A person wearing a plaid shirt and a tan vest stands in a field, looking towards a brown cow and a black dog. The background shows a fence and snow-capped mountains under a cloudy sky.

# **Keeping Cattle and People at Home on the Range: *Positive Livestock-Recreation Interactions***

**Elkhorn Slough Coastal Training Program  
September 29<sup>th</sup>, 2015**

**Kristina Wolf  
*PhD Candidate, U.C. Davis  
Central Coast Rangeland Coalition  
Midpeninsula Regional Open Space District***

# *Today's Overview*

- **Literature Review**
  - **Methods**
  - **History of grazing in California**
  - **Public lands management goals**
  - **Why are there cows in the park?**
  - **Potential outcomes of recreation and grazing**
- **Interview Data**
  - **Methods, Results**
- **How can we facilitate positive interactions?**

# *Today's Overview*

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  - **Public lands management goals**
  - **Why are there cows in the park?**
  - **Potential outcomes of recreation and grazing**
- **Interview Data**
  - **Methods, Results**
- **Or, decrease negative interactions?**

# ***“Livestock-recreation interactions”***

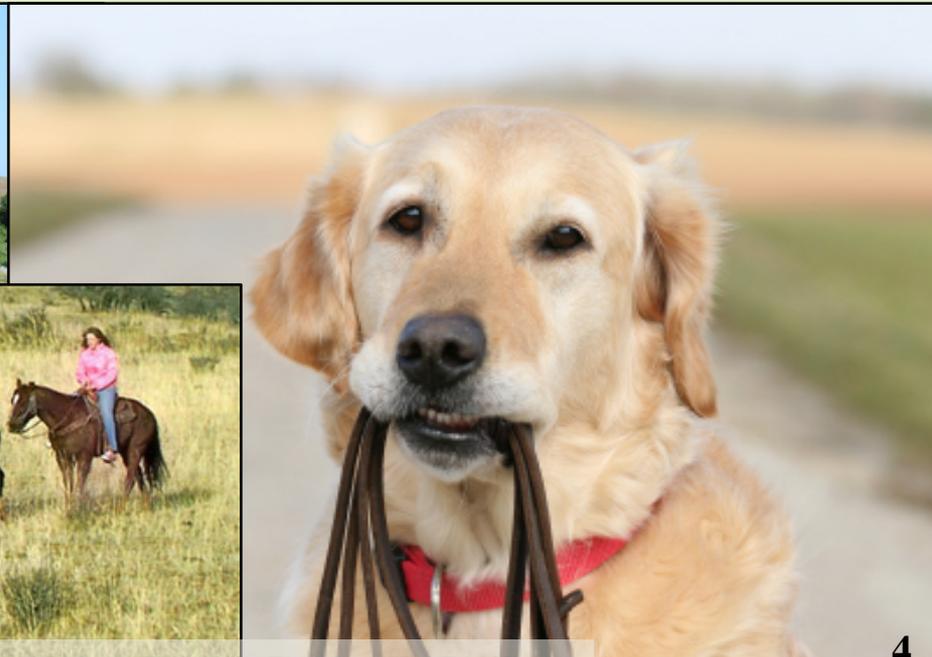
**Encounters between**

***livestock (or the effects of livestock)***

**and**

***recreationists (or the effects of recreation)***

**\*includes animals under the control of recreationists**



# *Methods*

## Literature Review

- scientific articles

Environmental Management (2014) 53:454–464

DOI 10.1007/s00267-013-0216-4

---

### **Using Social Media to Discover Public Values, Interests, and Perceptions about Cattle Grazing on Park Lands**

Sheila J. Barry

# Methods

## Literature Review

- scientific articles
- newspapers

Times-Herald  
NEWS

News ▾ Sports ▾ Business Entertainment ▾ Lifestyle ▾ Obituaries ▾ Jobs ▾ Opinion ▾

Home News

Walnut Creek hikers, dogs running afoul of cows



Hikers, bike riders and runners are still learning how to co-exist with grazing cattle along open space trails. There have been some reports of incidents between bovine and human which has resulted in the posting of new informational warning signs and the removal of problem cows or steers. Dan Honda — Bay Area News Group

POSTED: 04/26/15, 1:05 PM PDT | UPDATED: ON 04/26/2015 0 COMMENTS

By Andrew McGall  
Bay Area News Group

# *Methods*

## **Literature Review**

- **scientific articles**
- **newspapers**
- **newsletters**



**I·A·R·E·H**  
Institute of Agricultural Rural and Environmental Health



Fact Sheet  
No. 16  
March 2002

# **LOW STRESS CATTLE HANDLING**

# *Methods*

## Literature Review

- scientific articles
- newspapers
- newsletters
- bulletins and reports

## Outdoor Recreation Participation in the United States—Projections to 2060

A Technical Document Supporting  
the Forest Service 2010 RPA Assessment

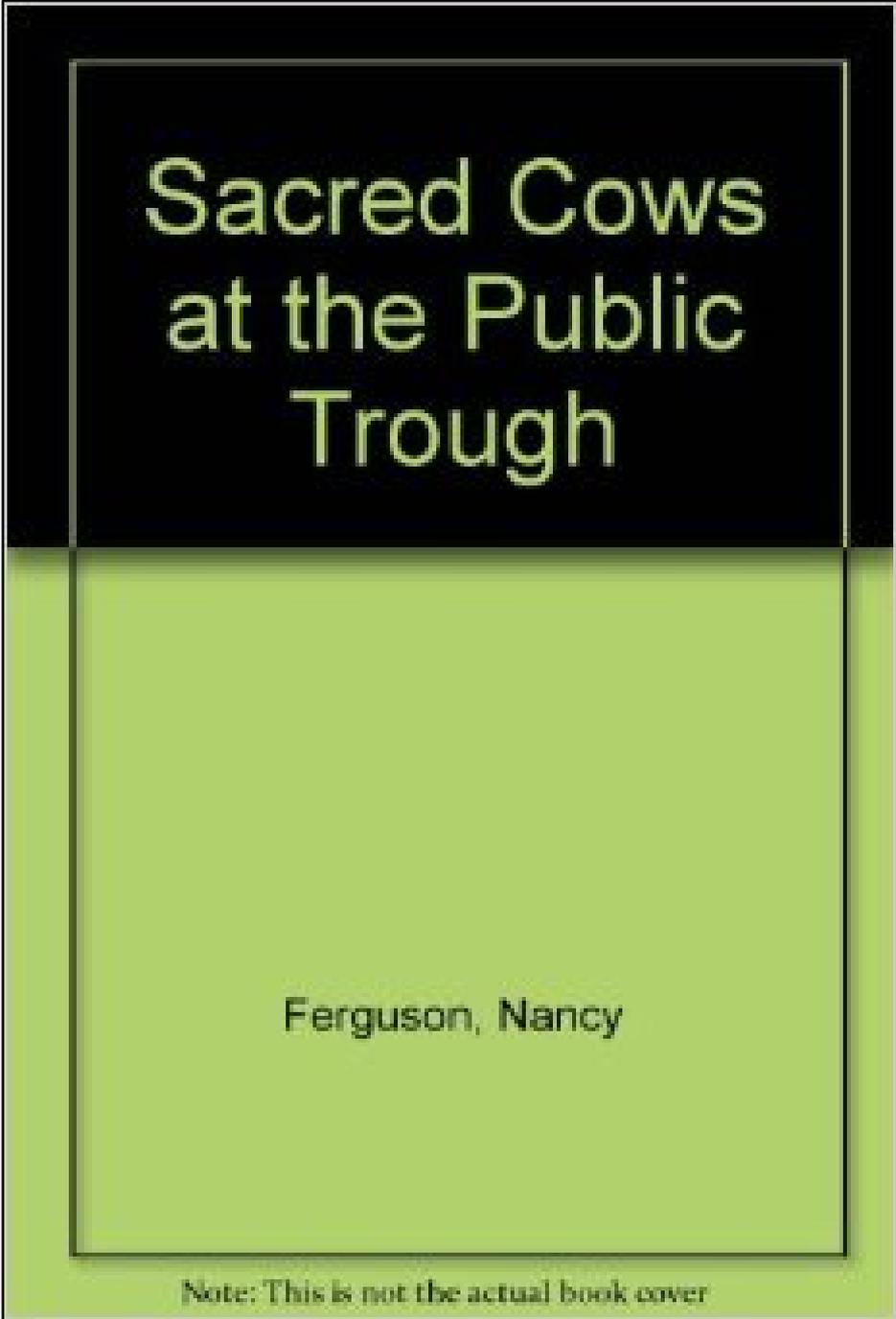
J.M. Bowker, Ashley E. Askew, H. Ken Cordell,  
Carter J. Betz, Stanley J. Zarnoch, and Lynne Seymour



# *Methods*

## **Literature Review**

- scientific articles
- newspapers
- newsletters
- bulletins and reports
- **books**



# Sacred Cows at the Public Trough

Ferguson, Nancy

Note: This is not the actual book cover

# *Methods*

## Literature Review

- scientific articles
- newspapers
- newsletters
- bulletins and reports
- books

## Interviews

- ranchers

Photo Credits : NRCS (top); Vinee Tong, KQED (bottom)



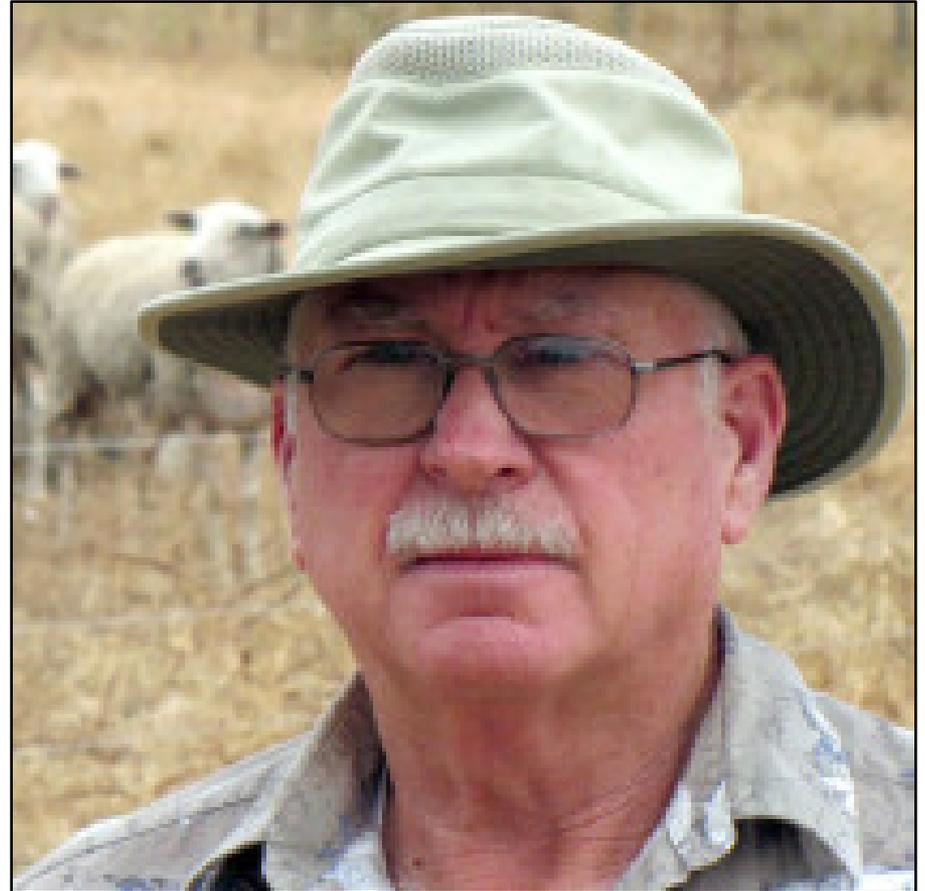
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## **Literature Review**

- **scientific articles**
- **newspapers**
- **newsletters**
- **bulletins and reports**
- **books**

## **Interviews**

- **ranchers**
- **consultants**



**Photo Credit: Holistic Management International**

# *Methods*

## **Literature Review**

- **scientific articles**
- **newspapers**
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- **bulletins and reports**
- **books**

## **Interviews**

- **ranchers**
- **consultants**
- **public lands managers**



Photo Credit: [VenturaCountyTrails.org](http://VenturaCountyTrails.org)

# Methods

## Literature Review

- scientific articles
- newspapers
- newsletters
- bulletins and reports
- books

## Interviews

- ranchers
- consultants
- public lands managers

## Products

- workshops and discussions



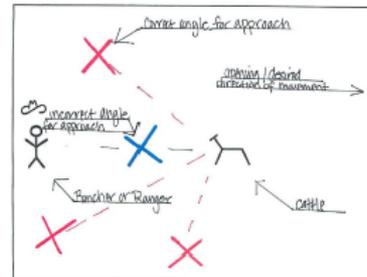
**PUBLIC WORKSHOP ANNOUNCEMENT:**  
INTERACTING WITH CATTLE IN SANTA CLARA COUNTY PARKS  
**Saturday, October 17, 2015 • 10:00 AM to Noon**  
Coyote Lake-Harvey Bear County Park. Harvey Bear Park entrance San Martin, CA



The Santa Clara County Parks and Recreation Department invites all interested park visitors to participate in a 2 hour public workshop focused on public safety aspects of livestock grazing on County Park lands.

Park staff, ranchers, and livestock and range management experts will make presentations and answer questions.

Topics will include natural resources management, cattle behavior, livestock operations, and techniques for improving visitor safety and protecting park resources.



**Meet At:** Harvey Bear Ranch Trailhead,  
Coyote Lake-Harvey Bear Ranch County Park, San Martin, CA 95046  
Past the corner of Foothill Ave. and San Martin Ave..

**How to Get There:** From U.S. Highway 101 in San Martin, take the San Martin Ave. exit. Proceed east on San Martin Ave. for 2 miles. The entrance to the park is on the left, one-quarter mile east of Foothill Avenue (near the intersection with New Avenue) in San Martin.

We hope to see you there!  
For more information, call Barry Hill at (408)-489-8908.  
[www.ParkHere.org](http://www.ParkHere.org)

# Methods

## Literature Review

- scientific articles
- newspapers
- newsletters
- bulletins and reports
- books

## Interviews

- ranchers
- consultants
- public lands managers

## Products

- workshops and discussions
- two journal articles

1 Are livestock grazing and recreational uses compatible on coastal California's public  
2 lands? The what, where, why, and how of livestock grazing on public lands

3  
4 Authors: Kristina M. Wolf<sup>a</sup>, Roger Baldwin<sup>b</sup>, and Sheila Barry<sup>c</sup>

5  
6 <sup>a</sup>Corresponding Author; Department of Plant Sciences and Graduate Group in Ecology,  
7 University of California, Davis, 1 Shields Avenue, Davis, CA 95616, USA;  
8 kmwolf@ucdavis.edu

9  
10 <sup>b</sup>Department of Wildlife, Fish, and Conservation Biology and University of California  
11 Cooperative Extension Human-Wildlife Conflict Resolution, University of California, Davis, 1  
12 Shields Avenue, Davis, CA 95616, USA; rabaldwin@ucanr.edu

13  
14 <sup>c</sup>University of California Cooperative Extension Livestock and Natural Resources Advisor and  
15 Country Director Santa Clara, University of California, Santa Clara, 1553 Berger Drive, San  
16 Jose, CA 95112, USA; sbarry@ucanr.edu

### 17 Abstract

18 While the primary use of rangelands for well over a century has been livestock grazing to  
19 produce food and fiber, elevated demands for recreational land has increasingly brought  
20 livestock-recreation interactions to the forefront. California's Central Coast is a hotspot for  
21 graziers and recreationists alike and an important region in which to address the challenges and  
22 synergies of concurrent grazing and recreation. Here we review the literature to elucidate the  
23 impetus for livestock grazing on publicly-owned recreational lands, discuss potential areas of  
24 conflict, and highlight promising avenues for fostering positive livestock-recreation interactions.  
25 Managers grazing livestock on public lands have adopted a variety of management practices to  
26 minimize conflicts and maximize benefits derived from multiple uses of public lands. Graziers  
27 are interested in supporting environmental health and protecting ecosystem services provided by  
28 rangelands, and grazing practices have improved over time to the point that well-managed  
29 grazing can enhance recreational lands and improve wildlife habitat. However, even a few  
30 perceived negative recreationist experiences may prompt some public land agencies to remove  
31 livestock grazing entirely. Conflicts between recreationists, environmentalists, and ranchers  
32 could be minimized and benefits maximized with appropriate policies and creative management.  
33 Moreover, California's grasslands are the most "at risk" habitat type for development, and  
34 increasing economic and social pressures on ranchers that utilize leased public lands make it  
35 more likely that ranchers will sell their private lands to developers if access to public grazing  
36 land was eliminated, further increasing threats to our already dwindling rangelands. The  
37 continued accessibility of public lands for grazing is thus inextricably linked to the protection of  
38 private rangelands and the critical resources they provide. Novel approaches to public education  
39 and collaborative land management are critical to reducing negative livestock-recreation  
40 encounter and ensure continued conservation of wildlands.

# Methods

## Literature Review

- scientific articles
- newspapers
- newsletters
- bulletins and reports
- books

## Interviews

- ranchers
- consultants
- public lands managers

## Products

- workshops and discussions
- two journal articles

Livestock-Recreation Interactions, Part Two: Interviews

1 Public lands managers and ranchers address concurrent recreation and livestock grazing  
2 on coastal California public lands: Fostering positive livestock-recreation interactions  
3

4 Authors: Kristina M. Wolf<sup>a</sup>, Roger Baldwin<sup>b</sup>, and Sheila Barry<sup>c</sup>  
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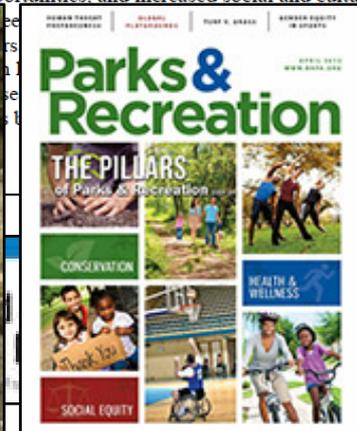
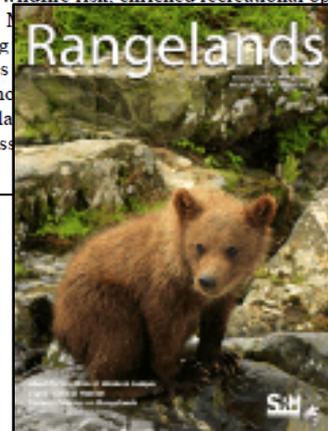
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### 17 Abstract

18 The primary use of California rangelands has been livestock grazing to produce food and fiber,  
19 but approximately 47,000 acres (19,000 ha) of rangeland are converted to other uses *each year*,  
20 leaving graziers with a dwindling resource base. Due to increased pressures on graziers,  
21 including rising costs, increased regulations, a strong interest in conserving and sustaining their  
22 rangeland resource base, and negative effects of climate change and long-term drought, many  
23 have either sold their operations, decreased herd sizes, or moved to public lands' grazing to  
24 sustain their livelihoods, cultures, and traditions. Simultaneously, elevated demand for  
25 recreational land along the California coast has brought interactions between livestock and  
26 recreationists to the forefront of public lands' management concerns. Here we used one-on-one  
27 interviews and surveys of land managers and graziers to elucidate issues arising from concurrent  
28 recreation and grazing on public lands, and to determine best practices for managers and  
29 recreationists for minimizing conflicts and maximizing the multiple benefits derived from public  
30 lands. We find that ranchers and managers are strongly interested in environmental health and  
31 the protection of ecosystem services provided by rangelands, and are motivated to implement  
32 practices that provide multiple benefits in the forms of enhanced habitat for local flora and fauna,  
33 reduced wildfire risk, enriched recreational opportunities, and increased social and cultural  
34 benefits. *Conservation Biology* 2018, 32(1):1-12. doi:10.1007/s11692-017-9488-8  
35 including  
36 strategies  
37 and econo  
38 grazing la  
39 awareness



# *Methods*

## **Literature Review**

- **scientific articles**
- **newspapers**
- **newsletters**
- **bulletins and reports**
- **books**

## **Interviews**

- **ranchers**
- **consultants**
- **public lands managers**

## **Products**

- **workshops and discussions**
- **two journal articles**
- **outreach article (CCRC, Rangeland Roundup)**

# *Grazing in the West: An evolving approach*

- **Intensive use, extractive, production focused**



Photo Credit: IZ Ranch, 2015

# *Grazing in the West: An evolving approach*

- Intensive use, extractive, production focused
- “Preservation” via grazing removal



Photo Credits left to right: eatkamloops.org; bushfiresmillpark; Josh Edelson

# *Grazing in the West: An evolving approach*

- **Intensive use, extractive, production focused**
- **“Preservation” via grazing removal**
- **Working landscapes for multiple benefits**
  - Sustainable multiple use
  - Economically viable
  - Protect from development
  - Support local communities
  - Reduce fire risk
  - Enhance ecosystem services

# *Trends in Recreation & Grazing*

- More people, more recreation<sup>4</sup>
  - 7% more recreationists; 30% more recreation days
  - “Nature viewing” increases by 100 million visitors
- Rancher Challenges
  - No increase in livestock numbers<sup>9</sup>
  - Liability / risk<sup>10</sup>
  - Long-term drought, climate change<sup>9,11</sup>
  - Grasslands at risk for development<sup>9</sup>
- Keep graziers on the land
  - Private lands → public lands ownership<sup>9,11</sup>
  - Barriers to public lands’ grazing<sup>10</sup>
- Recreation + grazing public lands  
== increasing potential for conflict<sup>9</sup>

Preservation  
Conservation  
Working Landscapes

**Public lands’ grazing linked to protection of open spaces and ecosystem services<sup>12</sup>**

# *Are public lands only for public uses?*

## **Biological Diversity and Ecosystem Health**

- Wildland-urban fire hazards
- Noxious weeds

## **Social and Cultural Services**

- Accident-free visitor experiences
- Outdoor recreational opportunities
- Environmental education

## **Park Infrastructure**

- Marijuana eradications
- Facilities and critical infrastructure

## **Working landscapes**

- Sustainable livestock grazing
- Maximize revenue potential from leases

Background  
Photo Credit:  
coolhorsetrails.  
com

# *Positive Impacts of Grazing\**

- **Plants and ungulates co-evolved → some native plants adapted to grazing<sup>16-18</sup>**

**Some native grasses that tolerate, or benefit from, well-managed grazing**

**California Oat Grass, *Danthonia californica***

**California brome, *Bromus carinatus***

**Blue wildrye, *Elymus glaucus***

**Red fescue, *Festuca rubra***

**Tufted hairgrass, *Deschampsia cespitosa***

**Meadow barley, *Hordeum brachyantherum***



# *Positive Impacts of Grazing*

**Plants and ungulates co-evolved → some native plants adapted to grazing<sup>16-18</sup>**

## **Weed management**

**– Mediterranean weeds abundant<sup>19-20</sup>**

- **Dominant, unpleasant to navigate<sup>21</sup>**
- **Stickers / seeds may hurt animals<sup>22-23</sup>**
- **Native floral abundance and diversity suffers<sup>21</sup>**
- **Trophic cascades<sup>22-23</sup>**

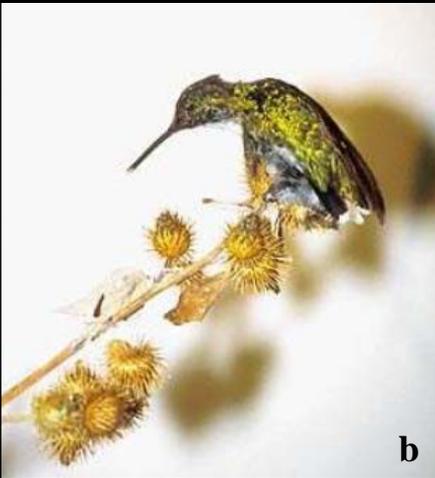


Photo Credits: a – Eddie B. Horvath; b – Shawna L. Bautista; c – UCANR; d:e – UC Regents (J.M. DiTomaso); f – Bert & Celeste Wilson; g – Kevin Cole

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- **Landscape aesthetics<sup>20,26</sup>**
  - **Golden hills of California?**
  - **Partly due to annual invasion**
  - **Woody encroachment**



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- **Alternative to repeated burns<sup>26-27</sup>, mowing<sup>27,29</sup>, herbicide<sup>28</sup>, tillage<sup>27,29</sup>, tarping<sup>29</sup>, hired goats<sup>30-31</sup>**



Photo Credit: Brian Hutchison, National Post

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- **Educational opportunities<sup>32-33</sup>**

# *Negative Impacts of Grazing\**

- **Potential ecological impacts**
  - Often attributed to grazing<sup>34-36</sup>



Photo Credits: a – Tom Choma; b – Greg Schneider; c – AIZON; d – Mike Hudak

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- **Potential ecological impacts**
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  - Perceived? Must monitor.<sup>37</sup>



Photo Credit: CDFW

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- **Aesthetic<sup>34</sup>**
  - Manure, flies



Photo Credits: Greg Schneider

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- **Potential ecological impacts**
  - Often attributed to grazing<sup>34-36</sup>
  - Perceived? Must monitor.<sup>37</sup>
- **Aesthetic**<sup>34</sup>
  - Manure, flies
- **Logistic**<sup>36-37</sup>
  - **Fencing**

Photo Credits: left - Greg Schneider; right – mandhanawires.com



# *Negative Impacts of Grazing\**

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  - Fencing
  - Movement of animals
  - Animal presence



# *Negative Impacts of Grazing\**

- **Potential ecological impacts**
  - Often attributed to grazing
  - Perceived? Must monitor.
- **Aesthetic**
  - Manure, flies
- **Logistic**
  - Fencing
  - Movement of animals
  - Animal presence
- **Impacts on recreationists and pets<sup>37</sup>**
  - Spooked horses, dogs, or people



Photo Credit: Ron Atkinson

# *Negative Impacts of Grazing\**

**Real or perceived?<sup>37</sup>**



Photo Credit: IntelliHub

# *Positive Impacts of Recreation\**

- **Enjoyment of natural open spaces**



**Photo Credit: County of Sonoma**

# *Positive Impacts of Recreation\**

- **Enjoyment of natural open spaces**
- **Wildlife and floral habitat**



**Stock pond for California Tiger Salamander**  
**Photo Credit: Alameda County RCD**

**Coastal prairie wildflowers**  
**Photo Credit: J. Coleman**

# *Positive Impacts of Recreation\**

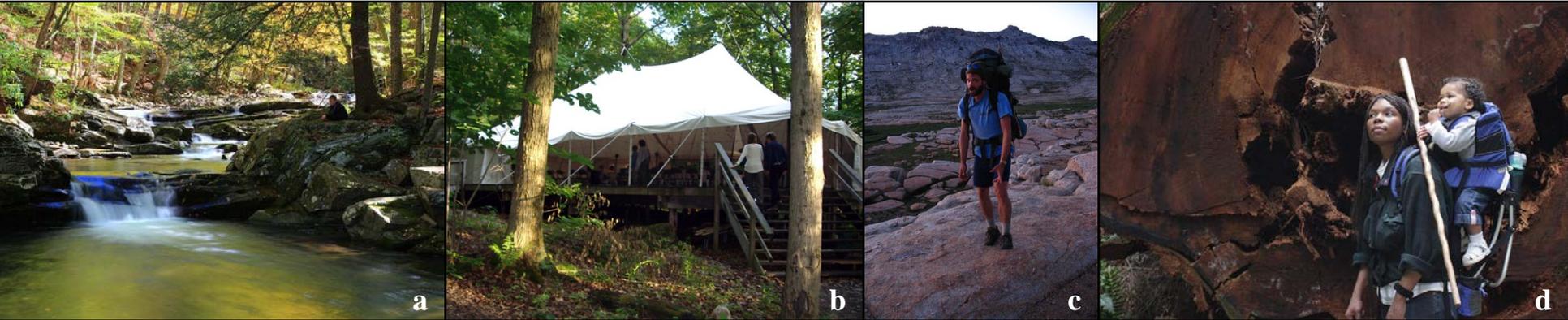


Photo Credits: a - ForestWander.com; b:c – Public domain; d USFWS

- **Recreational opportunities**
- **Psychological benefits of being in nature**
- **Health benefits of physical activity**
- **Increase connection to natural world**

# *Negative Impacts of Recreation\**

- Trail damage



Photo Credits: left – Phil Riggan; right – Jim Bell

# *Negative Impacts of Recreation\**

- Trail damage
- Damage to infrastructure, sabotage



Photo Credit: besllcorners

# *Negative Impacts of Recreation\**

- Trail damage
- Damage to infrastructure, sabotage
- **Vandalism and crime**



Photo Credits: left – Anne Berleant; right – Inside Bay Area News

# *Negative Impacts of Recreation\**

- Trail damage
- Damage to infrastructure, sabotage
- Vandalism and crime
- Introduction of weedy plant species



Photo Credits: left – USDA; right – NPS

# *Negative Impacts of Recreation\**

- **Trail damage**
- **Damage to infrastructure, sabotage**
- **Vandalism and crime**
- **Introduction of weedy plant species**
- **Trash**



Photo Credit: Isaac Fast

# *Objectives*

## Literature Review – Interviews – Surveys

- Can livestock grazing and public recreation coexist on public lands?



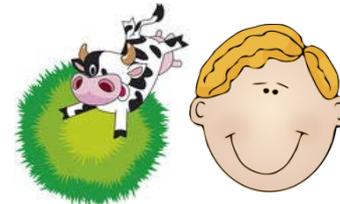
- What are potential downsides to concurrent recreation and grazing?



- What are potential benefits to concurrent recreation and grazing?



- How to facilitate positive relationships?



# *Interview Results*

- **n = 15, contact me if interested!**
- **Clicker Survey data**
- **13 questions (similar to clicker survey)**
  - **Compatibility of recreation and grazing**
  - **Types of recreation**
  - **Barriers to grazing on public lands**
  - **Trade-offs**
  - **Positive interactions**



# *Are livestock grazing and recreation compatible on public lands?*

- **Yes – 100%**
  - **Enjoyment of livestock**
  - **Public education re: managed grazing as a tool**
  - **Ecosystem services**

## **Rancher**

**“How to make interactions positive?**

***PLAN* for it!”**

- **Caveats**
  - **Problematic public disconnect to natural world**
  - **Poor management could have negative ecological effects**

# *Are livestock grazing and recreation compatible on public lands?*

## Rancher

“You have to do everything you can to reduce liability and conflict. If you don’t understand that, you shouldn’t be on public ground. You are there as a **PRIVILEGE**... Anything and everything you do has to reduce or eliminate conflict, and this is what it is about on public ground...”

## Rancher

“[Cattle grazing on public lands] may not be easy, but the whole key is that the cattle owner and the land agency need to work together... very little **COMMUNICATION** is often the problem.”

# *What types of recreational activities have you observed on grazed lands?*

Percentage of land managers observing recreational activities on grazed lands in the Central Coast of California, based on phone, in-person, and email interviews.

<i>Activity</i>	<i>Percent</i>	<i>Activity</i>	<i>Percent</i>
Cultural/Heritage/Archaeological Sites	54	Dog Walking**	46
Cattle Drive	69	Biking*	62
Ranch Retreat	38	Falconry	23
Horse Camp	38	Fishing	38
Hunting	62	Picnics	31
Bed & Breakfast	31	Kites	31
ATV*	54	Hang Gliding	8
Camping	46	Birding	100
Hiking*	100	Other Wildlife Viewing	77
Horseback Riding*	85	Other Activities	54

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**\* Most common problematic interactions with livestock**

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<b>Hiking*</b>	<b>100**</b>	Other Wildlife Viewing	<b>77**</b>
<b>Horseback Riding*</b>	<b>85**</b>	Other Activities	54

**\* Most common problematic interactions with livestock**

**\*\* Most common ≠ most problematic all the time**

**Are outcomes generally negative then?**

# *Have outcomes been generally positive, negative, mixed, or neutral?*

---

- **Positive – 70%**

- Enjoyed public interaction; public enjoyed livestock
- Plan for it

*East Bay Regional Parks District*  
18 (reported) incidents / 4 years  
0.000225%

- **Negative – 15%**

- Too much work and stress; too little return
- Sabotage, economic losses
- Openly hostile recreationists (rare)

- **Depends – 15%**

- Context- or region-specific

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---

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  - Enjoyed public interaction; public enjoyed livestock

- Plan for it

**Sunol Regional Wilderness**

*A few out of millions is an  
“unacceptable risk”*

- **Negative – 15%**

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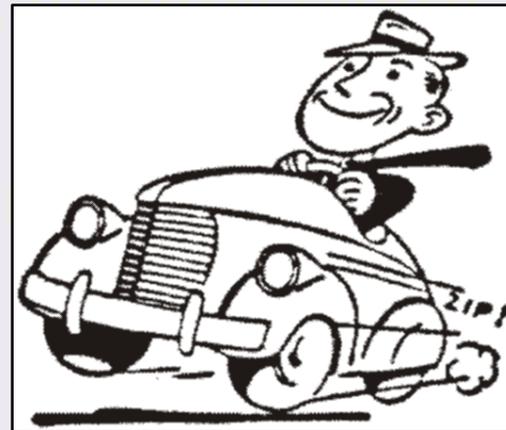
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**Sunol Regional Wilderness**  
*A few out of millions is an  
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  - **Context- or region-specific**

# *Have outcomes been generally positive, negative, mixed, or neutral?*

---

## Rancher

**“Overwhelmingly it has been a positive relationship between me, the cattle, and the enjoyment of the visiting public. But it takes only a couple of negative encounters to leave a bad lasting impression with me.”**

*How do you currently encourage  
positive interactions?*

**92% actively encouraged positive interactions**

# *How do you currently encourage positive interactions?*

**92% actively encouraged positive interactions**

- **Engaged recreationists**
  - Answer Q's
  - Demonstrate safe interactions
  - Make allies

# *How do you currently encourage positive interactions?*

**92% actively encouraged positive interactions**

- **Engaged recreationists**
- **Participated in workshops, tours, seminars**

# *How do you currently encourage positive interactions?*

**92% actively encouraged positive interactions**

- **Engaged recreationists**
- **Participated in workshops, tours, seminars**
- **Stockmanship**
  - **Training and habituation**
  - **Breeding for temperament, culling**

# *How do you currently encourage positive interactions?*

**92% actively encouraged positive interactions**

- **Engaged recreationists**
- **Participated in workshops, tours, seminars**
- **Stockmanship**
- **Avoidance strategies**
  - **Avoid high traffic days or areas**
  - **Change locations during breeding and calving seasons**

# *How do you currently encourage positive interactions?*

**92% actively encouraged positive interactions**

- **Engaged recreationists**
- **Participated in workshops, tours, seminars**
- **Stockmanship**
- **Avoidance strategies**
- **Signage**
  - **Where are livestock**
  - **How to interact**
  - **Who to call if emergency**
  - **What *is* an emergency?**
  - **Why graze?**

# *How do you currently encourage positive interactions?*

**92% actively encouraged positive interactions**

- **Engaged recreationists**
- **Participated in workshops, tours, seminars**
- **Stockmanship**
- **Avoidance strategies**
- **Signage**
- **Websites, social media, articles**
- **Provide other services in parks**

# *How will you encourage positive interactions in the future?*

**62% planned new actions to facilitate positive interactions**

- **Assist recreationists in navigating trails and fencing**
  - Curated trails
  - Improved signage
  - Use of temporary fencing
- **Signage**
  - Maps
  - Benefits of livestock grazing
  - Dog-walking
  - Safe livestock interactions
- **Public events or meetings**
- **Stockmanship courses**
- **Avoidance strategies**

# *What barriers limit or prohibit grazing on public lands?*

**100% felt there were significant barriers for them,  
or for graziers in general**

**Barriers to grazing on public lands: Percentage of respondents that cited either personally experienced or general barriers to livestock grazing on public lands based on interviews.**

<i>Barrier Category</i>	<i>Personal</i>	<i>General</i>
<b>Logistical constraints</b>	<b>30</b>	<b>50</b>
<b>Economic constraints</b>	<b>20</b>	<b>40</b>
<b>Sabotage</b>	<b>17</b>	<b>10</b>
<b>Increased liability and risk</b>	<b>20</b>	<b>10</b>
<b>Availability of grazing leases</b>	<b>10</b>	<b>25</b>
<b>Negative ecological impacts</b>	<b>0</b>	<b>17</b>
<b>Recreationist interference</b>	<b>30</b>	<b>33</b>
<b>Poor grazier attitudes limiting availability</b>	<b>8</b>	<b>10</b>
<b>Public / agency misunderstanding of grazing impacts</b>	<b>90</b>	<b>75</b>

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Differences might be due to 1) not all respondents grazed on public lands; 2) those who have grazed on public lands have more experience now; 3) good individual management, as compared to *all* ranchers; 4) “grass is always greener...” perceptions

# *What barriers limit or prohibit grazing on public lands?*

## Rancher

“Often I feel that the agency people **THINK** I am just throwing my cattle out on the land, and am getting paid to do nothing. That is *not* the case; as a rancher you work hard to create your own profit.”

## Lands Manager (agency)

“I had about a miles worth of fence cut due to people angry with cattle grazing... these are **PUBLIC INDIVIDUALS** doing what they feel is best for them, and not considering others. This happened over a period of years, and for two years [the park] quit grazing and hired someone to be part of a management plan process and create a grazing plan. Currently everything is fine though. After they removed the grazing for two years, it took 6-7 years to knock back the thatch and bring back flowers, and many of our wildflower populations have not recovered since this. The grazing removal had very obvious and clear ramifications.”

# *What are downsides to grazing on public lands?*

**100% acknowledged potential downsides**

Percentage of *all* respondents, and of graziers specifically (with the difference between the two), that cited negative impacts of livestock grazing on public lands, based on interviews.

<i>Negative Impact Category</i>	<i>All Respondents</i>	<i>Graziers</i>	<i>Difference</i>
<b>Logistical constraints</b>	<b>69</b>	<b>78</b>	<b>9</b>
<b>Economic constraints</b>	<b>39</b>	<b>44</b>	<b>5</b>
<b>Sabotage</b>	<b>31</b>	<b>44</b>	<b>13</b>
<b>Availability of grazing leases</b>	<b>23</b>	<b>22</b>	<b>-1</b>
<b>Negative ecological impacts</b>	<b>15</b>	<b>11</b>	<b>-4</b>
<b>Recreationist interference</b>	<b>54</b>	<b>78</b>	<b>24</b>
<b>Poor grazier attitudes limiting availability</b>	<b>8</b>	<b>0</b>	<b>-8</b>
<b>Public / agency misunderstanding of grazing</b>	<b>54</b>	<b>56</b>	<b>2</b>
<b>Impacts on aesthetics</b>	<b>23</b>	<b>22</b>	<b>-1</b>
<b>Loss of grazier privacy</b>	<b>8</b>	<b>11</b>	<b>3</b>

# *What are downsides to grazing on public lands?*

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Negative ecological impacts	15	11	-4
<b>Recreationist interference</b>	<b>54</b>	<b>78</b>	<b>24</b>
Poor grazier attitudes limiting availability	8	0	-8
Public / agency misunderstanding of grazing	54	56	2
Impacts on aesthetics	23	22	-1
Loss of grazier privacy	8	11	3

## Rancher

69

“I’ve been doing it for 15-20 years. It takes a completely different mindset than from operating on private ground, so if you don’t get your head around that, it can drive you absolutely insane.”

# *What are positive outcomes of grazing on public lands?*

**100% acknowledged potential positive outcomes**

Percentage of *all* respondents, and of graziers specifically (with the difference between the two), that cited positive impacts of livestock grazing on public lands, based on interviews.

<b>Positive Impact Category</b>	<b>All Respondents</b>	<b>Graziers</b>	<b>Difference</b>
<b>Economic benefits</b>	<b>46</b>	<b>56</b>	<b>10</b>
<b>Positive ecological impacts</b>	<b>77</b>	<b>67</b>	<b>-10</b>
<b>Positive aesthetic changes</b>	<b>15</b>	<b>11</b>	<b>-4</b>
<b>Social &amp; cultural benefits*</b>	<b>46</b>	<b>56</b>	<b>10</b>
<b>Educational opportunities</b>	<b>62</b>	<b>78</b>	<b>16</b>

\* Includes a reduction in vandalism and illegal marijuana-growing operations due to more eyes on the land

# *What are positive outcomes of grazing on public lands?*

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<b>Educational opportunities</b>	<b>62</b>	<b>78</b>	<b>16</b>

## Manager and Consultant

“When you plan for both [cattle grazing and recreation are] compatible, and you can use both as *EDUCATIONAL* and *OUTREACH* opportunities for the rancher *and* recreationists.”

# *Facilitating positive interactions*



# *Facilitating positive interactions*

- **As recreation increases, interactions increase**
- **All respondents amenable to (or already doing) a variety of practices to improve interactions**
- **More than half of respondents**
  - **Personal webpages**
  - **Community tours**
  - **Signage to improve interactions**
  - **Condition / select livestock**
  - **Graze in highly visible or public settings**
  - **Outreach events / workshops**

# *Facilitating positive interactions*

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  - **Community tours**
  - **Signage → need more and better!**
  - **Condition / select livestock**
  - **Graze in highly visible or public settings**
  - **Outreach events / workshops → the “WHY”**

# *What can public land agencies do?*

- **Signage\***



**YOU ARE ENTERING A  
CATTLE GRAZING AREA**

**Cattle are an important tool to maintain our grasslands**

- Protect yourself, your pets and the livestock. Do not let your pets chase or harass livestock.
- If cattle are blocking the trail approach them slowly, speak normally and allow them to move away.
- Don't attempt to touch livestock. Do not get between the mother cow and young calves.
- If you encounter a cow that is acting in a threatening manner or appears to be injured, sick or dead, please note the location, the color of the animal, the ear tag number, and report it to the park staff.

**PARK OFFICE** \_\_\_\_\_

For Emergencies call **911**  
or Public Safety Dispatch: **(510) 881-1833**

For more information on grazing in the parks,  
please visit our website:  
[www.ebparks.org/about/stewardship/grazing](http://www.ebparks.org/about/stewardship/grazing)

**East Bay**   
Regional Park District

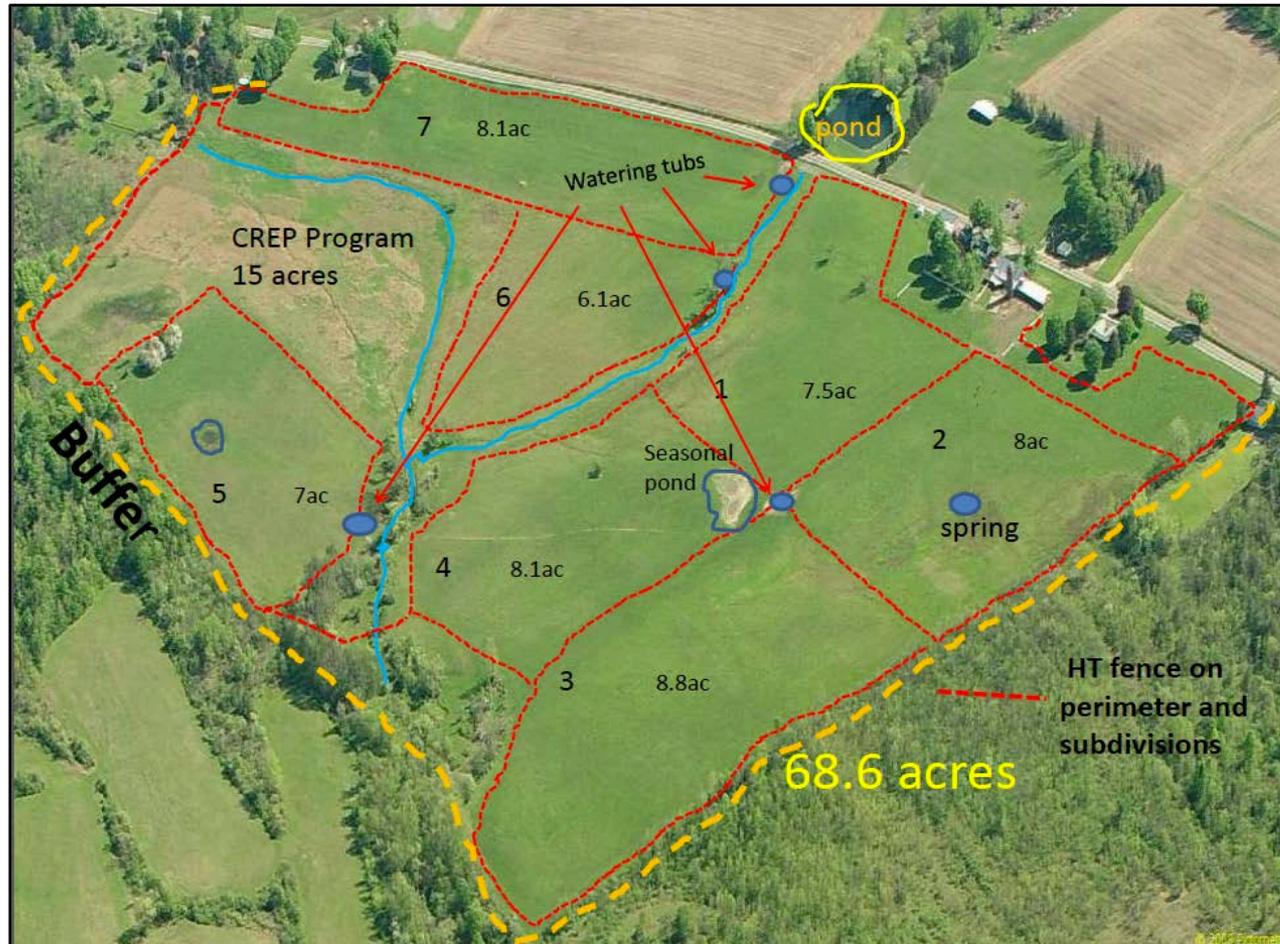
# *What can public land agencies do?*

- **Signage\***



# *What can public land agencies do?*

- **Signage\***



# What can public land agencies do?

- Signage\*
- Pamphlets / Factsheets

University of California  
Agriculture and Natural Resources

ANR Publication 8517 | April 2015  
<http://anrcatalog.ucanr.edu>

UC  
PEER  
REVIEWED

Photo: runaway/Flickr

## UNDERSTANDING WORKING RANGELANDS

### The Benefits of Grazing – Livestock Grazing: A Conservation Tool on California's Annual Grasslands

**Looking out across the grasslands** of California's Mediterranean climate zone, most of the plants you see are non-native annuals brought here from Europe and Asia. These include grasses, such as wild oats (*Avena* spp.) and soft chess (*Bromus hordeaceus mollis*) as well as forbs such as filarees (*Erodium* spp.) and black mustard (*Brassica nigra*). When left unmanaged, these non-native grasses and forbs can grow profusely in normal and above-normal precipitation years, degrading habitat conditions for some native plants and animals and increasing the risks of wildfire and pest plant infestations. California's Mediterranean-type grasslands are recognized among the world's "hot spots" of native biodiversity, despite being generally dominated by non-native species (Bartolome et al. 2014). An appreciation of this paradox and how it came to be can help conservation biologists, environmental regulators, agency managers, recreationists, and ranchers communicate more clearly about how to best manage California rangelands for the purposes of conservation.

SHEILA BARRY is UC Cooperative Extension livestock and natural resources advisor for the San Francisco Bay Area and UCCE county director for Santa Clara County; LISA BUSH is a rangeland management consultant in Sebastopol, California; STEPHANIE LARSON is UCCE livestock and range management advisor and UCCE county director for Sonoma County; and LAWRENCE D. FORD is a rangeland conservation science consultant in Felton, California.

Cattle grazing in the Bay checkerspot butterfly habitat at Coyote Ridge, south of San Jose, California. Photo: Sheila Barry

Working rangelands are open space lands that are managed with livestock grazing and rancher stewardship. Their management contributes to a variety of ecosystem services including food production, clean water, weed control, wildlife habitat maintenance and creation, fire fuel reduction, carbon sequestration, pollination services, and open space conservation.

# What can public land agencies do?

- Signage\*
- Pamphlets / Factsheets
- Articles

RANGELAND ROUND-UP *from the California Cattlemen's Association*

## Taking Grazing to the Next Level

### *Rancher benefits from Bay area managed lands*

*by Tracy Schohr, director of rangeland conservation, California Cattlemen's Association*

For nearly a one-half century, Fields Livestock, Castro Valley, has been grazing the same land in one of the most populated regions in the nation, California's Bay Area. When East Bay Regional Park District (District), based in Oakland, acquired the rolling hills studded with oak trees, abundant with wildlife and home to a diversity of plants, they continued the management practices that had been on the land, grazing.

In 1961, the District acquired the Sunol Regional Wilderness park (Park), that same year, Fields' began the grazing the 4,700-acre site.

With a rich history originating in 1934, the District today spans more than 100,000 acres with 65 parks, including 1,100 miles of trails. The nation's largest regional park district began with the foresight of local leaders seeking to preserve watershed lands in region. With a strong grassroots campaign, the District was created with a 71 percent approval rating at the polls. What's even more impressive is that this ballot measure passed in the height of the Great Depression.

With California's legacy in

environmental conservation, it is not surprising that voters created the first regional park district in the nation. This vision of local leaders sought to balance recreational opportunities and natural resources, uncommon for the time.

The mission of the District is to provide recreational opportunities, preserving the natural beauty of the land and protect wildlife habitat. The same values that the visionary leaders sought when the District was formed more than 75 years ago, today is achieved with managed grazing.

As David Amme, the District's wildland vegetation program manager recalled, "The District has been grazing for a long time, and there have been situations where the grazing program was questioned. There are strong reasons and objectives to the grazing on the land, including preventing brush encroachment and encouraging wildlife habitat."

The District has leases with ranchers in the region, providing forage to cattle, sheep and goats, while promoting healthy natural resources and diverse ecosystems. Nearly one-half of the District parks located in

Contra Costa and Alameda counties are grazed.

**Russ Fields**, owner of Fields Livestock, controls invasive species, reduces fire fuel loads, promotes native plants and creates habitat preferred by common species, and species of special concern on public land through cattle grazing.

The lease Fields has with the District is one of a handful of year-long grazing leases on public ground. Annually, he is responsible for meeting goals and objectives set forth by the District on the site.

On the Park, there is Residual Dry Matter (RDM) monitoring objectives that have to be met. In addition, you can find grazing exclosures on the Park, which serve as long term controls to demonstrate the benefits of managed grazing on the site.

"There has been opposition to the cattle on the site over the years," reflects Amme. "In response, the District has created a Wildland Management Policies document and taken up more extensive research on monitoring species composition and trends in collaboration with a

*Continued on page 76*

# *What can public land agencies do?*

- **Signage\***
- **Pamphlets / Factsheets**
- **Articles**
- **Online**
  - **Social Media**
    - **Facebook**

# What can public land agencies do?

01:43

165k Views  
488 Likes 33 Comments 161 Shares

Like Comment Share

Details not shared publicly

**Wildlife Mentoring of Los Angeles**  
August 12 · 🌐

City of Long Beach Agenda Item: 15-0764 08-11-15  
"Possibility of Coyote Mitigation Program"  
Recommendation to request City Manager to direct Animal Care Services (ACS) to study the potential of establishing a coyote mitigation program to address the growing presence of coyotes in Long Beach and to report back to City Council within thirty (30) days.  
Gregory Randall [Wildlife Specialist Commentary](#)

02:25

I am coyote, not villain, not evil, not devil, not scoundrel. I am what I am. I live where I live. I have died millions of times for being what I am, for being that which man has made of me. I sing for others of my kind. I do not hate, nor have I malice. I am not fear, I am not ruin...I am survival, I am adapter, I am dog of my maker.  
by Gregory Randall Wildlife Specialist

63 Views  
2 Likes 2 Comments

Like Comment Share

See more

**Wildlife Mentoring of Los Angeles** shared a link.  
July 25 · 🌐

# *What can public land agencies do?*

- **Signage\***
- **Pamphlets / Factsheets**
- **Articles**
- **Online**
  - **Social Media**
    - **Facebook**
    - **Twitter**

# What can public land agencies do?

New to Twitter? [Sign up](#)

Search Twitter  Have an account? [Log in](#)



**CA State Parks** [@CAStateParks](#)  
Official California State Parks Twitter feed. RTs & follows are not endorsement. Contact [media@parks.ca.gov](mailto:media@parks.ca.gov)  
California  
[parks.ca.gov](http://parks.ca.gov)  
Joined May 2009

233 Photos and videos

**Tweets** Tweets & replies Photos & videos

**CA State Parks** [@CAStateParks](#) · Sep 14  
Attached are today's updates for both the [#ValleyFire](#) and [#ButteFire](#) and California State Park closures.

**Valley Fire: Robert Lewis Stevenson State Park is closed until further notice.**

**Butte Fire: Calaveras Big Trees State Park and Indian Grinding Rock State Historic Park are closed for both camping and day-use through Tuesday, September 15. Both parks are scheduled to reopen Wednesday, September 16. Reservations for camping and cabins have been canceled through September 15 and refunds have been issued.**

CA State Parks retweeted **Sara M Skinner Photo** [@SaraMPhotos](#) · Sep 12  
Great day for kayaking Morro Bay [@CAStateParks](#) [@VisitSLOC](#) [@CA\\_NATIVES](#)

New to Twitter?  
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[Sign up](#)

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-  **Visit California** [@VisitCA](#)
-  **CalParks** [@calparks](#)
-  **Yosemite National Pk** [@YosemiteNPS](#)
-  **National Park Service** [@NatIParkService](#)

Trends

- [#GOPDebate](#)
- [#IStandWithAhmed](#)
- [iOS 9](#)
- [#TheNewBrokenScene](#)

# *What can public land agencies do?*

- **Signage**
- **Pamphlets / Factsheets**
- **Articles**
- **Online**
  - **Social Media**
    - **Facebook**
    - **Twitter**
    - **Blogs**

# What can public land agencies do?

The screenshot shows the California State Parks website with a navigation bar at the top containing "My Site" and "Reader" links. The main content area features three news items:

- Left Item:** A promotional graphic for the "AMERICAN DAY GALA" on July 18, 2015, from 6-9 PM at the Highlands Senior Center. It features a large eagle and the text "A WALK THROUGH TIME: THE STORY OF ANDERSON MARSH". It includes a "TICKETS ARE LIMITED \$20" badge and a list of ticket locations: Clearlake, Catfish Coffee House, Lakeport, and Watershed Books. Below the graphic is a video player with a date of July 17, 2015, and the text "WITH APPEARANCES BY DOCUMENTARY ON ANDERSON MARSH PREMIERS SATURDAY JULY 18".
- Middle Item:** A landscape photo of a dirt path leading to the ocean. Below it is a video player with a date of July 10, 2015, and the text "CALIFORNIA STATE PARKS AND GOOGLE CONTINUE PARTNERSHIP".
- Right Item:** A photo of a new wooden visitor center building and a covered picnic area. Below it is a video player with a date of May 29, 2015, and the text "NEW VISITOR CENTER AT MCARTHUR-BURNEY FALLS MEMORIAL STATE PARK".

At the bottom right of the screenshot, there is a "Follow" button with a plus icon and three dots.

# *What can public land agencies do?*

- **Signage**
- **Pamphlets / Factsheets**
- **Articles**
- **Online**
  - **Social Media**
    - **Facebook**
    - **Twitter**
    - **Blogs**
  - **Websites**

# East Bay Regional Park District webpage

The screenshot shows the East Bay Regional Park District website. The header includes the logo and navigation options like 'Print', 'Subscribe', and 'Share'. The main content area is titled 'Grazing' and contains several paragraphs of text. A left sidebar lists various categories like 'Parks / Trails', 'Activities', and 'About Us'. A right sidebar titled 'LINKS' provides additional resources such as 'Wildland Management Policies' and 'Grazing Brochure'.

**SEE AND DO!**

- Parks / Trails
- Activities
- Reservations / Registration
- About Us

**SEE AND DO!**

- About the District
- I Want To...
- Park Rules and Regulations
- News
- Human Resources / Jobs
- Bids and RFPs
- Board of Directors
- General Manager
- Park Advisory Committee
- Public Meetings / Notices
- Budget and Finances
- Park Planning
- Stewardship / Resources
- Stewardship - Resources
- Fisheries
- Grazing
  - Benefits of Grazing Animals
  - Parks With Grazing
  - Safety Tips for Hiking Near Grazing Animals
  - What You Can Do to Help
- Integrated Pest Management
- Water Resources

> East Bay Regional Park District | Embrace Life! > About Us > Stewardship / Resources > Grazing

## Grazing

Grazing animals have been a part of the ecosystem of this region for many thousands of years. The flora of the East Bay evolved under the influence of prehistoric herbivores, large herds of deer, elk, antelope, and other grazing animals.

Today, visitors to the East Bay Regional Parks may encounter cattle, sheep or goats grazing on the grasslands. The Park District has over 40 years of experience using grazing as a resource tool. Our program is conducted under a highly regulated license based upon accepted principles of range management.

Livestock grazing utilizing cattle, sheep and goats is used as a vegetation management tool to maintain and improve habitat conditions for resident plants and animals and to prevent wildfires. Ongoing research indicates that moderately grazed areas generally display a greater diversity and density of plant and animal life.

Approximately 5,000 cattle, 1,000 sheep and 1,000 goats are spread out over about half of the District's 65 parks. Most of the grazing takes place during the spring and early summer.

- > Benefits of Grazing Animals
- > What You Can Do to Help
- > Safety Tips for Hiking Near Grazing Animals
- > Parks With Grazing

Download: [Grazing License \(Sample Template\)](#) (PDF)

### 2015 Goat Grazing Activities

Visitors to the East Bay Regional Parks may encounter cattle, sheep or goats grazing on the grasslands. The District uses grazing animals as a practical and economic resource management tool. Grazing helps reduce fire hazards by controlling the amount and distribution of grasses and other potential fuel. Around urban settings, goats are often used in conjunction with human work crews and prescribed burns to create fuel breaks -a proactive effort to manage future wildfires.

Download: [2015 Goat Grazing Schedule](#) (PDF)

Download: [Final Report for EBRPD 2009 Field Season, Grassland Monitoring Project--Year 8 \(January 26, 2011\)](#) (PDF)

### LINKS

- [Wildland Management Policies](#)  
Download Wildland Management Policies in PDF format
- [Grassland Management Monitoring Project 2012](#)  
Download Grassland Management Monitoring Project 2012 in PDF format
- [Grassland Management Monitoring Project 2012 Appendices](#)  
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- [Field Season, Grassland Monitoring Project](#)  
Final Report for EBRPD 2009 Field Season, Grassland Monitoring Project--Year 8
- [Wildfire Hazard Reduction And Resource Management Plan and EIR](#)  
Learn more about East Bay Hills Wildfire Hazard Reduction And Resource Management Plan and EIR

## Synergies

*Vegetation Mgmt*

=

*Habitat*

*Forage*

=

*Wildlife Management  
Livestock Production*

# *What can public land agencies do?*

- **Meet the Rancher days**
  - BBQ lunch, Q&A, prizes

**Hopcott's Is Celebrating Its 7<sup>th</sup> Anniversary**  
**MEET THE RANCHER**  
Sat, July 27<sup>th</sup> + Event Hours: 11am to 3pm

**Know Where Your Meat Is Coming From**  
Meet the ranchers and farmers who raise the meat you eat.  
100 Mile House, Lumby, Merritt & Pitt Meadows

Ask Questions, Learn About Our Beef  
& TASTE, TASTE, TASTE !!



**CASH ONLY BBQ SUPER SPECIALS**  
**FREE COFFEE SAMPLES FUN FOR KIDS**  
**PRIZES CHARITY DUNK TANK**  
GABY DAVIS FOUNDATION

**www.HopcottMeats.ca + 604.465.7799**  
**18385 Old Dewdney Trunk Rd, Pitt Meadows**

Photo Credit: Gaby Davis Foundation

# *What can public land agencies do?*

- **Meet the Rancher days**
  - BBQ lunch, Q&A, prizes
- **Nature Days**
  - Wildflower and wildlife walks



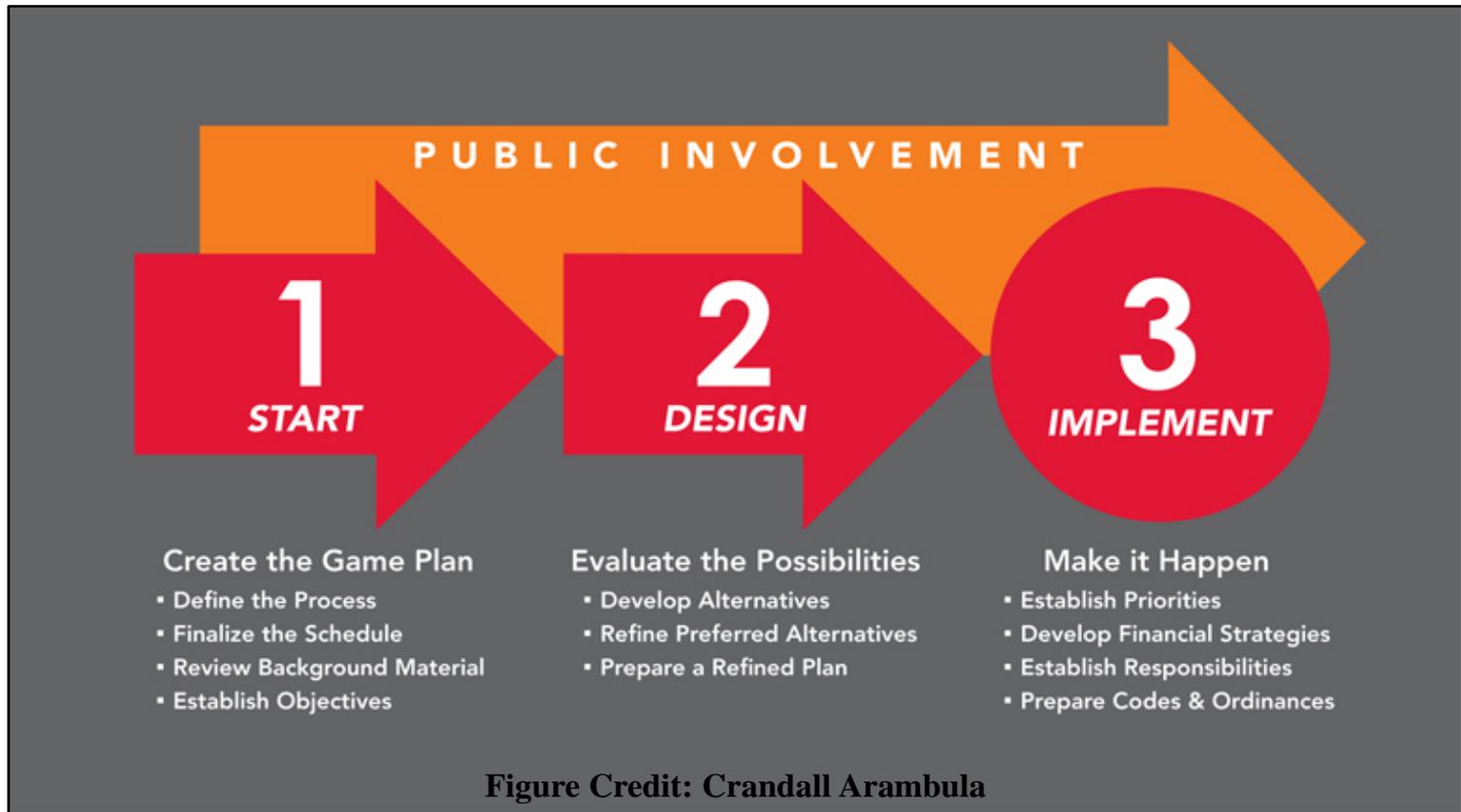
# *What can public land agencies do?*



**Photo Credit:  
Gaby Davis  
Foundation**

- **Work Days**
  - **Trail maintenance, vegetation management, restoration projects**

# *What can public land agencies do?*



- **Public participation in visioning processes**
  - What does the public want or need?

# *What can public land agencies do?*

---

**Focus on Education**

# *What can managers do to help?*

- **One-on-one with recreationists**
  - Initiate conversations, answer questions
  - Wave and smile
  - Open gates for recreationists
- **Communicate**
  - graziers / agencies to encourage appropriate interactions
  - law enforcement to triage emergency calls
- **Meet-the-rancher days in conjunction with public lands agencies, speak at workshops**

**PUT A FACE ON THE GRAZIER**

# *What can managers do to help?*

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- **Communicate**
  - graziers / agencies to encourage appropriate interactions
  - law enforcement to triage emergency calls
- **Meet-the-rancher days in conjunction with public lands agencies, speak at workshops**
- **Signage**
  - maintain signage
  - contribute to development of signage, pamphlets, and online educational materials for visiting recreationists

# *What can/do managers do to help?*



# *What can/do managers do to help?*

- **Perform other ecological services**
  - Plant trees
  - Pick up trash
  - Fix fences
  - Maintain water for dogs, horses, *and* wildlife
  - Keep gates in easy working order
- **Choose the best stock for public lands**
  - Animals with proven dispositions
  - Sound stockmanship
  - Remove aggressive, sick, or injured animals
- **Reduce interactions during potentially higher risk periods**
  - Bulls far away during breeding
  - Livestock away from high recreation areas when calving
  - Plan around peak recreational periods

*What can/do managers do to help?*

*Time + Money*

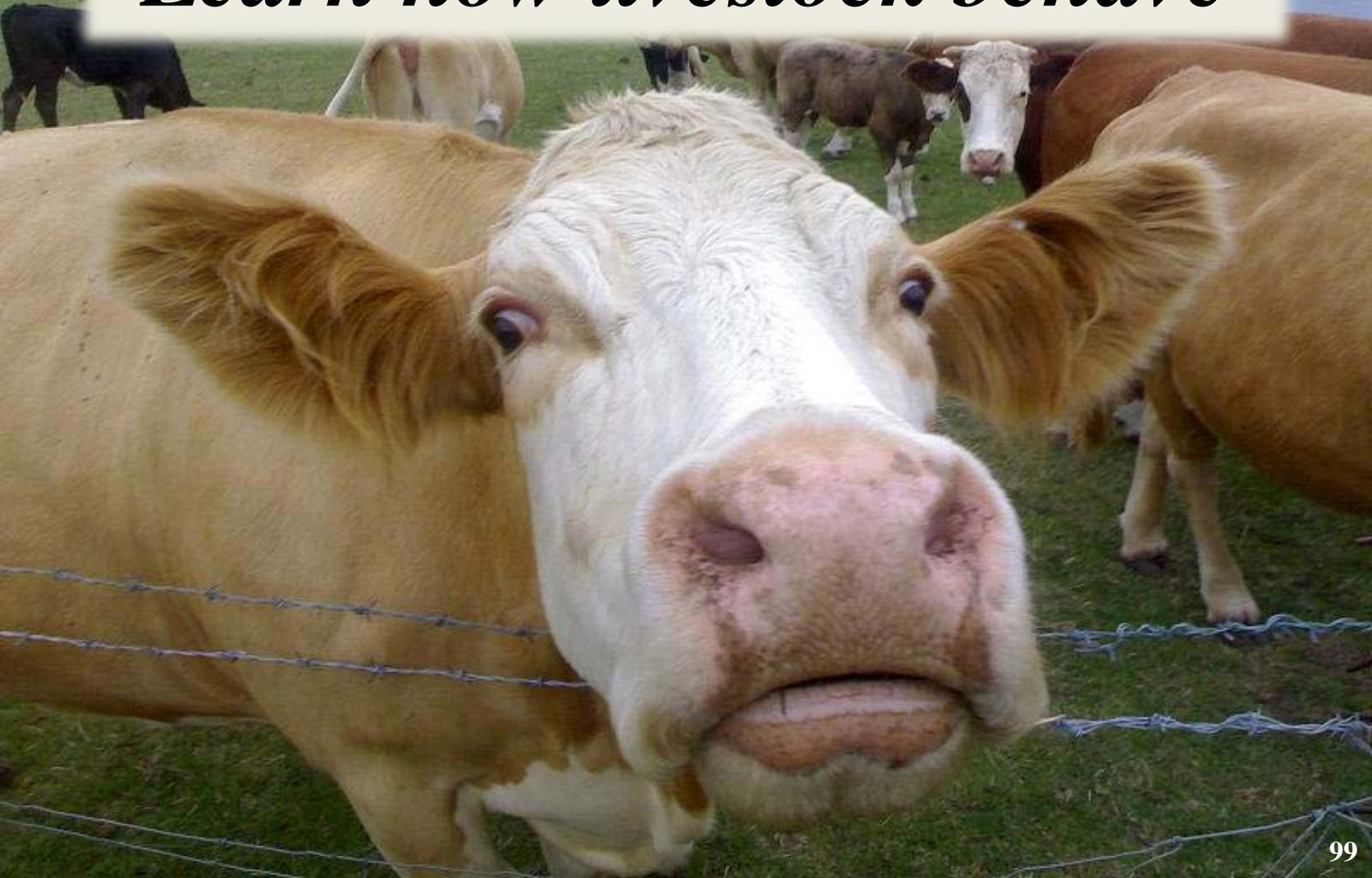
## **INVESTMENTS**

- **Conflict Reduction**
- **Continued Public Lease Availability**
- **Added-Value, Marketing**
- **Long-term Economic Stability**

# *What can visitors do?*

- *Read all signs and check online*
- *Leave gates as you find them*
- *Report maintenance needs*
- *Ask questions*
- *Do not interact directly with animals*

# *Learn how livestock behave*



# *Learn how livestock behave*

- **Walk towards you**
  - **Curiosity ≠ Aggression**
- **Paw or root through your belongings**
- **May become frightened or feel threatened**
  - **unfamiliar objects**
  - **fast-moving vehicles or bikes**
  - **off-leash dogs**
  - **running or yelling**
  - **dogs/people near their young**

# *Aggression in cattle is rare*

- Usually occurs only if an animal...
  - is very ill
  - feels threatened
  - chased or harassed
  - backed into a corner or singled out
- Flight is almost always their first choice
  - Give them a way out!

## Pacheco State Park visitor

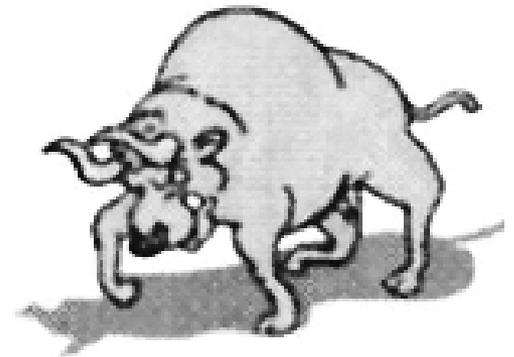
“The park is used as grazing land and during the first few miles we had several close cattle encounters, including a little guy who tried to **BLUFF CHARGE** me – more cute than terrifying. Other wildlife was minimal, except for the trio of coyotes spotted in the first mile, a few circling hawks, and curious ground squirrels. Wildflowers were blooming, and I was especially happy to see some beautiful hillsides covered in poppies.”

# *Warning Signs*

- **Dropping head to the ground**
- **Shaking head**
- **Bellowing**

## **Signs of Aggression:**

- quick, erratic movements
- raised tail/flicking tail
- pawing the ground
- turning sideways
- raised ears
- snorting

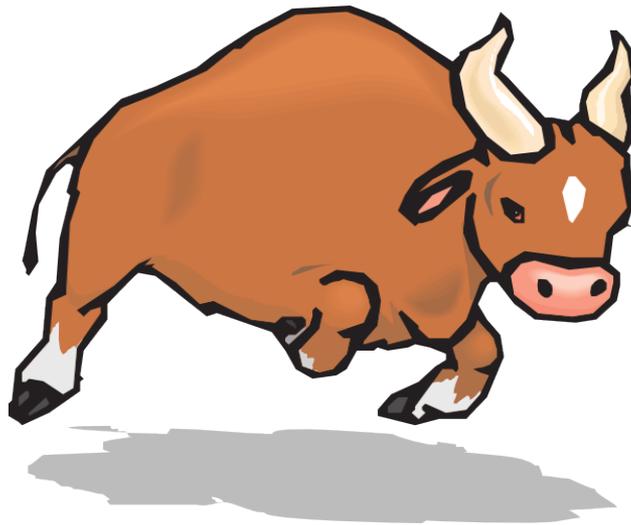


*IF you feel threatened*



# *IF you feel threatened*

- **Turn sideways**
- **Move away slowly**
- **Keep calm**
- **Speak in soft voice**
- **DO NOT RUN**



# *Dog walking*



# *Dog walking*

- Dogs are not allowed off-leash



# *Dog walking*

- **Dogs are not allowed off-leash**
  - protect wildlife



Photo Credit: Satyendra Kumar Tiwari

# *Dog walking*

- **Dogs are not allowed off-leash**
  - protect wildlife
  - keep children and other visitors safe



**Don't let this happen to you!**

# *Dog walking*

- **Dogs are not allowed off-leash**
  - protect wildlife
  - keep children and other visitors safe
  - prevent dog fights



# *Dog walking*

- **Dogs are not allowed off-leash**
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  - protect from injury and prevent chasing other animals



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- **Keep dogs on leash, maintaining control at all times**



# *Dog walking*

- **Dogs are not allowed off-leash**
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  - keep children and other visitors safe
  - prevent dog fights
  - protect from injury and prevent chasing other animals
- **Keep dogs on leash, maintaining control at all times**
- **Most dogs do not know how to interact safely with livestock**
  - only trained dogs employed by managers should herd

# *Dog walking*

**Don't worry, I'm a trained professional**



# *Dog walking*



Photo Credit: Brett Little

# *Dog walking*

- **Dogs are not allowed off-leash**
  - protect wildlife
  - keep children and other visitors safe
  - prevent dog fights
  - protect from injury and prevent chasing other animals
- **Keep dogs on leash, maintaining control at all times**
- **Most dogs do not know how to interact safely with livestock**
  - only trained dogs employed by managers should herd
- **Do not encourage dogs to chase or bark at other animals**
- **Report off-leash dogs and harassment of animals to park staff or rancher**

# *Horses, bikes, and ATVs*



**Photo Credit: Tanya Koob**

# *Horses, bikes, and ATVs*

- **If you encounter livestock, ride slowly around them**
- **Test-ride horses around livestock beforehand**
- **Move away from livestock as far as possible**
  - **also applies to horseback riders, dogs, and children**
  - **all can move unpredictably**



Photo Credit: Albert Herring

# *Cows and Calves*



Photo Credit: Hubert Berberich

# *Cows and Calves*

- **Most injuries occur during calving season**
- **Do not walk directly at mama cows**
- **Give them a wide berth**
- **Avoid startling**
- **Want to protect their young**

# *Cows and Calves*

Don't try this at home (or in the parks)



# *If you encounter animals in a large group...*

- Go around them, NOT through them
- Give them space
- Move slowly, calm voice
- No sudden movements
- If you have an animal
  - Secure dog leash
  - Dismount horse,  
maintain control

# *If you encounter animals in a large group...*

- Go around them, NOT through them
- Give them space
- Move slowly, calm voice
- No sudden movements
- If you have an animal
  - Secure dog leash
  - Dismount horse, maintain control

## On the flip side (graziers)

- Can be frustrating
- Risk of scattering
- Keep calm & regather



Photo Credit: Alex Proimos

# *If you see a calf alone...*

- Do not approach
- If bawling loudly, *clearly* in severe distress / injured, call 911
- Notable structures
- Waypoints
- Description of animal
- Eartag number



Photo Credit: Rinalia



Photo Credits: (left) Ric Garrido; (right) Lee Rentz

# *Trade-offs: Net Outcomes?*

- **Manure, flies**
- **Inconvenience**
- **Negative impact on ecosystems (if poor management)**
- **Very rare injuries, fear**
- **Disagreement on principle**
- **Management barriers**
- **Effects of sabotage & recreational interference**
- **Barriers to entry**

- **Wildfire risk reduction**
- **Native wildflowers**
- **Targeted wildlife habitat management (T&E)**
- **Weed management**
- **Educational opportunities**
- **Cost-effective**
- **Generates income**
- **Financial benefits to local economies**
- **Tradition, cultural & social benefits**
- **Protection from wildland development**
- **Potential to use existing infrastructure**
- **Grazier actions that “add value” to recreation**



# Trade-offs: Net Outcomes?

- Manure, flies
- Inconvenience
- Negative impact on ecosystems (if poor management)
- Very rare in some areas
- Disagreements
- Management costs
- Effects of some recreational activities
- Barriers to entry

- Wildfire risk reduction
- Native wildflowers
- Targeted wildlife habitat management (T&E)
- Wildlife management
- Recreation opportunities
- Economic benefits to local economies
- Education, cultural & social benefits
- Protection from wildland development
- Potential to use existing infrastructure
- Grazier actions that “add value” to recreation

**Weights**  
**It's not simple addition**  
**and will vary by region!**



# Trade-offs: Net Outcomes?

- Manure, flies
- Inconvenience
- Negative impact on ecosystems (if poor management)
- Very rare in some areas
- Disagreements
- Management costs
- Effects of seasonal recreation
- Barriers to entry

- Wildfire risk reduction
- Native wildflowers
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**Weights**  
**It's not simple addition**  
**and will vary by region!**



Consultant  
“Grazing is not only compatible [with recreation], it is mandatory [for grassland management].”

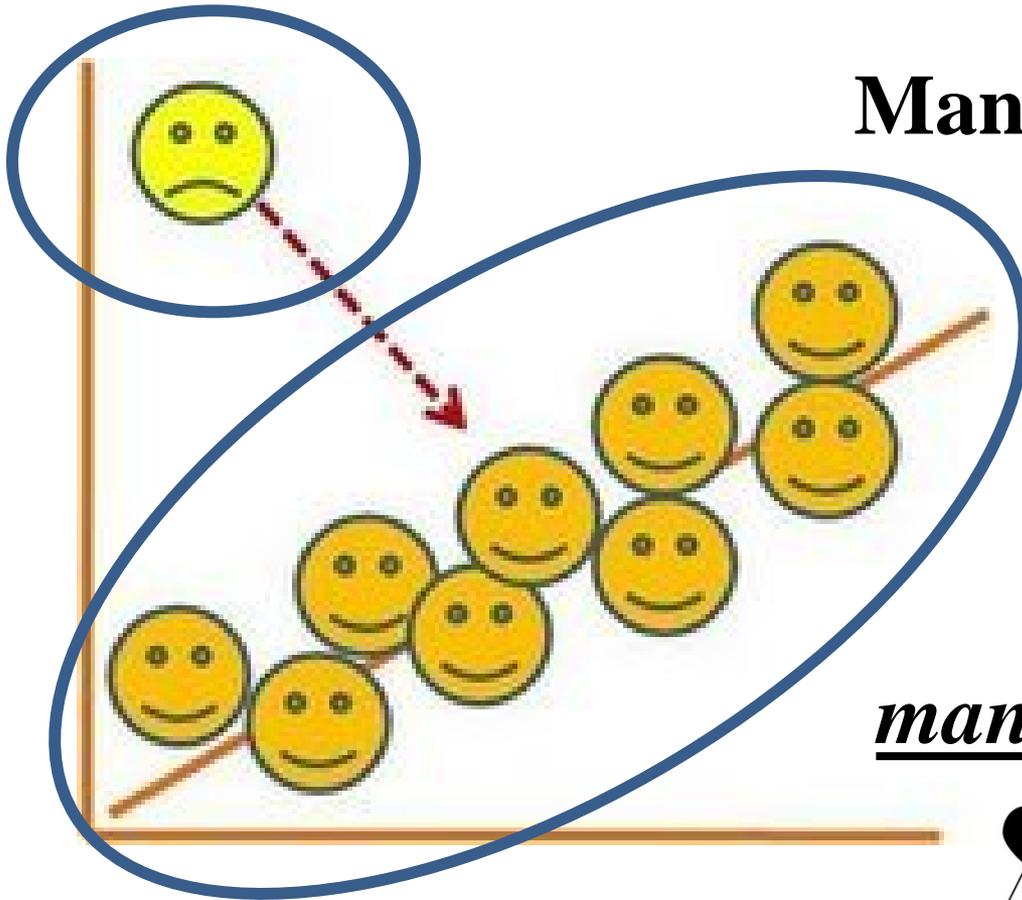
Managing for the outlier

while

Basing policy  
on the average

and

managing for trade-offs



***DON'T LOSE  
SIGHT OF  
THE  
AVERAGE***



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- **Funding by**  
*Midpeninsula Regional Open Space District*
- **Central Coast Rangeland Coalition**
- **Roger Baldwin**
- **Sheila Barry**
- **Grey Hayes**
- **Larry Ford**
- **Interviewees**
- **Attendees here today!**

**kmwolf@ucdavis.edu**  
**www.KristinaMWolf.com**



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