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

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”

- Create habitats, local and landscape effects (Jones et al. 1997).
- Ranchers maintain water developments, watch out for vandalism, pick up trash, steward land.
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- 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.

(Sulak 2007)
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

Ranch developed or ranch land taken out of production → Limits management → Loss of forage base → Loss of infrastructure → Loss of community → Costs to farm and pressure to sell increase → 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.”
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Benefits from Working Landscapes

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

Healthy foods, diversified products, manager stewardship

Forage and tree production, habitat and biodiversity
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.