Examining Ecological Sites for Grazing Plans

Purpose

Ecological sites (ESs) and ecological site descriptions (ESDs) provide a consistent framework for classifying and describing soils and vegetation and delineating land units that respond similarly to management activities and disturbance. ESDs provide information needed by land managers to evaluate the suitability of land for various uses, the response of the land to different management activities and disturbances, and the ability of the land to sustain productivity long term. The descriptions are a vital tool for conservation planning and land management.

Although ESs and ESDs have been developed for more than 20 years, a limited number of ESDs are available for conservation planners in the State of California. To minimize time-consuming data collection and literature reviews, NRCS-California Area 1 staff is using the existing ESDs available for their area of responsibility to complete important portions of the grazing plans for some conservation easements. Several topics were discussed with SSD staff, including the following:

- ESDs too broadly defined for evaluation of some landscapes,
- database inconsistencies,
- potential for collaboration to improve data quality, and
- improvement of ESDs to address specific needs related to grazing plans.

Grazing land field site in northern MLRA 18.

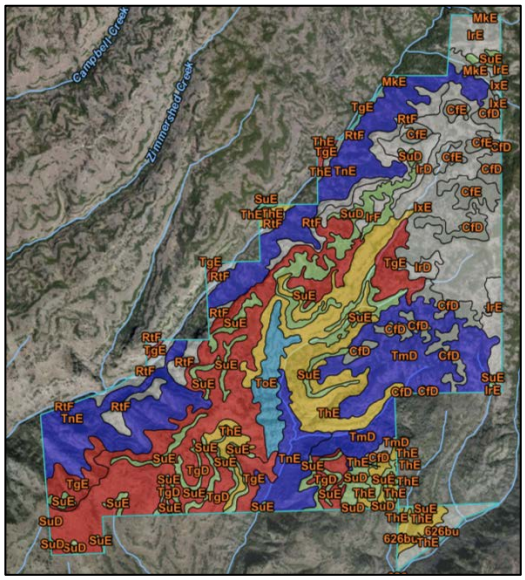
Key Outcomes/Products

Alan Bower, Area 1 rangeland specialist, and Kendra Moseley, regional ecological site specialist for Region 2, spent a day in the field together. For Kendra to gain a better understanding of the uses of ESDs for grazing plans, they viewed the ranches for which plans were being developed. Alan created soil maps, ES coverage maps, and grazing plans for a conservation easement and brought them to the field to demonstrate how the products and plans translate to the landscape.

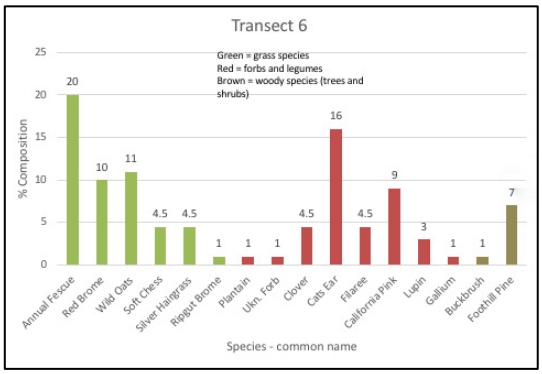
After discussing the landscape, soils, and available ES information, Alan illustrated the value of ESDs and the need for information that is not available in all of them. He also pointed out that some of the information is too broadly defined to be useful for grazing plans; therefore, he had to spend several days in the field collecting data and analyzing it to properly complete the plans.

Alan discovered that ESs and ESDs were not available for some areas of a ranch. For other areas, an ES was correlated to the soils but the number of the ES in Web Soil Survey was different than the number in the ESIS database.

Kendra and Alan discussed ways to address some of the simpler issues that can be fixed easily, such as mismatched ES numbers, and possible improvements that would help in future development of grazing plans for landowners.



Complex soils map of a ranch.



Vegetation data collected from an area of a ranch for which ES information is not available.

Future Goals/Conclusions

ESs and ESDs have great potential to improve the quality of NRCS conservation work. They provide crucial baseline data and compiled research information on soil-site characteristics and dynamics. They are a clearinghouse of information that can be used to make many alternate decisions for land management. ESDs can provide much of the information needed for grazing plans and effectively reduce the time and labor needed to gather important field data. However, more effort should to be focused on refining the scale of ES concepts so that they are applicable to conservation planning projects on small-scale acreages.

Future ES project plans should identify areas where the soil or ecological site concepts are too broad or don't properly describe and define the ecological dynamics and soil-site characteristics in an MLRA or LRU.