



DRAFT TRIBAL LANDS COMPANION PLAN

Fall 2015



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Knights Ferry Covered Bridge, California

Date: 3 February 2011

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Red Rock Canyon State Park, California

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Prepared by Blue Earth Consultants, LLC



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Disclaimer:

While we have made every effort to ensure that the information contained in this report accurately reflects SWAP 2015 companion plan development team discussions shared through web-based platforms, e-mails, and phone calls, Blue Earth Consultants, LLC makes no guarantee of the completeness and accuracy of information provided by all project sources. SWAP 2015 and associated companion plans are non-regulatory documents. The information shared is not legally binding nor does it reflect a change in the laws guiding wildlife and ecosystem conservation in the State. In addition, mention of organizations or entities in this report as potential partners does not indicate a willingness and/or commitment on behalf of these organizations or entities to partner, fund, or provide support for implementation of this plan or SWAP 2015.

The consultant team developed companion plans for multiple audiences, both with and without jurisdictional authority for implementing strategies and conservation activities described in SWAP 2015 and associated companion plans. These audiences include, but are not limited to, California Department of Fish and Wildlife leadership team and staff, California Fish and Game Commission, cooperating State, Federal, and local government agencies and organizations, California Tribes and tribal governments, and partners (such as non-governmental organizations, academic, research institutions, and citizen scientists).

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Acronyms and Abbreviations

AB	Assembly Bill
AFWA	Association of Fish and Wildlife Agencies
BIA	Bureau of Indian Affairs
BLM	U.S. Bureau of Land Management
Blue Earth	Blue Earth Consultants, LLC
Caltrans	California Department of Transportation
CBC	California Biodiversity Council
CDFA	California Department of Food and Agriculture
CDFW/the Department	California Department of Fish and Wildlife
Ch.	Chapter
CNRA	California Natural Resources Agency
CTKW	Climate and Traditional Knowledges Workgroup
DOI	U.S. Department of Interior
DRECP	Desert Renewable Energy Conservation Plan
DWR	California Department of Water Resources
HCP	Habitat Conservation Plan
HHS	Health and Human Services
ITEP	Institute for Tribal Environmental Professionals
KEA	Key Ecological Attribute
LCC	Landscape Conservation Cooperative
NCCP	Natural Community Conservation Plan
NGO	Non-governmental Organization
NOAA	National Oceanic and Atmospheric Administration
NRCS	National Resources Conservation Service
RAMP	Regional Advance Mitigation Planning
ROTC	Regional Tribal Operations Committee
SGC	Strategic Growth Council
SGCN	Species of Greatest Conservation Need
SWAP	State Wildlife Action Plan
SWG	State and Tribal Wildlife Grants
TEEIC	Tribal Energy and Environmental Information Clearinghouse
TEK	Traditional Ecological Knowledge
TNC	The Nature Conservancy
UCCE	University of California Cooperative Extension
US EPA	U.S. Environmental Protection Agency
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WCB	Wildlife Conservation Board



1. Introduction

The California State Wildlife Action Plan 2015 Update (SWAP 2015) provides a vision and a framework for conserving California's diverse natural heritage. SWAP 2015 also recognizes the need and calls for developing a collaborative framework to manage ecosystems sustainably across the State in balance with human uses of the natural resources. To address the need for a collaborative framework, California Department of Fish and Wildlife (CDFW), Blue Earth Consultants, LLC (Blue Earth), and partner agencies and organizations began preparation of sector-specific companion plans. While this document reports on the progress made thus far on collaboration, the intent is to set a stage for achieving the State's conservation priorities through continued partnership and by mutually managing and conserving the State's natural and cultural resources. Text box 2 highlights important definitions to SWAP 2015 and the companion plan process (CDFW, 2015b; Chapter [Ch.] 1.5.4).

Text Box 1. What is a State Wildlife Action Plan?

In 2000, Congress enacted the State and Tribal Wildlife Grants (SWG) program to support state programs that broadly benefit wildlife and habitats, but particularly "Species of Greatest Conservation Need" (SGCN) defined by the individual states. Congress mandated each state and territory to develop a SWAP that outlined a comprehensive wildlife conservation strategy to receive federal funds through the SWG program. From 2005 through 2014, CDFW received approximately \$37 million through the SWG program in matched with approximately \$19 million in State government support for the wildlife conservation activities. The SWG program requires SWAP updates at least every 10 years. CDFW prepared and submitted SWAP 2015, the first comprehensive update of the California SWAP 2005, to the U.S. Fish and Wildlife Service (USFWS) on 10/1/2015. The update allows CDFW to expand and improve the recommended conservation activities addressed in the original plan by integrating new knowledge acquired since 2005.¹

¹ For more information see: CDFW, "California State Wildlife Action Plan (SWAP)," 2015, 27 Oct. 2015.

Text Box 2. Definitions Important to SWAP 2015

Conservation Target: An element of biodiversity at a project site, which can be a species, habitat/ecological system, or ecological process on which a project has chosen to focus.

Goal: A formal statement detailing a desired outcome of a conservation project, such as a desired future status of a target. The scope of a goal is to improve or maintain *key ecological attributes* (defined below).

Key Ecological Attribute (KEA): Aspects of a target's biology or ecology that, if present, define a healthy target and, if missing or altered, would lead to the outright loss or extreme degradation of the target over time.

Objective: A formal statement detailing a desired outcome of a conservation project, such as reducing the negative impacts of a critical *pressure* (defined below). The scope of an objective is broader than that of a goal because it may address positive impacts not related to ecological entities (such as getting better ecological data or developing conservation plans) that would be important for the project. The set of objectives developed for a conservation project are intended, as a whole, to lead to the achievement of a goal or goals, that is, improvements of key ecological attributes.

Pressure: An anthropogenic (human-induced) or natural driver that could result in changing the ecological conditions of the target. Pressures can be positive or negative depending on intensity, timing, and duration. Negative or positive, the influence of a pressure to the target is likely to be significant.

Species of Greatest Conservation Need (SGCN): All state and federally listed and candidate species, species for which there is a conservation concern, or species identified as being vulnerable to climate change.

Strategy: A group of actions with a common focus that work together to reduce pressures, capitalize on opportunities, or restore natural systems. A set of strategies identified under a project are intended, as a whole, to achieve goals, objectives, and other key results addressed under the project.

Stress: A degraded ecological condition of a target that resulted directly or indirectly from negative impacts of pressures (e.g., habitat fragmentation).

(CDFW, 2015b; Ch. 1.5.4)



1.1 SWAP 2015 Statewide Goals

SWAP 2015 has three statewide conservation goals with 12 sub-goals, under which individual regional goals are organized (CDFW, 2015b; Ch. 4.1). These statewide goals set the context for the companion plans and SWAP 2015 implementation.

Goal 1 - Abundance and Richness: Maintain and increase ecosystem and native species distributions in California while sustaining and enhancing species abundance and richness.

Goal 2 - Enhance Ecosystem Conditions: Maintain and improve ecological conditions vital for sustaining ecosystems in California.

Goal 3 - Enhance Ecosystem Functions and Processes: Maintain and improve ecosystem functions and processes vital for sustaining ecosystems in California.

1.2 SWAP 2015 Companion Plans

Need for Partnerships

The state of California supports tremendous biodiversity. However, the State also has a large and growing human population and faces many challenges, such as climate change, which affects biodiversity and natural resources in general. To balance growing human activities with conservation needs for sustaining the State's ecosystems, collaboratively managing and conserving fragile natural resources is a necessity. As many desirable conservation actions identified under SWAP 2015 are beyond CDFW's jurisdiction, the Department determined that more detailed coordination plans are needed in line with and beyond the recommendations presented in SWAP 2015. Called "companion plans," these sector-specific plans (Text Box 3) were created collaboratively with partners and will be instrumental in implementing SWAP 2015 (See Appendix D for a list of partners that informed development of this companion plan).

Text Box 3. Companion Plan Sectors:

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

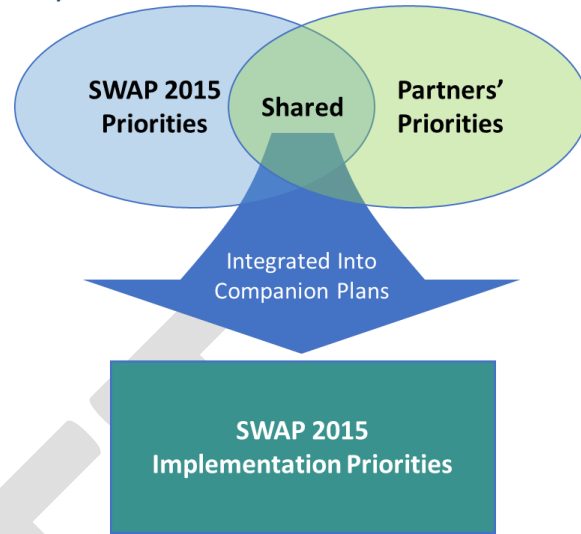
Companion Plan Purpose and Sector Selection

Companion plans present shared priorities identified among SWAP 2015 and partners involved in the companion plan development. Figure 1 illustrates how, through collaboration with partner organizations, priorities for SWAP 2015 have come together in the companion plan and will be elevated as high implementation priorities for SWAP 2015.

The companion plans respond to feedback from many sources, including CDFW staff and partners who support natural resources management and conservation. This includes the California Biodiversity Council (CBC), under which a resolution to promote interagency alignment within the State was signed

in 2013. The companion plans also fulfill the strong suggestion from the Association of Fish & Wildlife Agencies (AFWA) and the National Fish, Wildlife, and Plants Climate Adaptation Strategy¹ to incorporate increased partner engagement as a best practice in wildlife conservation planning. This effort also directly helps CDFW comply with recently added provisions to the Fish and Game Code under Assembly Bill (AB) 2402, specifically under Section 703.5(b), which states that CDFW shall “seek to create, foster, and actively participate in effective partnerships and collaborations with other agencies and stakeholders to achieve shared goals and to better integrate fish and wildlife resource conservation and management with the natural resource management responsibilities of other agencies” (California Fish and Game Code, 2015).

Figure 1: Alignment of SWAP 2015 and Partner Priorities in Companion Plans



CDFW selected sector categories based on the needs for the Department as well as the themes and subjects identified in other existing plans including the California Climate Adaptation Strategy,² 2014 update to the Safeguarding California: Reducing Climate Risk,³ The President’s Climate Action Plan,⁴ and the National Fish, Wildlife, and Plants Climate Adaptation Strategy.⁵

Because each companion plan focused on teamwork during its development phase, they inherently help set a stage for implementing SWAP 2015 through future collaborations. Together, SWAP 2015 and associated companion plans describe the context and strategic direction of integrated planning and management efforts that will help sustain California’s ecosystems.

¹ For more information, see: USFWS and National Oceanic Atmospheric Administration (NOAA), “National Fish, Wildlife, and Plants Adaptation Strategy,” 2012. Web. 27 Oct. 2015. <http://www.wildlifeadaptationstrategy.gov/>.

² For more information, see: California Natural Resources Agency (CNRA), “Climate Adaptation Strategy,” 2009. Web. 27 Oct. 2015. http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf.

³ For more information, see: CNRA, “Safeguarding California: Reducing Climate Risk – Update,” 2014. Web. 27 Oct. 2015. http://resources.ca.gov/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf.

⁴ For more information, see: Executive Office of the President, “The President’s Climate Action Plan,” 2013. Web. 27 Oct. 2015. <https://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.

⁵ For more information, see: USFWS and NOAA, “National Fish, Wildlife, and Plants Adaptation Strategy,” 2012.



Companion Plan Development

The SWAP 2015 companion plan **management team** (see Appendix C for a list of members), comprised of CDFW staff with support from Blue Earth staff, provided general direction to the **development team** (see Appendix D for a list of members). Blue Earth facilitated sector-specific discussions among the CDFW staff and development team members, who represented a cross section of sector interests and mandates. Team members were selected based on their positive response to outreach efforts by CDFW to seek participation and representation from public and private partners heavily involved in the conservation and management of the State's natural resources.⁶

Beginning in early 2015, a series of four planning and collaboration meetings were held for each sector. The meetings consisted of an initial kickoff session with participation from all sectors followed by three sector-specific meetings. During these meetings, development team participants discussed their ongoing and potential future efforts that would benefit wildlife and habitat conservation in the State. The development teams and CDFW then identified collaboration opportunities and joint priorities or overlaps among SWAP 2015 and partners' strategies and actions. Blue Earth and CDFW organized the feedback from the facilitated development team discussions into nine companion plan documents. In addition, the management team led a review process between CDFW and development team partners, along with a subsequent public review phase for the nine companion plan documents.

Text Box 4. Companion Plan Sector Challenges

Although the management team and Blue Earth sought participation from a broad range of potential development team participants, lack of available time and/or resources to participate limited the number of participants available to contribute to the companion plan development process. Because of this limited engagement, the tribal lands companion plan serves as a starting point and reference for future discussions and collaborations between CDFW and California Tribes, tribal governments, and other partners on Tribal lands and wildlife and habitat conservation priorities and activities in the State that address SWAP 2015 strategies and activities.

Companion Plan Content

Each companion plan addresses:

- SWAP 2015 priorities - statewide goals and strategies;
- companion plan overview - approach, purpose, development process, and content;
- description of the sector;
- common themes across the sectors;
- common priority pressures and strategies across the sectors;
- SWAP 2015 components that best align with the priorities of the participants' organizations under each sector;

⁶ Disclaimer: Although the management team sought to engage a broad range of partners in the development team process, CDFW recognizes that there are many other partners that will play important roles in implementing SWAP 2015 and companion plan.

- collaboration opportunities identified for joint priorities under each sector – alignment opportunity and potential resources by jurisdiction, locality, and strategy;
- considerations for evaluating future collaboration efforts and desired outcomes/outputs; and
- next steps relevant to the sector.

2. Tribal Lands Sector

2.1 Tribal Lands in California

As the state with the largest Native American population in the nation, California is home to more than 100 federally-recognized California Tribes and tribal governments who have a unique relationship with California’s natural and wildlife resources (Bureau of Indian Affairs [BIA], 2014a). California Tribes and tribal governments have sovereign authority over their members and territory and have distinct environmental interests and cultural knowledge about the State’s resources (California Natural Resources Agency [CNRA], 2012), as well as an interest in maintaining their ecological integrity. These natural resources (e.g., water, fish, agricultural land) have shaped and continue to shape the environmental values of Tribes and tribal governments by contributing to the cultural and spiritual identity of Tribes and tribal governments and offering opportunities for recreation and commerce (California Department of Water Resources [DWR], 2013).

California is distinctive in its number of Tribes and tribal governments and the complexity of tribal lands. There are three kinds of tribal lands encompassing approximately 0.6% of California’s landscape (Bureau of Land Management [BLM], 2015). The first, called trust lands, are federally-owned with beneficial interests for the Tribe. The second, restricted fee lands, are tribally-owned with legal restrictions against transferring property. Finally, there are fee lands purchased by Tribes and tribally-owned with no legal restrictions; however, the law is not clearly defined as to whether this applies to fee land within reservation boundaries (Tribal Energy and Environmental Information Clearinghouse [TEEIC], 2015). With the intricate tribal landscape in the State, a collaborative effort among natural resources agencies, Tribes, and tribal communities is essential for the management and conservation of California’s natural and wildlife resources.

2.2 Current Tribal Lands Management and Conservation in California

As traditional users and stewards of the State’s natural and wildlife resources, California Tribes and tribal governments have special knowledge of and associations with the resources in their surroundings. Subsequently, collaborations between California Tribes, tribal governments, and State agencies can lead to better planning and strategy adaptation as ecosystems change and prioritized actions are identified to conserve California’s natural and wildlife resources. For example, the BIA *Strategic Plan for 2014-2018* incorporates goals to implement adaptive management for all natural and cultural infrastructure while considering and utilizing traditional ecological knowledge (TEK) as a data source (BIA, 2014a). TEK “refers to the evolving knowledge acquired by indigenous and local peoples over hundreds or thousands of years through direct contact with the environment,” is location-specific, and includes relationships

with the species, plants, and landscape (USFWS, 2011; 1). The DWR developed a *Tribal Communication Plan* as a part of the California Water Plan Update, to support and promote integrated water planning with an emphasis on TEK from Tribes and tribal governments on topics such as water rights, traditional fishing, and climate change (DWR, 2014b). Additionally, DWR, in partnership with the California Tribal Water Summit Design Team, convened the second California Tribal Water Summit in 2013, where guiding principles and implementation goals were created (DWR, 2013). One goal stated the importance of Tribes, tribal governments, and State agencies working together to further the understanding of tribal lifestyles when it comes to the role of water, including subsistence⁷ and cultural practices (DWR, 2013). These are just a few examples of efforts in the tribal lands sector supporting conservation and planning efforts for California’s natural and wildlife resources.

Balancing California’s natural and wildlife resources with the conservation of Tribes and tribal governments’ subsistence values is an important goal to achieve for future generations. A number of State agencies and nonprofit organizations support projects to enrich natural and cultural heritage preservation while enhancing tribal collaborations. For example, in 2012 State and Federal conservation agencies (CDFW, USFWS, Pacific States Marine Fisheries Commission, and National Oceanic and Atmospheric Administration [NOAA] Fisheries) and California Tribes and tribal governments worked together to complete a scientific review of California’s salmon and steelhead hatcheries, where one of the goals of the project was to support sustainable fisheries for Yurok and Hoopa Tribes (USFWS, 2012). Another example of conservation work with Tribes and tribal governments was the California Fish and Game Commission 2015 approval of a proposal from the Yurok Tribe to implement a salmon conservation closure in the Blue Creek area, closing all non-tribal sport fishing from June 15 – September 14 (CDFW, 2015a). Furthermore, in 2012 the CNRA adopted a *Tribal Consultation Policy* distributed by other State agencies, which ensures government-to-government consultation between Tribes and agencies through inclusive communication efforts regarding Tribes and tribal governments’ interests in the development and planning of programs and projects that may affect the tribal governments (CNRA, 2012). To implement the 2011 Executive Order B-10-11 to “implement effective government-to-government consultation with California Tribes” and CNRA’s *Tribal Consultation Policy*, CDFW adopted its own policy in September 2014 to provide a foundation to work cooperatively, communicate effectively, and consult with Tribes (Office of Governor Edmund G. Brown Jr., 2011; CDFW, 2014).

Tribes and tribal governments are also taking steps to engage in conservation and restoration. For example, the Morongo Band of Mission Indians have an Environmental Protection Department focused on promoting “environmental awareness and environmentally considerate activities by exemplifying environmental stewards, fostering collaborative relationships, expanding education and outreach activities,” and continuing to enrich and develop their programs (The Morongo Band of Mission Indians, 2015). By continuing to collaborate with Tribes and tribal governments, CDFW and partner organizations can work together to protect and conserve the State’s current natural and wildlife resources while

⁷ Subsistence, defined as “the gathering and harvest, processing, consumption, and use of all wild resources – birds, mammals, fish, and plants – from all the varied environments found throughout tribal communities,” has continued to be an essential component of tribal culture (BIA, 2014a).

simultaneously providing new opportunities to grow and become knowledgeable in tribal values and how these values influence the State’s cultural heritage and resources.

Text Box 5. Collaborative Conservation Effort Examples in the Tribal Lands Sector

There are numerous collaborative conservation and management efforts found in California. Below we share two examples related to tribal lands in the State. These examples demonstrate existing conservation efforts that aligned with SWAP 2015. The partners addressed in each description are indicated in **bold**.

- *Cultural Values and Sea Level Rise Workshop*: **The Yurok Tribe** of the **California Yurok Reservation** was awarded a **BIA** Tribal Climate Change Adaptation Competitive Grant Program Award of \$59,800 for fiscal year 2014 to host a workshop focused on characterizing tribal cultural landscapes and values in the context of rising sea levels. The goal of the intertribal workshop was to apply the “Cultural Landscape Approach to identify tools and best practices and case studies for Tribes to identify and communicate areas of significance that will be impacted by rising ocean waters as a result of climate change” (BIA, 2014b).
- *Conservation of Humbug Valley*: Following **Pacific Gas & Electric Company’s** transfer of land parcels in Humbug Valley to the **Pacific Forest and Watersheds Stewardship Council, The Maidu Summit Consortium** – a collective of nine organizations of Maidu Indians (Maidu Summit Consortium, 2013) – and **CDFW** filed competing claims to gain ownership of Humbug Valley (Little, 2014). Through discussion during the process of filing their claims, the two groups realized they had many shared interests and thus decided to partner towards conservation and restoration of the valley. They formed joint working groups to draft a proposal outlining long-term management, restoration, and conservation goals and presented these to the **Stewardship Council**. In November 2013, the **Stewardship Council** endorsed the joint CDFW-Maidu Summit Consortium proposal for the **Maidu Summit Consortium** to hold the fee title to Humbug Valley in perpetuity and for CDFW to hold a conservation easement over the property. **CDFW** and the **Maidu Summit Consortium** are currently working together on a valley-wide management plan that will pair Maidu traditional ecological knowledge and **CDFW** knowledge and expertise (DWR and CDFW, 2013.)

3. Common Themes across Nine Sectors

Equally important to discussion topics unique to each sector is the common themes considered across all sectors. This section shares overarching themes identified through the development of the nine companion plans within the scope of SWAP 2015. As described below, the top two most commonly discussed topics were: 1) climate change and 2) integrated regional planning.

3.1 Climate Change Related Issues

All sectors highlighted the potential far-reaching effects on California's natural resources induced or exacerbated by climate change as a major issue. The negative impacts to the State's ecosystems described in SWAP 2015 may increase in their magnitude and severity by the compounding effects of climate change (CDFW, 2015b; Ch. 2.5.3). The implications of climate change are likely to be profound and influence many facets of the State's natural resources. Therefore, development teams considered collaboration across sectors related to natural resource management and conservation essential to assist ecosystem adaptation effectively and minimize negative effects from the shifting climate.

The suggested collaborative activities under various sector discussions that relate to climate change include a comprehensive assessment of the State's climate change vulnerability and implementation of appropriate adaptation actions (CDFW, 2015b; Ch. 2.5.3). Detailed activities addressed during the discussions include, but are not limited to: establishing a sustainable habitat reserve system to reduce other habitat threats and increase habitat resilience to climate change; incorporating climate change impacts (e.g., habitat shifts and sea level rise) into the management of watersheds, habitats, and vulnerable species; improving regulation of greenhouse gas emissions; developing comprehensive research guidelines to evaluate climate change effects; and engaging in education and outreach activities to raise awareness of climate change.

3.2 Integrated Regional Planning

California hosts a landscape that is ecologically, socio-economically, and politically intricate. The current status of the State's ecosystems reflects the synergistic interactions among ecological conditions and processes, as well as diverse human activities and conflicting needs and the regulations imposed on those activities.

The concept of integrated regional planning arises from the recognition that addressing only one aspect of such a multi-faceted, dynamic human and natural system would not be sustainable. Integrated regional planning in the context of SWAP 2015, paraphrased from the definition in the California Water Plan, is an approach to prepare for effective management, including conservation activities, while concurrently achieving social, environmental, and economic objectives to deliver multiple benefits across the region and jurisdictional boundaries (DWR, 2014a). The expected outcomes of adopting an integrated regional planning approach are to 1) maximize limited resources to provide for increased public well-being, and 2) receive broader support for natural resource conservation beyond the conservation community while systematically improving ecosystem conditions that sustain the ecological integrity of the region.

Integrated regional planning begins with the acceptance of diverse natural resource management priorities associated with the region and the accompanying activities necessary to pursue those interests. Based on this understanding and philosophy, attempts by natural resource management agencies to integrate activities often include negotiations during regional planning processes. Expected efforts under integrated regional planning processes include: planning to reduce conflicts among

priorities and activities; minimizing overlapping efforts by aligning similar activities; streamlining and integrating needed processes across the priorities; and collaborating to complement efforts and pursue mutual priorities and interests. As an example, integrated planning could occur by zoning larger planning regions, coordinating multiple needs for the region, and limiting activities within each zone to avoid incompatible activities, or at least reduce unintended negative consequences of isolated but interactive activities. In sum, integrated regional planning requires open-mindedness, transparency, patience, and comprehensive and strategic planning between natural resource management priorities and regional and/or local jurisdictions through coordination.

In developing the companion plans, all sectors considered an integrated regional planning framework as one of the State's top priorities. The needs and tasks related to integrated regional planning and expressed through the discussion among the sector groups were: preparing, approving, and implementing regional- and landscape-level conservation plans; pursuing necessary resources systematically for conservation strategy implementation; coordinating effective partnerships; adapting to emerging issues; and reviewing and revising the plans. Existing efforts recognized for supporting integrated regional planning include Natural Community Conservation Plans (NCCPs), Habitat Conservation Plans (HCPs), Habitat Connectivity Planning for Fish and Wildlife,⁸ the Master Plan for Marine Protected Areas, and individual species management plans. SWAP 2015 also addresses those activities and plans.

In addition, SWAP 2015 highlights where partners can potentially integrate SWAP with other agency conservation programs, including the efforts by California Wildlife Conservation Board (WCB), identified and discussed among the companion plan development teams.

4. Commonly Prioritized Pressures and Strategy Categories across Sectors

Below is an overview of pressures and strategy categories considered important across the nine sector teams. SWAP 2015 adopted the Open Standards for the Practice of Conservation⁹ process and applied it to each targeted ecosystem to identify strategies that could influence key ecosystem pressures (CDFW, 2015b; Ch. 1.5.4). During development team meetings, CDFW shared lists of those identified pressures and strategy categories that are considered relevant to each sector. Through voting, each development team prioritized the pressures and strategy categories by the importance to the sector. The commonly prioritized pressure and strategy categories described below were identified by synthesizing overarching discussion themes (for pressures) and by counting the frequency of the prioritization (for strategy categories) across the sectors.

⁸ For more information, see: CDFW, "Habitat Connectivity Planning for Fish and Wildlife," 2015. Web. 27 Oct. 2015. www.wildlife.ca.gov/Conservation/Planning/Connectivity.

⁹ For more information on the Open Standards for the Practice of Conservation, see: Conservation Measure Partnership, "The Open Standards," 2015. Web. 28 Oct. 2015. <http://www.conservationmeasures.org/>.

4.1 Pressures across Sectors

A pressure, as defined in SWAP 2015, is “an anthropogenic (human-induced) or natural driver that could result in impacts to the target (i.e., ecosystem) by changing the ecological conditions” (CDFW, 2015b Ch. 1.5.4, 26). Pressures can have either positive or negative effects depending on their intensity, timing, and duration, but they are all recognized to have strong influences on the well-being of ecosystems (CDFW, 2015b; Ch. 1.5.4). Table 1 lists the 29 standard pressures addressed under SWAP 2015 (CDFW, 2015b; Ch. 1.5.4).

Table 1. SWAP 2015 Pressures

<ul style="list-style-type: none"> • Agricultural and forestry effluents • Air-borne pollutants • Annual and perennial non-timber crops • Catastrophic geological events • Climate change • Commercial and industrial areas² • Dams and water management/use • Fire and fire suppression • Fishing and harvesting aquatic resources • Garbage and solid waste • Household sewage and urban waste water^{3,4} • Housing and urban areas² • Industrial and military effluents^{4, 5} • Introduced genetic material • Invasive plants/animals 	<ul style="list-style-type: none"> • Livestock, farming, and ranching • Logging and wood harvesting • Marine and freshwater aquaculture • Military activities • Mining and quarrying • Other ecosystem modifications⁶ • Parasites/pathogens/diseases • Recreational activities • Renewable energy • Roads and railroads • Shipping lanes⁷ • Tourism and recreation areas • Utility and service lines • Wood and pulp plantations
<p>Pressures include the following:</p> <ol style="list-style-type: none"> ¹ Volcano eruption, earthquake, tsunami, avalanche, landslide, and subsidence ² Shoreline development ³ Urban runoff (e.g., landscape watering) ⁴ Point discharges ⁵ Hazardous spills ⁶ Modification of mouth/channels; ocean/estuary water diversion/control; and artificial structures ⁷ Ballast water 	

(CDFW, 2015b; Ch. 1.5.4)

As described under Section 3.1, the climate change pressure was one of the common themes discussed across the sectors. There were no other standardized pressures listed under Table 1 that were commonly prioritized across all sectors. For more information on pressures prioritized for the tribal lands sector, please refer to Section 5.1 below.

4.2 Strategy Categories across Sectors

SWAP 2015 outlines 11 categories of statewide conservation strategies under which regional strategies are organized, similar to the manner in which the regional goals are tiered under the statewide conservation goals (CDFW, 2015b; Ch. 4.2). The statewide and regional strategies are meant to work synergistically to achieve the statewide goals and priorities. Table 2 lists the 11 standardized statewide strategy categories addressed under SWAP 2015 (CDFW, 2015b; Ch. 4.2).

Table 2. SWAP 2015 Conservation Strategy Categories

<ul style="list-style-type: none"> • Data Collection and Analysis • Direct Management • Economic Incentives • Environmental Review • Land Acquisition, Easement, and Lease • Land Use Planning 	<ul style="list-style-type: none"> • Law and Policy • Management Planning • Partner Engagement • Outreach and Education • Training and Technical Assistance
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(CDFW, 2015b; Ch. 4.2)

Of these 11 strategies, the three most commonly prioritized strategy categories across the nine sectors were: **Data Collection and Analysis** (78% or 7 sectors prioritized this strategy), **Management Planning** (78% or 7 sectors), and **Partner Engagement** (56% or 5 sectors). The strategy categories identified as most relevant to the tribal lands sector are described in Section 5.2 below.

5. Tribal Lands Priority Pressures and Strategy Categories

The tribal lands sector faces many challenges to address the conservation and management of California's natural and wildlife resources that include existing legal barriers, such as a lack of effective collaborative partnerships, unbalanced power relationships, disconnect between awareness and use of TEK within and outside of communities, low participation of tribal governments in management efforts, and political conflicts (Climate and Traditional Knowledge Workgroup [CTKW], 2014). As identified in SWAP 2015, pressures such as climate change, fishing and harvesting aquatic resources, and hunting and collecting terrestrial animals could also affect the tribal lands sector (CDFW, 2015b; Ch. 2.5.2). Likewise, stresses such as habitat fragmentation, changes in water levels and hydro periods, and changes in community structure or composition can drive the need for conservation activities within this sector. Although key challenges exist, each can be seen as future opportunities to support, improve, and enhance the implementation of SWAP 2015. Activities and strategies to address these pressures and stresses may include data collection and analysis, economic incentives, and training and technical assistance.

During companion plan development meetings held in early 2015, the top pressures and strategies (described below in Section 5.1) were prioritized through ranking and voting by the development teams. The list drew upon efforts undertaken between 2013 and 2014 to identify province- and state-scale pressures and strategies for SWAP 2015 (CDFW, 2015b; Ch. 1.5). Through facilitated discussions, the

development team prioritized pressures and strategies based on member knowledge and involvement in the sector. Below is a list of the prioritized pressures and strategies.

5.1 Priority Pressures

Climate change – The effects of climate change can alter the environment in a number of ways including temperature, precipitation, and sea level rise, as well as stresses experienced by vulnerable wildlife and habitats as a result of these exposures (e.g., habitat loss and fragmentation, migration barriers, increases in presence and prevalence of invasive species).

Fishing and hunting aquatic resources – Direct fishing and harvesting of aquatic resources for food, fish bait, and/or decoration can deplete populations, reduce biodiversity, alter habitat structure, and disrupt the ecological balance within the ecosystem.

Dams and water management/use – The management of water resources to meet water (stream and off-stream use) and power supply needs and to accommodate communities and agricultural production results in numerous pressures on rivers, wetlands, estuaries, and aquifers. This includes changing natural water flow patterns either deliberately or as a result of other activities, such as dam construction, dam operations, sediment control, salt regime change, wetland filling for mosquito control, levees and dike construction, surface water diversion, groundwater pumping, channelization, artificial lake creation, and illegal diversions.

5.2 Priority Strategy Categories

Highlighted below are the top five strategy categories the development team prioritized in alphabetical order – **Data Collection and Analysis, Economic Incentives, Law and Policy, Partner Engagement, and Training and Technical Assistance**. The information below is combined into a more comprehensive table shared in Section 6. *Collaboration Opportunities and Potential Resources by Strategy Category* (Table 3). The strategy category definitions described below include information from SWAP 2015 with additional insights gathered during the sector development team meetings (CDFW, 2015b; Ch. 4.2). The example conservation activities were prioritized by development team members early in the companion plan process.

Data Collection and Analysis – Data collection and analysis is the utilization of robust data and thorough analysis to facilitate more effective implementation of conservation strategies under other categories. More specifically, this strategy includes conducting research to design more effective conservation strategies with a focus on TEK, collecting data on climate impacts (e.g., species displaced by climate impacts), and conducting comprehensive ecological assessments on individual species, guilds, and ecosystems.

- Conservation activities include: identifying information needs in coordination with partners; collecting data to answer relevant questions; and conveying data to the correct people in an appropriate format.



Economic Incentives – Economic incentives are available and deployable resources for private landowners and other stakeholders to implement responsible stewardship and enhancement of landscapes, ecological conditions, and species.

- Conservation activities include: developing strategies for incentive practices; finding financial resources and grants; and conveying incentives to partners and stakeholders for responsible stewardship.

Law and Policy – Law and policy is the development, revision, guidance, and implementation of legislation, regulations, policy, and voluntary standards to improve conservation stewardship of species and habitats.

- Conservation activities include: providing input from appropriate partners and/or stakeholders regarding law or policy; ensuring laws and policies being approved are consistent with agency and/or stakeholder input; and enforcing laws or policies effectively and in a manner consistent with conservation objectives.

Partner Engagement – Partner engagement is the process for engaging and developing collaboration among State and Federal agencies, Tribes and tribal governments, non-governmental organizations (NGOs), private landowners, and other partners to achieve shared conservation objectives and enhance coordination across jurisdictions and areas of interest.

- Conservation activities include: identifying individuals for engagement in trainings; developing adaptation plans and conservation strategies; engaging in parallel efforts with partners; and extending conservation strategies to different ecosystems.

Training and Technical Assistance – Training and technical assistance enhance resource conservation efforts of managers, scientists, stakeholders, or others by building capacity for implementing effective conservation activities and techniques.

- Conservation activities include: developing trainings through university extensions; working with NGOs on habitat restoration activities; developing consistent messages for understanding climate change impacts; and conducting climate change vulnerability assessments.

Text Box 6. Identified Pressures and Strategies for Future Consideration

SWAP 2015 describes the 29 major pressures (Table 1) on the State's ecosystems (CDFW, 2015b; Ch. 2.5.2). The list below provides additional pressures and strategies the development team identified as important for this sector that should be considered during future SWAP updates. These pressures and strategies were not highlighted as top priorities for the tribal lands sector under the main SWAP 2015.¹ At this time, the team did not identify additional strategies for consideration.

Pressures

- Access to fresh water
- Hunting and collection of terrestrial animals
- Public health

¹ Note: Some additional pressures identified by development teams may already be addressed in SWAP 2015.

6. Collaboration Opportunities for Joint Priorities

This section describes the potential alignment opportunities for SWAP 2015 with existing plans and strategies from other sector agencies and organizations that development team members have identified. Section 6.1 introduces the four categories that are used to organize such opportunities; they are based on jurisdiction and locality of plans and strategies. Following Section 6.1, collaboration opportunities and resources identified by each strategy category are shared in Table 3, *Collaboration Opportunities and Potential Resources by Strategy Category*. For a more extensive list of plans, strategies, and documents identified through the companion plan development process, please see Appendix B.¹⁰ SWAP 2015 integration with other partners' programs is an integral part of balancing the needs of wildlife with the needs of society and is explored in SWAP 2015 (CDFW, 2015b; Ch. 7.1.2).

6.1 Alignment Opportunities by Jurisdiction and Locality

The section below describes four categories of locality and jurisdiction broadly where potential alignment opportunities typically fit: Federal, State, Regional and Multi-partner, and Non-governmental. These categories are based on jurisdiction and locality of the management and conservation efforts. Example opportunities for each category are also provided here.

Federal

Plans identified in this category typically draw upon national guidance reflecting the goals and strategies of Federal agencies and organizations. For example, the BIA has several types of conservation and management plans including the *Pacific Region Strategic Plan for Fiscal Years 2014-2018 Draft*. Both the U.S. Geological Survey (USGS) and U.S. Department of Health and Human Services (HHS) have several

¹⁰ This is not an exhaustive list of sector plans and strategies in alignment with SWAP 2015 goals.



types of plans that help guide actions in the State, including USGS' *Tribal Engagement Strategy of the South Central Climate Science Center* and HHS' *Tribal Management Grant Program*. Although these plans guide Federal agency interventions, they also play a key role in how these agencies engage in collaboration with states and other partners.

State

Plans identified in this category reflect numerous State agency priorities, strategies, and conservation actions of California. These plans and strategies guide decision-making, resources allocation, and implementation priorities of the State agencies. Examples of key statewide plans and strategies include, but are not limited to, CDFW's *SWAP 2015*, California Ocean Protection Council's *The California Collaborative Approach: Marine Protected Areas Partnership Plan*, and CBC's *Strengthening Agency Alignment for Natural Resource Conservation*. In addition, DWR has several types of plans that help guide actions in the State, including the *California Tribal Water Summit Guiding Principles and Statement of Goals for Implementation*, *California Tribal Water Summit Implementation Plan*, *Tribal Communication Plan Draft*, and *Tribal Engagement Plan*.

Regional and Multi-partner

Numerous regional and multi-partner plans help guide conservation efforts across the State. These plans and strategies, like those at the Federal and State level, describe strategies and activities that align with this companion plan and *SWAP 2015*. At a regional level, NCCPs and HCPs can be used to inform a wide array of conservation planning efforts. Many of the large-scale, multispecies HCPs and NCCPs are habitat-based plans that encourage future development to occur in already developed areas, while setting up a system of large contiguous protected lands based on a comprehensive landscape-level conservation strategy designed for the planning area. Planning at this scale provides regional protection for plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Sustainable community plans, such as those funded through the California Strategic Growth Council (SGC), often include regional and local plans and policies that benefit natural resources in ways consistent with conservation goals outlined in *SWAP 2015*. Examples of such policies include restricting urban boundaries adjacent to key forest/rangeland areas, zoning such areas as open space, or identifying key habitat areas characterizing the community for management or restoration as natural areas (SGC, 2014).

Non-governmental

Like the plans described above, private landowners and NGOs also play a key role in wildlife conservation and they have plans that describe their desired future conservation outcomes and management priorities compatible with those of *SWAP 2015*. Examples include, but are not limited to, the CTKW's *Guidelines for Considering Traditional Knowledge in Climate Change* and Pacific Northwest Tribal Climate Change Network's *Fostering Tribal Engagement in Climate Science Centers and Landscape Conservation Cooperatives Draft*.

6.2 Collaboration Opportunities and Potential Resources by Strategy Category¹¹

For each prioritized strategy category described in Section 5 above, Table 3 below shares example conservation activities that are, will, or might be implemented in the next 5-10 years. These conservation activities are listed adjacent to example potential partners and financial resources that development team members identified. Although the table below shares examples of potential activities where partnerships could occur at different spatial scales (statewide, regional, and local/site-specific), other activities addressing priority strategies should be considered as this is not a comprehensive list.¹² Similarly, while the identified example conservation activities could apply across many spatial scales and jurisdictions, the current table highlights the most relevant scale of implementation. As described earlier in this document, Table 3 does not indicate a willingness and/or commitment on behalf of these organizations or entities to partner, fund, or provide support for the strategy implementation.

¹¹ Disclaimer: Please note this is not an exhaustive list of potential partners and financial resources. The organizations listed in Table 3 were identified through this companion plan process, but their identification here does not indicate agreement to partner and/or provide financial resources for the conservation activities.

¹² **Statewide** indicates actions occurring across the state. **Regional** indicates efforts that occur at a smaller than statewide scale and across more than one locality or site. **Local/Site-specific** indicates activities occurring at a specific location (e.g., city or park unit) or site (e.g., Morro Bay Estuary or Mojave Desert).

Table 3. Collaboration Opportunities and Potential Resources by Strategy Category

Example Conservation Activities	Example Potential Partners	Example Potential Financial Resources
Priority Strategy: Data Collection and Analysis		
Local/Site-specific <ul style="list-style-type: none"> Analyze impacts of a particular pressure on a conservation target Collect baseline and long-term data for conservation targets Collect data on climate and climate refugia impacts on activities and landscapes Conduct comprehensive ecological assessments of individual species, guilds, and ecosystems Conduct groundwater and surface water assessments Conduct research to design more effective conservation strategies with a focus on TEK Explain correlations of human and abiotic effects on species distribution and demographics 	Federal <ul style="list-style-type: none"> Southwest Climate Science Center State <ul style="list-style-type: none"> CDFW DWR Local/County <ul style="list-style-type: none"> University of California Cooperative Extension (UCCE) 	Federal <ul style="list-style-type: none"> BIA Tribal Cooperative Landscape Conservation Program USFWS Tribal Wildlife Grant Program
Priority Strategy: Economic Incentives		
Local/Site-specific <ul style="list-style-type: none"> Convey economic incentives to stakeholders for responsible stewardship Develop strategies related to incentive practices Find financial resources/grants 	Federal <ul style="list-style-type: none"> Natural Resources Conservation Service (NRCS) Southwest Climate Science Center U.S. Forest Service (USFS) USFWS State <ul style="list-style-type: none"> CA Department of Food and Agriculture (CDFA) CA LCC CDFW DWR Institute for Tribal Environmental Professionals (ITEP) University of Oregon Tribal Climate Change Project Western Regional Climate Center Local/County <ul style="list-style-type: none"> UCCE NGO/Foundation	Federal <ul style="list-style-type: none"> BIA Tribal Grant Program Farm Bill President's Climate Action Plan Tribal Cooperative Landscape Conservation Program U.S. Environmental Protection Agency (USEPA) – Regional Tribal Operations Committee (RTOC) USFS USFWS Tribal Wildlife Grant-competitive grant State <ul style="list-style-type: none"> CA LCC – Tribal Team Caltrans CDFA – Specialty Block Grant Funds Western Integrated Pest Management Center at University of California, Davis Local/County

Example Conservation Activities	Example Potential Partners	Example Potential Financial Resources
	<ul style="list-style-type: none"> South Central Climate Science Center 	<ul style="list-style-type: none"> UCCE
Priority Strategy: Law and Policy		
<i>None identified</i>	<p>Federal</p> <ul style="list-style-type: none"> Southwest Climate Science Center <p>State</p> <ul style="list-style-type: none"> CDFW DWR <p>Local/County</p> <ul style="list-style-type: none"> UCCE <p>NGO/Foundation</p> <ul style="list-style-type: none"> Maidu Summit Consortium 	<p>Non-governmental</p> <ul style="list-style-type: none"> Maidu Summit Consortium
Priority Strategy: Partner Engagement		
<p>Statewide</p> <ul style="list-style-type: none"> Reference parallel efforts in other agencies and organizations <p>Regional</p> <ul style="list-style-type: none"> Include different ecosystems in conservation strategies <p>Local/Site-specific</p> <ul style="list-style-type: none"> Develop Tribal Team statements of conservation purpose and strategies Engage partners Identify and meet needs (e.g. climate vulnerability, adaptation) Identify natural resource managers and stakeholder organizations for partnering Identify the outcomes that require a strategic partnership Include human dimensions and traditional culture in plans Train partners in TEK awareness 	<p>Federal</p> <ul style="list-style-type: none"> Southwest Climate Science Center U.S. Department of Interior (DOI) <p>State</p> <ul style="list-style-type: none"> CA Desert LCC CA LCC – Tribal Team CDFA CDFW DWR ITEP <p>Local/County</p> <ul style="list-style-type: none"> UCCE <p>NGO/Foundation</p> <ul style="list-style-type: none"> Maidu Summit Consortium 	<p>Federal</p> <ul style="list-style-type: none"> BIA DOI Farm Bill USEPA USFS USFWS Partners for Fish and Wildlife Program USFWS Tribal Wildlife Grant <p>State</p> <ul style="list-style-type: none"> CA LCC and Tribal Team Caltrans CDFA <p>Local/County</p> <ul style="list-style-type: none"> Western Integrated Pest Management Center at University of California, Davis <p>Non-governmental</p> <ul style="list-style-type: none"> Maidu Summit Consortium
Priority Strategy: Training and Technical Assistance		
<p>Local/Site-specific</p> <ul style="list-style-type: none"> Address illegal marijuana farms upstream with impacts on Tribal lands 	<p>Federal</p> <ul style="list-style-type: none"> NRCS Southwest Climate Science Center U.S. Department of Agriculture (USDA) 	<p><i>See non-strategy specific resources below</i></p>

Example Conservation Activities	Example Potential Partners	Example Potential Financial Resources
<ul style="list-style-type: none"> Assist in compatible goals of LCCs and Tribal Implementation Plans Complete needs assessment on understanding climate change impacts Conduct climate change vulnerability assessments Address connections between water and salmon runs Incorporate TEK into water resource planning/training Provide high-level technical training Provide trainings on tribal climate adaptation (e.g., Climate-Smart Conservation planning) Offer trainings through UCCE on protection and promotion of agriculture, plan hedgerows, and habitat restoration activities Understand climate change impacts 	<ul style="list-style-type: none"> USEPA USFS USFWS Partners for Fish and Wildlife Program <p>State</p> <ul style="list-style-type: none"> CA LCC – Tribal Team CDFW DWR ITEP Western Regional Climate Center <p>Local/County</p> <ul style="list-style-type: none"> UCCE <p>NGO/Foundation</p> <ul style="list-style-type: none"> South Central Climate Science Center Sustainable Conservation The Nature Conservancy (TNC) 	

6.3 Potential Financial Resources for Joint Implementation

The list below provides additional potential financial resources identified for implementing sector conservation activities addressed under SWAP 2015 and the companion plans. The list is similar to the third column of Table 3, but the funding could be applied to more than one strategy category considered under the sector discussion.

Development team participants suggested a range of potential funding sources; however, this information is intended to serve as a starting point for outreach and potential engagement and does not represent a comprehensive list of all potential funding sources.

Federal Funding Programs

- BIA - Tribal Cooperative Landscape Conservation Program
- USFWS – Tribal Wildlife Grants

State Funding Programs

- DWR - Guidelines for Considering Traditional Knowledges in Climate Change Initiatives, Climate and Tribal Knowledge work group
- Proposition 1

- State Water Resources Control Board Revolving Fund
- University of Oregon - Pacific Northwest Tribal Climate Change Project

7. Evaluating Future Collaboration Efforts

Implementation of SWAP and its nine companion plans is a complex undertaking. The first section below describes the desired outcomes and outputs of the tribal lands companion plan implementation identified through the development team discussions. A desired outcome is an improved (and intended) future state of a conservation factor due to implementation of actions or strategies (CDFW, 2015b; Ch. 11). Through the companion plan process, the management team defined a desired output as a deliverable that can be measured by the activities and processes that will contribute to accomplishing the desired outcomes and goals. The list of desired outcomes and outputs in the sub-section below is followed by a high-level description emphasizing the importance of adaptive management to SWAP 2015 and the companion plans, and how their implementation effectiveness would be evaluated by applying the adaptive process addressed under the main document.

7.1 Desired Outcomes and Outputs

Participants were asked what the sector's top desired outcomes and outputs are in the next 5-10 years, based on the development team discussions, their knowledge of the sector, and within the context of SWAP 2015. The identified outcomes and outputs for each strategy category, not listed in order of priority, are provided below.

Data Collection and Analysis

- Comprehensive ecological assessments conducted on individual species and ecosystems (e.g., invasive Hydrilla tubers) to understand species' status and likelihood of spread, and assessments used to inform management decisions (e.g., exterminating boars that feed on Tanoak acorns).
- Ongoing data collection supported and implemented to contribute to strong baseline data, and complementary data collection efforts coordinated to protect native and culturally important species from environmental impacts (e.g., integration of DWR groundwater and surface water assessments with similar data collected by Tribes using USEPA funding).

Economic Incentives

- Necessary financial resources and grants secured to support activities that contribute to the goals of SWAP 2015 and companion plans.
- Economic incentives to support continued partner engagement identified and secured.

Law and Policy

- Culturally significant and sensitive species identified and conserved (e.g., species valued by Tribes, but not identified as conservation priorities by the State).
- Tribes engaged on and involved in the development of conservation policies for the State.

Partner Engagement

- Partners engaged on activities in support of SWAP 2015 and companion plans.
- Awareness of existing partnerships and opportunities for tribal engagement (e.g., the California LCCs) increased and mechanisms to encourage collaboration among partners identified and implemented.

Training and Technical Assistance

- Awareness and understanding of TEK increased in State agencies (e.g., through TEK and sensitivity trainings), as well as correlation between human impacts and species distribution/demographics (e.g., embryonic effects on species).
- Ongoing training of new State employees conducted to promote understanding of links between management and culturally sensitive issues (e.g., illegal marijuana farms).
- Existing collaborative training efforts (e.g., collaboration between UCCE and USFS) supported and funding for Tribes to engage in training activities secured to promote their continued participation and engagement.

7.2 Evaluating Implementation Efforts

SWAP 2015 sets a stage for adaptive management, including implementation evaluation, by developing the plan based on the Open Standards for the Practices of Conservation (CDFW, 2015b; Ch. 1.5.4). SWAP 2015 implementation will be monitored over time in concert with other conservation activities conducted by CDFW and its partners. SWAP 2015 recognizes three types of monitoring (CDFW, 2015b; Ch. 8.3):

1. Status monitoring, which tracks conditions of species, ecosystems, and other conservation factors (including negative impacts to ecosystems) through time
2. Effectiveness monitoring, which determines if conservation strategies are having their intended results and identifies ways to improve actions that are less effective (i.e., adaptive management)
3. Effect monitoring, which addresses if and how the target conditions are being influenced by strategy implementation

Monitoring the SWAP and companion plan implementation and evaluating the monitoring results are critical steps for CDFW and partners to demonstrate and account for the overall progress and success achieved by SWAP 2015. By incorporating lessons learned through monitoring and evaluation into future actions, CDFW and its partners have opportunities to improve performance on coordination and collaboration and to adapt emerging needs that were not considered during the time of the plan development into future actions. Similarly, monitoring and the evaluation results could help inform stakeholders, including decision-makers, partners, and funders, about the status of the plan implementation, as well as where to best deploy resources to achieve desired outcomes and outputs effectively.



SWAP 2015 developed performance measures for each strategy category (CDFW, 2015b; Ch. 8.3). These measures are critical in helping guide the Department and partners in assessing the effects and effectiveness of SWAP 2015 and the companion plans, as well as the level of the companion plan's contribution to the conservation of California's ecosystem.

8. Next Steps

During the third and final companion plan development team meeting, participants were asked to identify key next steps to ensure successful implementation of the companion plan, ideally within the next one to five years. The feedback fell into four categories which were used to organize the information: Partnership and Collaboration; Human and Financial Resources; Communication and Outreach; and Monitoring and Evaluation.

Partnership and Collaboration

- Promote and support existing collaborative research and training efforts (e.g., those of the LCC, CDFA, and University of California, Davis).
- Increase opportunities for face-to-face interactions (e.g., working groups on small projects) to help build partnerships and develop bonds among participants.

Human and Financial Resources

- Secure funding for designating staff to help ensure implementation of the companion plan tribal components and evaluating progress toward SWAP 2015 and companion plans goals.

Communication and Outreach

- Bring tribal groups together to increase awareness of and understanding about SWAP 2015 and companion plans.
- Design and implement mechanisms to inform partners on the implementation status of SWAP 2015 and companion plans (e.g., applying the model of the California Water Plan progress reports).

Monitoring and Evaluation

- Create a tracking framework on program implementation and conduct internal and statewide assessments of performance metrics identified in SWAP 2015 to evaluate progress toward SWAP 2015 and companion plan goals.

9. Closing

This companion plan was developed in collaboration with many partners who deserve special recognition for their time and commitment (please see Appendix D for a list of development team members). As an initial step towards building a collaborative approach for implementation of SWAP 2015 and the nine sector-focused companion plans, CDFW will develop a work plan that describes actions to implement the plans and address the next steps identified.

Appendices

Appendix A: List of Potential Partners and Coordination Bodies

Disclaimer: Please note this is not an exhaustive list of potential partners. The organizations listed in here were identified through this companion plan process, but their identification here does not indicate agreement to partner and/or provide financial resources for the conservation activities. Furthermore, the strategy categories checked off for each organization were completed to the best knowledge of the development team members; some organizations' efforts were unknown (blank cells).

Potential Partners/Coordination Bodies	Data Collection and Analysis	Economic Incentives	Law and Policy	Partner Engagement	Training and Technical Assistance
Bureau Indian Affairs (BIA)				✓	✓
CA Department of Fish and Wildlife (CDFW)	✓	✓	✓	✓	✓
CA Department of Food and Agriculture (CDFA)		✓		✓	
CA Department of Parks and Recreation				✓	
CA Department of Water Resources (DWR)				✓	✓
CA Landscape Conservation Cooperative (LCC) <ul style="list-style-type: none"> Desert LCC Tribal/TEK Team 		✓		✓	✓
Institute for Tribal Environmental Professionals (ITEP)		✓		✓	
Inter-Tribal Council <ul style="list-style-type: none"> Sacramento Sinkyone Wilderness 				✓	
Maidu Summit Consortium			✓	✓	
National Park Service				✓	
Natural Resources Conservation Service (NRCS)		✓		✓	
South Central Climate Science Center				✓	✓
Southwest Climate Science Center				✓	✓
Sustainable Conservation				✓	✓
The Nature Conservancy (TNC)				✓	✓
UC Cooperative Extension (UCCE)		✓		✓	
University of Oregon Tribal Climate Change Project		✓		✓	
U.S. Department of Agriculture (USDA)				✓	✓
U.S. Department of Interior (DOI)				✓	
U.S. Environmental Protection Agency (USEPA) – Region 9 <ul style="list-style-type: none"> Regional Tribal Operations Committee (RTOC) 				✓	✓
U.S. Fish and Wildlife Service	✓	✓		✓	✓
U.S. Forest Service (USFS)		✓	✓	✓	
Western Regional Climate Center				✓	✓

Appendix B: Plans, Strategies, and Documents Identified by the Development Team

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U.S. Forest Service (USFS). *Memorandum of Understanding Between Karuk Tribe and the USDA, Forest Service*. 2013. Print. http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5431959.pdf.

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University of Oregon. "Tribal Climate Change Project." 2015. Web. 23 Apr. 2015. <http://tribalclimate.uoregon.edu/>.

University of Oregon. *Fostering Tribal Engagement in Climate Science Centers and Landscape Conservation Cooperatives DRAFT*. 2012. Pacific Northwest Tribal Climate Change Network. Print. http://tribalclimate.uoregon.edu/files/2010/11/Tribal_engagement_10-15-2012-1izz31b.pdf.



Appendix C: CDFW Companion Plan Management Team

Name	Title
Armand Gonzales	SWAP 2015 Project Lead
Junko Hoshi	SWAP 2015 Assistant Project Lead
Kurt Malchow	SWAP 2015 Companion Plan Development Lead

Appendix D: Tribal Lands Companion Plan Development Team Members and Affiliations

Affiliation	Participant
California Department of Fish and Wildlife	Steve Ingram Terri Stewart
California Department of Food and Agriculture	David Pegos
California Department of Water Resources	Emily Alejandrino Michelle Selmon
California Fish and Game Commission, Trinidad Rancheria	Jacqueline Hostler-Carmesin
InterTribal Sinkyone Wilderness Council	Shawn Padi
Mountain Thistle Botanicals and Consultation, Nontipom Wintu Tribe	Sage La Pena
U.S. Fish and Wildlife Service	Damion Ciotti
University of California, Davis	Beth Rose Middleton

Appendix E: Glossary

Most terms in this section originate from the glossary in the Conservation Measures Partnership's (CMP) Open Standards for the Practice of Conservation (Version 2.0). These definitions are based on current usage by many CMP members, other conservation organizations, and planners in other disciplines. Some terms have been added or refined to clarify how CDFW uses them.

activity: a task needed to implement a strategy, and to achieve the objectives and the desirable outcomes of the strategy.

adaptive management: the incorporation of a formal learning process into conservation action. Specifically, it is the integration of project design, management, and monitoring, to provide a framework to systematically test assumptions, promote learning, and supply timely information for management decisions.

aquatic: growing, living in, or frequenting fresh water, usually open water; compare with wetland.

biodiversity: the full array of living things.

climate change vulnerability: refers to the degree to which an ecological system, habitat, or individual species is likely to be negatively affected as a result of changes in climate and often dependent on factors such as exposure, sensitivity, and adaptive capacity.

conceptual model: a diagram that represents relationships between key factors that are believed to impact or lead to one or more conservation targets. A good model should link the conservation targets to pressures, opportunities, stakeholders, and intervention points (factors – pressures, opportunities, or targets – in a conceptual model where a team can develop strategies that will influence those factors). It should also indicate which factors are most important to monitor.

conservation: the use of natural resources in ways such that they may remain viable for future generations. Compare with preservation.

conservation target: an element of biodiversity at a project site, which can be a species, habitat/ecological system, or ecological process on which a project has chosen to focus. All targets at a site should collectively represent the biodiversity of concern at the site. Synonymous with biodiversity target.

contributing factor: a behind the scene socio-economic factor that contributes to produce pressures.

critical pressure: direct pressure that have been prioritized as being the most important to address.

direct pressure: primarily human actions that immediately degrade one or more conservation targets. For example, "logging" or "fishing." They can also be natural phenomena altered by human activities (e.g., increase in extreme storm events due to climate change). Typically tied to one or more

stakeholders. Sometimes referred to as a “pressure” or “source of stress.” Compare with indirect pressure.

distribution: the pattern of occurrences for a species or habitat throughout the state; generally more precise than range.

driver: a synonym for factor.

ecosystem: a natural unit defined by both its living and non-living components; a balanced system for the exchange of nutrients and energy. Compare with habitat.

ecosystem function: the operational role of ecosystem components, structure, and processes.

ecosystem processes: the flow or cycling of energy, materials, and nutrients through space and time.

endangered species: any species, including subspecies or qualifying distinct population segment, which is in danger of extinction throughout all or a significant portion of its range.

evaluation: an assessment of a project or program in relation to its own previously stated goals and objectives. See monitoring and compare to audit.

extinct: refers to a plant or animal or vegetation type that no longer exists anywhere.

factor: a generic term for an element of a conceptual model including direct and indirect pressures, opportunities, and associated stakeholders. It is often advantageous to use this generic term since many factors – for example tourism – could be both a threat and an opportunity.

fauna: refers to all of the animal taxa in a given area.

flora: refers to all of the plant taxa in a given area.

fragmentation: the process by which a contiguous land cover, vegetative community, or habitat is broken into smaller patches within a mosaic of other forms of land use/land cover; e.g., islands of an older forest age class immersed within areas of younger-aged forest, or patches of oak woodlands surrounded by housing development.

goal: a formal statement detailing a desired outcome of a conservation project, such as a desired future status of a target. The scope of a goal is to improve or maintain key ecological attributes. A good goal meets the criteria of being linked to targets, impact oriented, measurable, time limited, and specific.

habitat: where a given plant or animal species meets its requirements for food, cover, and water in both space and time. May or may not coincide with a single macrogroup, i.e., vegetated condition or aquatic condition. Compare with ecosystem.

impact: the desired future state of a conservation target. A goal is a formal statement of the desired impact.

indicator: a measurable entity related to a specific information need such as the status of a target/factor, change in a threat, or progress toward an objective. A good indicator meets the criteria of being: measurable, precise, consistent, and sensitive.

indirect pressure: a factor identified in an analysis of the project situation that is a driver of direct pressure. Often an entry point for conservation actions. For example, “logging policies” or “demand for fish.” sometimes called a root cause or underlying cause. Compare with direct pressure.

information need: something that a project team and/or other people must know about a project. The basis for designing a monitoring plan.

landscape: the traits, patterns, and structure of a specific geographic area, including its biological composition, its physical environment, and its anthropogenic or social patterns. An area where interacting ecosystems are grouped and repeated in similar form.

migrate; migratory: referring to animals that travel seasonally. Migrations may be local or over long distances.

monitoring: the periodic collection and evaluation of data relative to stated project goals and objectives. Many people often also refer to this process as monitoring and evaluation (abbreviated M&E).

native: naturally occurring in a specified geographic region.

objective: A formal statement detailing a desired outcome of a conservation project, such as reducing a critical pressure. The scope of an objective is broader than that of a goal because it may address positive impacts not related to ecological entities (such as getting better ecological data or developing conservation plans) that would be important for the project. The set of objectives developed for a conservation project are intended, as a whole, to lead to the achievement of a goal or goals, that is, improvements of key ecological attributes. A good objective meets the criteria of being: results oriented, measurable, time limited, specific, and practical. If the project is well conceptualized and designed, realization of a project’s objectives should lead to the fulfillment of the project’s goals and ultimately its vision. Compare to vision and goal.

opportunity: a factor identified in an analysis of the project situation that potentially has a positive effect on one or more targets, either directly or indirectly. Often an entry point for conservation actions. For example, “demand for sustainably harvested timber.” In some senses, the opposite of a threat.

outcome: an improved (and intended) future state of a conservation factor due to implementation of actions or strategies. An objective is a formal statement of the desired outcome.

output: a deliverable that can be measured by the activities and processes that will contribute to accomplishing the desired outcomes and goals.

population: the number of individuals of a particular taxon in a defined area.

preservation: generally, the nonuse of natural resources. Compare with conservation.

pressure: an anthropogenic (human-induced) or natural driver that could result in impacts to the target by changing the ecological conditions. Pressures can be positive or negative depending on intensity, timing, and duration. See also direct pressure and indirect pressure.

private land: lands not publicly owned, including private conservancy lands.

program: a group of projects which together aim to achieve a common broad vision. In the interest of simplicity, this document uses the term “project” to represent both projects and programs since these standards of practice are designed to apply equally well to both.

project: a set of actions undertaken by a defined group of practitioners – including managers, researchers, community members, or other stakeholders – to achieve defined goals and objectives. The basic unit of conservation work. Compare with program.

project area: the place where the biodiversity of interest to the project is located. It can include one or more “conservation areas” or “areas of biodiversity significance” as identified through ecoregional assessments. Note that in some cases, project actions may take place outside of the defined project area.

project scope: individual ecoregion or watershed will serve as the basis for developing strategies and actions within the project area.

province: a regional unit defined under SWAP 2015 that is made out of several nearby conservation units.

public: lands owned by local, state, or federal government or special districts.

range: the maximum geographic extent of a taxon or habitat; does not imply that suitable conditions exist throughout the defined limits. Compare with distribution.

refugia: areas where species can take refuge during times of climatic upheaval or biological stress. Places of past refugium are sometimes areas that still harbor high biological diversity.

result: the desired future state of a target or factor. Results include impacts which are linked to targets and outcomes which are linked to threats and opportunities.

richness: a measure of diversity; the total number of plant taxa, animal species, or vegetation types in a given area.

scope: the broad geographic or thematic focus of a program or project. The State of California will serve as the broad geographic or thematic scope for the program which consists of a group of projects, which together aim to achieve a common broad vision.

Species of Greatest Conservation Need (SGCN): all state and federally listed and candidate species, species for which there is a conservation concern, or species identified as being highly vulnerable to climate change.

stakeholder: any individual, group, or institution that has a vested interest in the natural resources of the project area and/or that potentially will be affected by project activities and have something to gain or lose if conditions change or stay the same. Stakeholders are all those who need to be considered in achieving project goals and whose participation and support are crucial to its success.

strategic plan: the overall plan for a project. A complete strategic plan includes descriptions of a project's scope, vision, and targets; an analysis of project situation, an action plan, a monitoring plan, and an operational plan.

strategy: a group of actions with a common focus that work together to reduce pressures, capitalize on opportunities, or restore natural systems. A set of strategies identified under a project is intended, as a whole, to achieve goals, objectives, and other key results addressed under the project.

stress: a degraded ecological condition of a target that resulted directly or indirectly from pressures defined above (e.g., habitat fragmentation).

target: see conservation target.

taxa: plural of taxon.

taxon: the name that is applied to a group in biological classification, for example, species, subspecies, variety, or evolutionarily significant unit (ESU). The plural is taxa.

threat: see pressure.

wetland: a general term referring to the transitional zone between aquatic and upland areas. Some wetlands are flooded or saturated only during certain seasons of the year. Vernal pools are one example of a seasonal wetland.

wildlife: all species of free-ranging animals, including but not limited to mammals, birds, fishes, reptiles, amphibians, and invertebrates.

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