Conservation Strategies from Great Valley Watersheds

Point Blue Conservation Science's *Rangeland Watershed Initiative*

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Working Lands Program Director
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Advance conservation through bird and ecosystem studies, restoration and partnerships

- Founded in 1965
- 140+ staff and seasonal biologists
- 2013 Budget: ~$10m

Rangeland Watershed Initiative

Goal:

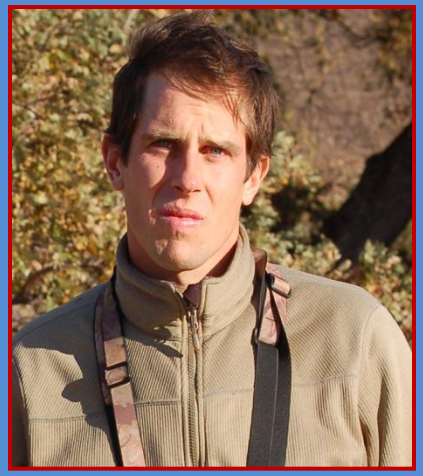
Improve watersheds by enhancing grazing lands and connecting them with riparian areas and valley wetlands, with a focus on the foothills surrounding the Central Valley.

Rangeland Watershed Initiative: Vision

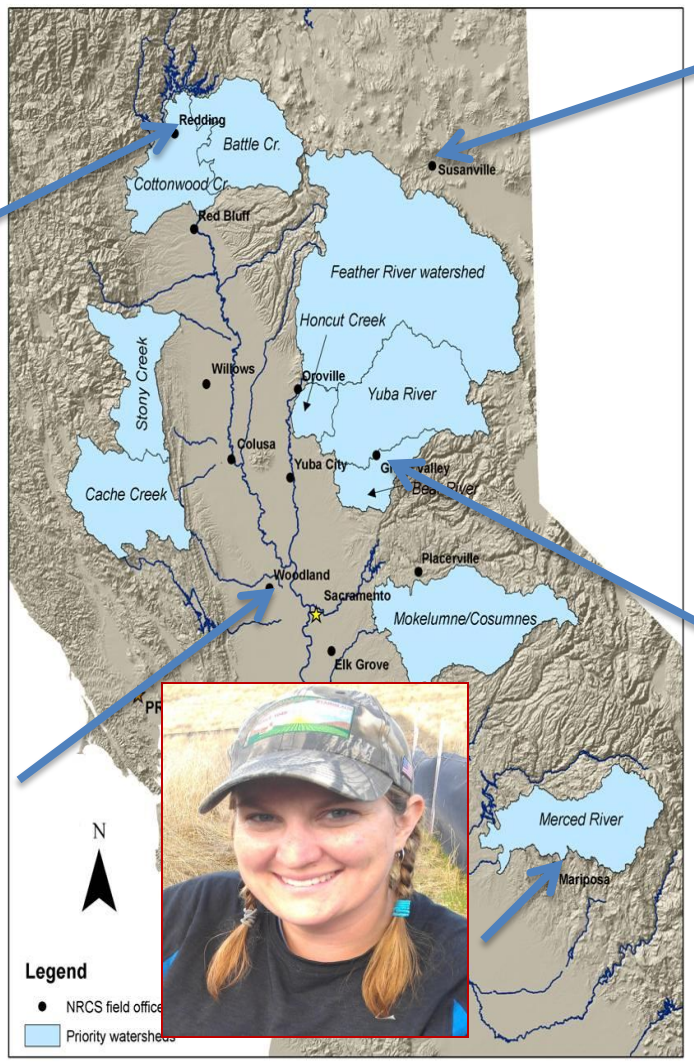
- Rangelands hold and store more water, release water more slowly throughout the year
- Watersheds linked to valley floor riparian and wetland habitats
- Increased groundwater recharge
- Ranchers and farmers active partners in eco-friendly management
- Ranching remains a viable enterprise
- Improved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

Partner Biologists On the Ground

Alicia Young



Corey Shake

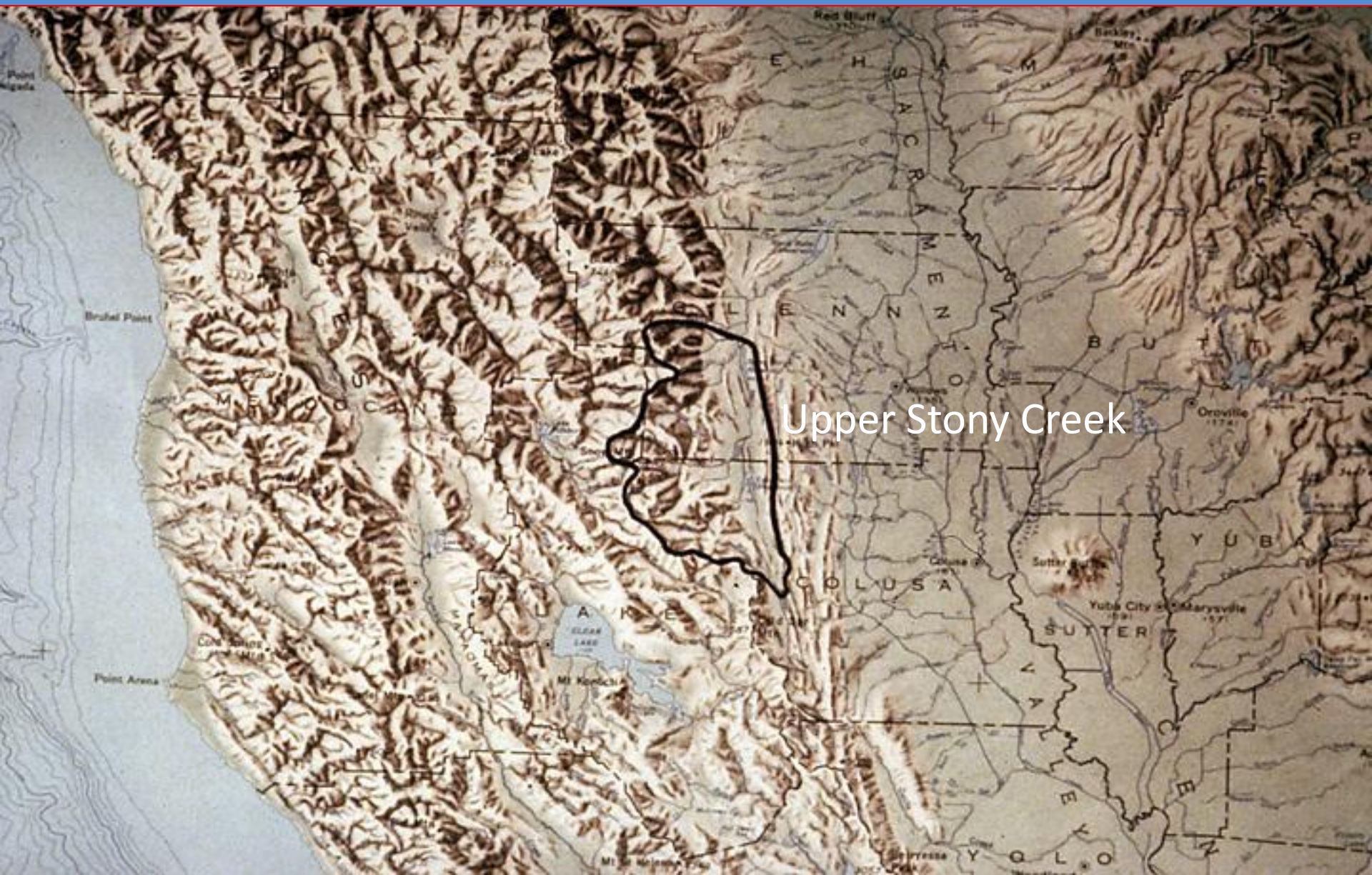


Melissa Odell

Tiffany Russell

Kelly Weintraub

Upper Stony Creek Watershed



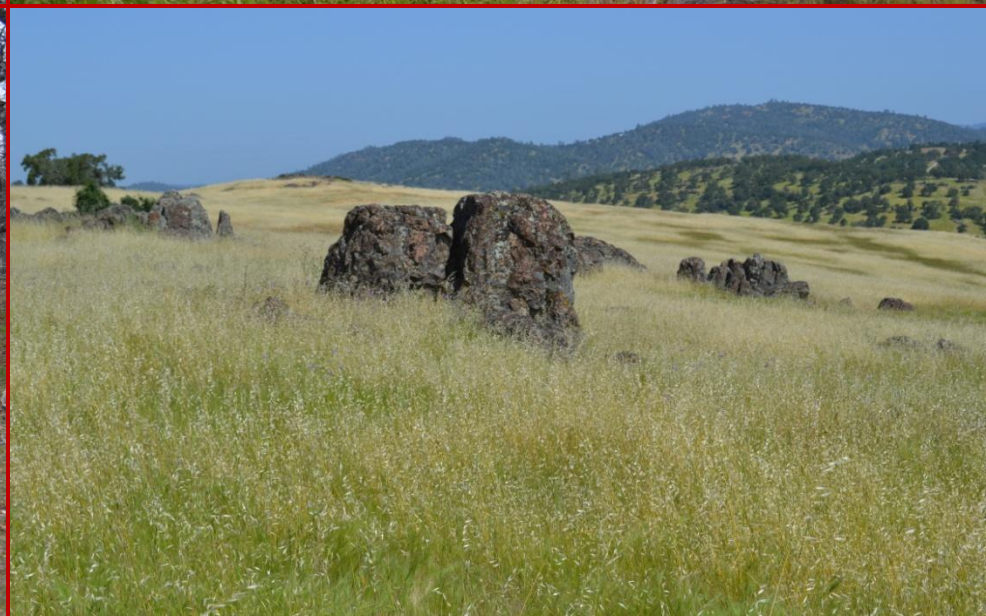
Upper Stony Creek Model

Bringing Back Water

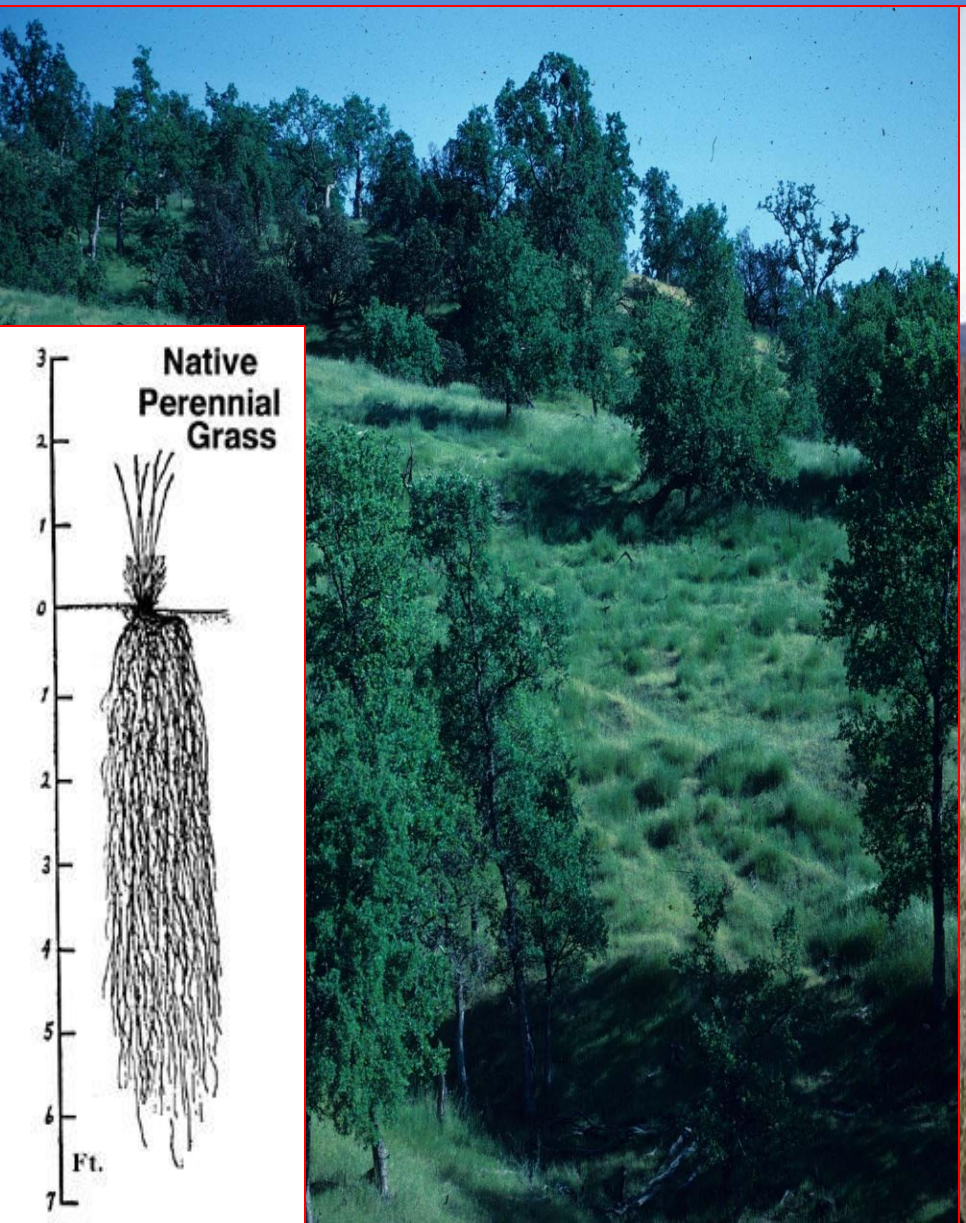
Same Creek, Re-watered, 8 years later

Pre and Post Prescriptive Grazing

Managing the Soil Surface



Watershed => Water Catchment



Conservation Management Practices

Conservation Facilitating Practices


Fence


Fence

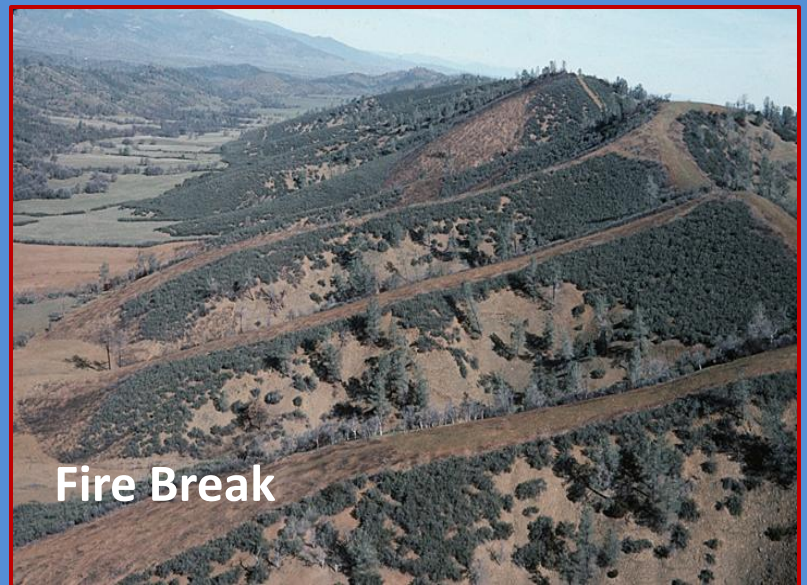

Spring Development


Water Facility

Conservation Accelerating Practices

Brush Management


Range Planting


Fire Break


Prescribed Burning

Case Study: Economics of Prescribed Grazing

Upper Stony Creek Project
Glenn County, California

- Six years of prescribed grazing
- Went from feeding 300 tons hay year to feeding NO hay
- Increased herd from 300 cow/calf to 500 cow/calf

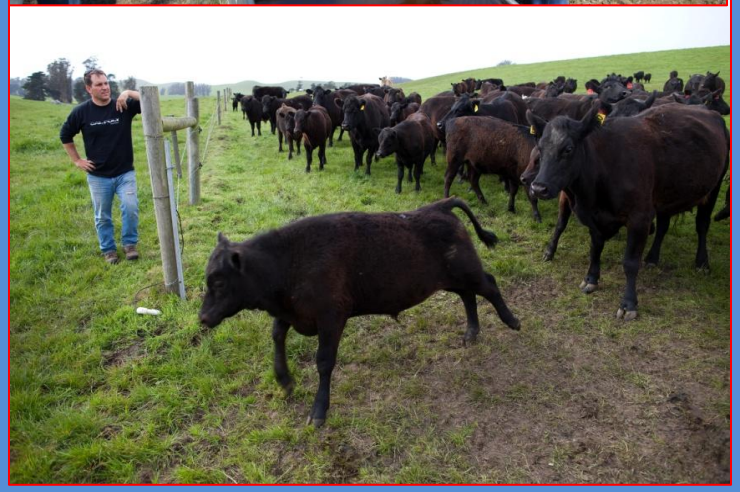
- Improved flows of 1st and 2nd order streams

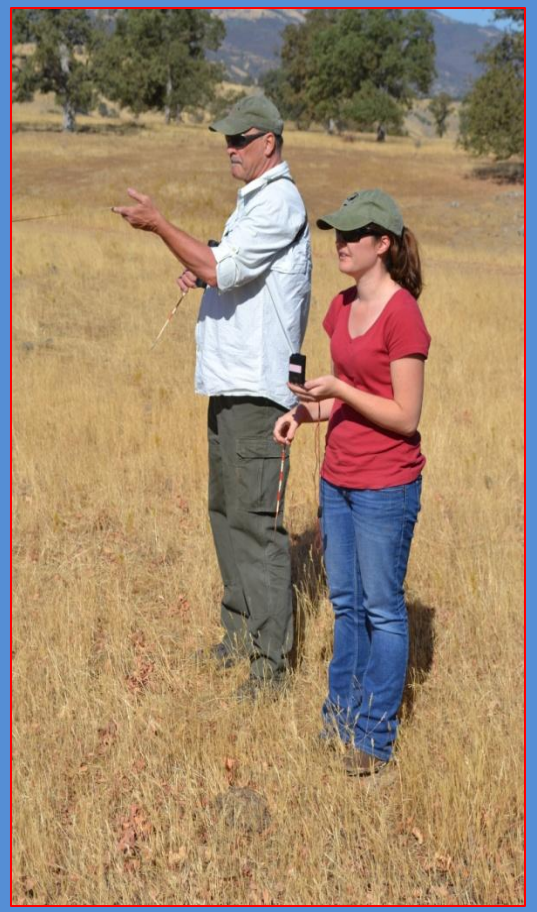
(improved resources during this period)

Managing for Biodiversity

First Year: On the Ground

1) Expanded new practices on 370,000 acres with 60 landowners;
2) Managing to increase soil water storage on participating ranches by 15%;
3) Leveraged $12.5m Farm Bill habitat funds & $12.5m in landowner contributions;
4) Cultivating 30 Leopoldian land stewards for long-term ecological benefits; and,
5) Documenting, communicating habitat & water benefits of Point Blue RWI.





Research Support

UC Davis Rangeland Watershed Lab

Dr. Ken Tate

Dr. Leslie Roach

Research Support

Benchmark and Implementation Metrics

Field Metrics-Soils & Vegetation

Soil Characteristics:	
Soil bulk density	Soil samples
Soil organic matter	Soil samples
Soil carbon	Soil samples
Soil infiltration	Soil samples

Rangeland Vegetation:	
% cover of perennial species	Line-intercept transects
% cover of annual species (e.g., smooth brome, rye, fescue)	Line-intercept transects
% cover of noxious/invasive weeds (e.g., medusahead, star thistle)	Line-intercept transects

Hydrologic Characteristics

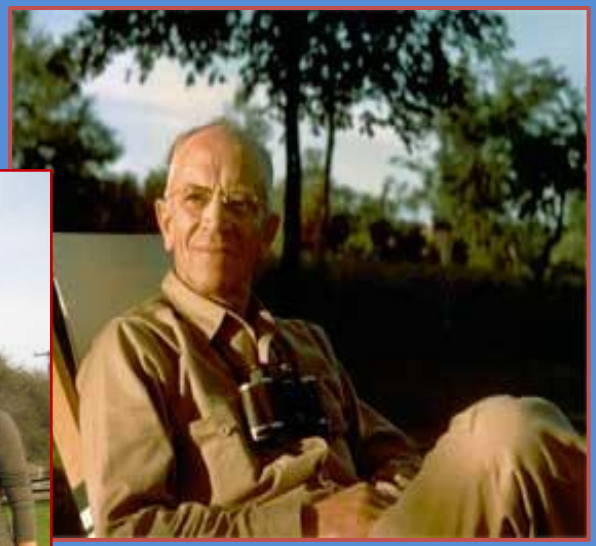
Stream Flow:	
Presence / absence of base flow on 1st and 2nd order streams (# of days, dates)	Visual survey, observation wells
Change in flow volume on sample creeks	Photo-points, stream gauges
Stream macro-invertebrates (e.g., caddisflies, mayflies)	Line-intercept transects

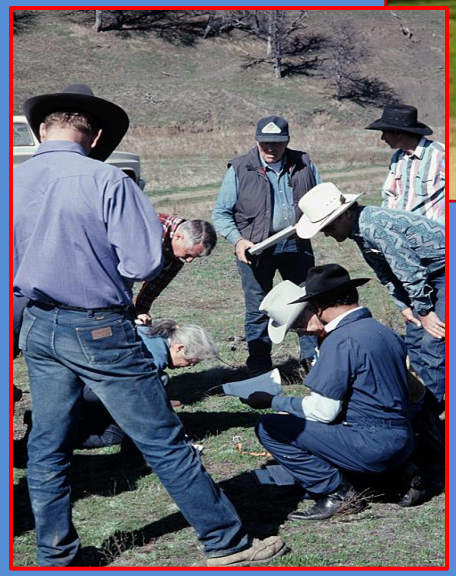
Biological Characteristics

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

Leopoldian Land Stewards

- Workshops
- Questionnaires
- Field Techniques





Questions