



California Department of Fish and Wildlife
Update: Climate Change Activities
 2013 Mid-year Report

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Updates

The CDFW Climate Science Program hosted a CDFW Climate Change Stakeholder meeting on May 16th, 2013 from 11:00AM-12:00PM in Sacramento. Program staff provided updates on the State Readiness Strategy (2009 California Climate Adaptation Strategy update), the CA State Wildlife Action Plan (SWAP) revision, the CDFW Climate College, and more. The following three work groups were formed at the meeting:

- **Climate-Smart SWAP:** This group will serve as a think tank for developing marine and terrestrial habitat-based state-wide climate vulnerability assessments. The group will also continue to provide input to SWAP ecoregional teams as they develop conservation strategies.
- **State Readiness Strategy:** This group will provide input on the Biodiversity and Habitats sector chapter of the CAS 2013 update and will have the opportunity to review the draft strategy in its entirety upon completion.
- **CDFW Climate College:** This group will help develop the next iteration of the Climate College – a Marine-focused course with a strong Traditional Ecological Knowledge component. The group will help develop the course curriculum and identify speakers.

If you would like to sign up for a working group, please contact climatechange@wildlife.ca.gov. The stakeholder meeting recording is now at http://www.dfg.ca.gov/Climate_and_Energy/Climate_Change/Activities/Stakeholders/.

DEPARTMENT ACTIVITIES

CDFW Climate College

The CDFW successfully completed the first lecture series for the CDFW Climate College, which was designed to provide a basic foundation of knowledge for all staff and partners on climate change science and its impacts to fish, wildlife, and habitats. The course ran from September 2012-May 2013 with an awards ceremony scheduled for June 25th. All course materials, including webinars, video lectures, and reading materials, are archived as a permanent resource for staff and partners at

http://www.dfg.ca.gov/Climate_and_Energy/Climate_Change/Climate_College/. The next iteration of the course is currently under development and will be topically focused on marine issues to enhance participants' understanding of marine-related climate change science, impacts to species and habitats, and the implications for marine region management and planning. In an effort to introduce traditional ecological knowledge (TEK) and build stronger partnership between tribal nations and the Department, this course will be a collaborative effort with tribal representatives. TEK can be defined as the "holistic, evolving practices and beliefs passed down through generations about the relationships of living beings to their environment" (Swinomish 2010, in National Strategy, 2013). TEK is an integral part of a holistic approach to planning that honors all partners' efforts to conserve biodiversity in a changing climate and should be incorporated into climate change planning wherever possible.



- *CDFW Climate Stakeholder Working Group: Climate Training:* The Climate Training work group laid the ground work for a successful CDFW Climate College lecture series by identifying course topics, speakers, and a course schedule. This work group also developed an online network of training materials to support the Climate College, which can be found at http://www.dfg.ca.gov/Climate_and_Energy/Climate_Change/Climate_College/Training_Resources.aspx.

California Wildlife Action Plan Revision

The state's Wildlife Action Plan (SWAP) revision is scheduled to be completed by 2015. Primary objectives of the revision are to incorporate new information developed through updates to Species of Special Concern documents for birds, mammals, reptiles, amphibians and fish; update the stressors and actions affecting fish and wildlife on an ecoregional scale; expand the analysis of threats posed by climate change and down-scale the state's adaptation strategy to on-the-ground, implemental actions. This revision is being led by Armand Gonzales. For more information please email Armand.Gonzales@wildlife.ca.gov or visit the SWAP website at <http://www.dfg.ca.gov/SWAP/>. CDFW Climate Science Program staff are currently working to ensure that climate change is thoroughly integrated throughout the update process and to provide the necessary resources and information by convening a working group of CDFW staff and partners to support this effort.

- *CDFW Climate Stakeholder Working Group: Climate Smart SWAP:* The SWAP Climate Work Group compiled climate projection data for all regions of the state to support SWAP ecoregional teams as they develop conservation strategies for habitat-based conservation targets. The work group also compiled a list of regional climate change references and identified climate experts across the state to support these efforts. These climate references can be accessed at http://www.dfg.ca.gov/Climate_and_Energy/Climate_Change/Activities/SWAP.aspx. The work group will reconvene to begin working on state-wide climate vulnerability assessments to support the SWAP revision.

CDFW Climate Outreach and Education

- *Climate Curriculum webpage:* CDFW recently created a webpage consisting of links to curriculum resources on climate change related to biodiversity.
- *CDFW Climate Stakeholder Working Group: Climate Menu:* CDFW is working collaboratively with the Department of Water Resources and the Department of Public Health to create an outreach document centered on climate change impacts to California harvested foods. The climate menu poster will help to educate the public on how climate change will affect the food on your plate and CDFW's role in safeguarding some of those resources.

CDFW Going Green Activities

- *Sustainability Policy:* CDFW Going Green team is working to update CDFW's existing sustainability guidelines to help reduce our carbon footprint in the workplace. This work will complement Executive Order



B-18-12 that requires increased efforts by state agencies to perform sustainable operations.

CDFW Bikes!

The CDFW Bikes! Committee is currently researching ways to incentivize bicycle commuting for CDFW staff.

STATE-WIDE, REGIONAL, AND NATIONAL ACTIVITIES

California Climate Adaptation Strategy Update 2013

The California Natural Resources Agency is currently leading an update to the 2009 California Climate Adaptation Strategy to incorporate new scientific information and advances in possible options for addressing climate impacts. The 2013 update to the State Climate Adaptation Strategy will inform state decision makers about continuing gaps in preparing for climate impacts and will make recommendations on further actions. The Adaptation Strategy is meant to be an overview document and will include discussion of nine different sectors: forestry, agriculture, oceans and coastal resources, public health, emergency management, transportation, water, energy, and biodiversity. CDFW will continue to oversee the Biodiversity and Habitat Sector chapter. The update is expected to be out for public comment by the end of this year.

Landscape Conservation Cooperatives in California

California is home to four Landscape Conservation Cooperatives (LCCs). LCCs were created to help translate science into on-the-ground management at landscape scale while accounting for challenges and stressors such as climate change. The LCCs are a DOI initiative that are each directed by steering committees comprised of federal, state, tribal, NGO partners, etc. The California DFW currently sits on all four steering committees of the LCCs that fall within California's borders – the California LCC, Desert LCC, North Pacific LCC, and Great Basin LCC. CDFW staff are working with the LCCs to develop LCC initiatives and science strategies to support the creation of climate change information and tools and the implementation of adaptation actions on the ground. More information on LCCs can be found online at <http://www.fws.gov/science/shc/lcc.html>.

Inaugural National Adaptation Forum: Action Today for a Better Tomorrow

CDFW's Climate Science Program staff played a major role in the creation of the inaugural National Adaptation Forum held in Denver, CO in April 2013.

The intent of this forum was to bring together climate adaptation practitioners and experts from around the country to support and build a community around climate adaptation that is focused on moving from adaptation planning to action. The National Adaptation Forum was the first of its kind national convening on climate change adaptation presenting state-of-the-art science adaptation practice in addition to providing professional development training, individual presentation, peer networking and working group innovation opportunities. The event included



55 symposiums, 12 training events, and 25 working groups. More than 500 registrants participated from 44 states, 2 territories, 3 Canadian Provinces, and 50 Tribal representatives. This was truly a cross sector collaborative endeavor that brought a wide range of practitioners into a forum to support information exchange, professional development, and opportunities to create new and innovative partnerships that are essential to addressing the myriad of challenges associated with climate change. More information at www.nationaladaptationforum.org. All presentations are now posted online at http://www.dfg.ca.gov/Climate_and_Energy/Climate_Change/Activities/National_Adaptation_Forum/.

National Fish, Wildlife, and Plants Climate Adaptation Strategy

The National Fish, Wildlife, and Plants Climate Adaptation Strategy was released in March 2013. The Strategy provides a roadmap of key steps needed over the next five years to reduce the current and expected impacts of climate change on our natural resources and builds upon efforts already underway by federal, state, tribal governments and other organizations. CDFW staff played an important role on the steering committee and as lead for technical committees to support a nationwide unified approach to climate driven adaptation strategies, reflecting shared principles and science-based practices to safeguard the nation's biodiversity, ecosystem function and sustainable human uses of fish, wildlife and plants.