Seeing is Believing

Steve Wingate and David Wolf[1]

Abstract.—When people view forest management activities there is usually nobody present to explain or interpret what is actually taking place. They judge what has happened by what they can see. In the short term, many long-term, beneficial activities such as clearcuts or herbicide applications appear to the average person as destruction, and they often only view an activity at one point in time.

Photographing, typical management activities from the same location and with the same equipment over a period of years (photo point photography) demonstrates in a short period of time what has taken place over a long period of time. Growth of a new forest from seedlings to trees can be shown visually in a matter of minutes. Another benefit of photo point photography is the ability to record changes which can be studied at a later date.

People believe what they see. Their judgement of what they see is based on whatever information they have at hand at one moment in time. Rarely is there anyone on the scene who can explain or interpret silvicultural activities.

To the average forest visitor, a recent final harvest of cut stumps, horizontal tops, ruts, and muddy landings represent destruction. They cannot distinguish new tree seedlings from other ground vegetation. Whether viewed in person, on video or in a picture, a recent final harvest makes a negative, lasting impression which is frozen in time. Even when interpreted by a forester, the visual image is so powerful that it can defeat his or her credibility. Published in the media, this image can negatively effect the opinions of millions of citizens.

Changes in the forest environment usually occur over long periods of time and happen seemingly without notice.

Repeat or photo point photography is a way of credibly documenting change which has taken place over a longer period of time. This method of documenting change has been used by researchers and historians almost since photography was invented. A series of photos taken at Little Arnot Creek on the Allegheny National Forest beginning in 1927 shows the amazing transformation of an old-growth stand to a seedling stand, and its subsequent growth into the mature Allegheny Hardwood stand it is today.

Photo points can be used to follow the progress of any type of management or natural change. Later, the pictures can be displayed in minutes to explain what has actually taken place over a number years. The fact that the location can be identified in each picture lends credibility to the demonstration.

Subject matter on the Allegheny National Forest can vary widely and can include clearcuts, beaver ponds, oil and gas operations, fish structures, wildlife planting, road closures, landing rehabilitation, roadside activities, trail rehabilitation, scenic vistas, or dispersed camping spots. The most common subject matter is silvicultural activities such as shelterwoods, thinnings and selection cuts but also includes herbiciding, patch clearcutting, TSI, and many replications of other final harvest cuts. Other sequuences cover the long-term effects of different logging systems and rehabilitation techniques. There is also extensive coverage of a large tornado which occurred in 1985.

One of the most dramatic series shows a stand before and after clearcutting followed by the steady growth of seedling into a sapling stand. This series was used on the television show "Pennsylvania Outdoors" to illustrate how forests are regenerated. The producer blended each successive slide so that on video the stand seemed to actually grown in front of the viewers eyes.

On the Allegheny National Forest, the photopoint program is actually accomplished by a Dave Wolf, a volunteer. He keeps track of over 150 photo points. Each point is periodically reviewed and re-photographed at one, five or ten year intervals. Dave has kept the program going for over 14 years. He recieves help from Forest Service personnel in locating the subjects, modest compensation for his out of pocket expenses, and a place to store his materials.

To be credible, photo point photography must be properly done. It is important to use the same type of camera, lens, and film speed. The points should be photographed at about the same time of day, time of year and, in similar light conditions.

When the subject matter is chosen it is very important to pick the right place from which to take the photograph. The photographer should select a long-lasting object such as a rock or stump to use as a reference point in each picture. The lens and focal length should be planned to insure that what is being observed will always remain in the scene as trees grow, roads get wider and vegetation spreads. We have many slides of regeneration cuts that began as panoramic views of slash and distant tree lines, and that now appear as a wall of vegetation which fills the photograph.

To accomplish these things, a record of each photo point must be carefully maintained. Many of the points have a permanent reference stake installed in a safe location. The photo point form has an attached map to show the general and detailed location. The actual point is measured from the reference stake or object by distance and azimith. The scene and the reference object is recorded on the form as well as the dates and times of previous photos. Dave finds it helpful

[1]USDA Forest Service, Allegheny National Forest

to bring along the most recent slide when going to take a repeat picture. He then compares the slide with image in his view finder to fine-tune the current picture.

The slides are filed in indexed plastic slide holders. When slides are needed to explain a treatment to the public, the appropriate subject can be located from a master list. The slide holder is then retrieved and can be quickly viewed on a light table or displayed with a slide projector.

It is time consuming to do this work well, and the benefits are often intangible and long-term. It is the kind of work that usually suffers when budgets are cut. Volunteers can be an effective way to keep the program going in lean years.

Conclusion: Repeat photography can be an important and credible way to demonstrate the long-term effects of forest management to the public. A series of pictures can show that the unattractive image of timber harvesting is temporary and actually results in the rebirth or growth of the forest. It can also be used to show the results of many other types of management.

To be credible, photo point photography must be carefully done. The observer should be able to see that the image is of the same spot each time even though the size and the shape of the vegetation changes. When variation is minimized, these photos are readily adaptable to video presentations.

As we learn to communicate with changing technology, being able to display convincing positive visual images is essential. Photo points can offer a believable picture, video or digital display of change in the forest.

Reference: MacCleery, Doug. 08/23/85. Repeat photography for Assessing Ecosystem Change: A Partial Listing of References. USDA/Forest Service.