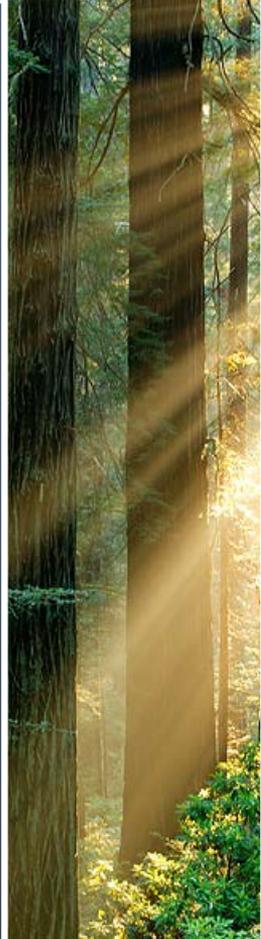




# Mitigation Trends DFG Programs, Priorities, Projects and Partners

BY TINA BARTLETT  
HABITAT CONSERVATION PLANNING BRANCH

ROAD ECOLOGY MEETING



# Mitigation Trends Overview

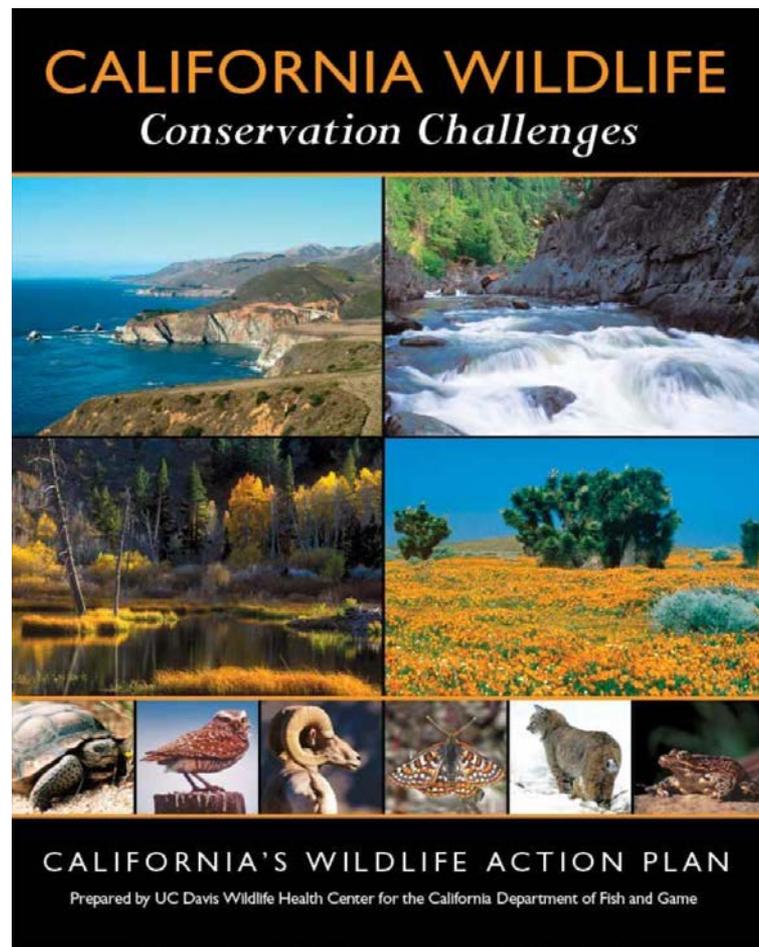
- **Coordination and collaboration for successful land/habitat conservation and to meet the goals of the State Wildlife Action Plan**
- **Green Infrastructure Planning and Prioritizing Comes First:**
  - **Prioritizing and focusing on ecologically important areas and making sure those areas retain their ecological value**
- **Coordinating for streamlined permitting to facilitate implementation of Economic Stimulus**
- **Developing and implementing successful ADVANCED (EARLY) mitigation strategies – Enhanced Stimulus**

# Mitigation Trends Overview

- **Alternative mitigation options: re-establishing linkages, restoration, and retrofit**
- **Achieving net benefit, going beyond mitigation**
- **Mitigating Climate Change?!**
- **Recognizing privately owned lands contribute to mitigation and conservation needs**
- **Increasing expense of mitigation (pay to play)**

# Coordination and Collaboration to meet the goals of the State Wildlife Action Plan

- Bi o- regi ons
- Stressors
- I denti fi cati on of Ri sks and Vul nerabi li ti es
- Recomm endati ons by bi o- regi on
- Reeval uati on looking through CC lens
- Devel opment of short and long term measures



<http://www.dfg.ca.gov/wildlife/wap/report.html>



# Wildlife Action Plan Implementation Themes:

- Focuses on restoring populations of declining and/or vulnerable species as an alternative to listing under the federal or State Endangered Species Acts
- Identifies those species, habitats, and systems that would benefit the most from development and implementation of conservation strategies
- Need to involve stakeholders, conservation organizations and potentially affected parties in the process

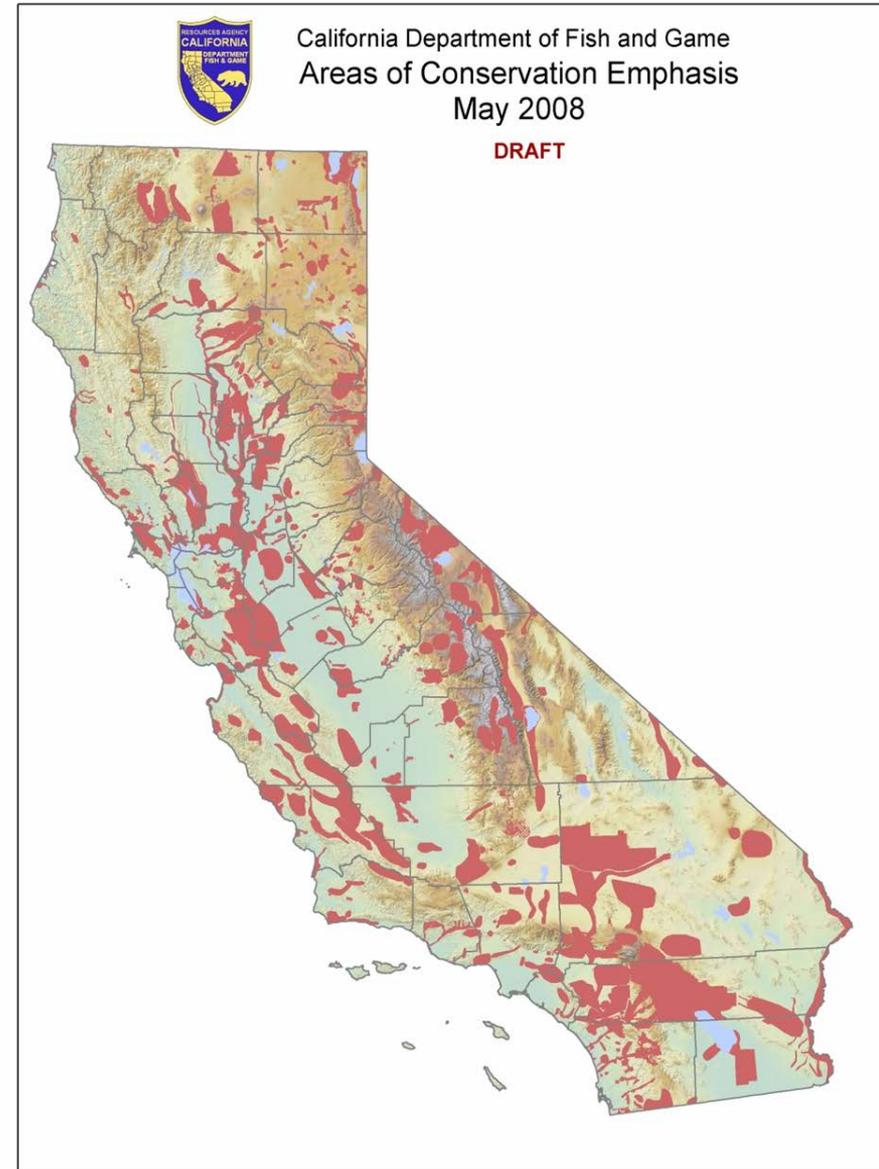
# Wildlife Action Plan Implementation: The Future

- Using the Action Plan as a framework, continue to establish and refine priorities
- Develop specific Element Plans based on these priorities and focus implementation on the plans
- Continue to use an inclusive process for gaining support for Plan implementation
- Build on collaborative relationships with other agencies and conservation organizations to leverage implementation



# Areas of Conservation Emphasis (“ACE”) DFG’s Green Infrastructure Planning

- **Identify DFG Priorities for Land Acquisition**
- **Develop a Comprehensive Acquisition Strategy**
- **Focus DFG and Partnership Efforts**
- **Act Quickly on Opportunities**



# ACE

- **Considerations**
  - **Ecological Factors**
    - **Species and Habitat Rarity**
    - **Important Representations of CA Diversity**
    - **Conservation at Multiple Scales**
    - **Species and Habitats Important to DFG**
  - **Landscape Considerations**
  - **Public Use and Access**

# Green “Infrastructure” Planning

- **CA Legislature taking notice and passing key green legislation**
  - **SB 375, AB 732**
  - **SB 85**
  - **AB 2785**

# SB 375 and SB 732

- 2008, Governor Schwarzenegger signed SB 375 – Sustainable Community Planning
- AB 732 Strategic Growth Council



# SB 85 (2007) and AB 2785 (2008): Corridor Mapping

- **VEGCAMP** and **vegetation mapping database**
- **Legislative report on wildlife corridors Jan. 2008.**
- **Identify and protect wildlife habitat linkages (corridors)**
- **Investigate, study, and determine what areas most essential as wildlife corridors and habitat linkages**

# CALIFORNIA ESSENTIAL HABITAT CONNECTIVITY

- A statewide map of areas important for connectivity that depicts the most important linkages
- Consistent, criteria-driven way to designate linkages (at least the most important ones).
- Will be easy to update as the landscape changes.



SC WILDLANDS



# Streamlined Permitting for Economic Stimulus -Traditional works?

- Project by project pre-consultation
- Workshops
- Conservation strategies
- Other outreach efforts – successful models
- General Plan participation
- NCCPs/HCPs

# Streamlining - Better Coordination with other Permitting Agencies

- **Work closely with State and Federal counterparts**
  - **Co-consultation**
- **Streamlined process for approving conservation and mitigation banks using common templates**

# Streamlining - Conservation Strategies Development

- **Santa Rosa Plain Conservation Strategy – vernal pools, California tiger salamander and 4 listed plant species**
- **East Alameda County Conservation Strategy**
- **UC Merced siting/Eastern Merced Conservation Strategy – vernal pool complexes**
- **Western Merced Co – kit fox movement corridors**

# Developing and Implementing Successful Alternative / Early Mitigation Strategies;

- **In lieu fee**
- **Mitigation banks, umbrella banks**
- **Conservation strategies  
Conservation plans  
(NCCP/HCP)**

# NCCP – Best streamlining tool!

- Streamline environmental review and permitting to counties and other local jurisdictions
- Involves a multi-year planning effort in order to achieve the broader goal



# Advanced Mitigation Planning

**2004 Presidential Executive Order on Facilitation of Cooperative Conservation requires Departments implement laws relating to the environment and natural resources in a manner that promotes cooperative conservation.**

# Advanced Mitigation Planning – Regional Approach

- Address the greatest threats to imperiled species, habitats, and watersheds
- Improve the temporal and spatial aspects of mitigation and reduce uncertainty regarding effectiveness
- Save time and money, manage workload, and create predictable project schedules





# Road Retrofits



# Retrofits...Setback Levees

- Lateral levees most common, typically cleared of vegetation
- Setbacks are generally parallel to the stream but placed far enough from the active channel to allow overbank flooding and some natural floodplain function



# Retrofits...Restoring fish passage



# Mitigation Ratios

“I talked about the various different obstacles that we are facing...a new solar farm in Victorville that's being held up because of a squirrel. Now, I love squirrels but...if the squirrel comes in we'll need some extra property set aside. So it goes a little crazy, the whole thing.”

-Arnold Schwarzenegger on green energy and mitigation ratios

# Beyond Mitigation...Net Conservation

- More and more businesses realize that good profits can be earned from sound ecosystem management.
- Some are becoming more interested in achieving long-term values
- Wave of the mitigation future similar to Safe Harbor, VLP, NCCP, Banks

# Mitigating Climate Change?

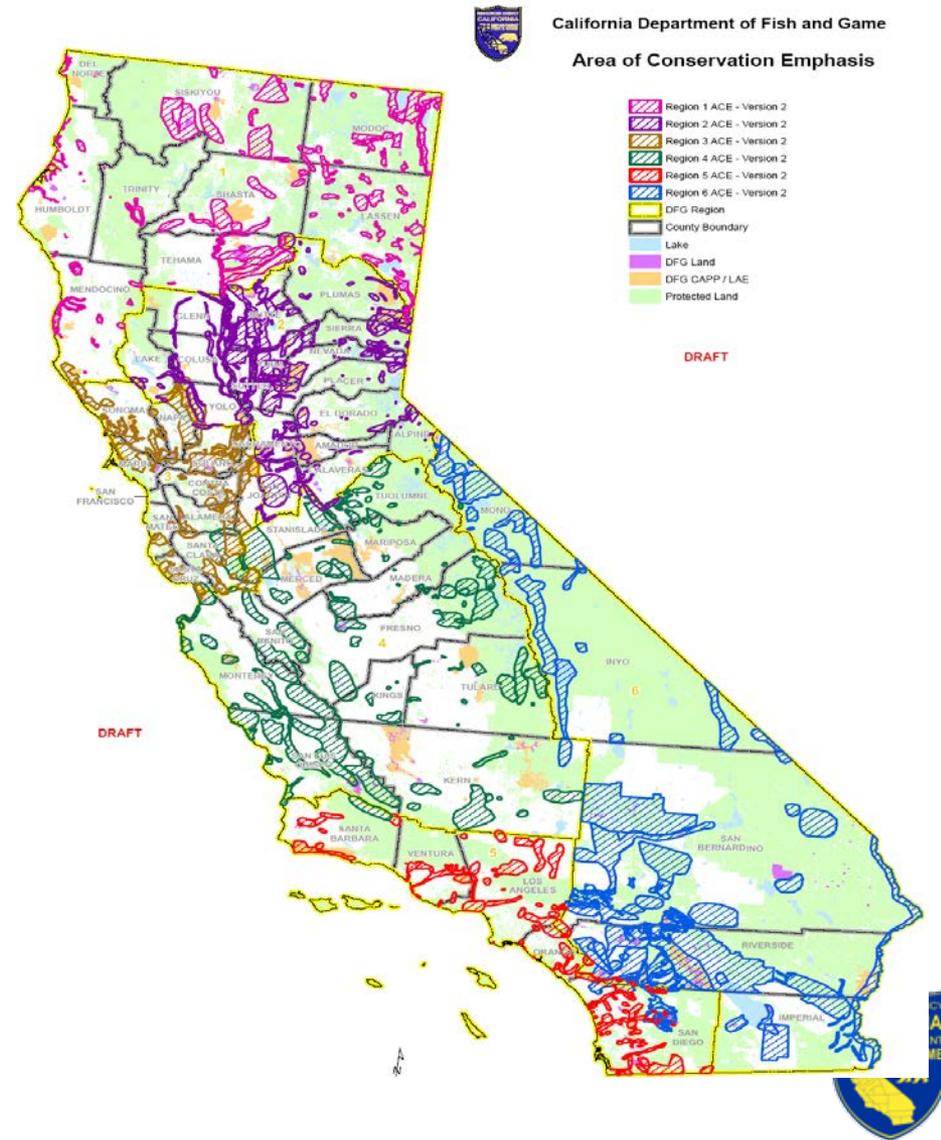
	Temp Change	Sierra snowpack	Critically dry years	Large fire risk	Sea level rise
<b>High Emissions</b>	8-10.4°F	90% loss	2.5x	<i>not evaluated</i>	22-33"
<b>Medium Emissions</b>	5.5-7.9°F	78-80% loss	2-2.5x	55% increase	14-22"
<b>Lower Emissions</b>	3.0-5.4°F	30-60% loss	1-1.5x	10-35% increase	6-14"

# Climate Change Adaptation Strategy Goals

- Integrate a thought process into all of the Department's administrative, management and policy branches that actively addresses climate change
- Develop an adaptation strategy for fish and wildlife that can be integrated into all our natural resources activities that anticipates future climate conditions
- Five key elements

# CC Adaptation Strategy Element I

## Landscape Reserves



# CC Adaptation Strategy Element IV



**Regulatory Requirements**

## 5 of 6 CC Key Management Priorities

- **Conduct baseline surveys/inventories**
- **Pursue priority restoration actions**
- **Identify areas of primary species movement**
- **Expand criteria for Natural Community Conservation Plans (NCCP's)**

# Private Landowners Offer Benefits to Wildlife



- **Wildlife dependent on privately owned agricultural lands for habitat**
- **Agricultural lands provide significant habitat and connectivity**
- **Benefits depend to a large degree on the landowner stewardship practices**
- **Agricultural landowners integrate wildlife habitat benefits into the management and operations**
- **Lack the capital, revenue incentives and/or expertise to implement these practices**

# Private Landowners Contribute to Mitigation Opportunities



- **Conservation and Mitigation Banking**
- **Conservation Easements**
  - **Habitat Mitigation Opportunities**
  - **Carbon Offsets**



# Pay to Play

- **Regulators no longer subsidizing mitigation = Costs born by developers (shock to the system!)**
- **Doing mitigation right – green infrastructure**
- **Necessary elements for effective mitigation**

# Twelve Elements of a Mitigation Plan

- **Key components:**
  - Site protection
  - Baseline report
  - Monitoring plan
  - Site enhancement or restoration
  - Long-term management plan
  - Adaptive management
  - Financial assurances
    - Short term
    - Long term endowment

# Green Infrastructure

- Long-term management of mitigation land and monitoring are necessary to assure its effectiveness
- “The belief of passive management for biological systems is no longer a biologically sound or fiscally prudent investment strategy.”



# Green Infrastructure...Services

Examples:

## Ecosystem function

Habitat provision to  
pollinators

Absorption of wave  
energy

## Ecosystem service

Pollination of  
crops

Buffering of tidal  
surges

## Ecosystem service value

Value of harvested crops  
(or avoided cost of  
artificial pollination)

Avoided/reduced damage  
to humans, human  
structures, crops,  
livestock



**Service values are context-specific!**

# Questions ?

