


PRBO Conservation Science

2009 NABCI Report



Delivering Fish and Wildlife Conservation:
Building Farm Bill Capacity
NABCI Private Lands Subcommittee
August 2009

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2009 NABCI Private Lands Subcommittee Report

Biologists accelerate Fish and Wildlife conservation through Farm Bill programs by:

- Bringing specialized fish and wildlife knowledge and habitat management skills into conservation planning.
- Marketing the fish and wildlife aspects of the Farm Bill programs and benefits of practices to ranchers, farmers, and other private landowners.
- Facilitate timely implementation of planning, contracting, and practice implementation necessary to bring habitat projects to fruition.
- Being locally involved and maintaining landowner trust.



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PRBO Working Lands Programs

Wetlands (below 300 ft) – rice, riparian, etc.

- Sacramento Valley
- San Joaquin Valley
- Bay Delta

Watersheds (above 300 ft) – rangelands, forest, meadows

- Sacramento Valley
- Northern Sierra
- San Joaquin Valley
- Coast ranges



Sagebrush –

- Modoc Plateau

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Rangeland Watershed Initiative (RWI)

Goal:
Improve watershed by enhancing water retention on grazing lands and connecting with valley wetlands, with a focus on the foothills around the Central Valley.

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Rangeland Watershed Initiative: Vision

- Rangelands hold and store more water, release water more slowly throughout the year
- Watersheds linked to valley floor riparian and wetland habitats
- Increased groundwater recharge
- Ranchers and farmers active partners in eco-friendly management
- Ranching remains a viable enterprise
- Improved landscape resilience to predicted extension of dry season conditions



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Progress to date

- NRCS Bay Delta & Migratory Bird Initiatives: \$347k (\$170k for watersheds).
- Secured nearly 2.3 million dollars in private matching funds.
- Hired 5 Partner Biologists: Redding, Willows, Susanville, Grass Valley Mariposa (Feb 2013), who are already working with over 50 land owners
- Trained 24 PRBO and Audubon staff on NRCS planning and assessment techniques.
- Developing plans for a total of 21 Partner Biologists over the next 5 years (2012-16).

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On the Ground

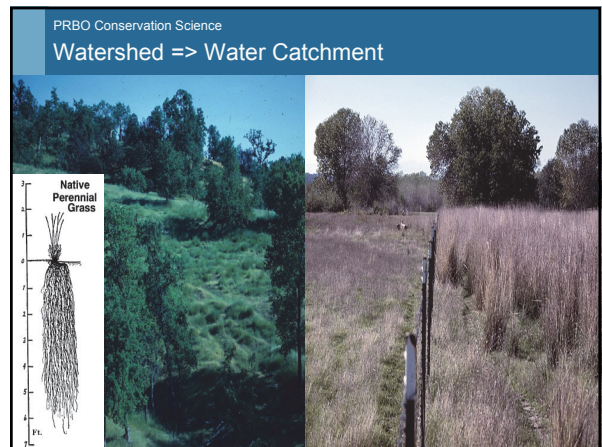
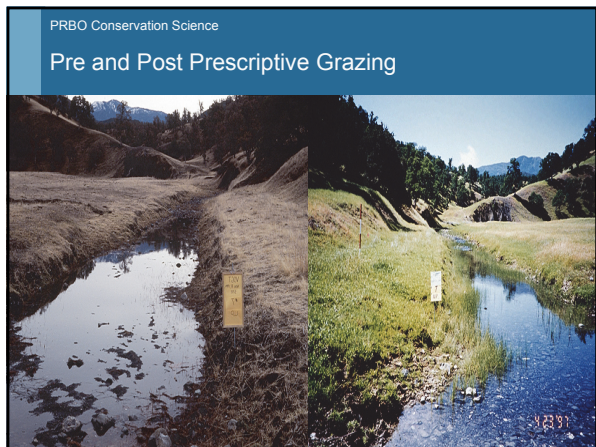
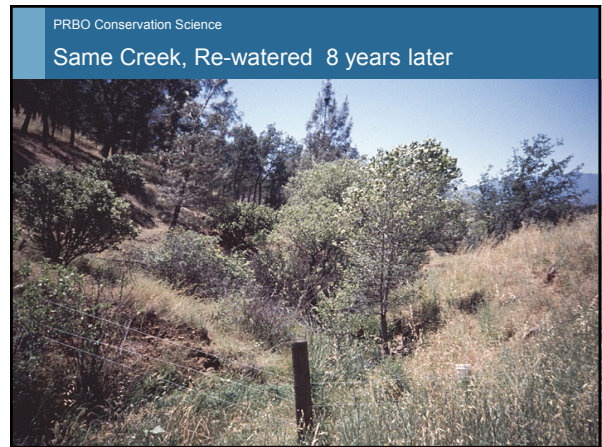
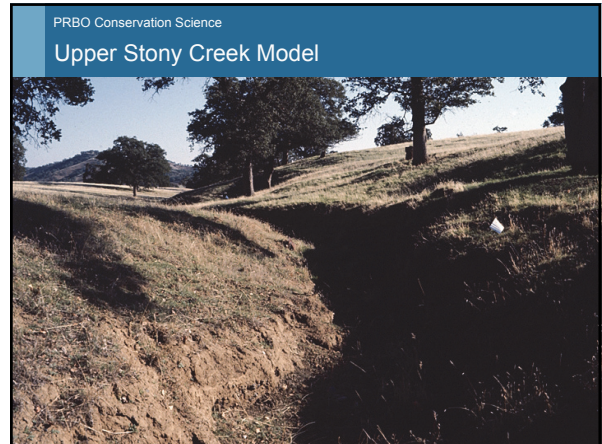
Alicia Young

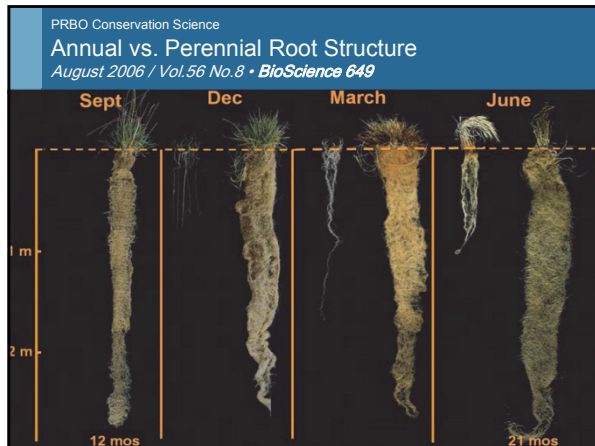
Melany Aten

Melissa Odell

Tiffany Russell

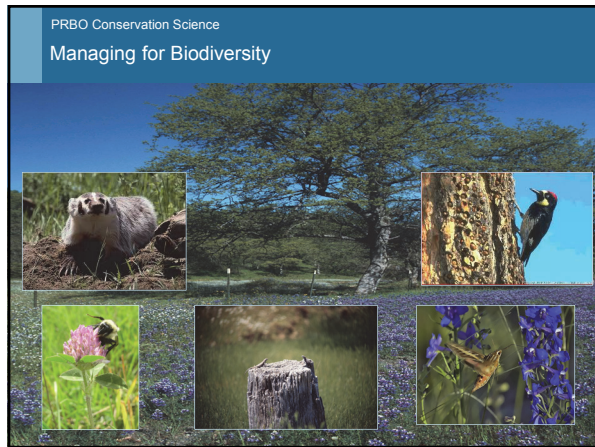
Kelly Weintraub





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Managing for Productivity

- Increased calving percent
- Improved calf health
- Animal thriftiness and weight gain
- Increase in biomass production:
 - ↑ forage availability
 - ↓ hay costs
 - ↓ water transportation costs
- Increase herd size



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Projected Outcomes

- 1) Enhanced soil, water and habitat values on 1.13 million acres.
- 2) Increased soil water storage by 15% to yield the equivalent of 2 Hetch Hetchy reservoirs in the subsequent 5 years.
- 3) Increased soil carbon sequestration capacity by 15%, an additional 1,130,000 tons of carbon sequestered per year going forward (8.4 million metric tons total after 10 years).
- 4) Leveraged Farm Bill habitat improvement funds.
- 5) Encourage 45 Leopoldian watershed land stewards.
- 6) Improved ranching operations for 110 ranchers.

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Research Support

UC Davis Rangeland Watershed Lab

Dr. Ken Tate

Dr. Leslie Roche

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Research Support

Benchmark and Implementation Metrics

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Field Metrics-Soils & Vegetation

Soil Characteristics:		Rangeland Vegetation:	
Soil bulk density	Soil samples	% cover of perennial species	Line-intercept transects
Soil organic matter	Soil samples	% cover of annual species (e.g., smooth brome, rye, fescue)	Line-intercept transects
Soil carbon	Soil samples	% cover of noxious/invasive weeds (e.g.,	Line-intercept transects
Soil infiltration	Soil samples		

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Hydrologic Characteristics

Stream Flow:		Visual survey of seepage wells	
Presence / absence of base flow on 1 st and 2 nd order streams (1 st of days, dated)	Photo-points, stream gauges	Stream macro-invertebrates (e.g., caddisflies, mayflies)	Line-intercept transects

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Biological Characteristics

Birds and Wildlife:	
Number of species detected	Point count surveys
Number of species breeding on site	Area search surveys
Stream macro-invertebrates (e.g., caddisflies, mayflies)	Line-intercept transects

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Leopoldian Land Stewards

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RWI-Spring 2013 Rancher Field Days

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THANK YOU!

Questions?