources will likely remain limited in the future, engagement with partners and leveraging their additional staff and financial capacity could alleviate this challenge.

Lack Clear Priorities and Measureable Actions: As stated in previous sections, one of the primary shortfalls of the SWAP 2005 implementation was a lack of strategic priorities; measurable, achievable

goals to guide the direction of the SWAP 2005; and clear metrics to measure progress. To overcome this challenge, interviewees suggested distilling the SWAP 2015 recommended conservation actions into a set of very specific recommended conservation actions for the next 10 years, which could be easily referenced and reviewed. Once clear priorities are identified, metrics to measure progress can be developed to assess progress and increase accountability for implementing the SWAP 2015 and SWG projects. In addition, the interviewees suggested leveraging the SWG with other grant opportunities, such as ESA Section 6 grants, to identify projects that benefit both SGCN as well as endangered species.

Dreamtime/Adam Thorn

Complex Grant Administration and Bureaucracy: Interviewees had several recommendations to alleviate the challenges associated with grant administrative processes, bureaucracy, and improve future implementation of the SWAP 2015. Specifically, interviewees suggested establishing consistent statewide processes, forms, and templates for grants; sharing all up-to-date documents on a website or grant page that is updated regularly and easily accessible by grant applicants and recipients; providing grant administrative support and training to SWG recipients; articulating clear objectives and metrics to measure progress in grant applications; developing more efficient and flexible processes for spending and allocating grant funds; identifying opportunities and processes for obtaining matching funds; streamlining the contracting process with outside organizations; establishing a clear lead for each grant that is accountable for grant performance; and providing grant applicants with feedback and rational for rejected grants.

Limited Communication and Collaboration: Interviewees indicated that communication and collaboration was both a challenge and a weakness during the implementation of the SWAP 2005; however, to ensure that the implementation of the SWAP 2015 meets its intent, interviewees stressed the need for continued focus on communication and collaboration. Interviewees specifically mentioned communication and collaboration could be improved by increasing interactions and partnerships with external groups (agencies, NGOs, private sector, and the public); developing opportunities for inter-agency interactions such as webinars and regular meetings; integrating SWAP implementation into other statewide strategies to increase engagement and implementation of synergistic actions; and building off of existing programs and initiatives to avoid duplication of efforts, such as working with local agencies through HCP/ NCCPs. Encouraging and incentivizing staff to collaborate across divisions or with outside groups could also simplify processes and reduce duplication of efforts within the CDFW and externally.

Limited SWAP Awareness and Education: Lack of awareness and education about the SWAP 2005 within the CDFW and within external organizations and agencies hindered SWAP 2005 implementation. To overcome this challenge during the implementation of the SWAP 2015, interviewees suggested educating staff and stakeholders about the SWAP 2015 through informative workshops; providing regular SWAP progress updates through the CDFW website or through annual reports; educating

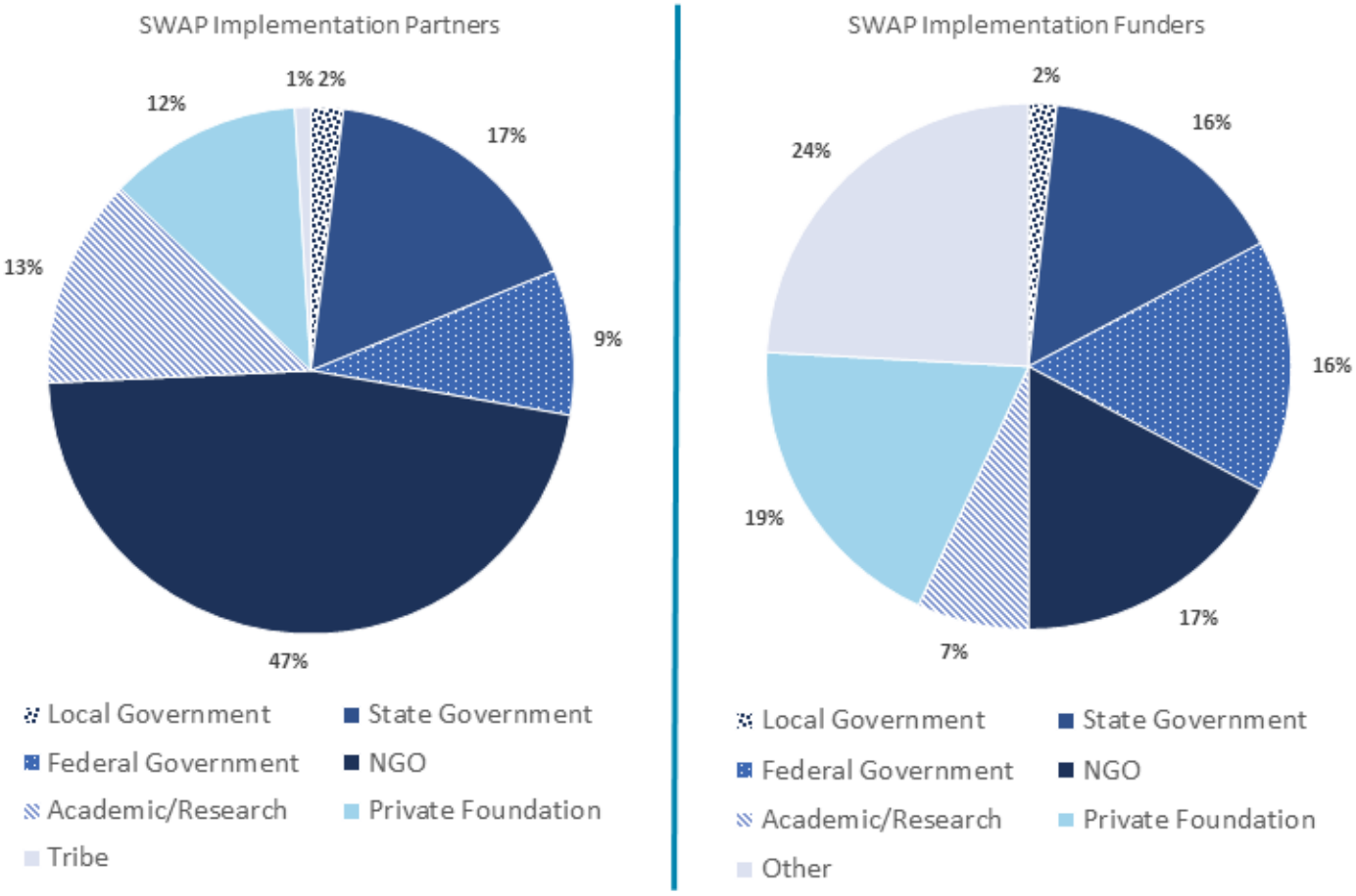
stakeholders about the SWAP 2015 to increase engagement and support of the SWAP 2015 conservation strategies and recommend actions; and by developing linkages to regional activities and implementation efforts. Interviewees also stressed the importance of developing sector-specific companion plans and felt this approach would not only help increase awareness, but would also increase collaboration.

Adaptability to Emerging Stresses and Pressures: Interviewees suggested making the SWAP 2015 more flexible so that it can adapt to emerging statewide stresses or pressures, rather than remain static between 10-year updates. Some interviewees also indicated that while having set priorities listed in the SWAP 2015 is important, they also highlighted the need to support adaptation and responsiveness to new emerging priorities. Interviewees also suggested using mid-term updates or reviews to revise the SWAP 2015 or allow for adaptations to key strategies, goals, and priorities based on new information or emerging needs.

Current and Future Partners and Funders Supporting SWAP Implementation

Partners and funders play an important role in the current and future implementation of SWAP conservation actions. Partners often help support complementary efforts, provide additional human and financial capacity, or engage in efforts to support specific SWAP conservation actions. In addition, funders provide needed financial resources necessary for implementation. To support the future implementation of the SWAP 2015, interviewees mentioned a variety of organizations that will likely support the SWAP 2015 implementation through funding and collaborative partnerships. *Figure 18* provides a breakdown of the types of partners and funders interviewees identified as likely to support SWAP 2015 implementation. Blue Earth recognizes that many efforts and funds support complementary efforts to the SWAP implementation statewide and regionally that may not be captured here or elsewhere in this evaluation.

Figure 18: Types of Partners and Funders Identified by Interviewees



Text Box 6: Evaluation Outcomes 3 and 4 Summary: SWAP Implementation Effectiveness, Strengths, and Areas for Improvement

Evaluation Outcomes 3 and 4 Summary: SWAP Implementation Effectiveness, Strengths, and Areas for Improvement

- Interviewees identified collaboration with external partners as both a strength of the SWAP 2005 implementation, as well as an opportunity and area of improvement for the SWAP 2015.
- State government's lack of sufficient staff to support SWAP implementation strongly correlated to a lack of overall funding to support the CDFW and SWAP activities.
- SWAP 2005 had limited utility for day-to-day work and for guiding long-term regional actions.
- Regional interviewees emphasized more difficulties with the grant process than statewide interviewees did; specifically they mentioned a need for a clearer grant application process and feedback on rejected grants.
- Identified challenges to successful implementation of the SWAP 2015 included insufficient human and financial resources, political opposition, policy reform, adverse environmental changes outside the control of CDFW (e.g., climate change), and potential interagency conflicts.
- Additional education and outreach to applicants and partners about the grant process, along with standardized applications, and increased administrative support could improve the grant-making process overall.
- Government agencies were identified as the sector most likely to fund related projects or provide match funding in support of SWAP projects, while NGOs comprised almost half of the potential implementation partners mentioned.

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Interviewee Lessons Learned

In this section, we share SWAP 2005 implementation lessons learned gleaned from interviewee perception and SWG funded grant reports to inform the SWAP 2015. Please note that SWG reporting documents did not include a lessons learned component. However, we gathered lessons learned from grant amendment documents as well as asked interviewees about implementation lessons learned. When interviewees responded to these questions, they often focused on programmatic planning and administration lessons rather than implementation lessons.

Lesson 1: Clear and Prioritized Implementation Strategies and Actions are Key to Successful Implementation

To enhance the SWAP 2015 implementation success and effectiveness, interviewees indicated the importance of having clear and prioritized implementation strategies that focus on achievable actions (e.g., actions are time bound and realistic). For example, the SWAP update process is utilizing the Miradi system based on the Open Standards. Through this system, conservation strategies and actions undergo numerous viability assessments to identify the strategies that will yield the most effective outcomes. By articulating and prioritizing actions in this way, informants shared that the SWAP 2015 could support greater uptake by identifying what is feasible and most important for addressing the threats and stressors facing species and habitats in the State. In addition, the CDFW, other agencies, and partners could more effectively align funding allocations with prioritized strategies, objectives, and activities to ensure more adequate levels of funding are available to address these priorities. One caveat noted by interviewees was the importance of ensuring that although specific strategies and actions are prioritized based on the best available information at this time, there is a need to allow flexibility to address emerging or new issues in the future.

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Lesson 2: Clearly Articulating Goals, Objectives, and Metrics to Measure Progress Could Help Improve and Support State Government's Ability to Regularly Evaluate and Assess Progress

Informants suggested clearly articulating goals, objectives, and metrics to measure progress could lead to improved assessment capabilities and more routine evaluation and assessment of progress. In addition, having these components in place could strengthen accountability based on progress assessment and evaluation results.

Lesson 3: Accountable, Transparent, Consistent, and Effective Grant Administration Processes Improve Overall Grant Success and Implementation

Interviewees indicated increased consistency and transparency in the current grant administration procedures could lead to more effective implementation and reductions in delays and complications. Improved consistency in forms, applications, and contracting procedures between regions for example could improve implementation and more efficient use of staff time overall. One grant administration and tracking model interviewees suggested that CDFW could emulate internally is the DWR's online grant tool and tracking system. In addition, for grants administered under the USFWS Wildlife and Sport Fish Restoration program CDFW already uses the USFWS' 2013 Wildlife TRACS tool, which allows for real-time tracking and reporting online. Interviewees also indicated that greater guidance and training for grant administration and budgeting, could improve ability to meet timelines and reduce delays caused by denied spend-down requests for equipment purchases or staff hires. Interviewees explained that understanding the grant process, fund allocation, and spending limitations, could improve their proposal and implementation effectiveness.

Lesson 4: Increased Integration of SWAP with other Statewide and Regional Plans Fosters Uptake and Successful Implementation

Interviewees shared that increasing buy-in and linkages with other efforts at statewide and regional scales could not only increase uptake and integration of SWAP 2015 strategies into work supported by groups beyond the CDFW, but could also address gaps in capacity. In addition, interviewees suggested that coordination between agencies and organizations could lead to greater human and financial capacity, reductions in effort duplication, and stronger implementation.

Lesson 5: Increased Awareness, Buy-in, and Engagement of Partners and Stakeholders Increases Successful Implementation

Interviewees indicated that increasing awareness, buy-in, and engagement of agencies, partners, and stakeholders beyond CDFW could improve implementation success. Greater outreach and education, could also lead to implementation of mutually beneficial activities, additional resources, and leveraged support in the future.

Flickr/USCDyer

Recommendations and Paths Forward

Based on Blue Earth's evaluation of SWG documents, semi-structured interviews with key interviewees, web-based research, review of other documents, and synthesis of collected information, we have several recommendations for improving the SWAP implementation moving forward. Recommendations for improving SWAP implementation are organized into three categories below: SWAP 2015 Update, State Operations and SWAP Implementation, and Awareness Building, Coordination, and Collaboration. Following the recommendations, we highlight next steps.

SWAP 2015 Update

Interviewees provided specific feedback with regard to information that should be included in the SWAP update, primarily a need for articulating the SWAP 2015's purpose, vision, goals, objectives, and metrics to measure progress. There is also an opportunity to explicitly link the SWAP 2015 with SWG applications and implemented projects, the CDFW's ongoing work, other State government efforts (such as the Governor's Water Action Plan or the 2014 Water Bond), and other partners' activities. Blue Earth also determined that the CDFW should consider crafting a realistic plan that matches available capacity as well as seek opportunities to strengthen capacity and the CDFW's ability to implement the plan through partner engagement.

Recommendation 1: Articulate the SWAP 2015 Vision, Conservation Goals, Objectives, and Metrics to Measure Progress that will Guide Future Implementation

In order to encourage broader partner engagement, track progress, and demonstrate successes, the SWAP 2015 should articulate a clear vision for what the plan aims to support, outline specific goals it seeks to achieve, share objectives and outlined actions that State government will aim to meet, and provide a set of metrics to measure progress toward stated objectives and goals. By outlining these components clearly, the SWAP 2015 could serve to help set the context and strategic direction of habitat and wildlife conservation and restoration efforts more broadly and help inform use of funding to support these efforts for the State, as well as among partners (see *Recommendation 7* for more detail). For example, the SWAP 2015 could be used as State government's investment guide in using 2014 Water Bond and other sources of funding.

Additionally, the SWAP 2015 could include a high-level theory of change that outlines and further describes how implementation of recommended conservation actions will help the CDFW achieve near-term SWAP 2015 goals and its long-term vision. A theory of change is a comprehensive description or model of the theory that underlies all or part of an organization's or program's work.[23] A theory of change describes the order, timing of strategies to achieve key outcomes, goals, and metrics to measure progress, as well as describes the alignment and role within the CDFW and among other agencies and

[23] Paul Brest, "Update on the Hewlett Foundation's Approach to Philanthropy: The Importance of Strategy," The William and Flora Hewlett Packard Foundation, 2004, 29 Jan. 2015 http://www.hewlett.org/about-us/annual-reports

partners to address implementation needs. Despite the shortcomings of the SWAP 2005, through the update process, the CDFW is already taking steps to develop goals and metrics to measure progress through use of the Open Standards process, which has drawn upon expert knowledge.

State Government Operations and SWAP Implementation

The following recommendations focus on State government operations and SWAP implementation that could improve the implementation and impact of the SWAP 2015.

Recommendation 2: Increase, Balance, and/or Leverage State Government Human and Financial Resources to Achieve SWAP Goals and Objectives

To be successful, State government should seek to increase staff capacity and financial resources, where possible, or balance available human and financial resources and capacity with prioritized SWAP 2015 actions over the next 10 years. Identifying where and how resources could be leveraged to address both SWAP 2015 priorities and other priorities of the CDFW could help balance available resources and foster successes beyond the SWAP 2015's intended objectives (see Recommendation 7 for more detail on partnership engagement among agencies and with partners). This could be done through redirection of positions to high priority activities, Budget Change Proposals, or through legislation to support new positions focused on specific priorities.

Furthermore, interviews with CDFW staff highlighted an opportunity to educate internal staff about existing and potential ways to fund activities that support SWAP 2015 implementation beyond SWG funding and other government funding streams. Moreover, because limitations exist for the type of funding and funding mechanisms available for the CDFW to utilize, we recommend 1) identifying existing and new SWAP-relevant funding options; 2) considering how required match funding could be leveraged more broadly and effectively from internal and external groups; and 3) exploring the feasibility of efficiently granting SWG funds to external partners or other agencies outside of the CDFW to support implementation, for example utilizing the payable grants program. If possible, the grants division could identify and update a list of available SWAP-relevant funding sources. The list would need to be updated as new funding sources are developed, such as drawing upon funds made available through the recent passage of the 2014 Water Bond.

CalPhotos/G. Monroe

Recommendation 3: Develop a SWAP Strategic Work Plan, Identify a Program Home, and Assign Staff to Champion Implementation of SWAP Strategies

Although the SWAP is one of many efforts that the CDFW undertakes, in order to support the CDFW's implementation of the SWAP 2015 we recommend that the CDFW develop a strategic work plan that outlines how implementation of SWAP 2015 will be integrated into staff and division efforts and

incentivizes this integration. We also recommend that the CDFW not only allocate staff time to SWAP 2015 implementation, but also identify a program home and/or a champion responsible for managing SWAP 2015 implementation across State government agencies, topics, and regions in order to build awareness and promote success among staff and external partners. For example to help coordinate implementation of shared goals and activities outlined in the Governor's Water Action Plan. Specific duties could include supporting grant-making, encouraging uptake of the SWAP 2015 recommendations across the department and with external partners, communicating successes, and supporting adaptation of the SWAP 2015 as management, needs, and priorities change over time.

Recommendation 4: Monitor and Evaluate Changes in Ecosystem Health and Stressors, as well as Progress and Effectiveness of SWAP Implementation, Integration with Wildlife Conservation Efforts Throughout the State, and Adaptive Management

We recommend that State government use goals, objectives, and metrics developed through the Open Standards process to monitor and track SWAP 2015 implementation progress in real time and adapt implementation based on evaluation findings. Metrics should also be SMART (Specific, Measurable, Action-oriented, Realistic, and Time-bound). In addition, the CDFW and USFWS should encourage SWG grantees to articulate proposal objectives and then monitor and evaluate SWG progress based on these stated proposal objectives. Furthermore, consider developing additional materials that are completed alongside proposal and reporting templates and forms developed by the USFWS. Additional materials could include identification of not only objectives for each grant, but also specific metrics to measure SWG funded project success and implementation progress (for more discussion on this topic, please see *Recommendation 5*).

At this time, grants proposals and reports include objectives and expected results; however, the expected results are typically outputs such as reports or surveys completed rather than articulating outcomes, such as changes in policy, management action, behavior, or ecosystem or species health. The SWAP eight required elements also require that State government monitor and evaluate not only changes in species and habitat health, but also how effective the implementation is and adaptive management. The SWAP 2015 should include overarching measures to help assess each of these monitoring and evaluation categories and the CDFW should seek to provide implementation status and progress updates more regularly (e.g., annually), for more discussion on sharing SWAP 2015 implementation success and progress see *Recommendation 6*.

Recommendation 5: Strengthen Grant Administration, Application, and Reporting Processes to Improve Grant Implementation Effectiveness

We recommend that the CDFW develop and promote internal staff training for grant proposal writing and administration to help ensure staff build grant administration skills, understand limitations on fund use, improve efficiency and effectiveness of proposals preparation, and reporting is improved. In addition to training, there are several ways to improve the proposal development and reporting.

- First, incentivize proposal approval based on not only advancement of SWAP goals and outcomes defined in the SWAP 2015, but also identifying and using partners or other leveraged

funding (beyond multi-program funding, which typically highlights internal funding sources or match), where possible.

- Second, model grant reporting off other government grant programs such as Pittman-Robertson Federal Aid in Wildlife Restoration Act or the Sport Fish Restoration Act, which have grantees identify and propose metrics to measure progress based on stated objectives in their proposals. In addition, incorporate standardized metrics that all SWG grantees report upon, and then require grantees to monitor, evaluate, and report on their progress in each grant report.
- Third, develop transparent, consistent, and efficient grant administration processes and system, including: creating a website that provides SWG application information and standardized templates (e.g., deadlines, proposal template, contract templates, budget templates, etc.), developing more efficient processes for distributing funding secured through SWG for identified budget items (both equipment and staff), increasing consistency between regional requirements, and developing a grants management system that supports grant tracking and progress reporting. One option is to adapt DWR's Grants Review and Tracking System (GRanTS) grant administration application software.

Awareness Building, Coordination, and Collaboration

One of the common themes identified during this evaluation was the need for awareness building activities to foster more coordination and collaboration for SWAP implementation both internally and externally to the CDFW. The recommendations below share how State government may address this need. Please note, successful implementation of *Recommendations 6* and *7* would be strengthened by implementation of *Recommendation 3* above.

Recommendation 6: Improve SWAP Recognition to Increase Buy-in, Support, and Implementation Success

Strengthen communication to increase not only awareness and recognition of the SWAP 2015, but also to encourage greater buy-in, alignment, and support for implementing the SWAP. Two overarching themes emerged within this recommendation: 1) educate and inform a broad SWAP audience (e.g., staff, partners, funders, and stakeholders) and 2) communicate successes. Some differences exist between how State government can improve internal (within the CDFW and other agencies) and external (with partners and the public) recognition and support for SWAP through awareness building, coordination, and collaboration, below we provide examples where relevant.

Educate and Inform Broad SWAP Audience

Moving forward, encourage CDFW leadership, staff, agencies, partners, funders, and stakeholders to review and engage in the SWAP 2015's content. We recommend developing a shorter quick-reference version of the SWAP 2015 that provides a concise overview of the SWAP 2015, presents the SWAP 2015 goals and strategy, and provides references to relevant sections of the SWAP 2015. The reference version could then be utilized to brief CDFW leadership, external agencies, partners, and potential funders to strengthen buy-in and encourage broader support for SWAP 2015 implementation.

In addition to developing a shorter reference version, the updated SWAP 2015 should be disseminated broadly with CDFW leadership, staff, other State agencies, external partners, funders, stakeholders, and

the public to increase awareness of the plan and its content, as well as build buy-in with each of these types of SWAP 2015 audiences. We recommend that CDFW hold a road show or other meetings when the SWAP is released to inform others about the actions, activities, projects, and next steps the CDFW will undertake in relation to the SWAP 2015 implementation. To encourage greater awareness internally and with other agencies, sharing information at regional coordinating body and conservancy meetings that a range of agency actors participate could support broad dissemination without a significant demand on resources. Examples of regional coordinating bodies and conservancies include the Coastal Conservancy, Resource Conservation Districts, and CA LCC. To encourage greater partner awareness consider sharing information in both public meetings and small informal road show style meetings with key partners (e.g., NGOs, foundations, and academic institutions).

Communicate Successes

We recommend that the SWAP 2015 highlight and present what positive changes have occurred to benefit key SGCN or key habitats addressed in the SWAP 2005, doing so will help communicate examples of success or frame the ongoing need for conservation and restoration.

Providing annual updates on progress could also ensure the SWAP 2015 and its recommended conservation actions remain in the forefront of agency, partner, funders, and stakeholder consciousness. Sharing these updates and success, will also foster a better understanding of the SWAP's purpose, potential ways to leverage efforts throughout the State, and could help identify new sources of funding to support the SWAP 2015's implementation. Another way to communicate information could be to hold an annual forum, in which SWG recipients explain progress, success, areas of improvement, outputs (publications, surveys, etc.), and outcomes (behavior change, change in ecosystem or species health, policy implications, etc.) with internal CDFW staff as well as external partners and groups. The forum could not only serve to communicate success, but could also offer workshops and training to address needs highlighted in Recommendation 5 above.

Recommendation 7: Increase and Leverage Human and Financial Capacity by Fostering Coordination and Collaboration Among Agencies and with Partners to Implement the SWAP

Coordination and collaboration is important to address the limited human and financial resources needed to implement SWAP 2015. It is also a priority identified by other California coordination groups and bodies (such as the Biodiversity Council's Interagency Alignment Team).

To encourage greater collaboration, the SWAP 2015 should describe how it connects or overlaps with other State priorities and plans. By making these connections, State government will increase the likelihood that partners will support or help leverage both financial and human resources for SWAP 2015 implementation. At this time, State government already has a number of interagency collaborations including the California Biodiversity Council, Strategic Growth Council, OPC, California Water Plan State Agency Steering Committee, Resource Conservation Districts, CA LCC, Regional Advanced Mitigation Program (RAMP), and WCB, which it could draw upon to strengthen collaboration among agencies and partners at local, State, Federal, and regional scales. State government may also want to consider developing public/private partnerships that help grow funding and can support a broad range of activities highlighted by the SWAP 2015.

Internally, we recommend State government identify additional government and non-government funding sources (local, State, Federal, and regional), as well as explore possible mechanisms for allocating portions of SWG grant funds to external partners efficiently and effectively, which will help enhance SWAP 2015 implementation, reduce need for in-kind State government match of staff time, increase external match funding, and reduce implementation delays.

Next Steps and Path Forward

The most pressing next steps include completing the SWAP 2015 update process, developing SWAP 2015 sector-specific companion plans, and integrating recommendations and findings shared in the this SWAP 2005-2014 evaluation into planning processes, CDFW vision, CDFW's structure, and implementation activities. Uptake of recommendations from the evaluation is occurring at this time, which demonstrates that the CDFW is committed to developing and implementing a successful SWAP 2015. Internally, the CDFW may integrate recommendations outlined here and elsewhere into its guiding vision document, which will be developed in 2015. Externally, the CDFW has begun engaging other agencies and partners to ensure the SWAP 2015 is complimentary to other planning documents and strategic activities, such as the environmental stewardship priority actions outlined in the Governor's Water Action Plan and activities of the California Biodiversity Council. In addition, the companion plans are a solution CDFW designed based on CDFW staff and partner feedback, which go beyond the requirements of the 2005 and 2015 SWAPs and will strengthen implementation of the SWAP 2015. Companion plan development will begin in 2015. Specifically, companion plans will help:

- Serve as a way to coordinate and collaborate among agencies and partners,
- Identify key common priorities among partners for each sector,
- Outline specific linkages between sector goals and conservation actions and the SWAP 2015,
- Leverage implementation opportunities among partners in each sector to effectively implement common priorities, and
- Identify additional actions that sector partners can take to support overall implementation of the SWAP 2015.

These plans serve as a way to coordinate and collaborate among agencies and partners, by setting the context and strategic direction for habitat and wildlife conservation and restoration efforts more broadly. The SWAP 2015 and associated companion plans will help inform investments such as the 2014 Water Bond, WCB, and other sources of funding, thus increasing capacity and improving implementation success.

In addition, the Tribal Lands companion plan ensures effective, streamlined communication and collaboration with California tribes, tribal governments, the State of California, and other partners across sector areas. In addition to the above ways the companion plans supplement the SWAP 2015, the Tribal Lands companion plan helps explore opportunities to leverage aligned initiatives to support implementation of the SWAP 2015.

Appendices

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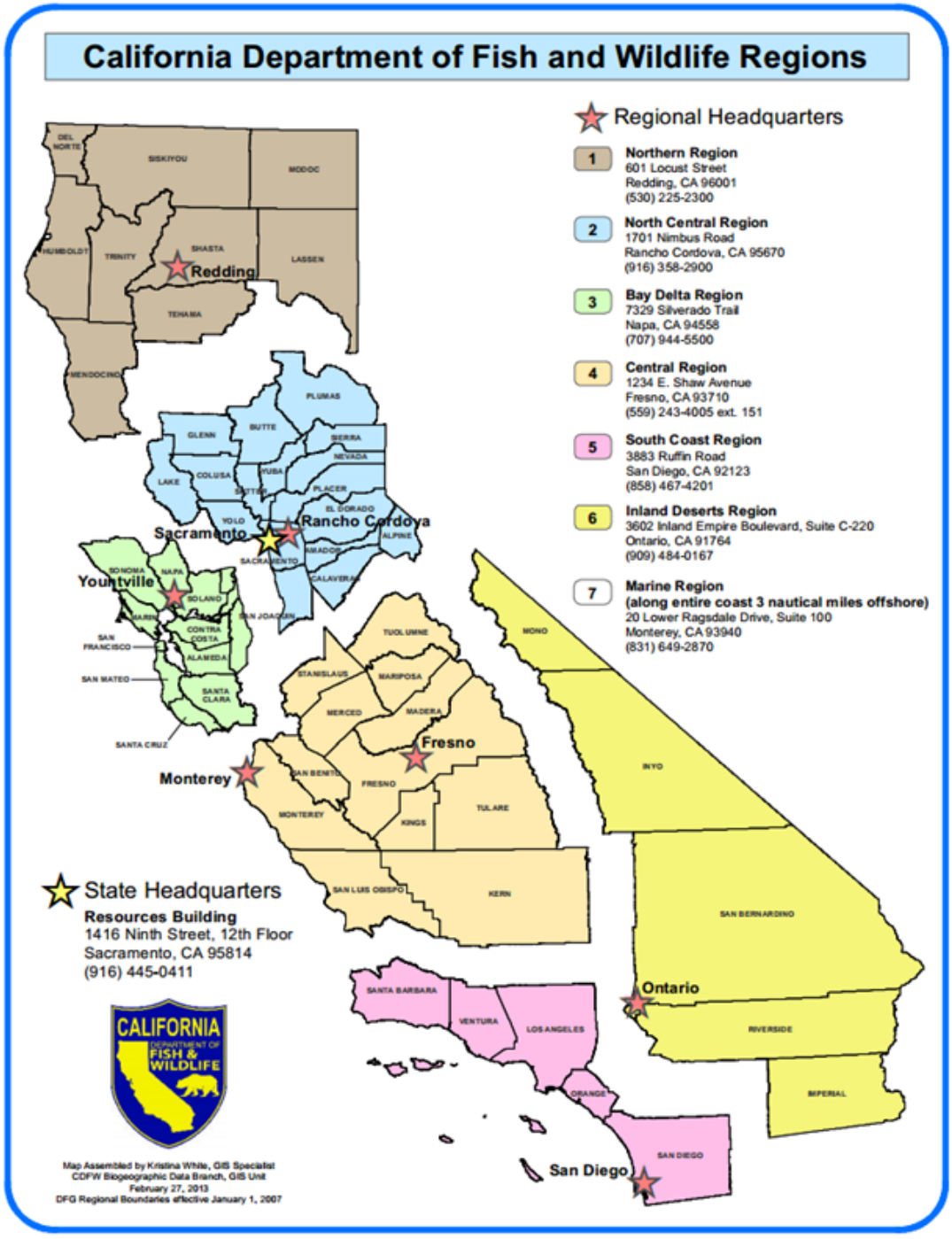
Appendix 1: Map of CDFW Regions



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[24] CDFW, "Regions," California Department of Fish and Wildlife, 2014, 29 Jan. 2015 https://www.wildlife.ca.gov/Regions.

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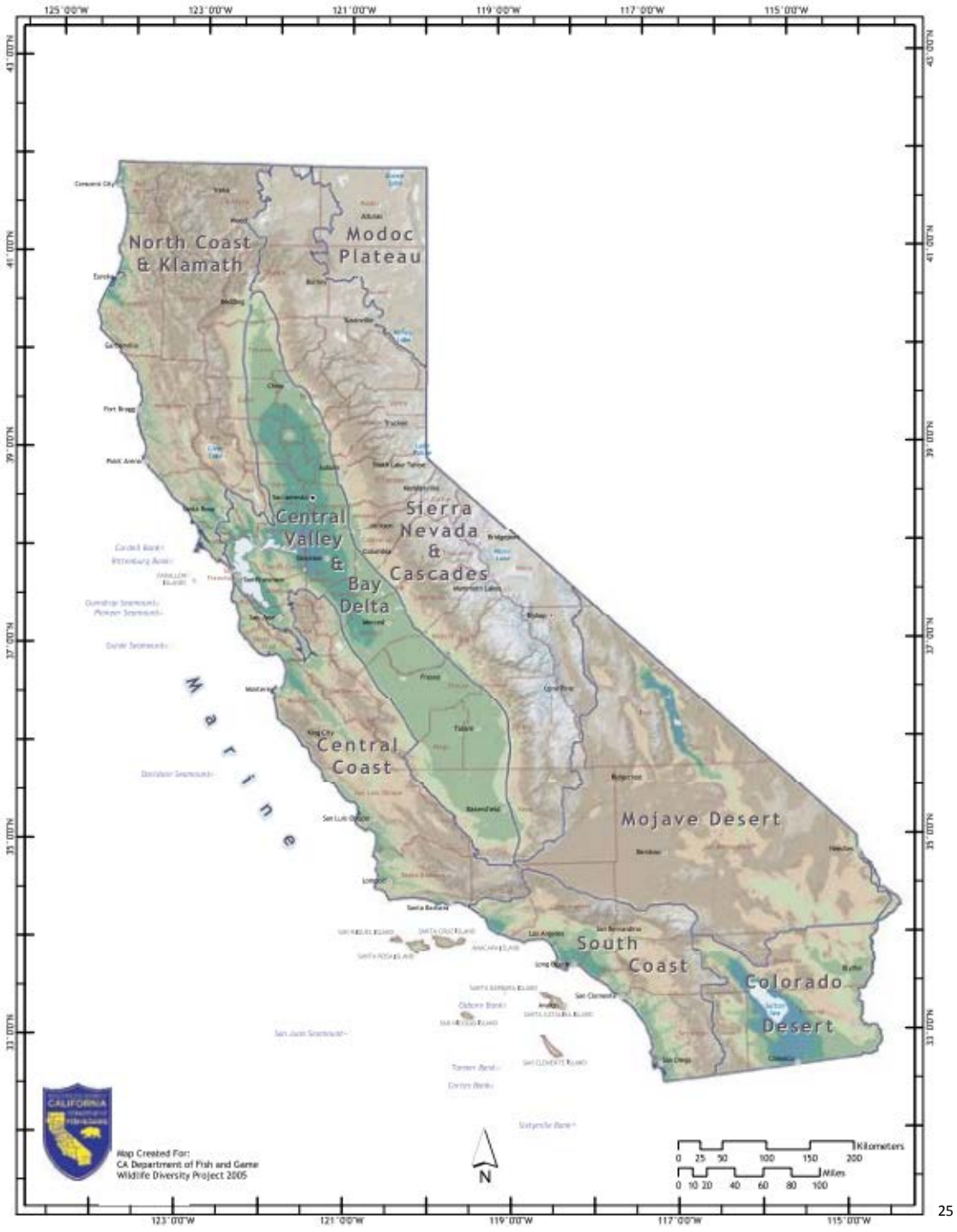
Appendix 2: Map of SWAP 2005 Regions



[25]

[25] David Bunn, et al., "California Wildlife Conservation Challenges: California's Wildlife Action Plan," University of California Davis Wildlife Health Center, California Department of Fish and Wildlife, 2007, 29 Jan. 2015 http://www.dfg.ca.gov/SWAP/2005/docs/SWAP-2005.pdf.

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Appendix 3: SWAP 2005 Major Wildlife Stressors

The table below drawn from the wildlife stressors outlined in the SWAP 2005 "Chapter 3: Threats to Wildlife Diversity in California." Stressors are shared in the order presented in the SWAP 2005 for each region.

Region	Wildlife Stressor
Statewide	• Growth and development • Water management conflicts • Invasive species • Climate change
Mojave Desert	• Multiple uses conflicting with wildlife on public lands • Growth and development • Groundwater overdrafting and loss of riparian habitat • Inappropriate off-road vehicle use • Excessive livestock grazing • Excessive burro and horse grazing • Invasive plants • Military land management conflicts • Mining operations
Colorado Desert	• Water management conflicts and water transfer impacts • Inappropriate off-road vehicle use • Loss and degradation of dune habitats - Disruption of sand transport processes - Invasive plant species - Inappropriate off-road vehicle use • Growth and development • Invasive species
South Coast	• Growth and development • Water management conflicts and degradation of aquatic ecosystems • Invasive species • Altered fire regimes • Recreational pressures
Central Coast	• Growth and development • Intensive agriculture • Excessive livestock grazing • Water management conflicts and degradation of aquatic ecosystems • Recreational pressures • Invasive species
North Coast–Klamath	• Water management conflicts • Instream gravel mining • Forest management conflicts • Altered fire regimes • Agriculture and urban development • Excessive livestock grazing

Region	Wildlife Stressor
	• Invasive species
Modoc Plateau	• Excessive livestock grazing • Excessive feral horse grazing • Altered fire regimes • Western juniper expansion • Invasive plants • Forest management conflicts • Water management conflicts and degradation of aquatic ecosystems
Sierra Nevada and Cascades	*Stressors affecting upland habitats* • Growth and land development • Forest management conflicts • Altered fire regimes • Excessive livestock grazing • Invasive plants • Recreational pressures • Climate change *Stressors affecting aquatic and riparian habitats* • Water diversions and dams • Watershed fragmentation and fish barriers • Hydropower project operations • Excessive livestock grazing • Water diversion from the Owens Valley • Introduced non-native fish
Central Valley and Bay-Delta	• Growth and development (including urban, residential, and agricultural) • Water management conflicts and reduced water for wildlife • Water pollution • Invasive species • Climate change
Marine	• Overfishing • Degradation of marine habitat • Invasive species • Pollution • Human disturbance

Appendix 4: Steering Committee Membership

SWAP Evaluation Steering Committee Membership:

Rebecca Fris, Science Coordinator, California Landscape Conservation Cooperative, Pacific Southwest Region U.S. Fish and Wildlife Service
Kamyar Guivetchi, Manager, Statewide Water Planning, Department of Water Resources; Co-Chair California Biodiversity Council
Christina Kakoyannis, Ph.D., Director, Strategic Planning and Evaluation, National Fish and Wildlife Foundation
Catherine Kuhlman, Executive Director of the Ocean Protection Council and Deputy Secretary for Ocean and Coastal Policy, California Natural Resources Agency
Eric Loft, Ph.D., Wildlife Branch Chief, California Department of Fish and Wildlife (Internal to CDFW)
Craig Shuman, D. Env., Regional Manager, Marine Region California Department of Fish and Wildlife (Internal to CDFW)
Mike Sutton, President, California Fish and Game Commission

Advisory and Information Role: Provide information to the steering committee and respond to any questions as they arise.

Armand Gonzales, SWAP 2015 Project Lead, Special Advisor, California Department of Fish and Wildlife, Climate Science and Renewable Energy Branch	Junko Hoshi, Ph.D., SWAP 2015 Assistant Project Lead, Senior Environmental Scientist, California Department of Fish and Wildlife, Climate Science and Renewable Energy Branch

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Appendix 5: SWAP Evaluation Semi-structured Survey Tool

Introduction:

First, I want to thank you for taking the time to speak with me today. This interview will inform an evaluation of the California State Wildlife Action Plan or SWAP that we are conducting. The first SWAP was developed in 2005 and is under review at this time for an update in 2015. At this time, we have been tasked with both evaluating the past efforts and progress towards implementing the recommended SWAP actions between 2005 and June 2014, as well as providing recommendations and considerations for the implementation of the SWAP moving forward. The findings from our evaluation will be incorporated into the SWAP update, which will conclude in 2015. The evaluation report will be shared publically. We will send this once approved, likely Spring 2015.

Because of your experience and current position as XX CDFW STAFF, FORMER SWG RECIPEINT, POTENTIAL/EXISTING PARTNER, STAKEHOLDER, FUNDER XX we believe you could provide valuable insight to address the following topics:

- ***Evaluation Outcome 1****: Progress and results of the SWAP 2005 implementation from 2005-2014.*
- ***Evaluation Outcome 2****: Analysis of SWG portfolio spending between 2005- 2014 by region, taxa, and conservation action category.*
- ***Evaluation Outcome 3****: Assess State government's effectiveness in implementing SWAP 2005 actions, including the human and financial capacity, ability to leverage additional human and financial resources, efficiency, strengths, opportunities for improvement, and gaps and obstacles for effective implementation.*
- ***Evaluation Outcome 4****: Describe overarching SWAP 2005 implementation challenges and identify areas where improvement could be made.*
- ***Evaluation Outcome 5****: Provide recommendations for the SWAP 2015 update and steps forward.*

Given these information needs, are there specific areas where you believe you have strong expertise and where we could focus our discussion?

I want to mention before we begin that this is a confidential interview, in that we will share trends and a synthesis of findings but will not share or attribute any specific information to you or your organization, agency, tribe, or group.

Do you have any questions before we begin?

In addition, if there are any questions that you are unfamiliar or feel you cannot answer, please just let me know.

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1. Could you describe how familiar you are with the SWAP 2005?
2. Can you please briefly describe your experience and role in addressing the implementation of the past SWAP or other aspects of wildlife conservation and including SGCN, wildlife, science, conservation, and the environment?

Evaluation Outcome 1: Progress and results of the SWAP 2005 implementation from 2005- 2014.

In this section, I will ask you questions regarding the progress and results of the SWAP 2005 implementation from 2005 through June 2014. I will first ask you questions at the statewide scale and then ask you questions at the regional scale.

Statewide Key Questions: Progress and Results

3. We shared a list of SWAP 2005 recommended actions, prior to receiving this list; did you know what the SWAP 2005 recommended statewide actions were?
4. In your opinion, were these the most appropriate conservation actions and conservation capability needs to address between 2005 and 2014? [*prompt if need be considering funding, capacity available, conservation needs*]
5. What activities have you or your organization been involved in implementing related to the SWAP 2005 recommended statewide actions?
6. How much progress has been made toward addressing and/or achieving SWAP 2005 statewide recommended conservation actions?
    a. Policies and Management Actions
    b. Enforcement
    c. Infrastructure, Land-use, Permitting
    d. Habitat Conservation and Restoration
    e. Species Conservation and Restoration
    f. Coordination, Collaboration, and Stakeholder Engagement
    g. Addressing Conservation Priorities and Emerging Stressors Identified in the SWAP 2005
    h. Education, Outreach, and Capacity-building
    i. Wildlife Resource Assessment
    j. Conservation Planning/ Plans
    k. Funding and Leveraged Funding
    l. Knowledge to Implement SWAP 2005
    m. Monitoring and Evaluation
    n. Adaptive Management
7. How much progress has been made toward addressing conservation capabilities needs (Wildlife Resource Assessment, Conservation Planning/ Plans, Funding and Leveraged Funding) since implementation of the SWAP 2005?
    a. Wildlife Resource Assessment
    b. Conservation Planning/ Plans
    c. Funding and Leveraged Funding
8. What key achievements/successes have been achieved in addressing challenges and meeting California's conservation and restoration needs since implementation of the SWAP 2005?
9. In your opinion, what has been the overall impact in addressing statewide stressors outlined in the 2005 SWAP and meeting California's conservation and restoration needs since implementation of the SWAP 2005? [*In addition, if you have any reports that speak to progress or impact, we would be interested in reviewing*]
    a. Growth and Development
    b. Water Management Conflicts

   c. Invasive Species
   d. Climate Change
10. How much progress has been made toward addressing monitoring and adaptive management targets since implementation of the SWAP 2005?
   a. Has a statewide monitoring program been implemented?

Regional Key Questions: Progress and Results

11. We shared a list of SWAP 2005 recommended actions, prior to receiving this list; did you know what the SWAP 2005 recommended regional actions were?
12. In your opinion, were these the appropriate conservation actions and conservation capability needs to address between 2005 and 2014? [prompt if need be considering funding, capacity available, conservation needs]
13. What activities have you or your organization been involved in implementing related to the SWAP 2005 recommended regional actions?
14. How much progress has been made toward addressing and/or achieving SWAP 2005 regional recommended conservation actions since implementation of the SWAP 2005?
   b. Policies and Management Actions
   c. Enforcement
   d. Infrastructure, Land-use, Permitting
   e. Habitat Conservation and Restoration
   f. Species Conservation and Restoration
   g. Coordination, Collaboration, and Stakeholder Engagement
   h. Addressing Conservation Priorities and Emerging Stressors Identified in the SWAP 2005
   i. Education, Outreach, and Capacity-building
   j. Wildlife Resource Assessment
   k. Conservation Planning/ Plans
   l. Funding and Leveraged Funding
   m. Knowledge to Implement SWAP 2005
   n. Monitoring and Evaluation
   o. Adaptive Management
15. How much progress has been made toward addressing conservation capabilities needs (Wildlife Resource Assessment, Conservation Planning/ Plans, Funding and Leveraged Funding) since implementation of the SWAP 2005?
   a. Wildlife Resource Assessment
   b. Conservation Planning/ Plans
   c. Funding and Leveraged
16. In your opinion, what has been the overall impact in addressing regional stressors outlined in the 2005 SWAP and meeting California's conservation and restoration needs since implementation of the SWAP 2005? [*In addition, if you have any reports that speak to progress or impact, we would be interested in reviewing*]

17. How much progress has been made toward addressing monitoring and adaptive management targets since implementation of the SWAP 2005?
    a. Has a regional or statewide monitoring program been implemented?
18. What key achievements/successes have been achieved in addressing challenges and meeting California's conservation and restoration needs since implementation of the SWAP 2005?
19. Have metrics to measure progress been developed to measure progress toward key indicators of wildlife and habitat conservation success in each region or across regions?
    a. If so, what metrics to measure progress have been developed? What progress has been identified for each key indicator developed?

Evaluation Outcome 3: An assessment of State government's effectiveness in implementing SWAP 2005 actions, including human and financial capacity, ability to leverage additional human and financial resources, efficiency, strengths, opportunities for improvement, gaps for effective implementation, and obstacles for implementation.

Evaluation Outcome 4: Describe overarching SWAP 2005 implementation challenges and identify areas where improvement can be made.

In this section I will ask you questions regarding State government's effectiveness in implementing the SWAP 2005 including its human and financial capacity, ability to leverage additional human and financial resources, efficiency, strengths, opportunities for improvement, gaps for effective implementation, and obstacles for implementation. IN addition, I will ask you questions regarding any challenges or bottlenecks for implementing the SWAP 2005 and what improvements could be made.

Statewide Key Questions: Program Organizational Effectiveness

20. On a 1-5 scale, 5 being most effective and 1 being ineffective, what was the level of human capacity (e.g., has the department had sufficient staff to implement the recommended actions of the SWAP 2005) at the statewide scale? Please explain.
21. On a 1-5 scale, 5 being most effective and 1 being ineffective, how efficiently has the State utilized its human capacity (e.g., has the department used human resources effectively and in ways that maximized benefit)? Please explain.
22. What have been State government's strengths for grant-making at the statewide levels?
23. On a 1-5 scale, 5 being most effective and 1 being ineffective, what was the level of financial capacity (e.g., has the department had sufficient funding) to implement the recommended actions of the SWAP 2005? Please explain.
24. On a 1-5 scale, 5 being most effective and 1 being ineffective, how efficiently has State government utilized its financial resources (e.g., has the department used financial resources effectively and in ways that maximized benefit)? Please explain.
25. On a 1-5 scale, 5 being most effective and 1 being ineffective, how effective has State government been at securing funds to support implementation of SWAP 2005 recommended conservation actions? Please explain.

26. On a 1-5 scale, 5 being most effective and 1 being ineffective, how effective has State government been at allocating secured funds to support implementation of SWAP 2005 recommended conservation actions? Please explain.
27. On a 1-5 scale, 5 being most effective and 1 being ineffective, how effective has State government been at leveraging funds to support implementation of SWAP 2005 recommended conservation actions? Please explain.
28. In your opinion, in what ways has State government allocated funding to support SWAP 2005 recommended conservation actions (e.g., for ecosystem/habitat versus species conservation efforts)?
    b. Policies and Management Actions
    c. Enforcement
    d. Infrastructure, Land-use, Permitting
    e. Habitat Conservation and Restoration
    f. Species Conservation and Restoration
    g. Coordination, Collaboration, and Stakeholder Engagement
    h. Addressing Conservation Priorities and Emerging Stressors Identified in the SWAP 2005
    i. Education, Outreach, and Capacity-building
    j. Wildlife Resource Assessment
    k. Conservation Planning/ Plans
    l. Funding and Leveraged Funding
    m. Knowledge to Implement SWAP 2005
    n. Monitoring and Evaluation
    o. Adaptive Management
29. What activities outlined in the statewide recommended SWAP 2005 actions were (if unaware of SWAP actions, ask more generally what is well funded/poorly funded?)
    a. Well funded?
    b. Poorly funded?
30. What were the CDFW and other State government agencies' strengths/strong capabilities for implementing the SWAP 2005?
31. What were the CDFW and other State government agencies' needs for implementing the SWAP 2005?
    a. Will any persist in the future? If so, which ones?
32. What challenges existed for the CDFW and other State government agencies' implementing the SWAP 2005?
33. What bottlenecks existed for the CDFW and other State government agencies' implementing the SWAP 2005?
34. Besides State Wildlife Grant and matching in –kind labor, what other sources of funding were used to help support implementation of SWAP 2005 actions at the statewide scale, if any? How much funding was made available through these sources?
35. What partners (government, tribes, NGO, academic, foundation, etc.) were engaged to support implementation of SWAP actions?

Regional Key Questions: Program Organizational Effectiveness

36. On a 1-5 scale, 5 being most effective and 1 being ineffective, what was the level of human capacity (e.g., has the department had sufficient staff) to implement the recommended actions of the SWAP 2005 at the regional scale? Please explain.
37. On a 1-5 scale, 5 being most effective and 1 being ineffective, how efficiently has State government utilized its human capacity (e.g., has the department used human resources effectively and in ways that maximized benefit)? Please explain.
38. On a 1-5 scale, 5 being most effective and 1 being ineffective, what was the level of financial capacity (e.g., has the department had sufficient funding) to implement the recommended actions of the SWAP 2005? Please explain.
39. On a 1-5 scale, 5 being most effective and 1 being ineffective, how efficiently has State government utilized its financial resources (e.g., has the department used financial resources effectively and in ways that maximized benefit)? Please explain.
40. What have been State government's strengths for grant-making at the regional level?
41. One a 1-5 scale, 5 being most effective and 1 being ineffective, how effective has State government been linking regional projects and activities to statewide goals? Please explain.
42. One a 1-5 scale, 5 being most effective and 1 being ineffective, how effective has State government been securing funds to support implementation of SWAP 2005 recommended conservation actions at a regional scale? Please explain.
43. One a 1-5 scale, 5 being most effective and 1 being ineffective, how effective has State government been allocating funds to support implementation of SWAP 2005 recommended conservation actions at a regional scale? Please explain.
44. One a 1-5 scale, 5 being most effective and 1 being ineffective, how effective has State government been leveraging funds to support implementation of SWAP 2005 recommended conservation actions at a regional scale? Please explain.
45. In your opinion, what ways has State government allocated funding to support SWAP 2005 regional recommended conservation actions?
    a. Policies and Management Actions
    b. Enforcement
    c. Infrastructure, Land-use, Permitting
    d. Habitat Conservation and Restoration
    e. Species Conservation and Restoration
    f. Coordination, Collaboration, and Stakeholder Engagement
    g. Addressing Conservation Priorities and Stressors in the SWAP 2005
    h. Education, Outreach, and Capacity-building
    i. Wildlife Resource Assessment
    j. Conservation Planning/ Plans
    k. Funding and Leveraged Funding
    l. Knowledge to Implement SWAP 2005
    m. Monitoring and Evaluation
    n. Adaptive Management

46. What activities outlined in the regional recommended SWAP 2005 actions were (if unaware of SWAP actions, ask more generally what is well funded/poorly funded?)
    a. Well funded?
    b. Poorly funded?
47. What were the CDFW and other State government agencies' strength/strong capabilities for implementing the SWAP 2005?
48. What were the CDFW and other State government agencies' needs for implementing the SWAP 2005?
    a. Will any persist in the future? If so, which ones?
49. What challenges existed for the CDFW and other State government agencies' implementing the SWAP 2005?
50. What bottlenecks existed for the CDFW and other State government agencies' implementing the SWAP 2005?
51. Besides State Wildlife Grant and matching in –kind labor, what other sources of funding were used to help support implementation of SWAP 2005 actions at the regional scale, if any? How much funding was made available through these sources?
52. What partners (government, tribes, NGO, academic, foundation, etc.) were engaged to support implementation of SWAP actions?

Evaluation Outcome 5: Recommendations for SWAP 2015 update and steps forward.

In this section, I will ask you questions regarding your recommendations for improving the SWAO 2005 as well as lessons learned or best practices, improving implementation; and addressing bottlenecks, challenges, or risks moving forward.

Statewide Key Questions: Recommendations for Improvement

53. How might past implementation challenges be overcome at the statewide scale?
54. Were there some key bottlenecks that need to be addressed to be able to implement more effectively in the future? What bottlenecks might inhibit implementation moving forward at the statewide scale?
    a. How might these bottlenecks be addressed?
55. Are there opportunities to leverage the SWAP 2015 to support implementation moving forward (e.g., funding, programs, capacity, policies, mandates etc.)?
56. What risks exist to being able to successfully implement SWAP activities moving forward? [prompt if need be: Regulatory, Financial, Environmental, Scientific, Social, Economic, or Institutional]
57. What information is currently used to inform decision-making at the statewide scale relevant to SWAP recommended actions?
    a. What information from monitoring and evaluation would be most helpful in decision-making moving forward?

58. How could SWAP 2005 monitoring and evaluation be strengthened and improved for the 2015 update process
    a. What are some SMART metrics to measure progress to consider for the SWAP 2015 update? (TIER 2 QUESTION)
    b. What other efforts could be leveraged for monitoring and evaluation?
59. To what extent is learning incorporated back into future SWAP decision-making?
    a. "How can this be improved moving forward?
60. What key lessons learned can be drawn from the implementation of the SWAP 2005?
61. In what ways could State government improve its grant-making at the statewide level to more effectively create and implement a common vision across the state?
    a. How could the grant-making program be used to catalyze and leveraged efforts in the state?
62. What additional funding sources exist or could be leveraged to support SWAP actions moving forward? *[prompt if needed: Federal, foundation, other private]*
63. What partners (government, tribes, NGO, academic, foundation, etc.) could be engaged to support implementation of SWAP actions moving forward?

Regional Key Questions: Recommendations for Improvement

64. How might past implementation challenges at the regional scale be overcome?
65. What bottlenecks might inhibit implementation moving forward at the regional scale?
    a. How might these bottlenecks be addressed?
66. Are there opportunities to leverage the SWAP 2015 to support implementation moving forward (e.g., funding, programs, capacity, policies, mandates etc.)?
67. What risks exist for implementing SWAP activities moving forward at the regional scale? [prompt if need be: Regulatory, Financial, Environmental, Scientific, Social, Economic, or Institutional]
68. What information is currently used to inform decision-making at the regional scale relevant to SWAP recommended actions?
    a. What information from monitoring and evaluation would be most helpful in decision-making moving forward?
69. How could SWAP 2005 monitoring and evaluation be strengthened and improved for the 2015 update process
    a. What are some SMART metrics to measure progress to consider? (TIER 2 QUESTION)
    b. What other efforts could be leveraged for monitoring and evaluation?
70. To what extent is learning incorporated back into future SWAP decision-making?
    a. "How can this be improved moving forward?
71. What best practices exist from implementing the SWAP 2005 at the regional scale?
72. What key lessons learned can be drawn from the implementation of the SWAP 2005 at the regional scale?
73. In what ways could State government improve its grant-making at the regional level to more effectively create and implement a common vision across the state?

   a. How could the grant-making program be used to catalyze and leveraged efforts in the state?

74. What additional funding sources exist or could be leveraged to support SWAP actions moving forward? *[prompt if needed: Federal, foundation, other private]*
75. How could regional SWAP 2005 adaptive management be strengthened and improved for the 2015 update process?
76. What partners (government, tribes, NGO, academic, foundation, etc.) could be engaged to support implementation of SWAP actions moving forward?

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Appendix 6: SWAP Evaluation Interviewees

Interviewee	Affiliation
Amber Transou	California Department of Parks and Recreation
Amy Golden	California Department of Transportation
Andrea Jones	Audubon California
Bill Craven	Senate Natural Resources and Water Committee
Brett Furnas	California Department of Fish and Wildlife
Bruce Gwynne	California Department of Conservation
Carie Battistone	California Department of Fish and Wildlife
Catherine Kuhlman	California Natural Resources Agency
Chris Beale	Resources Legacy Fund
Chris Dorsett	Ocean Conservancy
Chris Potter	California Natural Resources Agency
Craig Shuman	California Department of Fish and Wildlife
Dave Shuford	Point Blue Conservation Science
David Elms	California Department of Fish and Wildlife
David Wright	California Department of Fish and Wildlife
Elliot Chasin	California Department of Fish and Wildlife
Gary Falxa	California Department of Fish and Wildlife
Gary Knoblock	S.D. Bechtel, JR. Foundation
Hawk Rosales	InterTribal Sinkyone Wilderness Council
Heather Ludemann	The David and Lucile Packard Foundation
James Thorne	University of California Davis
Joe Croteau	California Department of Fish and Wildlife
Julie Horenstein	California Department of Fish and Wildlife
Justin Oldfield	California Cattlemen's Association
Kamyar Guivetchi	California Department of Water Resources
Karen L. Miner	California Department of Fish and Wildlife
Kim Delfino	Defenders of Wildlife
Krista Tomlinson	California Department of Fish and Wildlife
Krysta Rogers	California Department of Fish and Wildlife
Leslie MacNair	California Department of Fish and Wildlife
Mark Stopher	California Department of Fish and Wildlife
Mary Beth Woulfe	California Department of Fish and Wildlife
Mike Sutton	California Fish and Game Commission
Monica Parisi	California Department of Fish and Wildlife
Noelle G. Cremers	California Farm Bureau Federation
Patrick Huber	University of California Davis
Pelayo Alvarez	California Rangeland Conservation Coalition
Pete Figura	California Department of Fish and Wildlife
Rebecca Fris	California Landscape Conservation Cooperative

Interviewee	Affiliation
Richard Callas	California Department of Fish and Wildlife
Robert M. Sullivan	California Department of Fish and Wildlife
Sarah Reed	Colorado State University
Scott Gardner	California Department of Fish and Wildlife
Scott Koller	California Department of Fish and Wildlife
Scott Osborn	California Department of Fish and Wildlife
Scott Wilson	California Department of Fish and Wildlife
Stacy Anderson	California Department of Fish and Wildlife
Steve Goldman	California Department of Fish and Wildlife
Steve Torres	California Department of Fish and Wildlife
Tina Bartlett	California Department of Fish and Wildlife
William Hull	Consultative Group on Biological Diversity

Appendix 7: Conservation Action Categories and Examples

The table below provides examples of the type of activities and actions included within each conservation action categories. In the column "example conservation actions," information comes directly from the SWAP 2005. Information provided in the column "example grant planned or implemented activities," shares information drawn directly from SWG funded project reports and documentation. Finally, information shared in the column "interviewee examples of actions/activities supporting SWAP 2005 conservation action," provides direct quotes from interviewees shared during interviews.

Recommended Conservation Actions	Example Conservation Actions	Example Grant Planned or Implemented Activities	Interviewee Examples of Actions/Activities Supporting SWAP 2005 Conservation Action
Policies and Management Actions	h. Fully implement the recovery plans for the Mojave tui chub, Amargosa vole, and Inyo California towhee. (Mojave Desert region)	Improve the habitat for the SGCN (sensitive, listed and candidate) through active management of the natural resources on CDFW-Managed lands.	*Lots of management actions have taken place, specifically in the Bay Delta system where bond money has been used for restoration and protection.*
Enforcement	i. Federal and State resource agencies should foster and facilitate interstate collaborative enforcement efforts on marine species whose ranges cross jurisdictional boundaries. (Marine region)	A variety of projects were implemented with the goal of achieving site security and habitat improvements. *No other grants mentioned enforcement	*Department signed an MOU with the U.S. Coast Guard to collaborate on MPA enforcement.*
Infrastructure, Land-use, Permitting	b. Wildlife agencies should establish regional goals for species and habitat protection and work with city, county, and State agency land-use planning processes to accomplish those goals. (South Coast region) l. Public agencies and private organizations should protect, restore, and improve water dependent habitats (including wetland, riparian, and estuarine) throughout the region. Design of these actions should factor in the likely effects of accelerated climate change. (Central Valley and Bay-Delta region)	Department developed a monitoring strategy to identify species conservation goals for future and ongoing land management. Maintenance activities conducted from June 2011 to May 2012 included fence repair, trash removal, invasive plant monitoring and control, and various tasks associated with grazing lease management and burn preparation.	*Progress has been made, particularly linking up program efforts with the RAMP and streamlining restoration permitting.*

Recommended Conservation Actions	Example Conservation Actions	Example Grant Planned or Implemented Activities	Interviewee Examples of Actions/Activities Supporting SWAP 2005 Conservation Action
Habitat Conservation and Restoration	d. State and Federal agencies should work with cities and counties to secure sensitive habitats and key habitat linkages. (Statewide) j. Water management agencies need to reestablish and maintain more natural river flows, flooding patterns, water temperatures, and salinity conditions to support wildlife species and habitats. (Central Valley and Bay-Delta region)	Project activities focused on improvement of vegetation conditions in California tiger salamander upland habitat and 950 native plants were planted at the Woodbridge Ecological Reserve.	*With funding from the Coastal Conservancy and through collaborative efforts such as the Southern California Wetlands Recovery Project, CDFW and other agencies have worked together on coastal acquisition and restoration of coastal areas. Both the Federal and State government are purchasing land along the Sacramento River to protect riparian species. This is good for both flood control and lower property damage from floods.*
Species Conservation and Restoration	k. The State should strengthen its capacity to implement conservation actions and to assist local agencies and landowners with planning and implementation of wildlife and habitat restoration and conservation efforts. (Statewide) e. Federal, State, and local public agencies should sufficiently protect sensitive species and important wildlife habitats on their lands. (Central Coast region)	Since the project started, we have completed 625 plots, and have identified a baseline inventory consisting of 150 bird and 25 small mammal species. These data have been used to map distributions of upland game birds (e.g., mountain quail) and species of special concern (e.g., olive-sided flycatcher). Efforts to repair guzzlers, restore springs, salt cedar and fountain grass removal resulted in maintaining populations of peninsular bighorn sheep in Magnesia Spring and Carrizo Ecological Reserves.	*We are spending funding on riparian areas and target species like the red-legged frog, which has been identified as a species that has data gaps.* *There have been more efforts for direct species rather than habitat restoration because we only have so much available habitat. In the future, there may be a shift in mitigation strategy from individual species conservation to habitat restoration.*
Coordination, Collaboration, and Stakeholder Engagement	f. Federal, State, and local agencies should provide greater resources and coordinate efforts to control existing occurrences of invasive species and to prevent new introductions. (Statewide) e. Public agencies and private organizations need to collaboratively protect and restore habitat connectivity along major rivers in the	The California Safe Passages Project is intended to become an ongoing forum for discussion concerning the planning and implementation of wildlife habitat connectivity conservation efforts throughout California. The Department hosted a seminar on Climate Change and Ecological Resources in California followed by a workshop of staff and key	*Pleasantly surprised with the collaborative projects associated with SWAP. There have been good efforts to get the CDFW to coordinate with infrastructure and transportation agencies.* *Our top priority has been to work with land owners and the Federal government. We have worked with BLM, which is a major land manager, as well as the Forest Service and the*

Recommended Conservation Actions	Example Conservation Actions	Example Grant Planned or Implemented Activities	Interviewee Examples of Actions/Activities Supporting SWAP 2005 Conservation Action
	Central Valley. (Central Valley and Bay-Delta region)	agencies and stakeholders in June 2008 and in September 2009 to initially consider climate change implications for the priority actions identified in the Plan and provide updates on CDFW efforts on these subjects.	*State Parks Department. We have done a really good job coordinating with agencies and other non-profits and land stakeholders. We have worked well with non-profits, but I think we could interact even more.*
Addressing Conservation Priorities and Stressors in the SWAP 2005	l. Public agencies and private organizations should protect, restore, and improve water dependent habitats (including wetland, riparian, and estuarine) throughout the region. Design of these actions should factor in the likely effects of accelerated climate change. (Central Valley and Bay-Delta region) m. Permitting agencies, county and local planners, and land management agencies should work to ensure that infrastructure development projects are designed and sited to avoid harmful effects on sensitive species and habitats. (Statewide)	Extensive work was completed for the treatment and removal of invasive species including the spraying of pampas grass (spot treatments within eight acre area), onionweed (spot treatments within 16 acre area), annual exotic grasses, and iceplant, and the physical removal of mustard, and invasive cultivars of Monterey and Torrey pines (approximately 55 trees). Monitored available information on climate change effects on Western burrowing owls in California	*We have made more progress than we thought we would on issues related to climate change. Farmers and ranchers in the central valley are noticing the affects and are starting to create climate adaptation plans to mitigate potential impacts.*
Education, Outreach, and Capacity-building	j. The State and Federal governments should give greater priority to wildlife and natural resources conservation education. (Statewide) k. The State should strengthen its capacity to implement conservation actions and to assist local agencies and landowners with planning and implementation of wildlife and habitat restoration and conservation efforts. (Statewide)	Conducted training and provided oversight of staff and volunteers in the appropriate application of herbicides to restore wildlife habitat, and collated and submitted regulatory reports. Developed new web mapping tool with added functionality and ability to assist in more efficient decision-making. We had a feedback session on this Beta tool, and have incorporated significant changes based on the feedback to create a more functional and intuitive web mapping tool.	*There has been more effective outreach in Sacramento, most likely through improved technologies or better leadership.* *DFW has done a good job getting the word out about projects. We have an Office of Communication, Education, and Outreach. They are grossly underfunded, but are doing a good job with their resources.*

Recommended Conservation Actions	Example Conservation Actions	Example Grant Planned or Implemented Activities	Interviewee Examples of Actions/Activities Supporting SWAP 2005 Conservation Action
Wildlife Resource Assessment/ Research	d. Fish and Game should continue fisheries restoration and watershed assessment efforts. (North Coast-Klamath region) n. To address habitat fragmentation and avoid the loss of key wildlife corridors, Federal, State and local agencies, along with NGOs, should support scientific studies to identify key wildlife habitat linkages throughout the State. (Statewide).	A systematic, property-wide mesocarnivore survey, including special status carnivores, using remote camera traps was initiated in August 2009 and concluded in 2012. During the breeding season of 2009, with a team of 27 Department staff, surveyed 125 randomly selected landscape blocks within the study area, each measuring five km^2, for all active Swainson's hawk nests – a total of over 3,000 square kilometers surveyed. Analyzed images collected at camera stations for detections of fishers to estimate naïve occupancy rates as follows: Sampled eight units in Humboldt Redwoods State Park, consisting of 32 track plate-hair snare hybrid stations and 32 remote cameras for a minimum of 15 days.	*In the North Central CDFW region, we have made great progress, primarily through our research and assessment group. We are very science oriented and do a good job at identifying species of conservation needs, research proposals and getting funding to implement the projects. We have one long-term monitoring project that has been going on for six years. Progress has been made on wildlife resource assessments, specifically through SWG funding to support an increase in human capacity.*
Conservation Planning/Plans	a. The State should provide scientific and planning assistance and financial incentives to local governments to develop and implement regional multi-species conservation plans for all of the rapidly developing areas of the Sierra Nevada and Cascades. (Sierra Nevada and Cascades region) g. The State should systematically review and monitor the distribution and abundance of nonharvested marine fish and invertebrates. (Marine region)	SWG-supported assessments of high mountain lakes have been used to develop seven watershed-based aquatic biodiversity management plans, with five approved and finalized to date. These plans direct Department resource managers to improve the status of native fauna, including the mountain yellow-legged frog and Yosemite toad, through habitat restoration via removal of non-native species. Coordinated regional and statewide conservation planning by providing policy and technical guidance on NCCPs focused on the Bay	*Good progress made towards doing regional comprehensive conservation planning. From our standpoint there have been valuable efforts made to integrate transportation planning to conservation planning.* *The habitat planning branch made some movement lately for standardizing different measures and how to develop and meet conservation planning at a species level that is consistent across the State. The biggest efforts have occurred through HCCPs.*

Recommended Conservation Actions	Example Conservation Actions	Example Grant Planned or Implemented Activities	Interviewee Examples of Actions/Activities Supporting SWAP 2005 Conservation Action
		Delta Conservation Plan, a complex plan that crosses multiple county jurisdictions, some with their own developing regional conservation plans.	
Funding and Leveraging	o. The State should provide scientific and planning assistance and financial incentives to local governments to develop and implement regional multi-species conservation plans for all of the rapidly developing areas. (Statewide) p. Fish and Game should expand funding and coordinate efforts to prevent the establishment of invasive species and to reduce the damage of established invasive species. (Central Valley and Bay-Delta region)	Project funds were leveraged with other stakeholder efforts including surveys funded by the Imperial Irrigation District and Pasadena Audubon.	*We have been very good at finding partners to get our work done.* **Interviewees provided limited on funding and leveraging examples*
Knowledge to Implement SWAP 2005	i. Federal and State agencies should work to understand the natural fire regimes of different ecosystems and how the ecological role of wildfire can be replicated with prescribed fire and other forest management practices. (North Coast-Klamath region)	Surveys have been initiated to determine presence, and in some cases distribution, of special status species, to establish an index of population trend of "indicator" species, and to assess habitat. The primary objectives of this element of the grant were to monitor habitat use, survival, and reproductive ecology of fishers translocated to a portion of their historic range in the southern Cascades and northern Sierra Nevada.	*The Department Director has put together the science team and we are promoting a website that shares literature by CDFW with stakeholders. Caltrans and CDFW worked on wildlife mapping connectivity project. We paid attention to areas of high priority and helped identify regional assessment priorities. One of the actions of that project was to implement smaller scale regional mapping for targeted areas.* *Progress has been made towards applied relevant science that has been used to influence decision-making.*
Monitoring and Evaluation	l. Fish and Game should be allocated the resources to monitor the distribution of sensitive fish and other aquatic species populations and to engage effectively in	Evaluation process and tools in place to assess progress by integrating monitoring results and other learnings, as a basis for decision-making under adaptive management.	*We started long term monitoring project in our regions in the Sierra Nevada, going on for six years, we have tried to educate the need for baseline data monitoring,*

Recommended Conservation Actions	Example Conservation Actions	Example Grant Planned or Implemented Activities	Interviewee Examples of Actions/Activities Supporting SWAP 2005 Conservation Action
	water-rights decision processes, water diversion issues, land-management planning, and conservation planning actions to restore and enhance aquatic systems. (Sierra Nevada and Cascades region) f. Where historical or active gravel mining has had substantial effects on river systems that are important for sensitive aquatic species, Federal, State, and local agencies should continue monitoring and restoration efforts to minimize the negative effects of mining. Active mining operations should employ the most ecologically sensitive practices possible. (North Coast-Klamath region)	During 2012, we monitored approximately 57 Sierra Nevada sites for bird and mammal species, habitat characteristics, and woody plant species. We used low-cost, high-return methods that produce archival records: audio recordings were made and archived for birds; infrared- and motion-triggered camera data were collected for mammals.	*especially with years like this year and the drought. It is really hard, can only run so many as money.* *Inventory monitoring is becoming more developed across all NCCP and the ecoregions, which is evolving to become a more of a comprehensive region wide effort.*
Adaptive Management	i. In their conservation planning and ecosystem restoration work, State and Federal wildlife agencies and land managers should consider the most current projections of the effects of global warming. (Statewide)	The Contractor developed a white paper (Shilling and Waetjen, 2011) delineating several approaches for assessing and prioritizing connectivity on a regional scale and completed a case study from the San Joaquin Valley illustrating an alternative to “core and linkage” modeling. *No other grants mentioned processes in place	*Depending on the action or project, all NCCP’s have to have some kind of adaptive management component included.*

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[26] Data collected from the "California Species and Natural Communities Monitoring and Assessment Project" was mentioned as being analyzed as part of a Ph.D. dissertation through the University of California Berkeley, and was likely publically released through the University of California Berkeley; however, the only information we have is that the data collected would be incorporated into a dissertation.

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Appendix 9: SWG Funded Grants, Grant Period, Funding Amount, and Final Outputs

Information provided below drawn directly from final grant reports. Of the 69 completed grants, 15 final grant reports were shared with Blue Earth. In the table below we provide the grant title and grant number, length of the grant's implementation, total value of the project (SWG and State government match), and stated outputs from the grant as shared in the final grant reports.

Grant Title (and Grant #)	Length	Value	Outputs
California Species and Natural Communities Monitoring and Assessment Project (T-1-3)	4 years	$3,314,000	• Department staff led field efforts on several priority projects reported on previously in annual performance reports and used SWG funding to support temporary field staff during the grant period. • Transmitted all completed databases to the Department's Biogeographic Data Branch for incorporation into the State's data warehouse (BIOS) for analysis, use, and decision-making support. • Produced two publications.
Conservation Grant Coordination Project (T-1-4)	5 years	$413,075	*Final performance report does not list any outcomes, outputs, or publications*
California Species and Natural Communities Monitoring and Assessment Project-Phase 3 (T-1-5)	3 years	$2,284,798	• Primarily completed fieldwork goals from 2005 through 2008 according to schedule with a few changes that were results of staffing limitations and time constraints. • Added passerine point counts in the fall of 2007 to monitor differences in avian use between grazed and ungrazed areas within Lower Cottonwood Creek Wildlife Area, as well as avian use within various stages of riparian and wetland restoration on the Los Baños Wildlife Area. • Resumed waterfowl pair and brood surveys. • In 2008 expanded search area for the Tricolored Blackbird onto State Parks property in an area that had a breeding colony in 2005. • Mapped changes in alkali sink habitats and effects on Hispid Bird's-beak, *Cordylanthus mollis hispidus*, on the Los Baños and Volta Wildlife Areas each summer from 2005 – 2007. • Mapped habitat changes within the San Joaquin River flood plain on the China Island Unit of the North Grasslands Wildlife Area. • Mapped the distribution of invasive weeds, primarily perennial pepperweed (*Lepidium latifolium*), within riparian and grassland habitats on selected properties. • Produced seven publications.
Development of a California Comprehensive Wildlife	4 years	$1,726,701	• The CDFW conducted additional coordination and solicited public comments by modifying the website to receive comments electronically, as well as through holding three public meetings in Sacramento, Redding, and Riverside.

Conservation Plan (T-2-1)			• Contacted California tribes by mail and telephone and invited them to comment on the plan. The CDFW addressed the comments received and revised sections of the plan as appropriate. • The CDFW created a new chapter (Chapter 5) on monitoring and adaptive management. • The CDFW hosted a seminar on climate change and ecological resources in California followed by a workshop for staff, key agencies, and stakeholders. • The project involved conducting a statewide assessment of essential habitat connectivity by using the best available science, data sets, spatial analyses and modeling techniques to produce a functional network of connected wildlands. Used results from the project in plan implementation. • Produced one publication.
Department of Fish and Game Lands Resource Assessment and Monitoring Project (T-3-1)	3 years	$1,604,000	• Used funding to write collaborative agreements with California State University foundations and to hire temporary research/technical assistants. • In the Northern California region, field crews collected data at 250 randomly chosen plots in nine Wildlife Areas. Field crews collected information on habitat, small mammals present, bird species present and amphibian and reptile species present. • Collected data in the North Central region. Performed a field inventory on forty-one CDFW properties in the region. Performed inventory surveys for habitats, birds, mammals, and to a limited extent reptiles and amphibians. • Conducted surveys in the Central CDFW region for threatened and endangered vertebrate species on six CDFW properties. Recorded incidental observations for a number of other sensitive species during the establishment and completion of the formal surveys. • Following three years of reconnaissance, established two small mammal grids and one blunt-nosed leopard lizard grid at the Northern Semitropic Ridge property. • Generated maps illustrating the locations and relative densities of sensitive vertebrate species targeted during survey efforts.
Southern California DFG Lands Management Project (T-6-1)	1 year	*No value included in documents shared by the CDFW*	• Implemented a variety of projects on CDFW lands in the South Coast and Inland Deserts regions with the goal of achieving site security and habitat improvements. • Area planning and reporting, coordination with outside groups, species monitoring and research, and annual and ongoing maintenance and repair. • Land management plans, restoration plans, and accompanying documents for 10 properties were in a variety of stages during the grant-reporting period.
Develop Initial Components for a Western Burrowing Owl Conservation Strategy (T-7-1)	7 years	$384,351	• Revised the Western burrowing owl guidance document solicited peer review. • Produced and edited a draft conservation strategy and range maps. • Reworked internal policy document entitled “Guidance for Burrowing Owl Conservation.” • Added 233 new Western burrowing owl records into the California Natural Diversity Database. • Institute for Bird Populations published the results of their statewide surveys for Western burrowing owls in California.

			• Coordinated with CDFW regional staff to help conserve Western burrowing owls and secure mitigation for habitat loss during development and maintenance projects. • Participated in development and implementation of NCCPs and other large-scale conservation efforts that cover burrowing owls. • Produced six publications.
Development of a Conservation Strategy for the Western Pond Turtle (T-10-1)	5 years	$271,506	• Produced one publication, which incorporated input from a variety of agency biologists and regional turtle experts.
T-11-1 Strengthening California's Resource Assessment Capability (T-11-1)	6 years	*No value included in documents shared by the CDFW*	• Identified leads in the Northern, North Central, and the Central CDFW regions where the project occurred. Each project lead was responsible for hiring a field crew and conducting surveys within their respective region and producing an annual and a final report of their findings. • Two other sub-projects evolved out of Project 1A, and provided individual reports of their findings. • Initiated a motion-detection camera survey protocol that emulated methods described by Zielinski and Kucera (1995). • Completed 530 camera station surveys within 265 sampling units across 14 counties, 10 National Forests, and four CDFW regions. • Created a centralized database to house the meso-carnivore project data.
Heavy Metal Contamination in Sentinel Wildlife Species (T-12-1)	4 years	*No value included in documents shared by the CDFW*	• Documented lead exposure and compared exposure levels to live-trapped turkey vultures in areas with varying hunting activities. • Received blood samples and carcasses from golden eagles, turkey vultures, and common ravens collected opportunistically from wildlife rehabilitation centers and agency biologists throughout California. Calculated estimates for cause-specific mortality for the overall sample and for each species separately. • Compared stable lead isotope ratios of blood from golden eagles and lead samples collected from carrion found as available prey for eagles and published lead isotope ratios from ammunition purchased within California. • Documented lead exposure in golden eagles and turkey vultures within the condor range before and after the ban of lead ammunition.
High Mountain Aquatic Resource Assessment and Management (T-15-1)	4 years	$182,116	• Submitted a final draft of the Desolation Wilderness Area Based Management Plan (ABMP) for agency review. • Nearly completed the first draft of the South Fork Yuba ABMP. • Completed coordination and planning efforts with USDA-FS and USFWS partner agencies for four additional plans. • Project biologist consulted on three USDA-FS fish removal projects conducted in the CDFW North

			Central region. • Project biologist developed monitoring plans that field personnel implemented.
Long term monitoring strategy for the Western Riverside County Multi-Species Habitat Conservation Plan (T-17-1)	5 years	$655,000	• Coordinated and conducted Biological Monitoring program surveys, as well as funded personnel time for development of the long-term monitoring strategy document. • Provided funding for the Biological Monitoring program Administrator, a Lead Biologist, a Program Lead, and up to seven Field Biologists. • Conducted an inventory of the 146 covered species on accessible conserved land to determine current distributions and status. • Survey work to document the distribution of covered species in the Conservation Area from 2007- 2012 included surveys for all taxa covered under the MSHCP (i.e., birds, mammals, reptiles, amphibians, fish, insects, crustaceans, and plants). • Developed survey protocols and detection probabilities for select covered species. • Tested and refined long-term monitoring protocols and calculated detection probabilities for feasible species (e.g., coastal sage scrub birds, Quino checkerspot butterfly). • Combined surveys for multiple taxa within a covered vegetation/habitat type to test a long-term monitoring strategy that tracks the status, trend, and condition of covered species over time. • Implemented a long-term monitoring strategy within at least one upland vegetation/habitat type (tentatively coastal sage scrub) across the Conservation Area. • Began to develop a monitoring strategy within one aquatic vegetation/habitat type. • Evaluated survey strategies and procedures to determine optimal efficiency. • Began an expanded pilot to assess the condition of coastal sage scrub, chaparral, and grassland vegetation communities within the Conservation Area. • Provided data to the adaptive management program and to the wildlife agencies to evaluate species and habitat goals. • Monitoring Program Administrator coordinated monthly meetings of land managers and representatives from affiliates and partner organizations including the wildlife agencies. • The MSHCP Biological Monitoring program prepared summary reports of all surveys conducted from 2007-2011. • The Western Riverside County RCA prepared annual reports of all MSHCP activities including those carried out by the Biological Monitoring program.
Focused Regional and Statewide Conservation Planning (T-19-1)	3 years	$900,000	• Funded one permanent CDFW employee to coordinate regional and statewide conservation planning, including working with field planning staff on NCCPs. • Coordinated efforts to develop a Swainson's hawk Conservation Strategy and worked with other agency employees, environmental groups and landowner representatives to develop a State Safe Harbor-like Agreement. • Funded a CDFW employee from August 2009 to March 2010, who provided policy and technical

			guidance on NCCPs.
The Safe Passages Project: Planning for Wildlife Connectivity in California (T-25-1)	3 years	$88,001	• Created a statewide connectivity forum of Federal, State, and local agencies involved in wildlife management, transportation and land-use planners, scientists and researchers, and conservation organizations. • Created a consensus document from the connectivity forum, which identifies lessons learned from past work and produces a set of recommendations – both technical and policy recommendations – to guide and inform future regional connectivity efforts. • Held a series of regional habitat connectivity workshops to develop and refine a comprehensive and systematic approach to identifying barriers to wildlife movement. • Developed an approach to connectivity design for this region that the agencies and other stakeholders could implement. • Produced one model linkage design for the San Joaquin Valley and foothills.
State Wildlife Action Plan Implementation: Resources and Capacity-building Tools for Amphibian and Reptile Conservation (U-26-R-1)	3 years	*No value included in documents shared by the CDFW*	• Completed the SGCN and climate change vulnerability tasks, primarily via a separate SWG grant (T-28-R-1) • Produced an analysis titled "Identifying Priority Amphibian and Reptile Conservation Areas in California: Pilot Implementation." The report contains numerous range maps and species richness figures. • Attended a nationwide symposium, and assisted with the compilation of regulations pertaining to amphibians and reptiles in the U.S. • Produced a final regulatory assessment report, State of the Union: Legal Authority over the Use of Native Amphibians and Reptiles in the U.S.