

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?

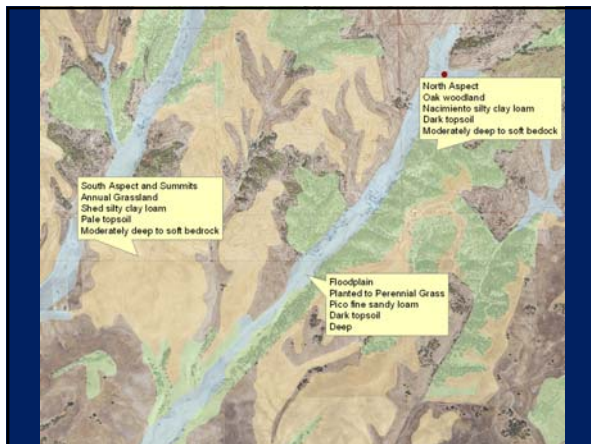
Mean Annual
Precipitation = 15 inches



Soft, Fractured, Calcareous
Sandstone & Shale

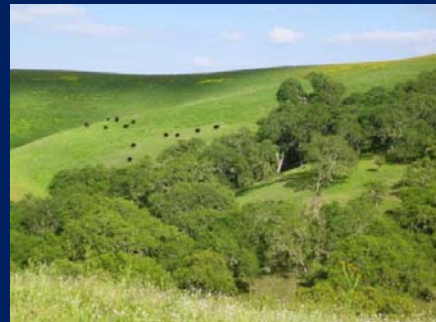


South Aspect and Summits
Annual Grassland
Shed silty clay loam
Pale topsoil
Moderately deep to soft bedrock



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



