Compiling and Analyzing Management Case Studies (a project under development)

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2 main challenges:
1. Context-specific results
2. Balancing multiple goals

Some conclusions:
• Limited conclusions on many practices due to lack of monitoring data—especially at scales most relevant to management (e.g. pasture/watershed scale in 5-10 year time periods)
• Limited utility of generalized management recommendations (must be site-specific)

Conservation Benefits of Rangeland Practices

Goals:
• Assess and quantify effects of management on environmental quality
• Build solid scientific foundation to improve natural resource assessment, planning and implementation

Need for:
• Standardized data collection
• Long-term data across local to regional scales
• Improved collaboration between scientists and managers—Include broader range of managers, with diverse goals

http://rangelandwatersheds.ucdavis.edu
**A. Diverse stakeholder groups have identified a pressing need to develop site-specific management recommendations by learning from the successes and failures of previous management trials.**

Collectively, they provide:
1. Thousands of short-term to long-term management trials: (1) across environmental conditions and (2) with diverse sets of goals
2. Long-term records of forage or livestock production encompassing variable weather conditions.
3. Quantitative or qualitative assessment of goals such as invasive species, wildlife, etc.

**Focal Services:** Forage production and quality, livestock production, noxious weed control, erosion control, wildlife habitat

Additional (as data is available): water supply and quality, soil carbon sequestration, native plant restoration potential, soil fertility, soil water holding capacity

**B. UC professors, Cooperative Extension, and Farm Advisors have identified the need to understand and predict how multiple ecosystem services are controlled over space and time, and how to translate this into site-specific management recommendations.**

Collectively, they provide:
1. Observational and experimental research on multiple ecosystem services across decades, and across the diverse environmental conditions.
2. A long history of collaborating with diverse managers


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**A. Stakeholder information, understanding**

**B. UC data, understanding, infrastructure**

**C. Development of web-based searchable database using workshop with stakeholders to determine design of database [measures to include, privacy of information, etc.]**

**D. Stakeholders and UC personnel input data into database**

**E. Database links with GIS model to provide site-specific information on soil, topography, climate, vegetation type, land use, etc.**

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Examples of questions that can be addressed:

- How do I reliably manage for a suite of goals on my site? (and is it even possible?)
- How does this vary with annual weather?
- How do we manage for ability of services to recover after a disruption (e.g. drought, erosion event)?
- How do we manage to minimize this disruption?
- Where can they effectively be managed?
- How will effective management practices vary by site/year?
- What is the short-term to long-term balance of the costs, risks and other benefits?
Looking for feedback and collaborators

• What questions do you want answered? (are we focused on the right services/questions?)
• Are you interested in participating? What would help you to participate?
• What are your concerns (e.g., data privacy)?
• Others?

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