



**Working Towards
Effective and Efficient
Conservation and
Mitigation of Habitat
and Open Space on
Rangelands**

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OVERVIEW

- **History of Rangelands**
- **Ca Rangeland Conservation Coalition**
- **Conservation Models**
- **Values on Working Rangelands**
- **Rangeland Management**
- **Resources**



CA GRASSLANDS

- **Habitat for 90% of threatened & endangered species**
- **Privately owned (85%)**





CONVERSION





RAPTORS





SJ Kit Fox





Condor





Bats





BAY CHECKERSPOT BUTTERFLY





RED LEGGED FROGS





CA TIGER SALAMANDERS





VERNAL POOLS





WILDFLOWERS





Pollinators





WATERSHED FUNCTION





CLIMATE CHANGE





WORKING TOGETHER



The Nature Conservancy



CALIFORNIA
FARM BUREAU
FEDERATION



RESOURCE
CONSERVATION

California Rangeland Resolution

The undersigned recognize the critical importance of California's privately owned rangelands, particularly that significant portion that encircles the Central Valley and includes the adjacent grasslands and oak woodlands, including the Sierra foothills and the interior coast ranges. These lands support important ecosystems and are the foundation for the ranching industry that owns them.

WHEREAS, these rangelands include a rich and varied landscape of grasslands, oak woodlands, vernal pools, riparian areas and wetlands, which support numerous imperiled species, many native plants once common in the Central Valley, and are home to the highest diversity and density of wintering raptors anywhere in North America;

WHEREAS, these rangelands are often located in California's fastest-growing counties and are at significant risk of conversion to development and other uses;

WHEREAS, these rangelands, and the species that rely on these habitats, largely persist today due to the positive and experienced grazing and other land stewardship practices of the ranchers that have owned and managed these lands and are committed to a healthy future for their working landscapes;

WHEREAS, these rangelands are a critical foundation of the economic and social fabric of California's ranching industry and rural communities, and will only continue to provide this important working landscape for California's plants, fish and wildlife if private rangelands remain in ranching;

THEREFORE, we declare that it is our goal to collaboratively work together to protect and enhance the rangeland landscape that encircles California's Central Valley and includes adjacent grasslands and oak woodlands by:

- Keeping common species common on private working landscapes;
- Working to recover imperiled species and enhancing habitat on rangelands while seeking to minimize regulations on private lands and streamline processes;
- Supporting the long-term viability of the ranching industry and its culture by providing economic, social and other incentives and by reducing burdens to proactive stewardship on private ranchlands;
- Increasing private, state and federal funding, technical expertise and other assistance to continue and expand the ranching community's beneficial land stewardship practices that benefit sensitive species and are fully compatible with normal ranching practices;
- Encouraging voluntary, collaborative and locally-led conservation that has proven to be very effective in maintaining and enhancing working landscapes;
- Educating the public about the benefits of grazing and ranching in these rangelands.



RESOLUTION

- **Voluntary**
- **Stewardship**
- **Education**
- **Collaborative**
- **Locally-led**
- **Economics**
- **Incentives**
- **Technical Assistance**
- **Enhancement**
- **Preservation**





COLLABORATIVE EFFORTS

- **Outreach** (*Field Trips and Newsletter*)
- **Research** (*Review, Identify Gaps & New*)
- **Interagency Coordination** (*Permit Coordination*)
- **Projects** (*Landowner Incentives - NRCS & USFWS*)
- **Legislative** (*Williamson Act, Estate Tax & Farm Bill*)

Umbrella Species



The Panther is an Umbrella Species; when we protect the Panther, we protect all our neighbors! Credit: Steve Carbor

“A species whose home range and habitat requirements are sufficiently broad that, if protected, numerous other species of smaller range will also be protected”

Ranchers as Umbrella Species



Protecting ranchers to protect species

California Rangeland Trust: Cowboys and Conservation, the New Frontier



Presented by:
Nita Vail, Chief Executive Officer

www.rangelandtrust.org

CALIFORNIA
RANGELAND
Trust

Who We Are

- Established: 1998 by the membership of the California Cattlemen's Association to ensure conservation easements work as a tool for the ranching community.
- Board of Directors: all ranchers and members of the CCA
 - *The ranchers who own and manage our state's open spaces trust our organization to meet their needs because our board members are ranchers just like them*
 - *The Rangeland Trust plays a vital role in providing a practical and cost-effective solution to maintaining the private stewardship of ranchers on the land while protecting the public resources they provide.*

California Rangeland Trust



Mission:

Dedicated to conserve the open space, natural habitat and stewardship provided by California ranches.

Conservation:

Over 238,000 acres of rangeland conserved throughout California since 1998

Trademark:

Only land trust that protects private land owner stewardship and habitat



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CONSERVATION PORTFOLIO



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California Rangeland Trust
Conservation Portfolio:
Completed and Pending
Projects

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Conservation Easements

- A recorded document that permanently restricts some uses of the land
- The recorded easement is a **voluntary**, negotiated agreement between the landowner and the land trust, and sometimes a funder
- Permanently retires most rights of development
- Since the property remains in private ownership, it also remains on the tax rolls contributing to the local economy
- Easements must be in **perpetuity** in order to be recognized by the IRS
 - Which is important for tax reasons

Easement Basics

- One of the fundamental rights of property ownership is the right to donate or sell an interest in the property, such as a conservation easement.
- Following the donation or sale of a conservation easement, a landowner retains rights to use the land for any agricultural operations and for any purpose that is not prohibited by the terms of the easement.
- While a conservation easement removes the development rights, the landowner still holds the title to the property, the right to restrict public access, and the right to sell, donate or transfer the property.

Types of Easements I

- *Donated Easements* - when the landowner donates the purchase price of the conservation easement for significant tax benefits.
- *Funded Easements* – when the purchase price of the conservation easement is paid for by one or more funding organizations, groups or agencies. This still offers tax benefits to the landowner.
 - Example: Wildlife Conservation Board, taking advantage of the Oak Woodlands Program funding, approved in 15 counties: Alameda, Butte, Colusa, Madera, Marin, Mariposa, Mendocino, Placer, Sacramento, San Luis Obispo, Santa Barbara, Tehama, Ventura, Yolo and Yuba

Types of Easements II

- Mitigation Easements – help to offset expected adverse impacts of development on loss of farmland, habitat or riparian areas. Paid for by the developer or mitigating group.
- Combination Easement – The rancher's needs may require the blending of any combination of the above three easement types.

California Rangeland Trust

❖ Our easements always require three things:

1. The right of the landowner to continue in agriculture

“Grazing and habitat, one does not trump the other!”

2. The continuing responsibility to respect and care for the habitat

3. Limits on development, including the preservation of all water rights needed to protect the conservation values

More than 100 ranchers WAITING!

- 500,000 acres, representing more than 100 ranching families
- Across 25 Counties
 - Twelve of these counties are ranked as CA's fastest growing counties
 - Eleven of these are located within the CA Rangeland Coalition's critical designation area.



Case Studies: Effective and Efficient Easements for Mitigation

Sheila Barry
Natural Resource/ Livestock Advisor
University of California Cooperative Extension

BAY AREA RANGELANDS

Conservation Lands Network

CALIFORNIA
RANGELAND
Plan



Conservation Lands Network on Rangeland

- Areas Critical to the Biodiversity Goals
- Other Areas that can Contribute to Biodiversity Goals

Rangeland Parcel Size

- 80 Acres or greater
- 10 - 79 Acres

Conservation Lands & Large Parcel Overlap (examples)

- Parcels - 80 Acres or greater & CLN - Critical and Important Areas

Land Status

- Public and Protected Land
Fee Title and Conservation Easement
- Urban and Built-up Land
- Other Land



San Francisco Bay Area Upland Habitat Goals Project
Preserving Biodiversity for Future Generations

Koopmann Ranch (Alameda County)

- Mitigation for residential development – wetlands with California tiger salamander (40 acres)
- Mitigation for a municipal golf course- grasslands for Callippe silver spot butterfly and wetlands with California tiger salamander (100 acres)

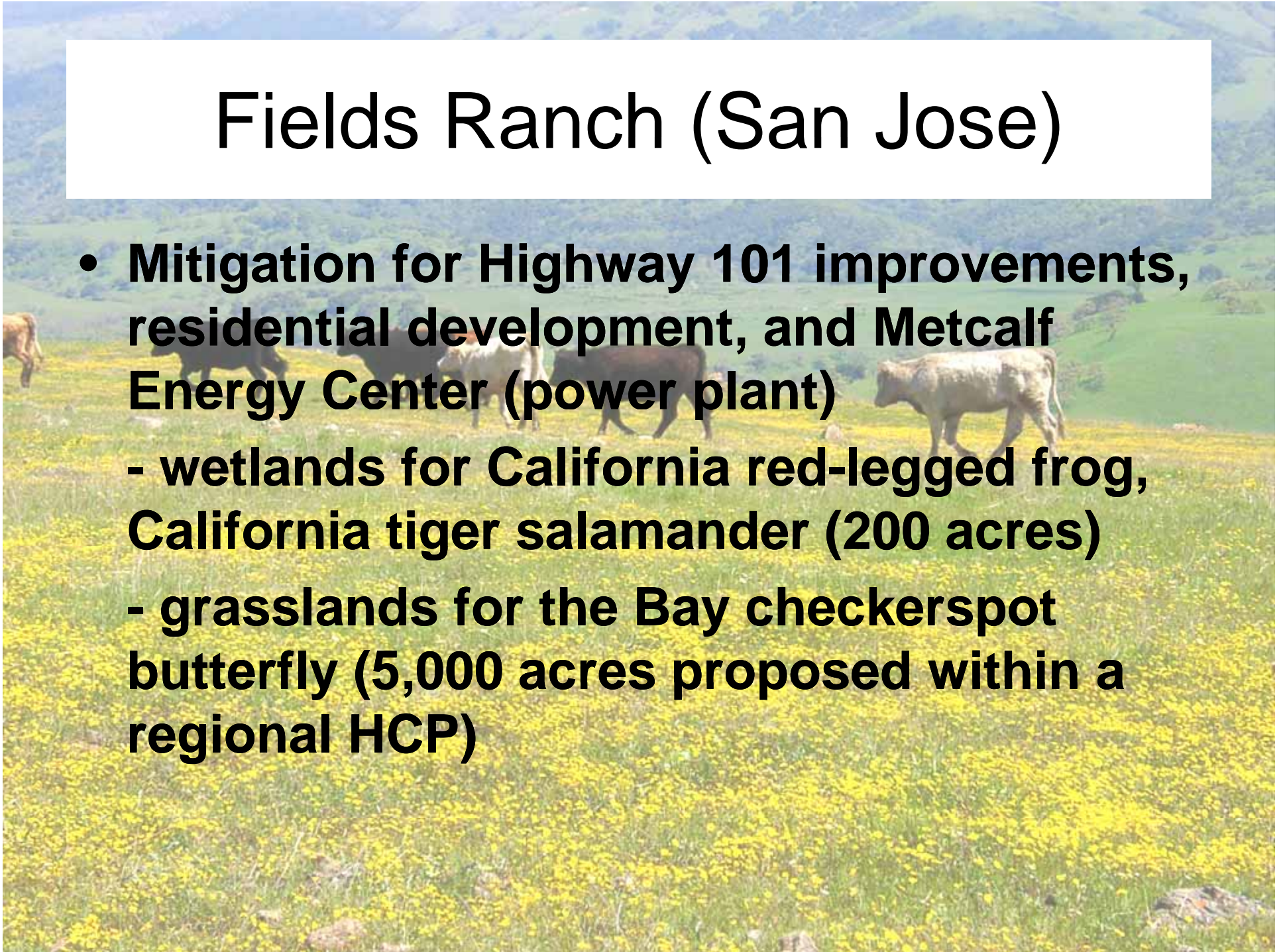






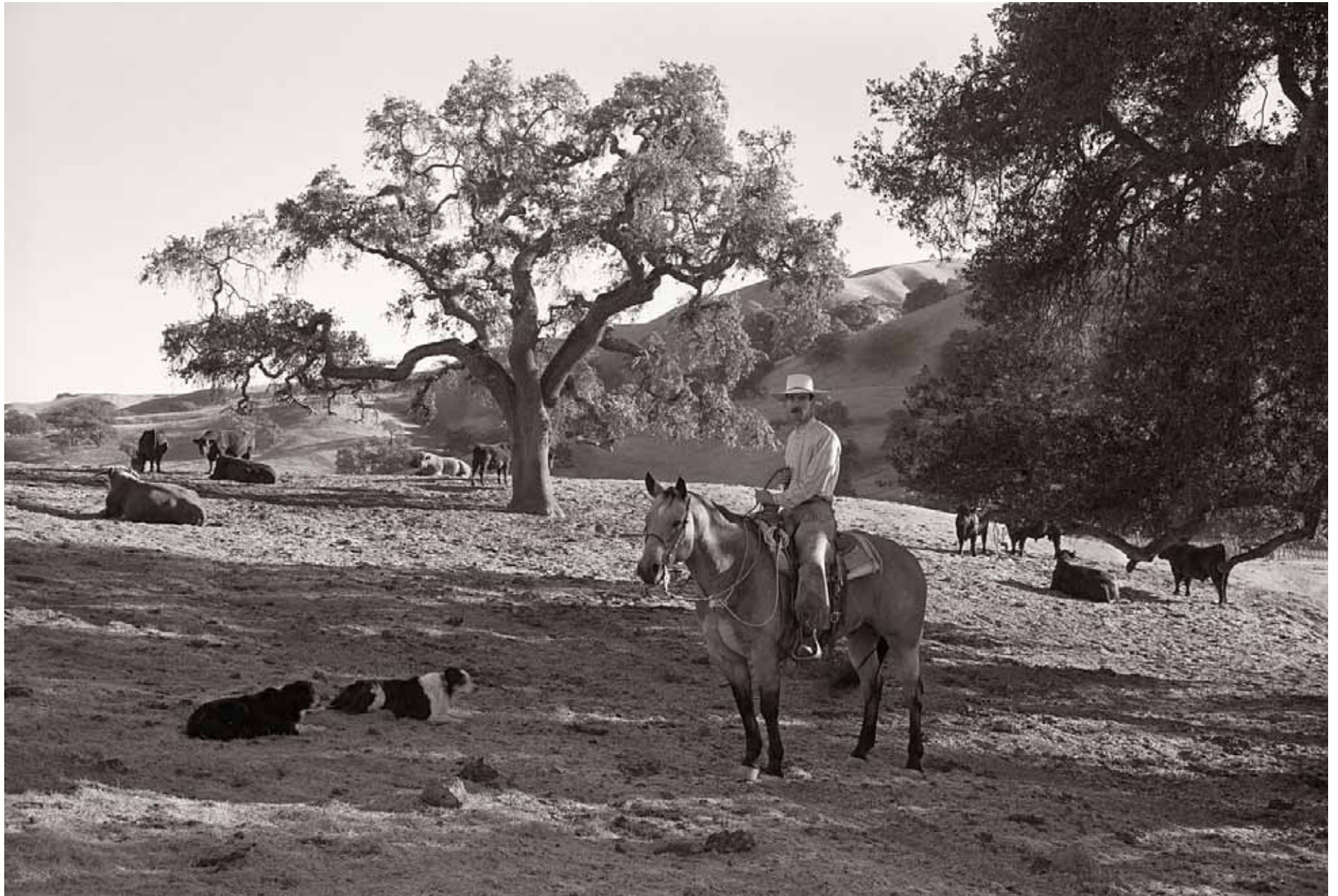
Fields Ranch (San Jose)

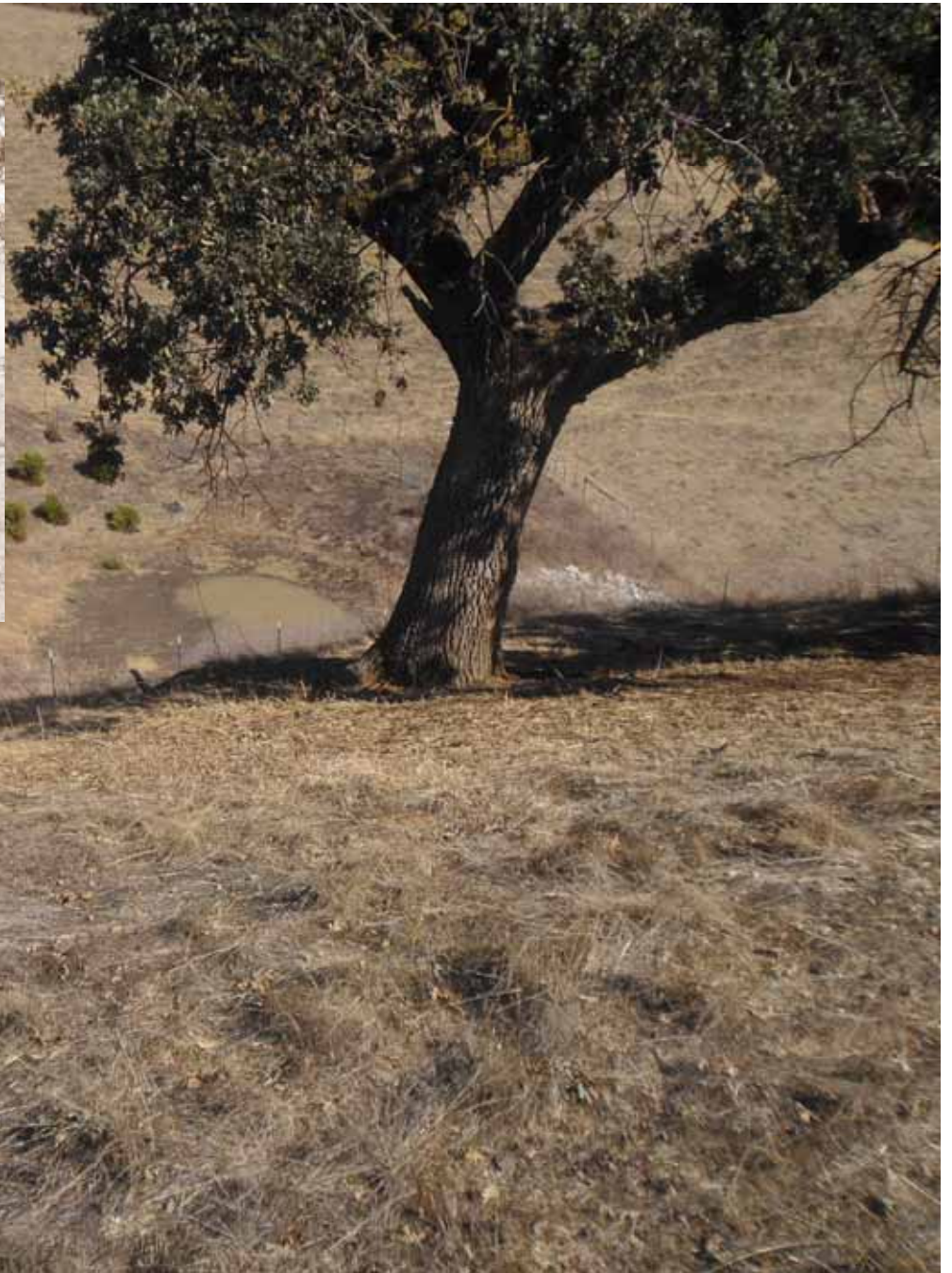
- **Mitigation for Highway 101 improvements, residential development, and Metcalf Energy Center (power plant)**
 - **wetlands for California red-legged frog, California tiger salamander (200 acres)**
 - **grasslands for the Bay checkerspot butterfly (5,000 acres proposed within a regional HCP)**











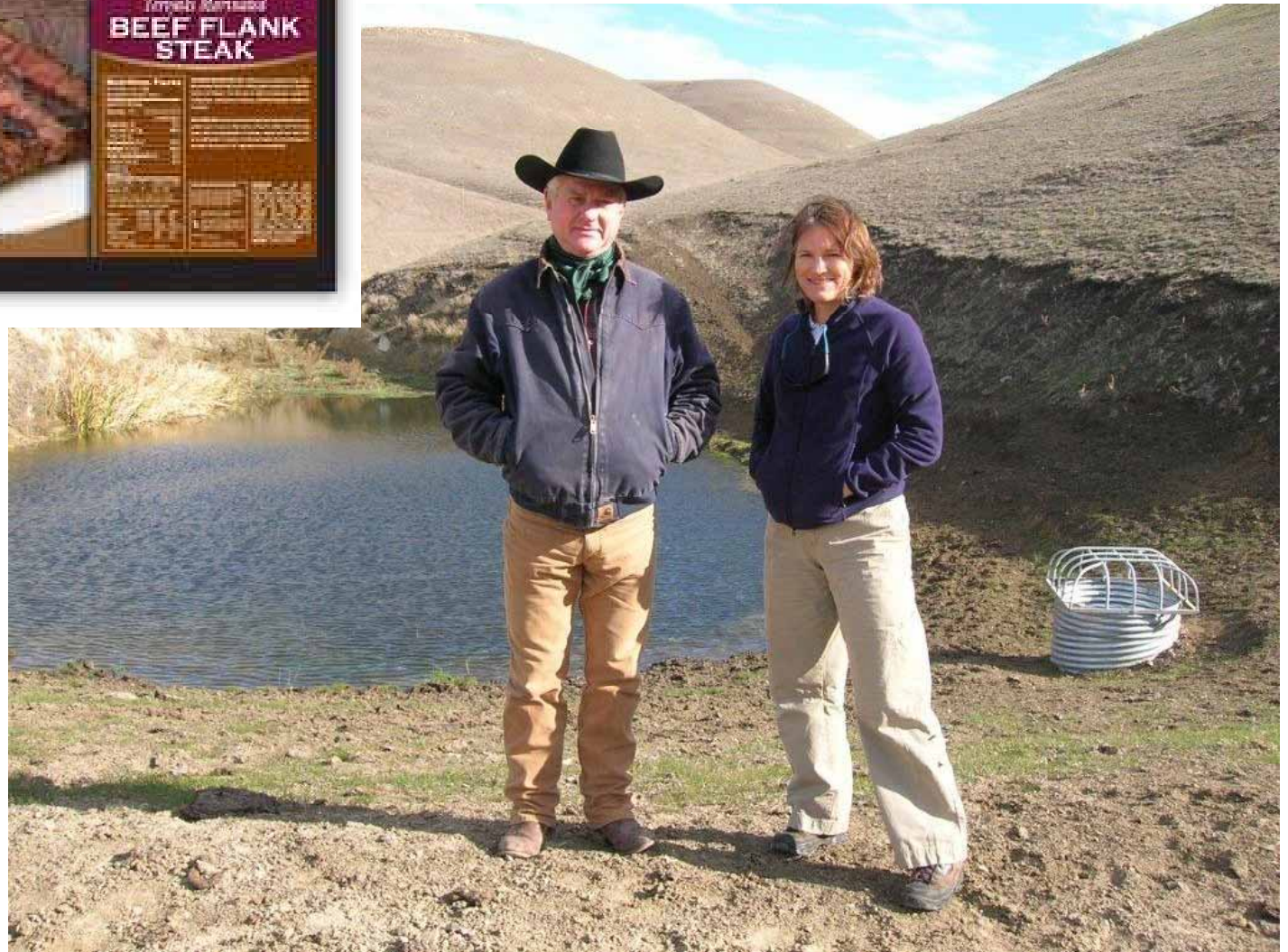
Sweet Ranch (Alameda County)

- Mitigation for Highway 84 widening project (Caltrans)
 - riparian creek enhancement, wetlands creation for California tiger salamander and Red legged frog, and San Joaquin kit fox habitat (90 acres)

Habitat Enhancement and Creation







Grazing Management Ecology, Planning, and Sources of Professional Assistance and Info



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Rangeland = Grassland = Livestock Grazing ?

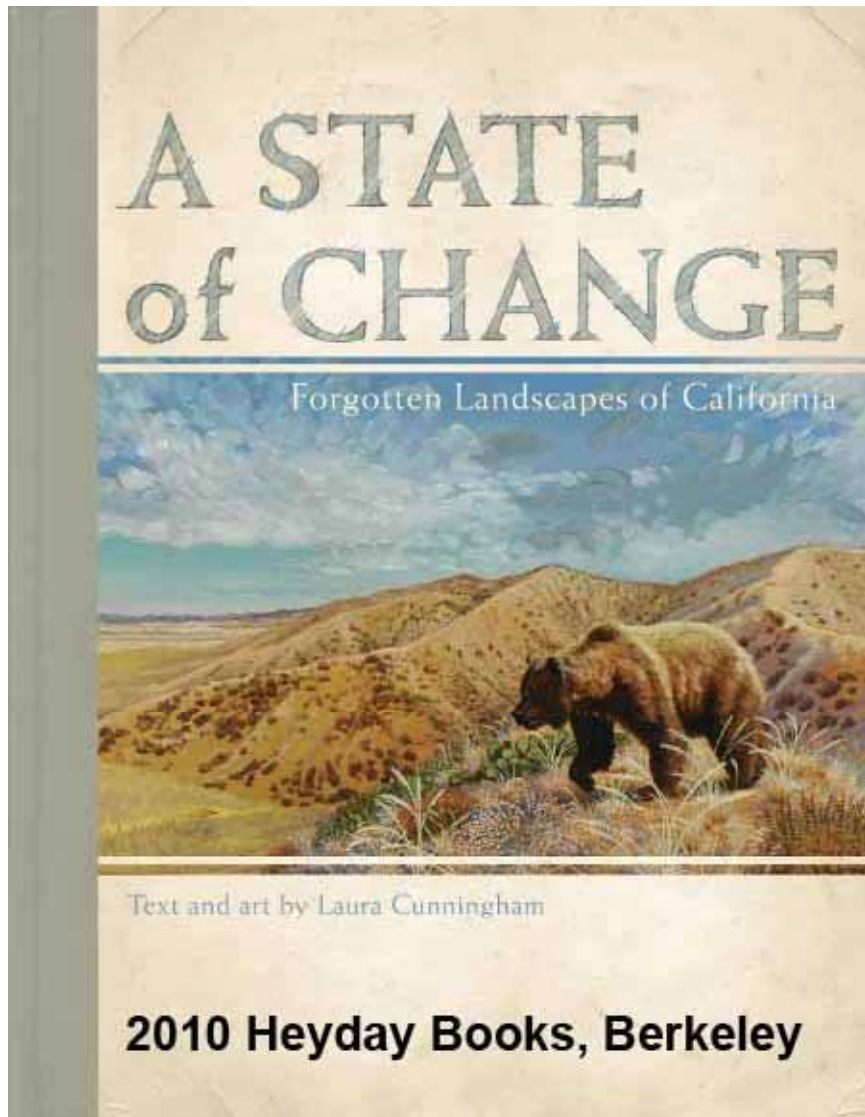
Concept of Rangeland—

- Long history in American natural resource management and science;
- Remote and/or low-productivity lands, *not yet* converted to timber, cultivated/irrigated crops, industrial, or urban;
- Grasslands, wetlands, mountain meadows, savannas, shrublands, and open woodlands;
- Some, not all grazed by livestock; in Calif., 80% privately owned;
- Livestock grazing is one of several effective management tools for conservation.

CA Coastal and Valley Grassland Types (ecological)



- What did pre-settlement Calif. grassland look like?
- What plants and animals and natural disturbances shaped it?



Theories of Conversion of California Grasslands from Natives to Non-Natives:

(also understories of related vegetation)

- Explorers versus settlers,
- Ecological pre-adaptation,
- Vulnerability to heavy grazing,
- Grasshoppers,
- Agricultural disturbance,
- Soil erosion,
- Reduced frequency and intensity of fire
- Combination

Challenge to California Rangeland Planners and Managers:

- Mediterranean grasses and forbs highly adapted to intense grazing
- History of grazing in Mediterranean and California (grazing now declining in CA)
- If uncontrolled, can obliterate habitat structure
- Minimize negative effects
- Grazing most effective tool for extensive lands, and most economical

Endangered Species--Bay Checkerspot Butterfly, Ohlone Tiger Beetle, San Joaquin Kit Fox, Burrowing Owl

- Grazing facilitated their persistence since grassland conversion
- Exclusion of grazing has degraded or eliminated their habitat



Bay Checkerspot Butterfly

(*Euphydryas editha bayensis*)

- Serpentine soil and rock outcrops, plus associated native-dominated grassland;
- Presence of host plants at appropriate densities;
- Cool to moderate micro-climates (warmer hilltops and slopes; sufficient winter-spring precipitation).



Bay Checkerspot Butterfly

- Host plants are typically out-competed (for sunlight, nutrients, moisture) by aggressive non-native grassland plants, particularly at weaker serpentine sites;
- Rec'd--flexible grazing management (timing and numbers), based on growing-season grazing of serpentine habitat areas.



Ohlone Tiger Beetle

(*Cicindela ohlone*)

- Watsonville Loam soil;
- Suitable bare ground for egg-laying, larval burrowing, and survival – grazed grassland; livestock and recreation trails and dirt roads (no graveling); soil disturbance in diggings, scrapings; low litter/manure/hay “dust;” cow-pies);
- Open sparse grassland.



Ohlone Tiger Beetle

Extirpated—hiking trails (low use), dense high-thatch grassland, encroaching shrubs, and no grazing



Ohlone Tiger Beetle

Occupied—hiking trails (low use), ranch roads, and continuous extensive cattle grazing



Ohlone Tiger Beetle

Occupied—hiking/biking trails (moderate use), mowing, maintenance roads, and no grazing



Ohlone Tiger Beetle

Occupied--Horse trailing, trail manipulations, and extensive grazing



San Joaquin Kit Fox

(*Vulpes macrotis mutica*)

- Requires populations of ground squirrels for prey and to dig burrows, which are then used for refuge and reproduction;
- Requires adequate seed production for consumption by small mammal prey;
- Favored by low herbaceous cover.



Burrowing Owl

(Athene cunicularia)

- Management for habitat of the ground squirrel benefits the availability of shelter and presence of prey;
- Poisoning of ground squirrels has contributed to population declines.



Burrowing Owl

- Management to maintain or improve the open qualities of the grasslands; and
- Minimize encroachment of shrubs and trees benefits this grassland dependent species.



Special-Status Species of California Grasslands

Disappearing California grassland animals and plants dependent on functioning grassland habitat:

23 mammals
17 birds
9 amphibians
5 reptiles
Invertebrates
479 plants



Scotts Valley Spineflower
Chorizanthe robusta var. *hartwegii*

Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Grassland Forage Production Relative Amount of Herbage (varies with annual weather):											
* requires minimum residual mulch for optimum grass production * requires abundance of seed production and persistence of viable seed bank from summer to autumn (for animal food and grass reproduction)											
San Joaquin Kit Fox * requires populations of ground squirrels and their burrows for refuge and reproduction * requires adequate seed production for prey populations -favored by low grass <div style="border: 1px solid black; height: 10px; width: 100%;"></div>											
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Grazing Management Plans

Planning Elements:	Document Development and Infrastructure	Goals, Objectives, performance Standards	Incorporate Fire Hazard, Pest Plant, Soil Erosion, Water Quality Management	Plan with Grazing Prescription, Monitoring for Special Resource Habitat and Populations	Baseline Natural Resource Inventory, Assessment, and Analysis of Management Effects	NEPA / CEQA Process (if permit required)	Degree of Planning Detail
Planning Purposes:							
1. Maintenance of Existing Rural Ranching Activities and Economy; General Conservation (private land easement)	X	X					Low
2. Maintenance of Ranching Heritage and Landscape (public land designation or private land easement)	X	X					Low
3. Maintain Biodiversity, Fire Hazard Reduction, and Recreation Opportunity (public land management agency park, open space)	X	X	X	X		General guidelines for avoiding impacts	Moderate to High
4. Mitigation or Conservation Bank for Habitat of Special-Status Species or Natural Communities (private land easement)	X	X	X	X	X	General guidelines for avoiding impacts	High

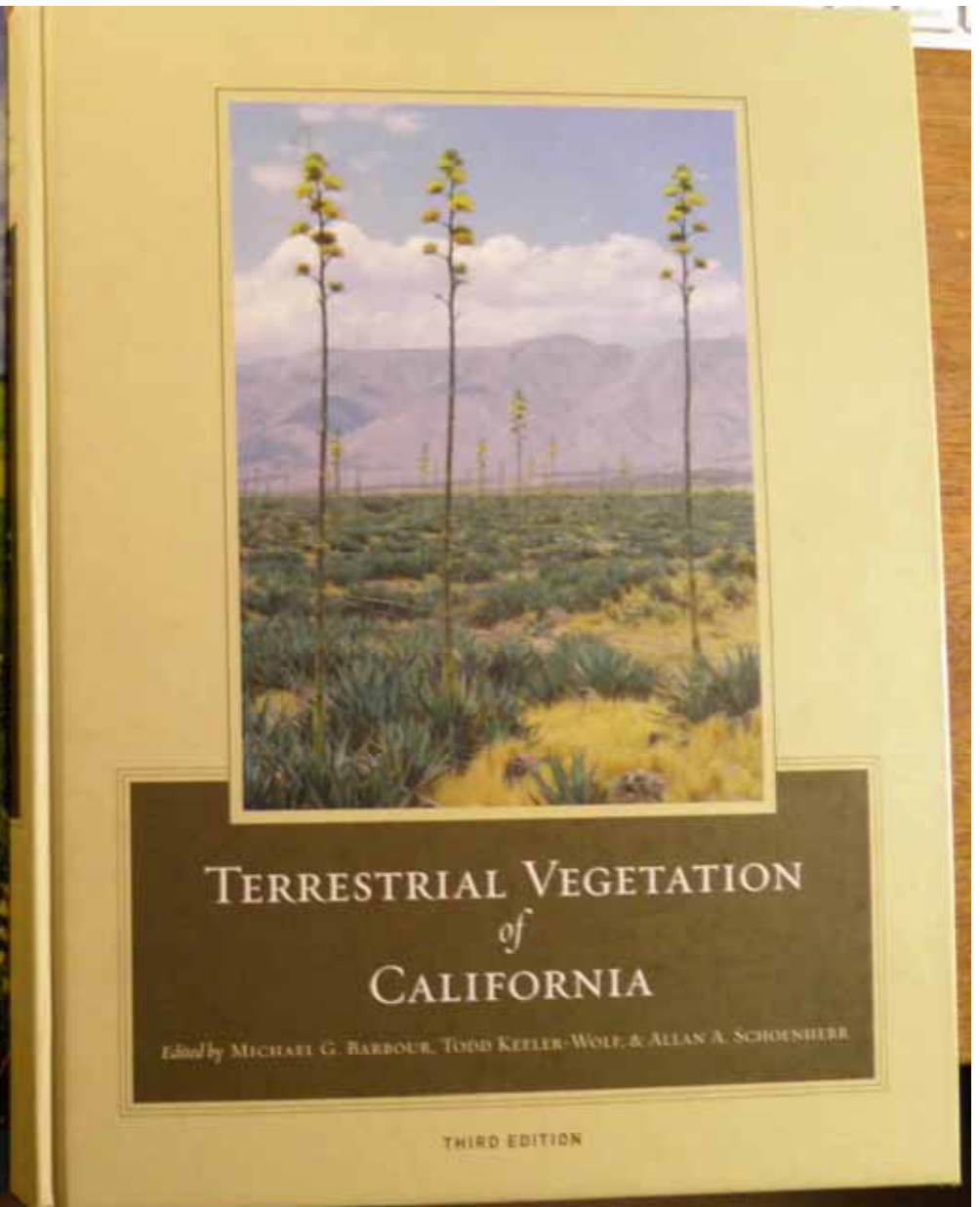
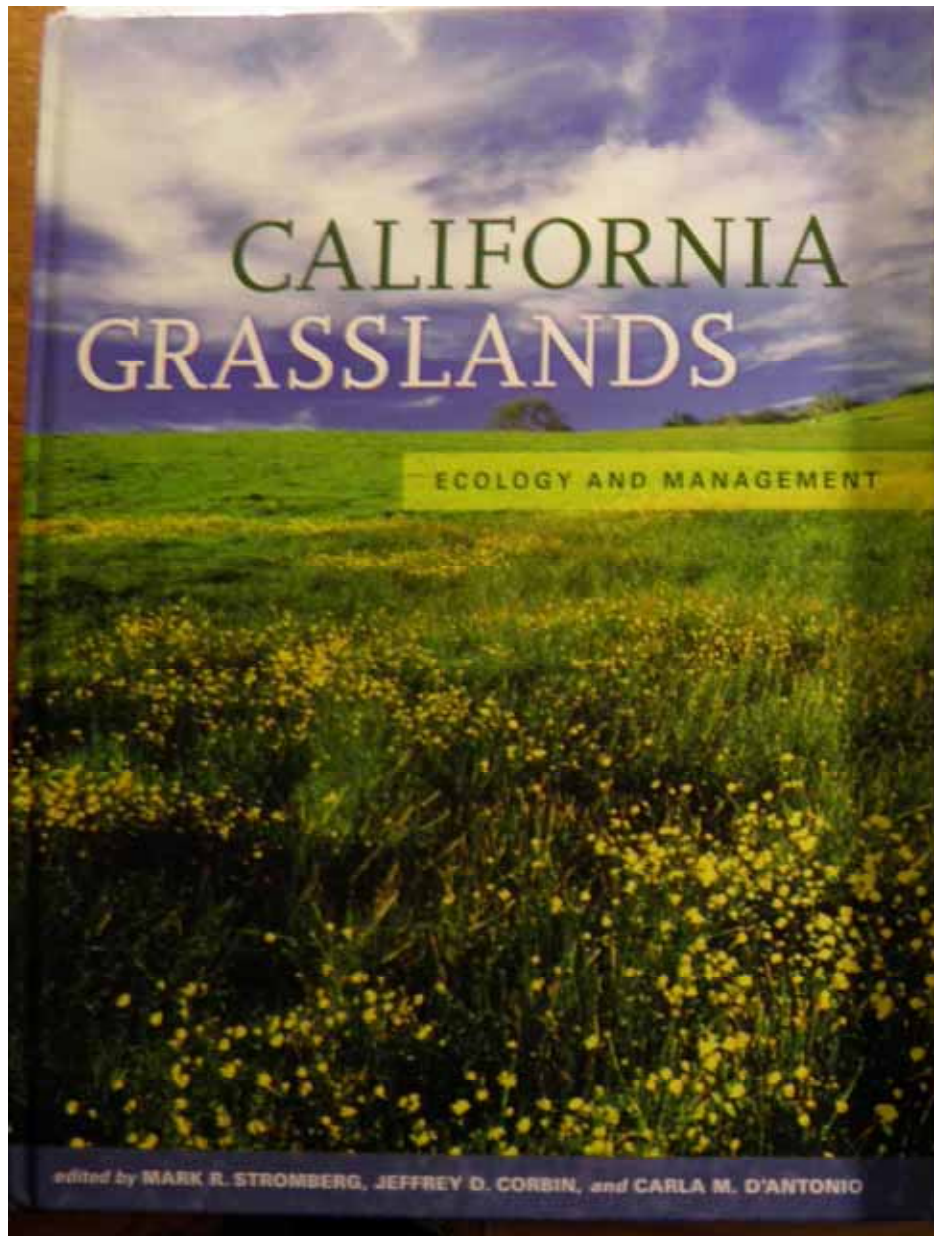
Grazing Management Plan Outline

1. Introduction
2. Summary of Current Conditions Affected by Grazing or Other Management (natural resources and regional rangeland economy)
3. Management Goals, Objectives, and Performance Standards
4. Predicted Effects and Desired Conditions
5. Grazing and Related Management Prescriptions
6. Sustainability--Integration with Regional Socio-Economic Systems for Long-term Sustainability; and Guidelines, Incentives, and Contingencies for Operations
7. Monitoring of Conditions and Planned Effects on Resources Related to Grazing
8. Implementation Schedule, Personnel, and Responsibilities
9. Assumptions and Recommended Supplementary Planning
10. Literature Cited

Planning Approach:

1. Based on best-available science--scholarship and reliance on experts, including rancher;
2. Maximize benefits to special resources, minimize impacts, and maintain sustainable livestock operation;
3. Defines objectives and performance standards, not tactics or specific practices;
4. Must be feasible and flexible for livestock operation, with incentives for cooperation, and integrated with regional rangeland economy;
5. Plan will be a comprehensive reference document for managers;
6. Plan will be adaptable based on efficient monitoring.

Two Recent UC Press books...



Grazing Management Professional Assistance

Certified Rangeland Manager (CRM)

- License required for professional *rangeland management* activities on covered rangelands
- *Licensed* for “*forested landscapes*” by the Calif. Board of Forestry and Fire Protection
- *Certified* for all Calif. rangelands by the Calif.-Pacific Section, Society for Range Management

Online Resource

- Brochure on CRMs from Calif.-Pacific Section, Society for Range Management

Sources of Grazing Management Planning Information

Online Resources:

1. Conservation Grazing Management Planning Purposes and Plan Elements (*described earlier*)
2. Conservation Grazing Management Plan Outline (*described earlier*)
3. Rangeland Conservation Funding Sources for Grazing Operations—technical and financial assistance to rangeland owners and livestock operators for conservation from federal and state agencies
4. Sources of Additional Technical Information on Ecology and Management of California Grasslands