Introduction to Photo Monitoring

Photographs are a valuable tool for managers

- Easily established
- Show trend over time
- Wide audience
- Supplement data

Where to Photograph

- Key areas
  - Document changes in dominant species
  - Observe annual standing biomass/ grazing effects
- Revegetated areas
  - Seeded/planted areas
  - Document mortality
- Riparian areas
  - Upstream & downstream views
  - Across stream
  - Document streamside attributes
- Grazed areas
  - Livestock impacts
  - On/off photos document stubble height
  - Document use and recovery

Measurable objectives

- Developing objective involves asking:
  - why? - why monitor. Sets the stage.
  - where? - location depends on why
    - fire, livestock grazing, logging, revegetation
  - what? - critical items
    - vegetation, soil, streambanks, animals
  - when? - critical times
    - season, specific times, following disturbances, multiple years
  - how? - procedures

What to photograph

- What is expected to change?
- What will the photo represent?
- Depends on objectives

Why Monitor?

Common Purposes:

- to describe or document current conditions *(baseline monitoring)*
- to describe or document abnormal or catastrophic events
- to detect and document change *(trend monitoring)*
- to confirm agency assessments
- to investigate perceived problems
- to document the application or implementation of management practices *(implementation monitoring)*
- to document the effectiveness of management practices *(effectiveness monitoring)*

When to photograph

- Capture vegetation phenological stages
  - Peak biomass varies by life form
- Time progression
  - Year after year
- Disturbance events
  - Fire, flood event
- Pre/Post Livestock grazing

How to photograph

- Common ground-based photographic procedures:
  - Transect photos
  - Landscape photos
  - Close-up photos (Plot-Photos)
  - Riparian photos

Landscape Photos

Transect Photos

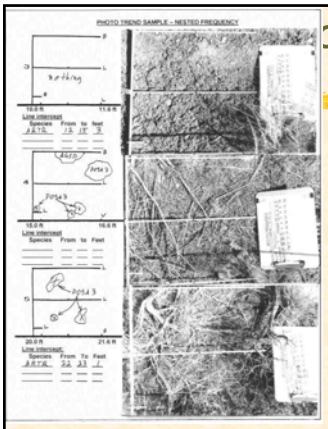
Landscape Photo

Transect Photos

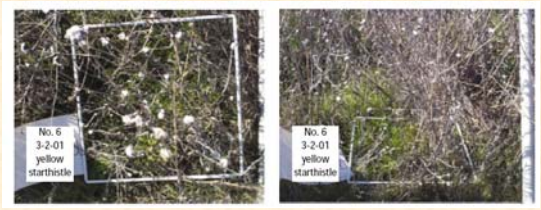
Landscape Photo

Landscape Photo

Close-up photos (Plot photos)

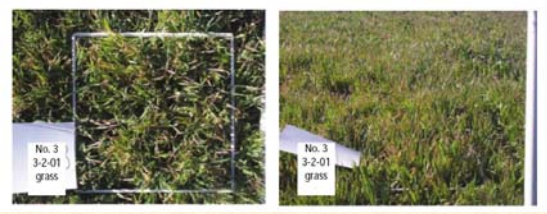


Close-up photos (Plot photos)



Riparian Photo

Close-up photos (Plot photos)



Riparian photo

Riparian Photos

Records

- Observations of general area
  - actual use,animal concentration, wildlife sign/use, rodent sign/use, insect infestation, flood, fire, rainfall, water availability, open gates, vandalism
- Record mileage to key area from prominent physical features
  - road intersections, other key areas
- Jot down your rationale for locating the photo-plot

Supplies and Equipment

- Good quality camera
  - 35mm or digital
- Notebook and/or data sheets
- Photo Identification Label
- Labeling Pen
- Compass
- Steel Post
- Rebar or permanent stake
- Hammer
- Transect Tape
- Pencil

Records

- Spray-paint stakes with brightcolored spray paint
- Organize your photos and forms in a 3-ring binder by date and photoplot identification number

Records

- Record on the study location
  - Compass bearing and distance
- Incorporate a witness post
- Sketch of prominent physical features of the key area
  - roads,trees, fencelines, rock outcrops, streams

Example Photo Labels

DATE 7/24/84
NO. 035-27W-08-03
R.A. Lost Mountain
ALLOT. Quaking Aspen
PAST. Sheep Creek

Data Sheet

Study Location & Documentation Data

Good

Taking Photos

- Take your photo making sure the plot frame and photo identification form are included in the photo.
  - *Note: Taking photos from the north side helps reduce shadowing across the plot.*
- Be CONSISTENT!

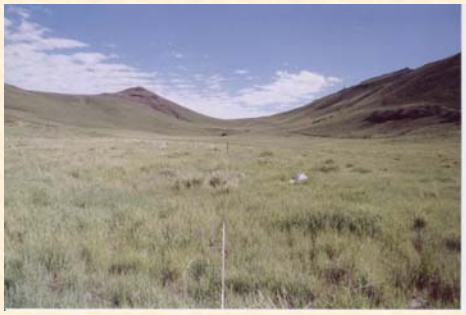
Bad

Example Photographs

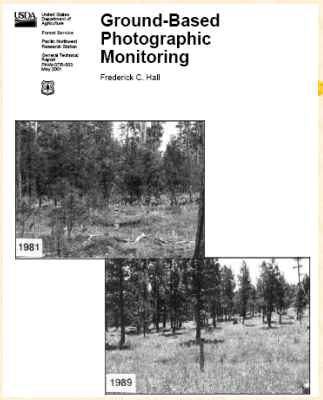
The Good, Bad, and Ugly of Photographic Monitoring

Ugly

Good

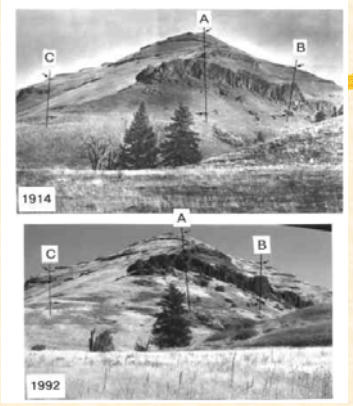


Photos as Data



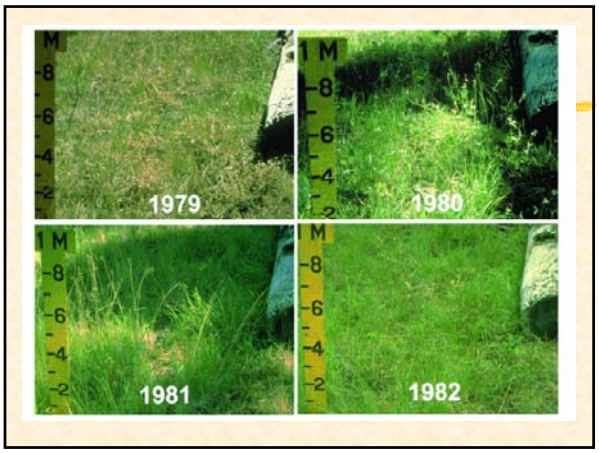
Bad

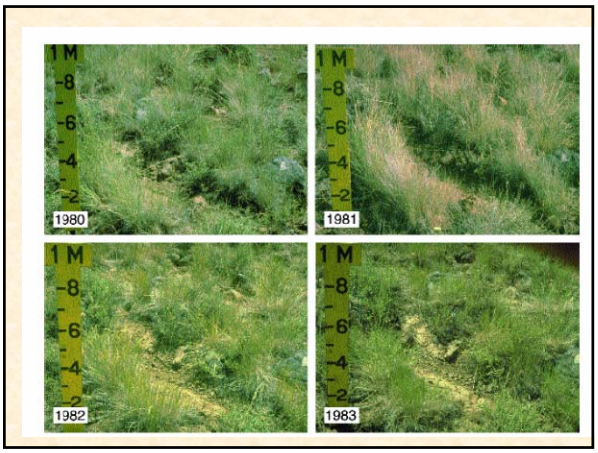
Photos as Data



Ugly

Photos continued





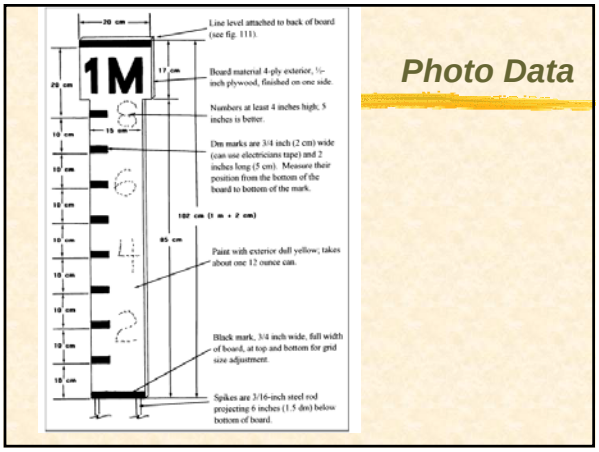
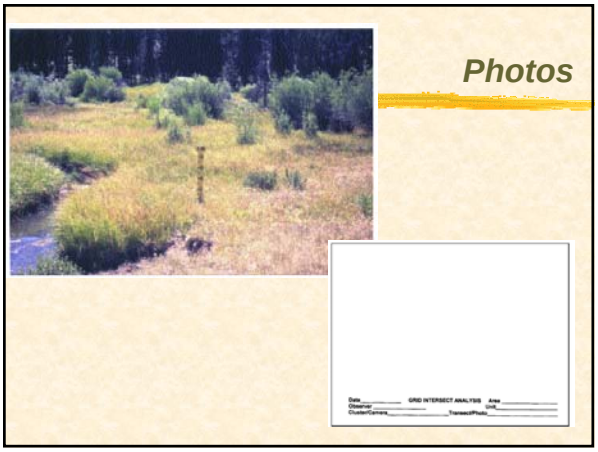
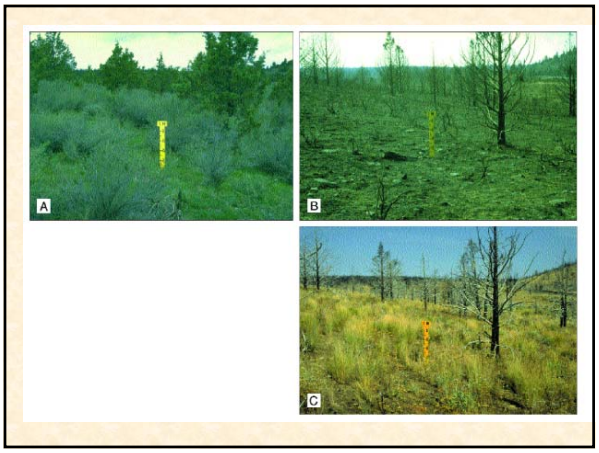
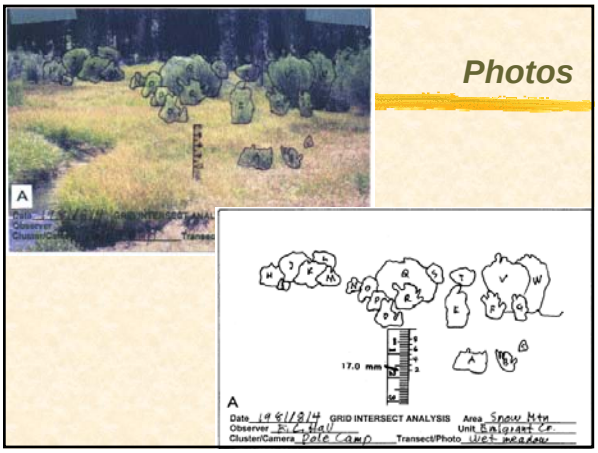


Photo Data

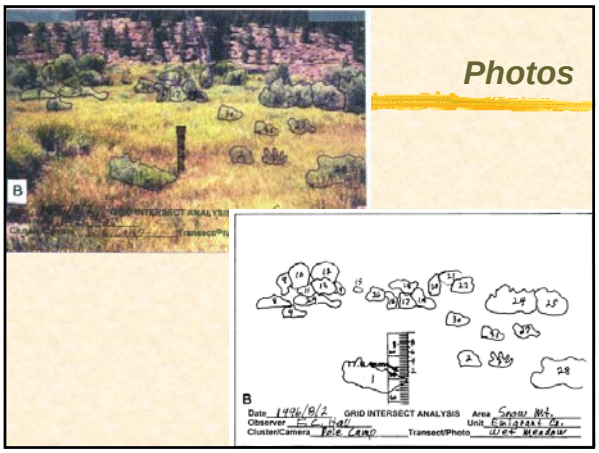


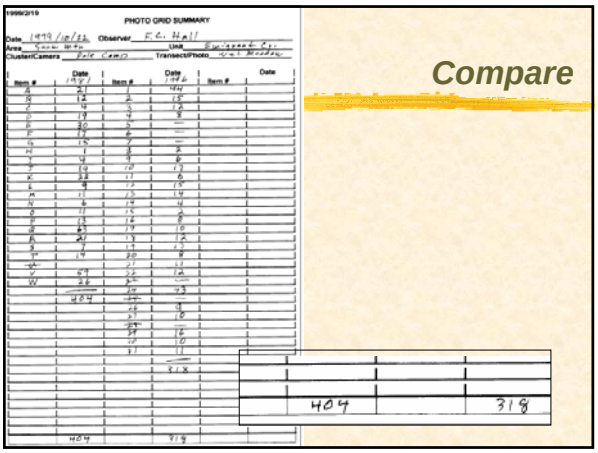
Photos

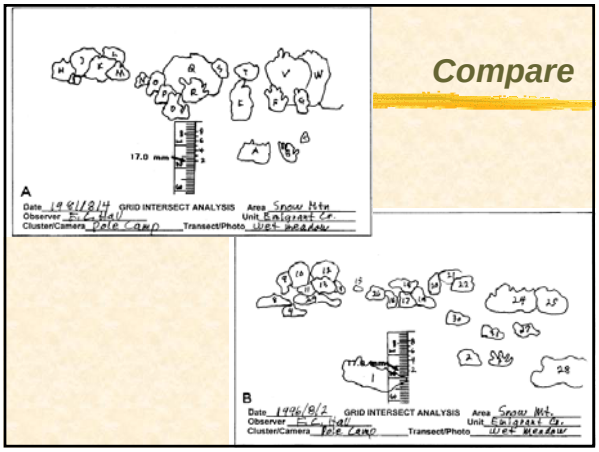


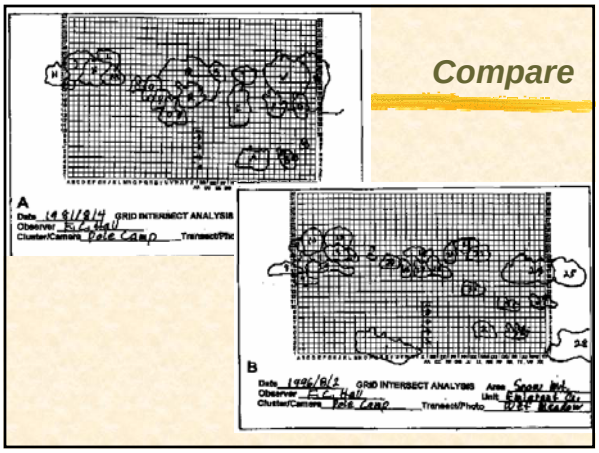


Photos


Photos
B
B
Date 1996/8/2 GRID INTERSECT ANALYSIS Area Snow Mtn.
Observer E.C. Hall Unit Emigrant Cr.
Cluster/Camera Pole Camp Transect/Photo Wet Meadow


Compare
PHOTO GRID SUMMARY
404
318


Compare
A
17.0 mm
Date 1981/8/14 GRID INTERSECT ANALYSIS Area Snow Mtn.
Observer E.C. Hall Unit Emigrant Cr.
Cluster/Camera Pole Camp Transect/Photo Wet Meadow
B
Date 1996/8/2 GRID INTERSECT ANALYSIS Area Snow Mtn.
Observer E.C. Hall Unit Emigrant Cr.
Cluster/Camera Pole Camp Transect/Photo Wet Meadow


Compare
A
Observer E.C. Hall
Cluster/Camera Pole Camp
B
Date 1996/8/2 GRID INTERSECT ANALYSIS Area Snow Mtn.
Observer E.C. Hall Unit Emigrant Cr.
Cluster/Camera Pole Camp Transect/Photo Wet Meadow