

TO: All NWCOS members and others interested
FROM: Dana Bishop, Maria Fernandez-Gimenez, and the NWCOS OHV Monitoring Workgroup
RE: NWCOS OHV Monitoring Project
DATE: May 12, 2005

Background Information

This OHV monitoring effort was initiated by NWCOS members. After the January 15 adaptive management workshop facilitated by CSU, participants showed interest in beginning a small pilot adaptive management project focused on OHV use in Sand Wash Basin. A monitoring plan and baseline data are needed in order to outline an adaptive management plan. The OHV workgroup was created to discuss and organize monitoring efforts. Dana Bishop and her advisor, Maria Fernandez-Gimenez (graduate student and CSU professor) agreed to help guide the group through the process of developing and implementing a pilot OHV monitoring study. This pilot study will provide preliminary data that will: 1) enable the group to create a statistically rigorous and informative long-term monitoring program, and 2) provide initial information on the effects of OHV use on vegetation and soils. We will learn from this experimental pilot study and some adjustments may be necessary in the future. Based on the information gathered in this pilot project, a long-term monitoring plan will be outlined that addresses the goals and objectives outlined below. NWCOS can then work with the BLM to determine whether and how the monitoring plan may inform future management decisions. The BLM has mentioned that these data may be useful to understand the impacts of OHV (on soil and vegetation) and to give scientific support for where trails will be located. This is more of an activity level decision, rather than an RMP level decision. However, we will have to wait until these data are analyzed to understand their rigor and utility.

Overall Goals and Objectives of the OHV Monitoring Workgroup

Goals:

- 1) Complete a pilot project that provides information to inform future monitoring of OHV effects on soil and vegetation (e.g. number of plots required to detect changes, time requirements, etc.).
- 2) Gain experience with community-based monitoring.
- 3) Understand OHV use and OHV interaction with the *landscape*.

Objectives

- 1) Determine the level of OHV use across the landscape using trail counters and aerial photos over time.
- 2) Understand how the different levels of OHV use affect
 - a) vegetation and soils
 - b) archeological sites
 - c) sage grouse habitat
 - d) wildlife (wild horses, elk, deer, etc) (to some extent, this info can be extrapolated from vegetation and soils data)

Goals and Objectives Addressed in the Spring 2005 Sand Wash Basin OHV Monitoring Study

Goals

- 1) Complete a pilot project that provides information to inform future monitoring of OHV effects on soil and vegetation (e.g. number of plots required, time requirements, etc.).
- 2) Gain experience with community-based monitoring.

Objectives

- 1) Understand how the different levels of OHV use affect
 - a) vegetation and soils

The specific goals and objectives addressed in the spring 2005 Sand Wash Basin monitoring effort represent the knowledge area of the CSU staff that is providing assistance with this project. The project is relatively narrow in scope due to the limited time and funding available to the group. This is a pilot project and as data are gathered and the OHV workgroup continues its discussions, the objectives and methods may change.

Spring 2005 Vegetation and Soil Monitoring in Sand Wash Basin

The Sand Wash Basin monitoring is scheduled to begin May 21 and continue throughout the week until data collection is completed.

This monitoring addresses two main questions:

- Do soils and vegetation differ on trails that receive different levels of use? (i.e. on high, medium, and low-use trails and off-trail controls)
- How do impacts on soils and vegetation change with distance from trails? (i.e. How far from the trail do impacts disappear (become undetectable)?)

Data will be collected on:

- a) Vegetation cover (via line-point and gap intercept methods)
- b) Cover of bare ground (gap intercept method)
- c) Invasive species (frequency method)
- d) Soil compaction
- e) Erosion (via trail profiles)
- f) Photo points.

We will be monitoring these variables in south Sand Wash Basin on trails of different use (i.e. high, medium, and low use trails, and off-trail control areas). Four different trails in each use category have been randomly selected for monitoring. This project will focus on a single vegetation type, sagebrush-grass communities, and relatively flat terrain areas. It is important in this pilot study to locate plots in areas of similar vegetation and slope so that we can be sure that any differences in soils and vegetation that are detected are due to OHV use and not other factors (such as differing slopes or vegetation types). This also reduces the number of plots that must be sampled to obtain reliable results. In the future, if NWCOS members want to know how OHVs affect soils and vegetation on steep slopes or in other vegetation communities (e.g. piñon-juniper), monitoring can be expanded into these areas.

For this pilot project, CSU encourages NWCOS to keep the design simple by focusing on a single vegetation type and placing all plots in fairly level areas. The monitoring design that CSU proposes has been reviewed by scientists at the Center for Environmental Management of Military Lands, who have extensive experience in monitoring vehicle impacts on different vegetation types, and by a biostatistician. Since this is a pilot effort, we won't know how well this monitoring protocol works until after the first season's data are collected and analyzed. Then we can use this pilot data to make any necessary revisions in the monitoring plan.

Suggestions from all NWCOS members are welcome and can be expressed via emails to the OHV workgroup and at OHV workgroup meetings. We encourage anyone interested to attend the workgroup meetings or to come out and help with the monitoring so that you can see exactly what is being measured and how.