Is your ranch thirsty and hungry?

Agenda
1. Where are we today?
2. Why should I manage soil life?
3. How can I manage soil life?

Mean Annual Precipitation = 15 inches

Soft, Fractured, Calcareous Sandstone & Shale

Grassland on South Facing Slopes
Woodland on North Facing Slopes
Perennial Grasses Planted on Stream Terrace

Water Cycle Basics
• Keep Ground Covered:
• Reduce Runoff
• Increase Infiltration
• Recharge Groundwater

Why should I manage soil life?

1. Cycles Nutrients
• Decompose plant and animal residue
• Fix atmospheric nitrogen
• Make nutrients available to plants
• Form mycorrhiza

2. Stabilize Soil
• Protect soil from Erosion
• Crusting
• Compaction
• Form soil aggregates & macropores
• Improve water infiltration
• Enhance root development

3. Increase Water Quantity and Quality
• Reduce runoff
• Increase infiltration
• Increase storage of water
• Reduce leaching of nitrates
• Degrade pollutants
4. Improve Plant Health
- Compete with pathogens
- Predation on pathogens

How can I manage soil life?

1. Keep the Ground Covered
- Living Plants
- Seeding
  Drill not Plow
  Mix of grasses & legumes
- Balance RDM (500-1200 lbs/ac)

2. Manage for Diversity
- Promote oak regeneration
- Create patchy habitat w/ control burn or bulldozing
- Balance RDM for grasses, forbs & legumes
- Short term grazing favors perennials

3. Manage Disturbance
- Avoid traffic on wet soils to prevent compaction
- Abandon compacted trails that concentrate runoff
- Prevent sedimentation that buries habitat
- Prevent erosion that removes habitat

3. Manage Disturbance (more)
- Manage fuels for cool rather than hot fires
- Limit defecation to sacrifice area after worming