

“Nature Conservation Paradigms:  
Their Evolution and Applications to California Rangeland Landscapes”



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# Refer to your handout--

## Nature Conservation Paradigms: Their Evolution and Applications to California Rangeland Landscapes

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Concepts	Historical Context and Impetus	Contributions
<p><b>1. Natural Resource Conservation</b> (started 1890s)</p> <ul style="list-style-type: none"> <li>• Forests</li> <li>• Rangelands</li> <li>• Wildlife</li> <li>• Soil</li> <li>• Parks</li> </ul>	<ul style="list-style-type: none"> <li>• Crises of unregulated resource loss and degradation</li> <li>• John Muir—inspiration from nature; naturalist; advocated parks</li> <li>• Aldo Leopold—land ethic; science/forestry; management; vignettes of pre-settlement conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Public demands stop to resource degradation and wasting</li> <li>• Forest reserves established</li> <li>• Regulation, enforcement, and management</li> <li>• Rise of dedicated professions and agencies to manage and regulate</li> </ul>
<p><b>2. Wilderness Preservation, Recreation Access, and Aesthetic Appreciation</b> (started 1960s)</p> <ul style="list-style-type: none"> <li>• Roadless areas; open space</li> <li>• Public access</li> <li>• Research and teaching reserves</li> </ul>	<ul style="list-style-type: none"> <li>• Crises of unregulated development and urban sprawl</li> <li>• Recognition of science to guide management</li> <li>• Urban dominated politics and recreational demands</li> </ul>	<ul style="list-style-type: none"> <li>• Parks, nature preserves, and open space networks established</li> <li>• Wilderness areas established</li> <li>• Off-road vehicle areas established</li> <li>• Sustainable yields</li> </ul>
<p><b>3. Environmental Planning and Mitigation</b> (started late 1960s)</p> <ul style="list-style-type: none"> <li>• Ecosystem management</li> <li>• Impact analyses</li> <li>• Mitigation</li> <li>• Regional planning</li> <li>• Eco-development</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced scientific analyses</li> <li>• Need to find solutions</li> <li>• Plan and mitigate in advance</li> <li>• Work with the private sector</li> </ul>	<ul style="list-style-type: none"> <li>• Conservation easements</li> <li>• Environmental planning, endangered species, water quality, hazardous materials law</li> <li>• Viewshed protection</li> <li>• Habitat Conservation Plans / Natural Community Conservation Plans</li> </ul>
<p><b>4. Biological Diversity and Its Conservation</b> (started late 1970s)</p> <ul style="list-style-type: none"> <li>• Conservation biology</li> <li>• Ecological restoration</li> <li>• Eco-tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Crises of extinctions and habitat loss</li> <li>• Professional and scientific pressure to develop solutions for biodiversity</li> <li>• Recognition of indigenous rights</li> <li>• Ray Dasman—"Destruction of California," biodiversity term, challenge is outside of parks</li> <li>• Bruce Wilcox and Tom Lovejoy—new scientific and professional field</li> </ul>	<ul style="list-style-type: none"> <li>• Global system of causes and effects</li> <li>• Trans-border solutions</li> <li>• "Paper parks" inadequate</li> <li>• Biosphere Reserves (model with core, buffer and transition zones), Bioregions / Eco-cultural regions</li> </ul>
<p><b>5. Ecosystem Health and Stewardship</b> (started 1990s)</p> <ul style="list-style-type: none"> <li>• Sustainable development</li> <li>• Indigenous / local ecological knowledge</li> <li>• Environmental health linked to human health</li> <li>• Community participation</li> <li>• Incentives instead of penalties</li> <li>• Food security</li> <li>• Wildlands as "gardens"</li> </ul>	<ul style="list-style-type: none"> <li>• Crises of climate change, large wildfires, impoverishment, coastal erosion and inundation, urbanization of formerly rural areas, cultural diversity loss</li> <li>• British "countryside conservation"</li> <li>• New models of local community engagement and environmental appreciation; strengthened relationships of producers and consumers</li> <li>• Increased awareness of indigenous management and requirements for management to maintain desired conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Private sector is key</li> <li>• Grazing is both a compatible use and beneficial for conservation purposes in annual grassland</li> <li>• Local food; integrate food production and environmental protection; reduced dependence on foreign-sourced energy</li> <li>• Adjusting public lands management to support local "working conservation landscapes" (grazing leases)</li> <li>• Manage to maintain and enhance desired conditions (control mass/height of Mediterranean grasses, fire hazards and pest plants)</li> </ul>

# Nature Conservation Paradigms: Concepts

1. Natural Resource Conservation (1890s)
2. Wilderness Preservation, Recreation Access, and Aesthetic Appreciation (1960s)
3. Environmental Planning and Mitigation (1970s)
4. Biological Diversity and Its Conservation (1970s)
5. Ecosystem Health and Stewardship (1990s)

# Where Are We Now?

## What is the Most Modern and Effective Paradigm for Conservation of California Rangelands?



# Nature Conservation Paradigms: #5 Ecosystem Health and Stewardship

- Sustainable development
- Indigenous / local ecological knowledge
- Environmental health linked to human health
- Community participation
- Incentives instead of penalties
- Food security
- Wildlands as “gardens”

# Nature Conservation Paradigms

A cumulative evolution of activism, science, professions, and practical management toward--

- Sustainability of complex ecosystems with targeted special resources
- Feasible management goals and specified expectations for targeted areas and results
- Collaboration to achieve management results
- Local community and resource use sustainability

# Prof. Raymond F. Dasmann's Challenge:

“...parks and wilderness areas are important... But these are not the answer to nature conservation, or even likely to be a large part of the answer. It is the way we care for the lands where we live... that will be more important... our greatest challenge will be in producing our food and fiber, and obtaining fuels and minerals in ways that are not environmentally destructive.

...the fringe lands, the farmlands, the ranges, pastures, and managed forests are the areas where the real conservation issues of the next two decades will be faced.”

From: Dasmann, R.F. 1981. The country in between. Introduction to the Wilderness 1982  
Sierra Club Engagement Calendar.

# Summary--Challenges to California Grassland Conservation Policy-Makers and Planners:

1. Composed ~100% non-native Mediterranean grasses and forbs, highly adapted to intense grazing
2. Grazing most effective and economical management tool to achieve conservation results
3. 80% private lands; 20% public lands
4. ~100% private grazing operators

# Summary--Challenges to California Grassland Conservation Policy-Makers and Planners:

5. Maintain grazing—for conservation as well as local economy; sustain the “working landscape;” include grazing management for “protected” lands
6. Plan with grazing prescriptions to guide effective grazing for habitat qualities; performance standards tied to specific management objectives

# Summary--Challenges to California Grassland Conservation Policy-Makers and Planners:

7. Designate and integrate core habitat areas, special management areas for targeted grazing, non-habitat flexible use fields, and off-lease fields and grass banks for optimal conservation grazing
8. To maintain grazing, it must be affordable, feasible, and flexible for livestock operation, with incentives for cooperation

# Summary--Challenges to California Grassland Conservation Policy-Makers and Planners:

9. Use grazing leases for grazing services as well as non-grazing “stewardship” services; leases should compensate for stewardship beyond normal grazing lease responsibilities
10. HCPs should focus on easements with plans for feasible performance standards; integrate local private lands and ranching operations into work plans