



## WILDLIFE CONNECTIVITY ADVANCE MITIGATION GUIDELINES

September 2024

# CONNECTIVITY ADVANCE MITIGATION (CAM)

*Caltrans Local Assistance Training Program*

### **PRESENTED BY:**

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California Department of Fish and Wildlife

August 2025

*All photos are CDFW photos*

# So Far





# Code- Background

Senate Bill 790 became Fish and G. Code section 1955-1958

Guidelines Section  
1: Overview

## Compensatory Mitigation Credits for Wildlife Connectivity Actions

- Mitigation and Conservation Banking Program
- Mitigation Credit Agreements (MCAs), a subprogram of Regional Conservation Investment Strategies (RCIS) Program



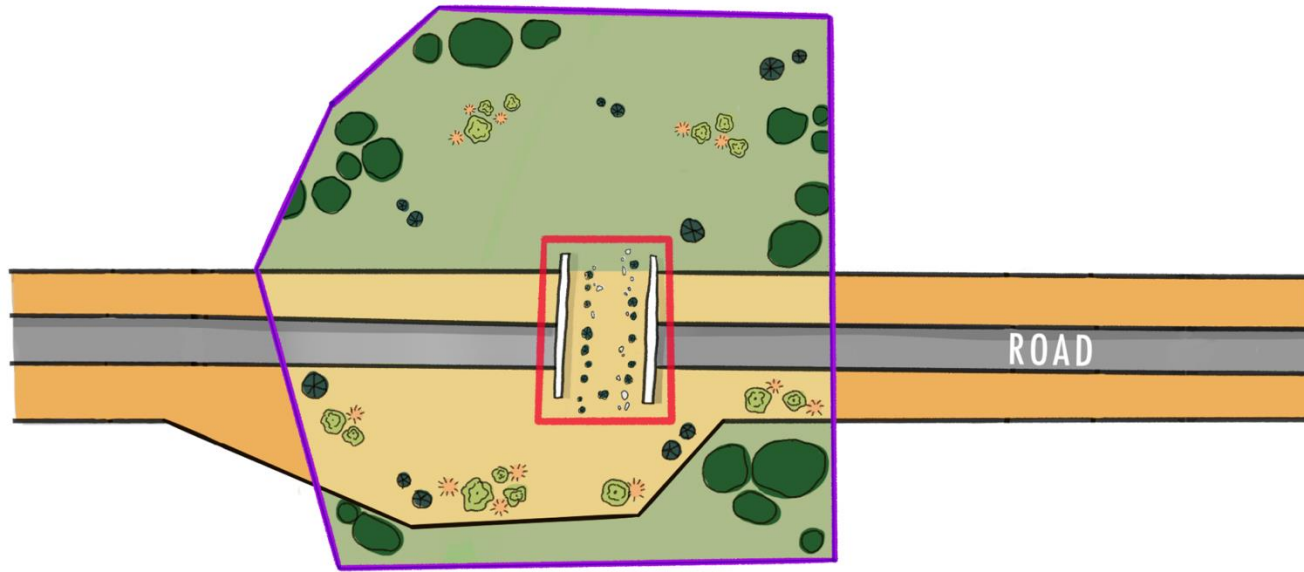
# Key Features



- Economic incentives to develop wildlife crossings
- Overcomes implementation difficulties with mitigation banks that encompass barriers like roads and addresses right-of-way issues
  - Allows for Long-term Durability Agreements
- Uses ecologically based evaluation criteria to determine credits

# Wildlife Connectivity Action

## Guidelines Section 1.6: Wildlife Connectivity Actions



WILDLIFE CONNECTIVITY ACTION

ADJACENT LANDS

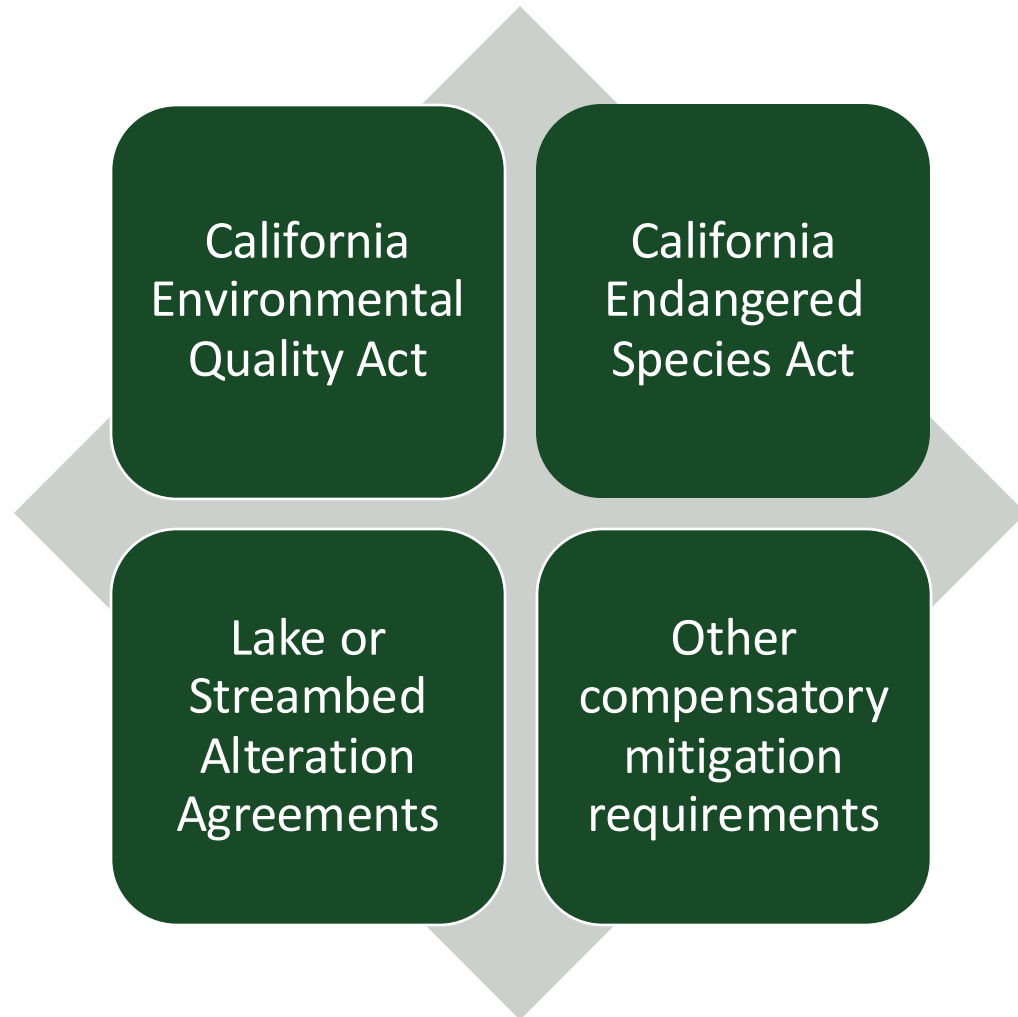
BANK OR MCA

RIGHT OF WAY

Any structure (e.g., road overpass, underpass), designed to improve aquatic or terrestrial habitat connectivity, wildlife migration, movement, recolonization, or breeding opportunities inhibited by built infrastructure.



# Mitigation Fulfillment



Guidelines Section  
3.1: Credit Types

# Guidelines and Resources Available

- Wildlife Connectivity Advance Mitigation Guidelines
- Additional documents
  1. Wildlife Connectivity Action Bank Checklist
  2. Wildlife Connectivity Action MCA Checklist
  3. Target Species Scoring Sheet
  4. Target Habitat Scoring Sheet
  5. Target Species Scoring Justification Checklist
  6. Target Habitat Scoring Justification Checklist
- FAQ with diagrams
- Webinar YouTube video
- Advance Mitigation Options Decision Tree





# Guidelines

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1. Overview
2. Banking and MCA Process with a Wildlife Connectivity Action
3. Wildlife Connectivity Action Crediting
4. Target **Species** Ecological Benefit Crediting Considerations
5. Target **Habitat** Ecological Benefit Crediting Considerations
6. Real Estate Instruments, Maintenance, and Monitoring
7. Bank and MCA Modifications
8. Appendices



# Crediting

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# Wildlife Connectivity Action Crediting Process

Guidelines Section  
3.2: Credit Amount





# Credit Score: Ecological Benefit Crediting Considerations



Ecological engineered design



Value of the habitat connected



Value of particular location



Critical linkages



Population-level benefits to species

Guidelines Section 4  
and 5: Ecological  
Benefit Crediting  
Considerations



# Scoring Process

## Scoring Matrix (in guidelines)

Crediting Considerations and Subcategories	High	Medium	Low	Total Possible Score
<b>1. Ecological Engineered Design</b>	N/A	N/A	N/A	<b>24</b>
A. Structure Dimensions	5-6	3-4	1-2	6
B. Noise and Light Minimization Measures	3	2	1	3
C. Surface Substrates and Vegetation	3	2	1	3
D. Approaches and Fencing or Other Directional Implements	7-9	4-6	1-3	9
E. Designing for Resilience to Climate Change	3	2	1	3
<b>2. Value of the Habitat Connected</b>	N/A	N/A	N/A	<b>24</b>
A. Habitat Quantity	6-8	3-5	1-2	8
B. Habitat Quality	6-8	3-5	1-2	8
C. Protection of the Land	6-8	3-5	1-2	8
<b>3. Value of the Particular Location</b>	N/A	N/A	N/A	<b>21</b>
A. Topography, Aquatic Resource or Other Natural Pathway	5-6	3-4	1-2	6
B. Existing Vegetation and Other Cover	3	2	1	3
C. Movement and Mortality	5-6	3-4	1-2	6
D. Existing Conditions	3	2	1	3
E. Human Impacts	3	2	1	3
<b>4. Critical Linkages</b>	N/A	N/A	N/A	<b>16</b>



## Scoring Sheet (fillable)

TARGET SPECIES SCORING SHEET		
Bank/MCA name: _____	Date: _____	
Target Species/Credit type: _____		
Crediting Considerations and Subcategories	Sponsor Proposed Score	CDFW Score
<b>1. Ecological Engineered Design</b>	N/A	N/A
A. Structure Dimensions	/6	/6
B. Noise and Light Minimization Measures	/3	/3
C. Surface Substrates and Vegetation	/3	/3
D. Approaches and Fencing and Other Directional Implements	/9	/9
E. Designing for Resilience to Climate Change	/3	/3
<b>2. Value of the Habitat Connected</b>	N/A	N/A
A. Habitat Quantity	/8	/8
B. Habitat Quality	/8	/8
C. Protection of the Land	/8	/8
<b>3. Value of the Particular Location</b>	N/A	N/A
A. Topography, Aquatic Resource or Other Natural Pathway	/6	/6
B. Existing Vegetation and Other Cover	/3	/3
C. Movement and Mortality Data	/6	/6
D. Existing Conditions	/3	/3



# Scoring Justification

## Target Habitat / Species Justification Checklists

**Checklist**

**Section 4.1 Ecological Engineered Design**

1. The sponsor shall provide a full set of engineered design plans that must include:

- ☐ Existing conditions;
- ☐ Wildlife connectivity structure dimensions and a written description of how these structure dimensions allow for the movement of the target species;
- ☐ Wildlife connectivity action approaches;
- ☐ Engineered drawings in plan, elevation, longitudinal profile and cross-sectional views depicting the 2-, 5-, and 100-year hydraulic events including potential debris flow and how the service life of the design has taken into consideration how each of these events will be increasing due to climate change (if applicable);

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## Appendix A for resources to help justification

### WILDLIFE CONNECTIVITY ACTION LOCATION RESOURCES

The below resources can be used to identify where connectivity actions are needed.

#### Hot Spot Resources

These resources can be used to identify priority locations for wildlife connectivity actions.

- **Biogeographic Information and Observation System (BIOS):** BIOS is a geographic information system designed to enable the management, visualization, and analysis of biogeographic data collected by CDFW and its partner organizations. The BIOS connectivity bookmark enables viewers to get more detail on regional linkages. There are two datasets for wildlife connectivity hot spots:
  - **CDFW Fish Passage Priorities:** A map-based representation of an ongoing inventory of known and potential barriers to anadromous fish in California. It compiles currently available fish passage information from more than two hundred data sources and allows past and future barrier assessments to be standardized and stored in one place. The inventory is to be used to identify barriers suitable for removal or modification to restore spawning and riparian habitat for salmon and steelhead, and to enhance aquatic and riparian habitat.
  - **CDFW Wildlife Movement Barrier Priorities:** This dataset represents barriers to terrestrial wildlife movement in California that are high priority for

# Crediting Factor

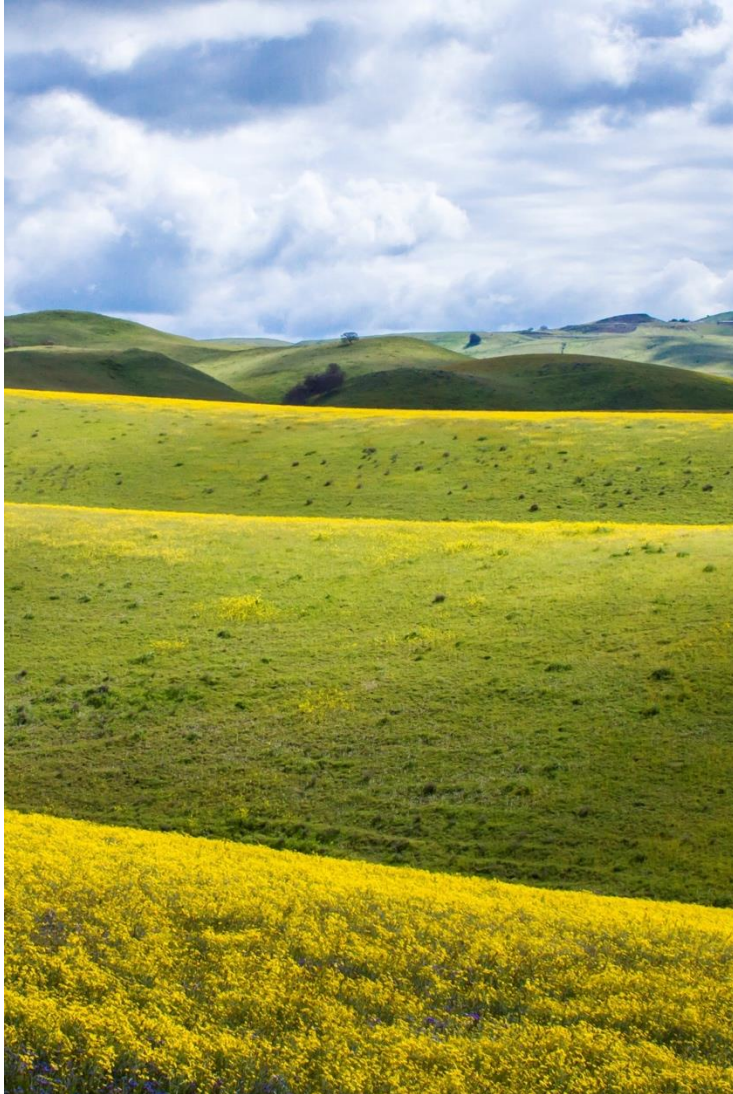
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- Stakeholder Engagement Pilot Period to figure out
- Different for credit type and project
- Will be important for sponsors determining if project is financially feasible
- CDFW focusing on ecological benefits



# Crediting Factor Progress



## Types of Crediting Factors

- Terrestrial
- Aquatic
- Habitat
- More?



## Terrestrial Crediting Factor Initial Criteria

- Contiguous Habitat
- Bottleneck
- Passage Improvement
- Full Barrier

# Land Protections

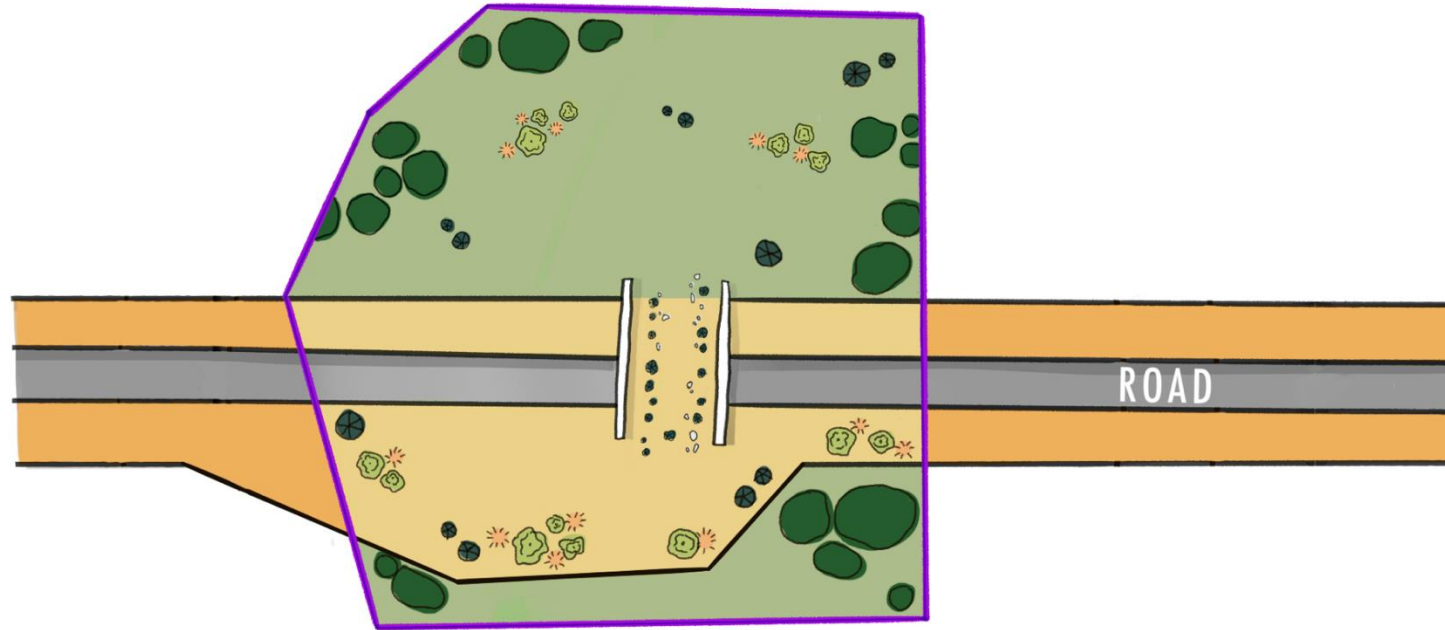
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# Real Estate Instruments

Guidelines Section  
6: Real Estate  
Instrument,  
Maintenance, and  
Monitoring



- AREA PROTECTED BY CONSERVATION EASEMENT
- AREA PROTECTED BY LONG-TERM DURABILITY AGREEMENT
- RIGHT OF WAY
- BANK OR MCA

# Long-term Durability Agreement

An enforceable legal instrument

Ensures the legal real estate, maintenance, and repair

Required on any portion of a wildlife connectivity action where a Conservation easement is infeasible

Guidelines Section 6: Real Estate Instrument, Maintenance, and Monitoring





# Long-term Durability and Other Programs

- For MCAs, refers to non-permanent land protection
- For CAM, refers to land protection where a CE is not feasible e.g., in the right of way
  - Both banks and MCAs can have long term durability agreements (where a CE is infeasible) for wildlife connectivity actions

Guidelines Section  
6: Real Estate  
Instrument,  
Maintenance, and  
Monitoring





# Next Steps: Implementation

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# Stakeholder Engagement Pilot Period

- 6 pilot projects approved or 2 years
- Gather more information
  - Crediting factor
  - Long term durability agreement
  - Funding options



Guidelines Section  
3.2.3.1: Stakeholder  
Engagement Pilot  
Period





# Pilot Projects



- Focus on projects addressing linear built infrastructure
- CDFW encourages sponsors to have initial conversations with us prior to official fee and document submittal
  - Sponsor reaches out using [mitconnect@wildlife.ca.gov](mailto:mitconnect@wildlife.ca.gov)
- CDFW will coordinate and collaborate with Bank MOU agencies and acknowledging agencies



# Considerations for sponsors

## Connectivity

- What connectivity benefit is there for the species?
- Is there/will there be protected lands on either side of the crossing?

## Credits

- Does your proposed project benefit protected species? Which ones?
- What is the market for that credit type in the area?
- Feasibility of potential credit amounts covering project costs

## Partnerships

- What other regulatory agencies will you need to engage based on the proposed credit types?



# CAM Contacts



## Headquarters CAM Team

**Laurel Low**, Statewide CAM Coordinator

**Monica Aquino**, CAM and Banking Specialist

**Andy Amacher**, Advance Mitigation Caltrans Liaison

**Suzanne Gilmore**, Senior Environmental Supervisor

**Karen Weiss**, Environmental Program Manager

## Region CAM Coordinators

**Marcus Griswold**, Bay Delta Region (R3)

**Reagen O'Leary**, Central Region (R4)

**Jason Bill**, Inland Deserts Region (R6)

[MitConnect@wildlife.ca.gov](mailto:MitConnect@wildlife.ca.gov)

<https://wildlife.ca.gov/Conservation/Planning/Connectivity>



# Questions?

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