

## Landowner photomonitoring

One of the time-tested methods for improving the condition of your land and your management skills is monitoring. Historically, monitoring has meant taking measurements of certain physical characteristics such as species composition, forage production or biomass, species frequency, canopy cover, ground cover, etc. The changes in these measurements over time were used to evaluate whether a site was moving away from or toward a landscape goal or desired condition. These quantitative methods provide excellent data but they require a lot of time, usually require technical equipment and training, and consistency among the individuals collecting data is sometimes poor. Photo monitoring has made great strides in the last two decades as a method of data collecting and documenting change. A picture is worth a thousand words. "Pictures are easier and faster to interpret than measurements, and measurements, if needed, can be made from the photographs."<sup>1</sup> Many researchers and livestock producers have used photo-monitoring to demonstrate the positive effects of their land management and livestock grazing. They also provide early warning of negative changes such as increases in weeds or bare ground.

### Questions to answer in planning your photomonitoring:

1. Why to monitor? Define the question you hope to answer. What is the objective?
2. Where to set up photoplots? This depends completely on the Why. Select a site that will answer all the questions you wish to answer.
3. What to monitor? Determine what attributes you want to track. Ex. Vegetation, soil, wildlife activity, waterways.
4. When to monitor? Depends on above 3 questions, and could be annual, multiple-year, seasonal, during disturbance events, etc.
5. How to monitor? This refers to the specific photographic procedure used.

### Guidelines for setting up photo plots and obtaining useful data:

1. Create a map that will get you or anyone else to the site. Record details such as site description, landmarks, directions – make sure you can get back to the same place!
2. Use a permanent marker such as a T-post for each individual photopoint. Create a map of the photopoints at a given site – make sure you can take the same pictures again!
3. File a good description of when photographs need to be taken and why. For example, if vegetation needs to be



Rock Creek, OR 1979 – season-long grazing (BLM photo)



Rock Creek, OR 1986 – spring-only grazing (BLM photo)

*(This site in Oregon exhibited rapid recovery in response to late season rest – the pictures tell the story!)*

<sup>1</sup> Hall, Frederick C. 2001. Ground-based photographic monitoring. Gen. Tech. Rep. PNW-GTR-503. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

backlit, a certain range of day times is necessary; landscape photos may require a certain level of visibility; riparian monitoring photos may be taken corresponding to stream flow levels instead of time of year.

4. Include a "photoboard" in the picture that gives the location, date, and compass bearing of the photograph.
5. Take the picture at the same time or stage of growth every year.
6. File appropriate forms and field instructions for doing the monitoring.
7. Set up an easy-to-follow filing system including all the above information.
8. Label pictures or digital images immediately after processing!

*(Adapted from Hall 2001; this publication can be downloaded at <http://www.fs.fed.us/pnw/pubs/gtr503/>)*

If you are making changes in how you manage your land, or are simply interested in seeing how things change over time, consider setting up a few simple photopoints. At a minimum, you might want to take a single picture per year in a couple spots. I'd be happy to help someone get started. --Tip