Rangeland management systems

How we got here?

- **Started big – worked toward smaller**
- **Looked at 2007 Action Plan and customer input**
- **Last plan: 3 problem areas**
  - **Conservation, livestock, restoration**

Moving forward

- **Moved to livestock, restoration and conservation, and basic science**
- **We debated ordering of these for the Action Plan**

General outline

- **Livestock**
  - **Production and efficiency**
  - **Livestock as management tool**
  - **Poisonous plants**

- **Managing rangelands**
  - **Restoring rangeland**
  - **Conserving rangeland**
  - **Applying and assessing management at multiple scales**

- **Basic science**
  - **Genetics and germplasm development**
  - **Ecological processes**

Problem Area 1

- **Management systems for livestock production including enterprise scales (food security and climate change)**
- **Objectives:**
  - **Grazing-based livestock production systems**
  - **Livestock as a management tool influencing plant communities and ecosystem services within climatic variability (address tradeoffs here)**
  - **Poisonous plants**
- **Products:**
  - **Retrospective analyses of legacy data regarding livestock production and climate, Drought response strategies (post-drought recovery), Extend grazing season.**

Problem Area 2

- **Managing rangelands using landscape approaches for multiple ecosystem services (climate change)**
- **Objectives:**
  - **Restoration of degraded lands**
  - **Conservation of non-degraded lands**
  - **Application and assessment of management practices at multiple scales**
- **Products:**
  - **Decision support tools for determination of where on the landscape to apply practices to increase effectiveness, Development of integrated tools involving grazing (multiple species, targeted grazing), Retrospective analyses of legacy data from prior application of conservation/restoration practices for determination of effectiveness (from BLM, FS, private ranches)**

Problem Area 3

- **Basic science (including climate variability, spatial and temporal aspects, GraceNet, CEAP)**

- **Objectives:**
  - **Development of genetics and germplasm materials**
  - **Ecological processes (plants, soils, water – transitions/thresholds/restoration pathways for STM models)**

- **Products:**
  - **STM models, interpretations of ESDs, Data for GraceNet, CEAP products (models), Cross-walking of ground-based data with remote-sensed data, Cross-walking of plot to landscape data, Plant germplasm releases**

Where we go next?

- **Outputs**
- **Locations**
- **Collaborations**
- **Writing assignments**
- **Fun**☺