

# Working Landscapes Working Together

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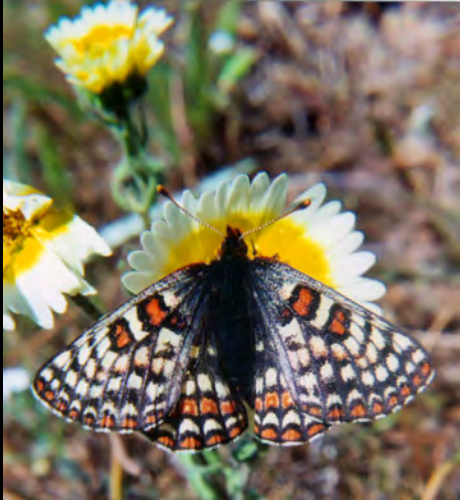
Synergies!

# Working Landscapes

Multiple benefits: ecosystem services including food, habitat, viewshed, heritage.



# Pasture Scale: Producing the ecosystem service of wildlife habitat



Species may benefit from grazing to alter grassland structure

- shorter grass, openings.
- species or structural heterogeneity
- tool to manage invasives

- Western burrowing owl (CCWD 2005).
- Stephens kangaroo rats (Kelt et al 2005; USFWS 1997)
- Goldfields (Barry 2005)
- Some insects/beetles (Dennis et al 1997)
- Western pond turtle (CCWD 2005).
- Butterflies (Weiss, 1999)





# Vernal Pools

- Grazing benefits documented by Pyke and Marty, Marty 2005.



# Conservation of working landscapes requires all three:

- Pasture: manage grazing to achieve environmental effects.
- Ranch: sustainable enterprise.
- Landscape: year round forage supply from mix of private, leased, and public land.





# Ranchers as “ecosystem engineers”

- Create habitats, local and landscape effects (*Jones et al 1997*).
- Ranchers maintain water developments, watch out for vandalism, pick up trash, steward land.
- Manage grazing for fire hazard reduction, endangered species, biodiversity, soil
- Ranchers and ranching can be “ecosystem services”



# Ranchers as “ecosystem engineers”

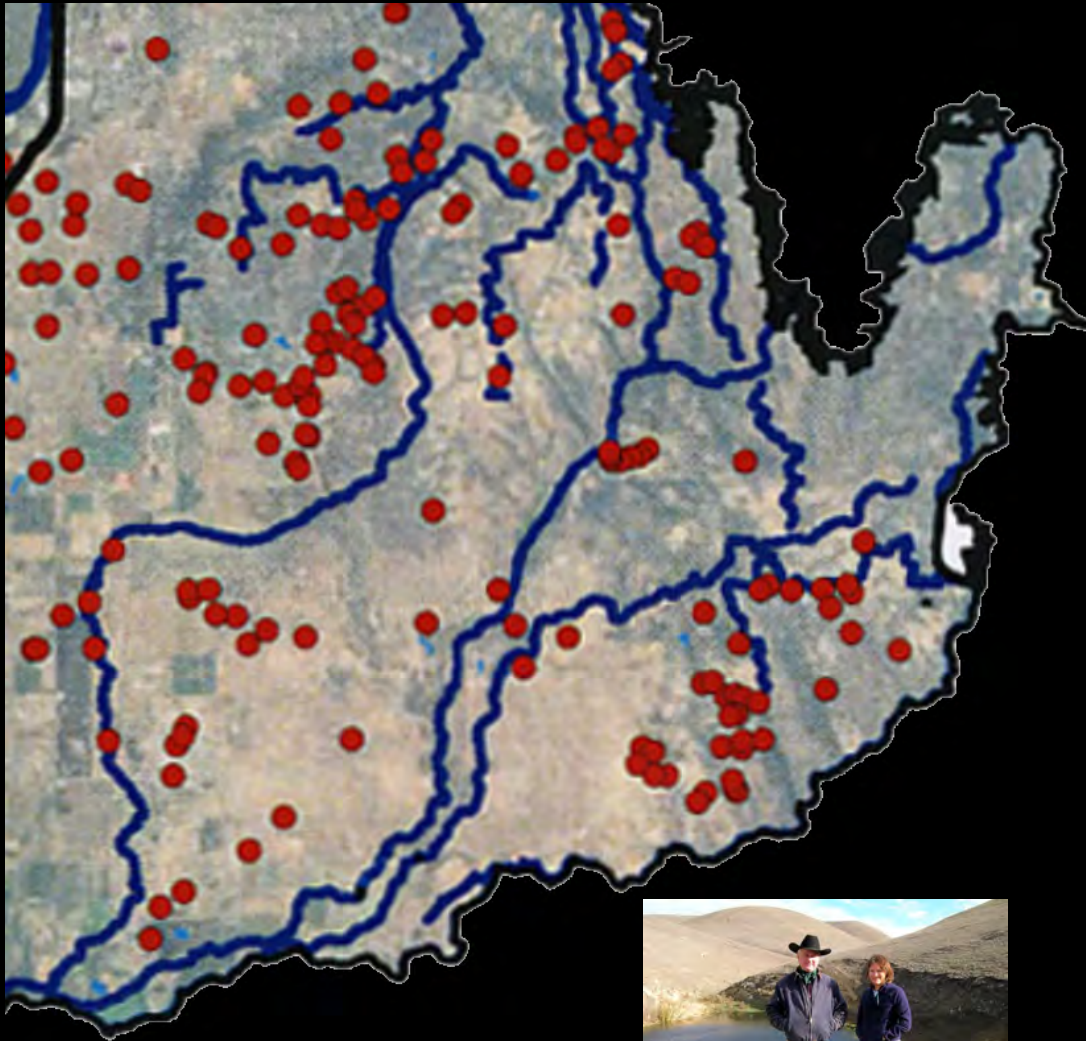
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Pasture scale: construction and maintenance of stockponds





Landscape level  
ecosystem  
engineering:

Network of  
stockponds  
across a  
working  
landscape  
benefits tiger  
salamanders  
and livestock.



# Ranchers benefit from ecosystem services from their land and enterprise

90% + in California, Colorado, say that living near “natural beauty” is an important motive for ranching



(Huntsinger et al. 2010;  
Rowe et al.)



# Synergies: mutual benefits from ranch stewardship

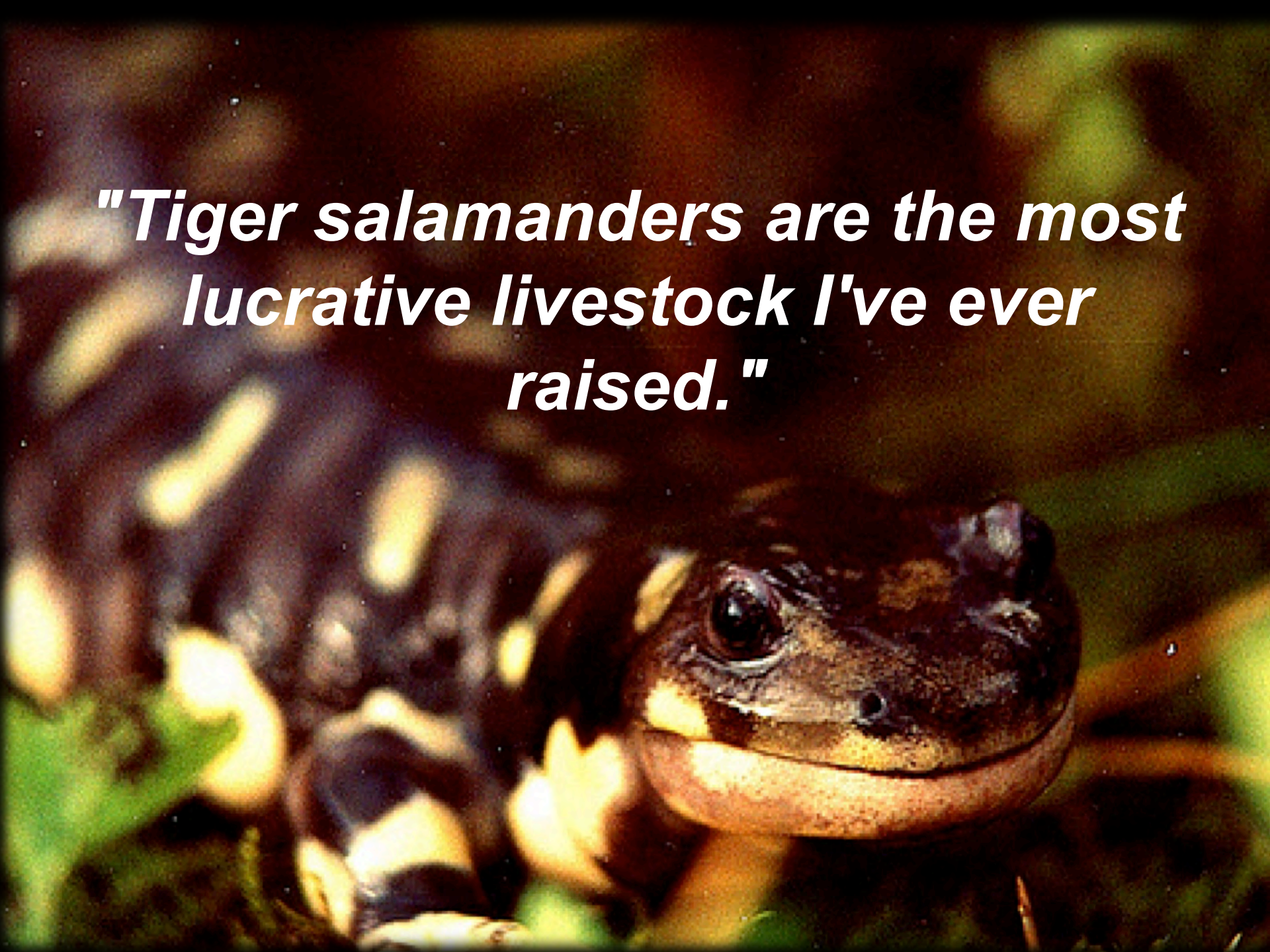
## **Rancher ecosystem services**

- Natural beauty
- Living on property
- Wildlife and recreation
- Legacy value: heirs
- Production value

## **Public ecosystem benefits**

- Natural beauty
- Existence and viewshed
- Wildlife and recreation
- Legacy value: future generations
- Local ranch products

***"Tiger salamanders are the most  
lucrative livestock I've ever  
raised."***





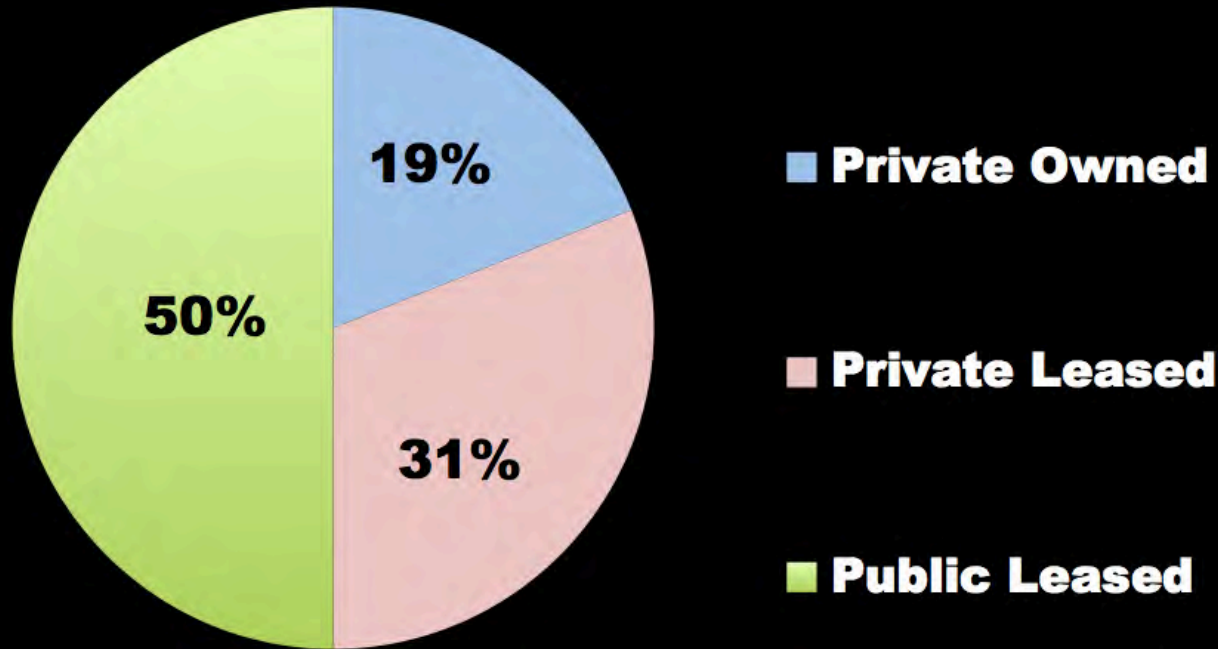


--Sustainable ranches need a stable, year round, forage supply

--Cows are not plants: pastoralism world-wide makes use of mobility

# A typical East Bay ranch

(Sulak 2007)



- Median date of establishment: 1890
- Competition for public leases is fierce as the forage base shrinks.
- Used 4 private leases on average, one used 15 private and public



***"They think we can put the cows on a shelf when they don't need them."***



# If I lost my public leases...



- Would suffer a significant decline in income (41%).
- Would have to reduce herd size.
- Would like to buy or lease more land but it is increasingly difficult to find.
- 35% - 50% might sell the ranch.

# Critical mass of producer community

- Provides local labor pool, peer networks.
- Supports production and marketing infrastructure.
- Maintains extensive sylvopastoral ecosystems

(Hart 1991; Liffmann et al. 2000)



# Landscape Scale: Feedbacks of development or exclusion



feedback loop: loss of ranches increases loss of ranches

(Sulak and Huntsinger 2007)



77% of CA  
ranchers think  
that ranching  
can survive





*“It’s not open space.”*

# Conservation of working landscapes requires all three:

- Pasture: manage grazing to achieve environmental effects.
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# Benefits from Working Landscapes

*Landscape*

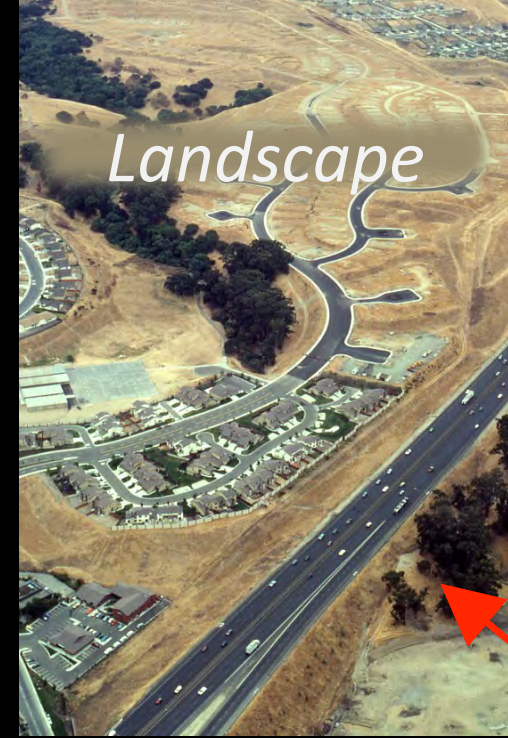
Carbon sequestration, air and water quality, pollination, extensive wildlife habitat

Healthy foods, diversified products, manager stewardship

*Ranch*

Forage and tree production, habitat and biodiversity

*Pasture*





# Conclusions: the landscape we know and ranching are interdependent

- Managed and stewarded by ranchers, and part of the ranching economy.
- Ranching can provide ecosystem stewardship and services on private as well as public lands.
- Ranchers need an affordable, year-round forage supply that fits the livestock calendar.
- Agencies, mitigation management have important impacts on regional private land conservation

In some areas, land management agencies and entities may be part of selecting the ranchers of the future.....

- Ecosystem services from the pasture depend on maintaining the ranch and the landscape.
- Can't maintain landscape level services without the pasture and the ranch.

