

Working Landscapes Working Together

Lynn Huntsinger,
University of California, Berkeley

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.

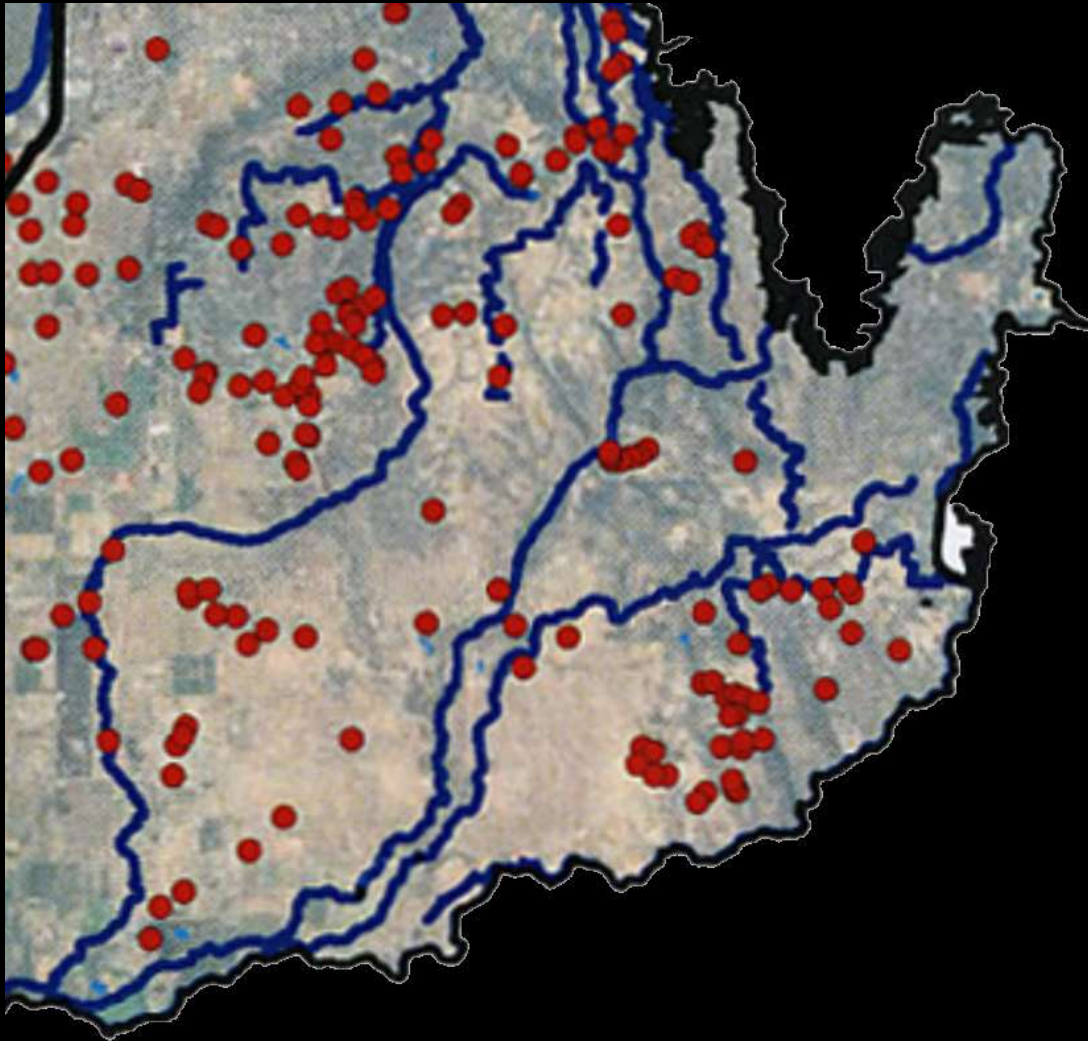


Ranchers as “ecosystem engineers”

- 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”



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

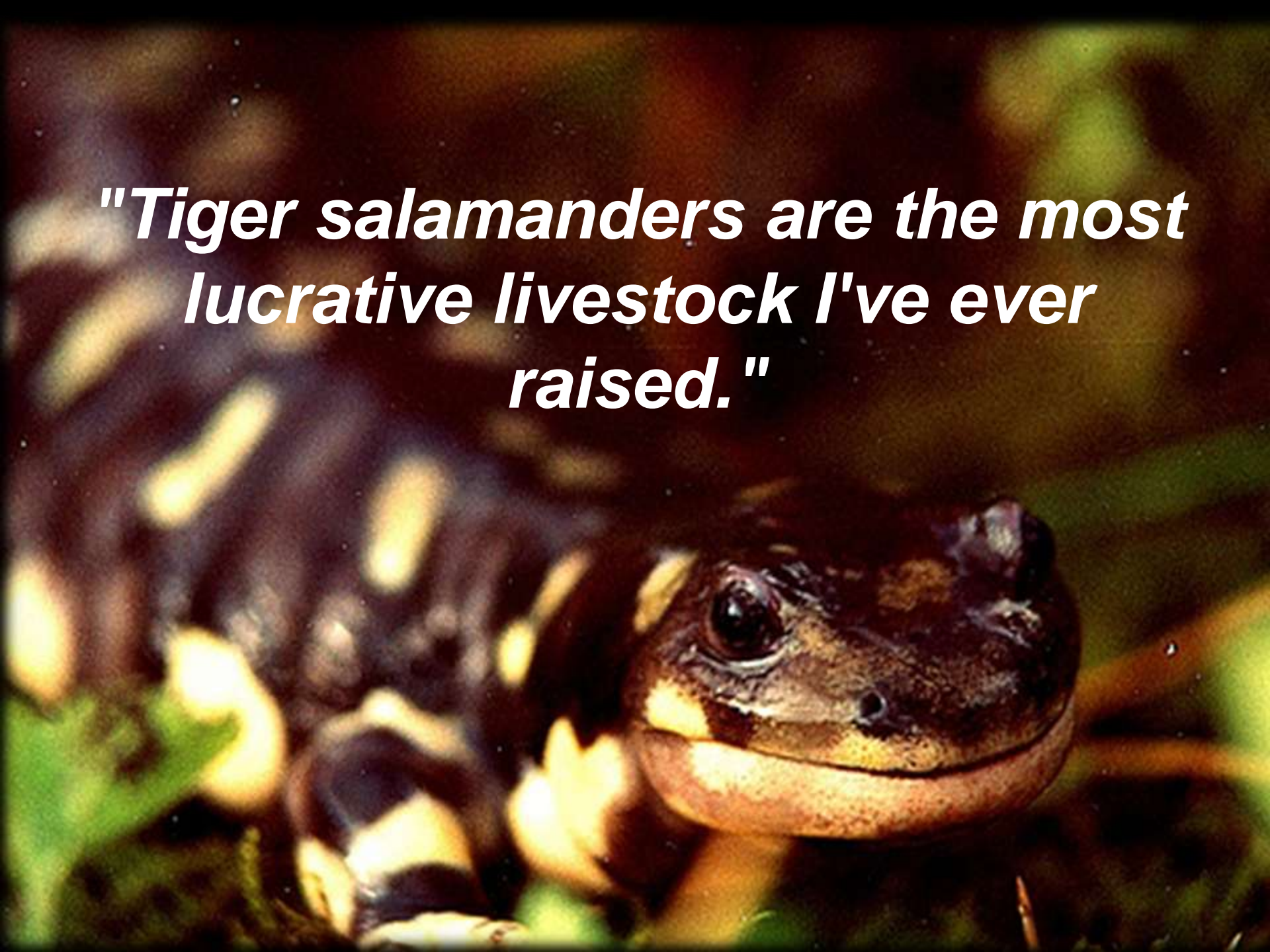
Rancher ecosystem services

- 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."***



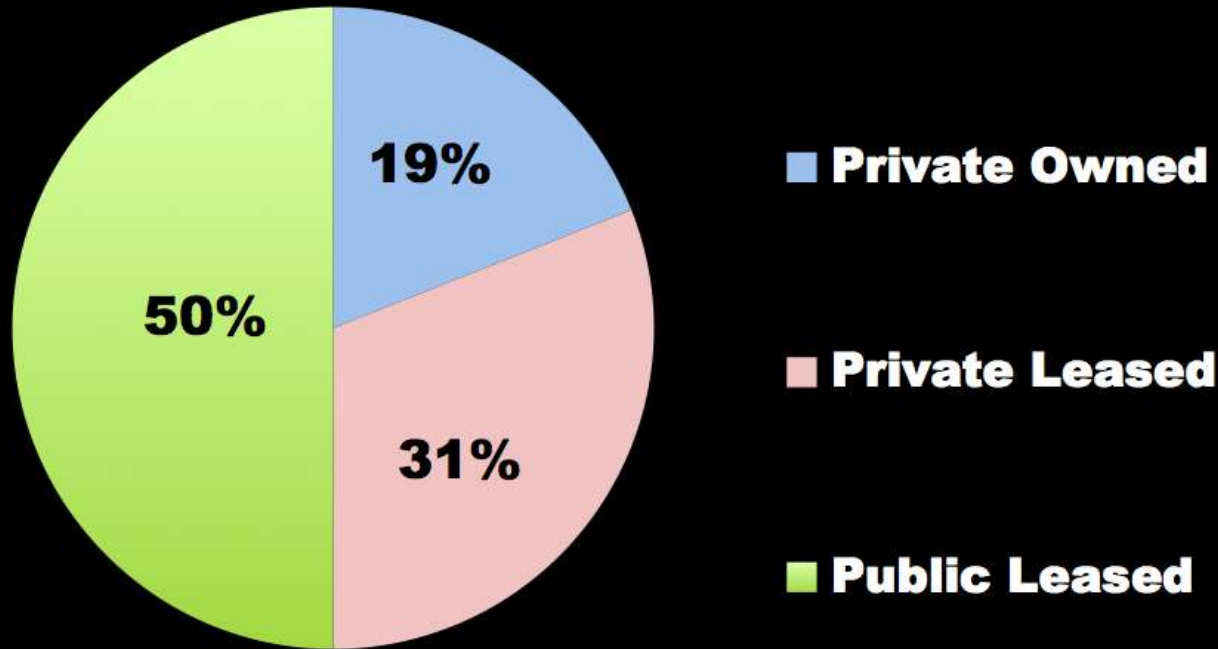


--Sustainable ranches need a stable, year round, forage supply

--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."

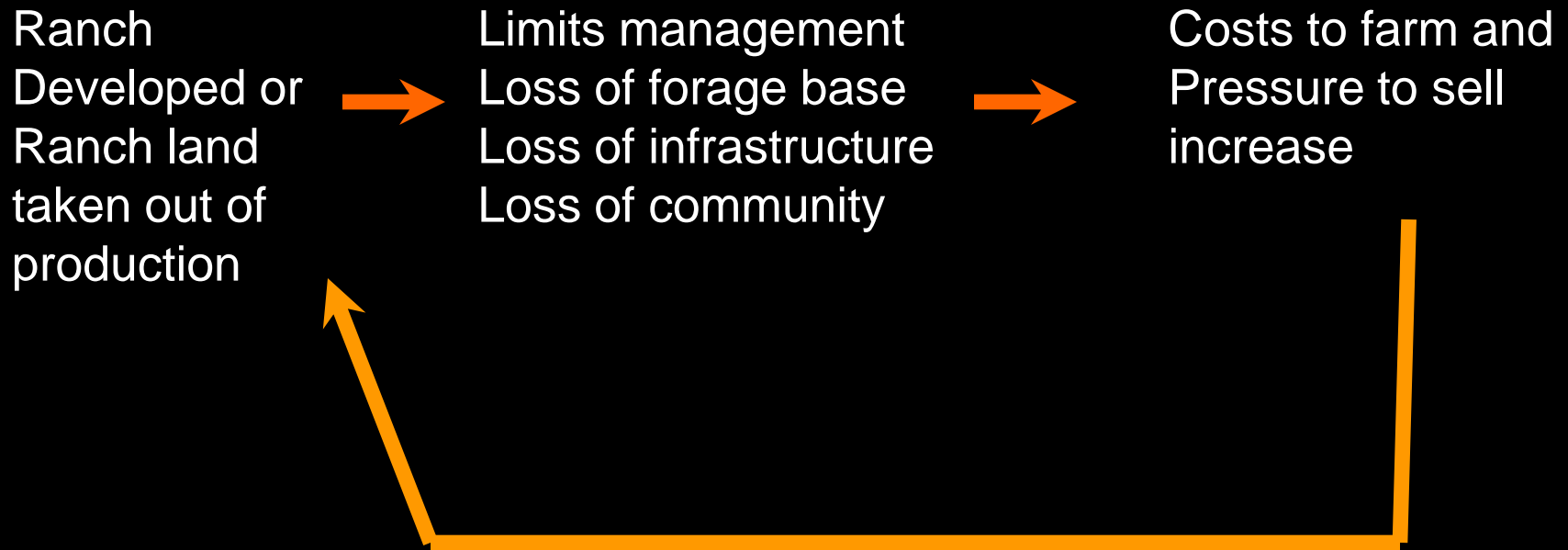


If I lost my public leases...



- 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.

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



A deep space photograph showing a dense field of stars against a black background. The stars vary in brightness and color, with some appearing as sharp white points and others as softer, yellowish or reddish-orange glows. The distribution is uneven, with some clusters and many isolated stars.

“It’s not open space.”

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

- 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.

