


Mountain Meadow Function and Ecosystem Services



Presented in Quincy, CA
February 3, 2011

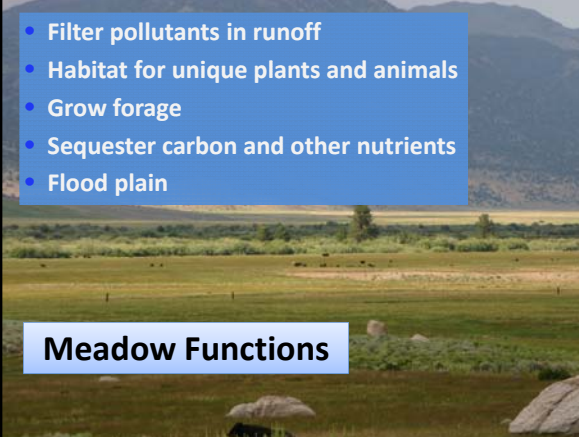
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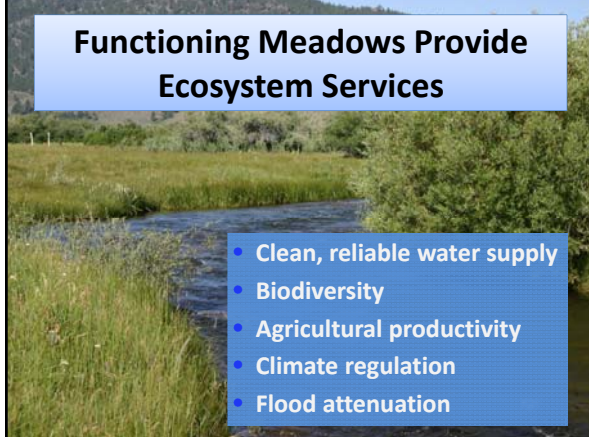
Mountain meadows in the Sierra Nevada and southern Cascade represent a small portion of the landscape, but provide a large number of critical services to the region.

- Filter pollutants in runoff
- Habitat for unique plants and animals
- Grow forage
- Sequester carbon and other nutrients
- Flood plain



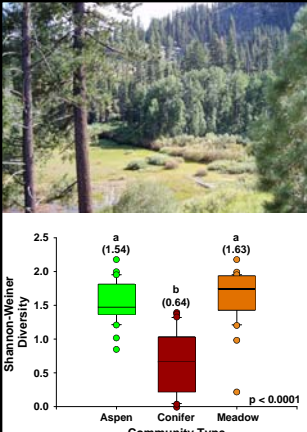
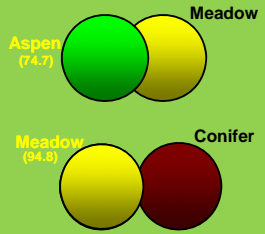
Meadow Functions

Functioning Meadows Provide Ecosystem Services



- Clean, reliable water supply
- Biodiversity
- Agricultural productivity
- Climate regulation
- Flood attenuation

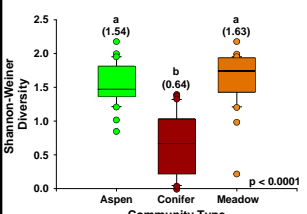
Plant Diversity

Aspen (74.7)

Meadow (94.8)

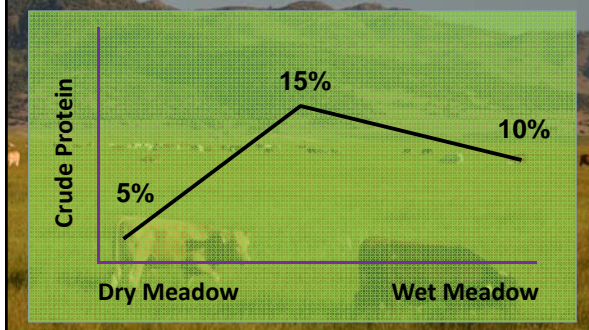
Conifer



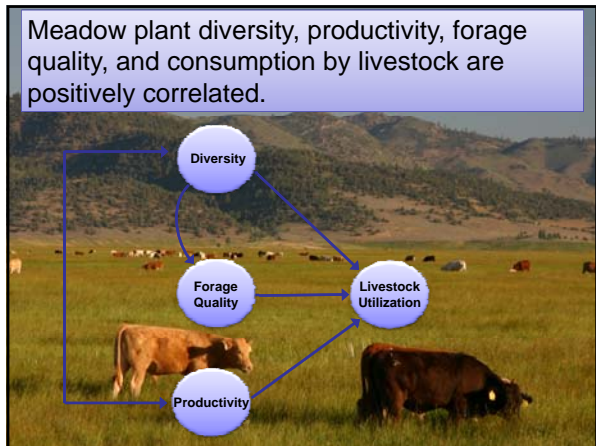
Community Type	Mean Diversity	Significance Group
Aspen	1.54	a
Conifer	0.64	b
Meadow	1.63	a

p < 0.0001

Meadow forage quality can be very high – particularly in moist meadows.



Meadow Type	Crude Protein (%)
Dry Meadow	5%
Wet Meadow	15%



These functions and services are dependent upon the overall hydrologic function of the meadow and associated stream.

- Erosion, sediment generation, reduced filtration
- Lowered water table, drier conditions, reduced diversity and production
- Loss of carbon and other nutrients
- Channelized flow, reduced floodplain access

