

Vegetation Attributes

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- Plant Species or Type
- Cover
- Frequency
- Density
- Structure
- Biomass/RDM



Plant Species or Type

- Plant Species = genetically unique and closely related plants.
- Life Form
 - Grasses
 - Grass-likes
 - Forbs
 - Shrubs
 - Trees



Plant Composition

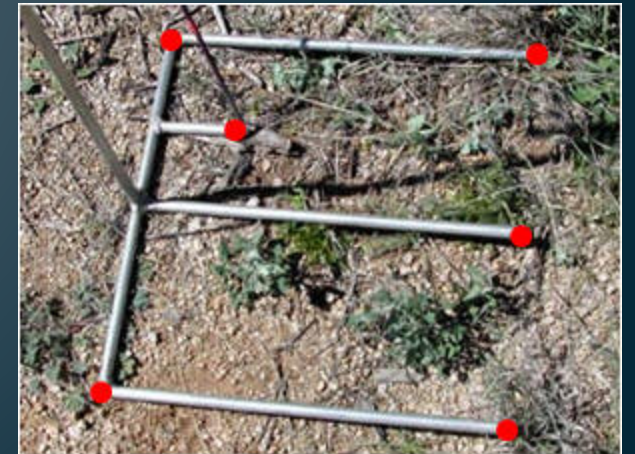
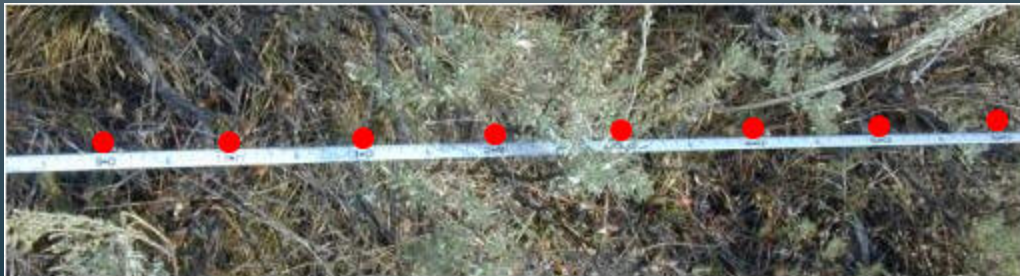
- A calculation based on proportions of biomass or cover.
- Proportion (%) of various plants (or life form) in relation to total plant biomass or cover

Species	Lbs/ac	Composition
Sagebrush	150	25%
Wheatgrass	400	67%
Lupine	30	5%
Yarrow	20	3%



Cover

- Amount of ground surface covered by vegetation or other objects including:
 - rocks,
 - litter (dead plant matter)
 - moss
 - bare ground
- Measured with points or plots



Frequency

- How often a plant occurs within a sampled area
- Proportion (%) of times a plant occurs in the total number of plots examined.

Example: If dandelions occur in 2 out of 5 plots examined = Frequency of 40%



Density

- Number of individuals per unit area
 - Plants/ft²
 - Plants/hectare



Structure

- Three-dimensional arrangement of a plant community.
- Relates to:
 - Hiding Cover
 - Thermal Cover
 - Wildland Fuels




Biomass

- Total weight of living organisms, including plants and animals, for a given area
 - Usually expressed as kg/ha or lbs/acre
 - In range assessment refers to just plants, *does not usually include weight of animals per area.*
 - Determined by clipping and weighing



Biomass – can vary substantially

Repeat photos from a site in Central Idaho illustrates immense year to year variation in biomass production. This study focused on production of crested wheatgrass (*Agropyron cristatum*) (Sanders, K., N. Rimbey, and L.A. Sharp. 1992.

Variability of crested wheatgrass production over 35 years. *Rangelands*. 14(3):153-168.) -- [Link to original publication](#) 

1957 -
Annual
precipitation
was 10.2
inches.

Crested
wheatgrass
production =
846 lbs/acre.



1960 - Annual
precipitation was
6.8 inches.

Crested wheatgrass
production = **186**
lbs/acre.



1971 -
Annual
precipitation
was 16.2
inches.

Crested
wheatgrass
production =
1,090
lbs/acre.



1974 - Annual
precipitation was
8.1 inches.

Crested wheatgrass
production = **324**
lbs/acre.



BIOMASS

Residual Dry Matter

Residual Dry Matter



- Light grazing



- Heavy grazing



Residual Dry Matter



- **Heavy Grazing**

- **Moderate Grazing**

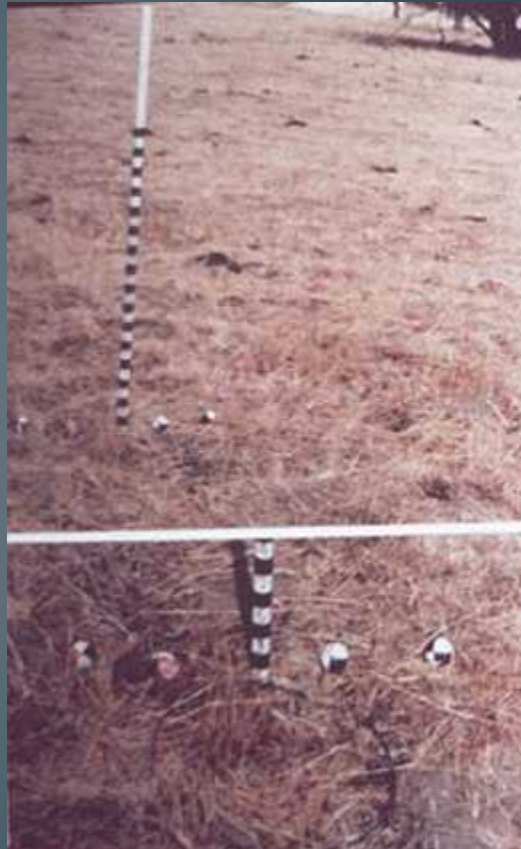
Residual Dry Matter

- Visual Assessment
- Photo Guides
- Clipping
- Mapping

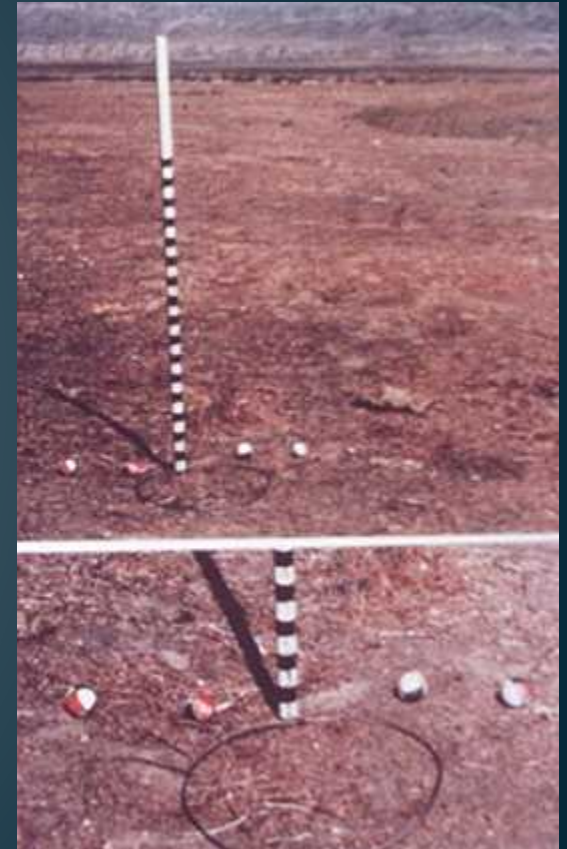


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500-750 lb/a



<200 lbs/a

RDM Monitoring

	Slope		
	Flat	Gentle	Steep
Precipitation	lbs/acre		
Southern California (<10")	200	250	350
Valley Foothills (10-40")	400	600	800
North Coast (>40")	750	1000	1250

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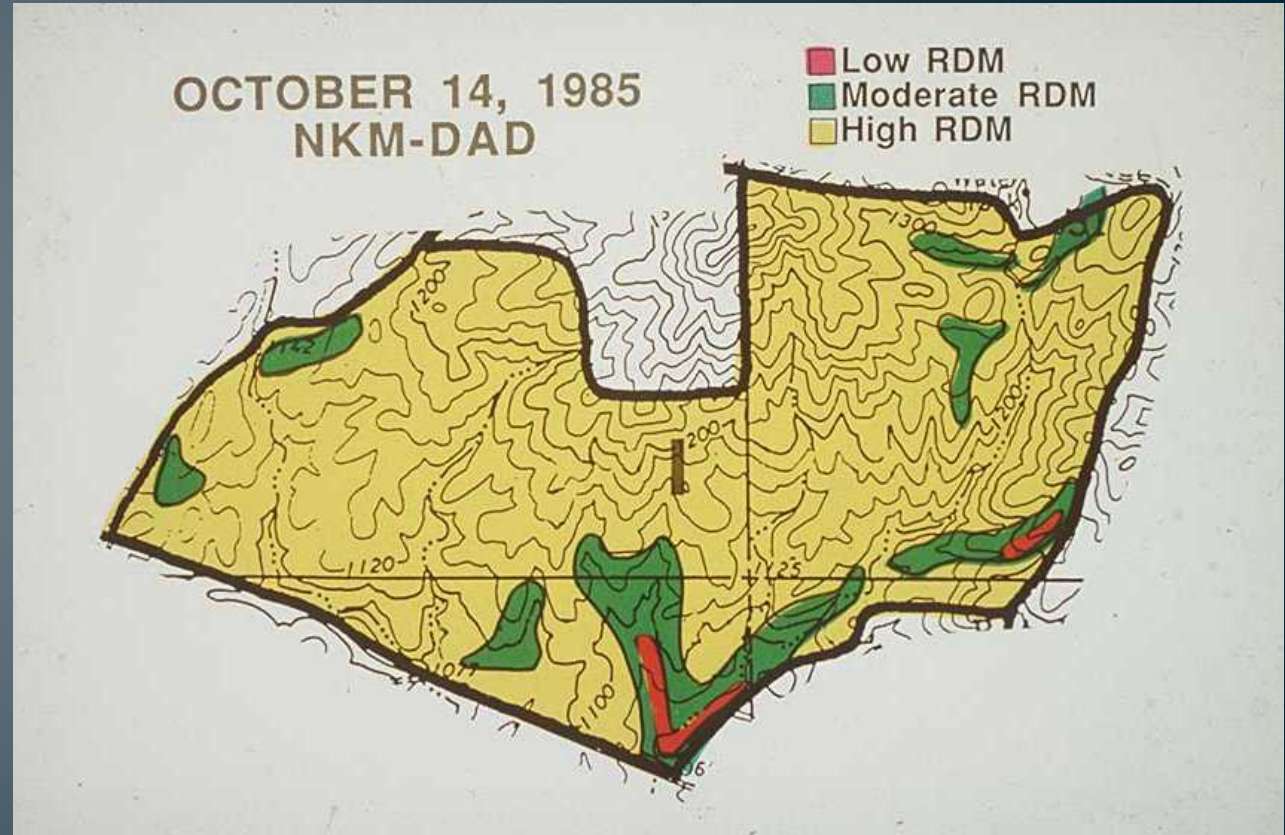


Photo-Monitoring

- *Landscape*
- *Plot or close-up*
- *Riparian/Stream*
- *Event*
- *Practice*

Landscape Photo



Plot or close-up



Riparian/Stream



Practice

Erosion control
Before and after



Landscape Event



End of slides