



Council of Bay Area Resource Conservation Districts

Equine Facilities Assistance Program

"Working with horse owners to protect San Francisco Bay Area water resources."

Photographic Monitoring for Equestrian Facilities

Number 4

June 2000

Participating Resource Conservation Districts

Alameda County RCD
Contra Costa RCD
Marin County RCD
San Mateo County RCD
Southern Sonoma County RCD

For more information contact:

Council of Bay Area RCDs
1301 Redwood Way, Suite 170
Petaluma, CA 94954
(707) 794-1242, ext 121

Photographic monitoring is a simple and convenient method for documenting the relationship between conservation practices that you implement on your property and the condition of natural resources. This fact sheet explains why, what, how, and when to photograph your facility. It also describes what equipment you need and simple record-keeping procedures.

Why should I photograph my equine facility?

It has been said that a picture is worth a thousand words. A photographic collection that documents changes made to your equestrian facility provides a history of your property and can show others how you have improved conditions. Here are some more reasons why you should photograph your equine facility:

- ◆ Photographs show the investment you have made in developing and improving your property.
- ◆ Photographic monitoring establishes a visual representation of the effectiveness of management practices you have implemented.
- ◆ Photographs show important details that supplement features shown on your facility site map and described in your conservation plan.
- ◆ Photographic monitoring is a tool that can help you make management decisions.

What should I photograph?

In order to monitor changes at your facility, photographs should document:

- ◆ Changes over time in the condition of natural resources and man-made features
- ◆ Conservation measures you have taken to insure water quality (before & after)
- ◆ Impacts of major storm events, fires, landslides, etc. on your facility
- ◆ Sources of contaminants (e.g. manure, chemicals) and how they are transported or contained
- ◆ Special management areas (e.g. wildlife set asides)

Photographs will demonstrate the effectiveness of your conservation plan. Therefore, focus your photographing effort on specific areas that are being addressed in the plan. Following is a list of specific areas in your horse facility that you should monitor with photographs with guidelines for photographing each area.

What to monitor with photographs

Manure Management Areas

Photograph the components of your manure management system - collection, storage, and use. Include evidence of grass buffer strips, roofs, or other efforts to control runoff from these areas. You may also want to photograph manure utilized as mulch for landscape, spread as fertilizer on fields, or used in a garden.

Pastures

In each pasture, establish permanent photopoints that can be re-photographed year after year. Take overview pictures of each pasture looking across it. Include fencelines, developed water sources and other features that show the effects of land management. Then take close-up pictures in each pasture to record plant cover.

Buildings (Barns/Covered Arenas)

Use photographs to illustrate where structures are situated in relation to creeks and hills. Take an overview picture of the site area and add detail shots if necessary. When installing new gutters or drains, be sure to photograph these improvements with before and after pictures. Show path of roof runoff and outlet at creek or infiltration area.

Heavy-use Horse Areas (Open Arenas/Riding Rings/Corrals/Paddocks)

Take photographs illustrating the relationship of these areas to topography and water flow. Again, take overview pictures and close-up shots. Since these areas are usually bare ground, show any vegetated areas such as a grass buffer strip. If you make improvements such as upslope diversion of runoff or footing changes be sure to include before and after pictures.

Trails and Roads

Trails and roads are especially susceptible to erosion problems. Photograph trails and roads that are used extensively and/or those which pass through steeply sloping areas or near water bodies. Use before and after pictures to record improvements after regrading, installing culverts, or implementing other erosion control practices.

Water Resources and Riparian Areas

Riparian areas include land next to springs, creeks, rivers, lakes, or ponds. Be sure to include photographs of these areas. Choose a representative area, photographing an overview and close-up. Show any road/trail crossings, pipe outfalls, etc. Record improvements made to creek banks for erosion control.

Impacts from Natural Hazards

Major events such as fire, floods, earthquakes, and drought may create noticeable impacts on the resources of your property. Use photographs to document the damages, your repair efforts after the event, and any further practices you install as a result of the event.

Neighboring Land Uses

Neighboring land uses such as encroaching urban development can impact water quality near your property by changing runoff patterns, drainage, and slope stability. Take overview photographs of neighboring lands, especially focusing on land-use practices that may impact *your* property.

Equipment needed for photo monitoring

- ◆ Camera (35 mm, with 50 mm and wide angle lens if possible)
- ◆ Film (100 or 200 speed)
- ◆ Notebook
- ◆ Marker card, non-white
- ◆ Photo safe pen
- ◆ Photo safe album

How to photograph your property

Take two types of pictures:

◆ **Overview photographs** document overall change over time. Use overview photographs of your property to record the location of barns, corrals, pastures, and arenas in relation to waterways, water bodies, drainage courses, and general topography. When taking overview photographs, always include a permanent identifiable feature in the background such as a building, tree, fence, or rock outcropping. Since overview photographs need to encompass a large area, you may wish to use a wide-angle lens or panoramic setting (if your camera has one).

◆ **Close-up photographs** show details of the changes at your facility. After taking overview photographs, use close-up photographs to show specific characteristics of an area such as soil surface or plant cover. Close-up photographs can also be used to show details when recording the construction of a conservation practice. Close-up photographs should be taken looking into the area at approximately a forty-five degree angle. Use an object or measuring tool in the photo to show scale and size of the features being recorded.

Establish permanent photopoints:

When monitoring with photographs, permanent photopoints should be established in each area that you want to monitor. The number of photopoints established will be dependent upon the size, general layout, topography, and complexity of the operation and the individual manager. When choosing photopoints, remember you want to document improvements you have made and trends over time that affect water quality.

To establish a photopoint, use a permanent landmark such as a fence post or tree (or create a marker with a wood or steel post). This is where you will always stand when you take the monitoring photos. Be sure to show the location of the photopoint on your facility site map. Give each photopoint a name or number.

When you take the pictures, you may want to include a marker card (on non-white paper) in each photograph showing the photopoint name/number and date. This will help you identify the photograph once it is developed.

Record every photograph:

In a notebook, write down a description of each photograph you take. Include the following:

- ◆ Name or number of photopoint
- ◆ Specific description of location
- ◆ Date & time of day
- ◆ Name of photographer
- ◆ Camera and lens size
- ◆ Film speed, film roll #, frame #
- ◆ Field notes (weather, unusual conditions)
- ◆ Location information (e.g., GPS reading)

When to photograph your property

Once photopoints are established, you should return to these exact points at the same time of the year to document changes over time. You may return to photograph a point annually or several times per year. For example, you may time your photos to correspond with the winter rains (to show runoff patterns) and also during the summer to give a contrasting view. From each photopoint, take at least one overview photograph and one close-up photograph. Also, remember to always take photographs before and after you have made facility improvements to document the long and short term effects of your conservation efforts.

How do I store my photographs?

When the photographs are processed, file the prints in a monitoring album. To ensure safe, long-term storage, purchase an album that uses acid free archival quality paper and/or PVC free plastic. It is best to obtain double prints and store the negatives and one set of prints in a safe place separate from the album.

Each photopoint should have its own clearly marked page. Be sure to label the photographs, but do not write directly on prints because it can damage the image. Use self-adhesive labels and a photo safe pen. Remember to store photographs away from heat, light, and moisture.

Prepared by Alameda County Resource Conservation District

This project has been funded in part by the United States Environmental Protection Agency Assistance Agreement No. C9-999414-96-1 to the State Water Resources Control Board and by Contract No. 7-028-252-0 in the amount of \$255,000.00. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency or the State Water Resources Control Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

This fact sheet is part of a series prepared and published by the Council of Bay Area Resource Conservation Districts in cooperation with the USDA Natural Resources Conservation Service and the University of California Cooperative Extension. The Equine Facilities Assistance Program's goal is to protect San Francisco Bay Area water resources by assisting in effective management of possible non-point source pollutants associated with horses. Resource Conservation Districts (RCD) are non-regulatory, special districts governed by a volunteer board of directors. In addition to educational programs, RCDs provide landowners and the general public with technical assistance in natural resource management.