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July 11, 2019

Secretary of Agriculture Sonny Perdue
U.S. Department of Agriculture
1400 Independence Ave., S.W.
Washington, DC 20250

Secretary of the Interior David Bernhardt
U.S. Department of the Interior
1849 C Street, N.W.
Washington, DC 20240

Dear Secretary Perdue and Secretary Bernhardt,

This letter requests your support, and encourages a proactive approach to develop and refine quality ecological site descriptions (ESDs) and soil surveys. Accurate and up-to-date information on soil characteristics, ecological potentials, and management responses on rangelands and forestlands is essential to assess natural resources, inform resource management planning and generate science-based management decisions. The Society for Range Management (SRM) is a professional organization that promotes sustainable, science-based natural resource management and has long taken the position that sound inventory and assessment information is vital to this goal. SRM has repeatedly supported the ecological site concept, developed by the Natural Resource Conservation Service (NRCS) and used by most federal, state and county agencies, as a valuable resource and tool for assessing natural resources and for conservation planning. Completed soil surveys using integrated data collection methods can bolster agency efforts, e.g., the USDA Forest Service (FS) Terrestrial Ecological Unit approach, is essential for this purpose.

In January 2013, The USDI Bureau of Land Management (BLM), USDA Forest Service (FS) and NRCS completed the *Interagency Ecological Site Handbook for Rangelands*. The Handbook directs all three agencies "to cooperatively identify and describe rangeland ecological sites for use in inventory, monitoring, evaluation and management of the Nation's rangelands." This was in part directed by Congress in the Agencies Appropriations Act of 2002. In that Act, "Congress expected the Secretary of Agriculture and the Secretary of the Interior to prepare a coordinated plan and budget that would identify the cost of completing standardized soil surveys and ecological classification on all rangelands for use at local management levels."

While progress has been made over the years to classify and describe soils and ecological sites, the SRM has specific concerns. Some areas in the U.S. lack soil surveys and/or Ecological Site Descriptions (ESDs), or the soil surveys and/or ESDs are out-of-date or are based on minimal technical information. As new surveys are completed, existing soil surveys and ESDs must be updated.

The SRM recommends the following:

1. Updating and completing ESDs. Ecological site descriptions are often incomplete or based on limited information. They are classified as "draft" or "provisional" by the NRCS. Relatively new ecological concepts that have been developed over the past 25 years, such as state-and-transition models and rangeland health reference sheets, are lacking in many ESDs and older versions are not supported by current reference information. If published information does not exist, NRCS should indicate that the

state-and-transition models in an ESD are based on expert opinion, and will be supported by published information as it becomes available.

2. Adequate and appropriate skill set to complete ESDs. With the urgent need to complete soil surveys and ESDs, characterizing plant communities, vegetative state-and-transition models, rangeland health indicators, and response to management and natural processes, such as drought, can only be reliably assessed by competent professionals with long-term field experience in the local area. Regional research groups or contractors brought in from other areas can help provide some data, improve the conceptual basis, and facilitate the use of data by developing data banks, but they cannot describe the interface between physical and biological processes without actually observing how these sites respond to weather, fire, grazing and other influences over time. Soil surveys and ESDs must be completed by local experts.

Provisional ESDs were to be completed by 2020. We have concerns that quality may be compromised from this well-intended, aggressive process. For example, some of the provisional ESDs we have reviewed are too broad to be of much use in conservation planning. Some ESDs have slopes ranging from 0-90%, surface rock contents ranging from 0-90%, and cover several soil textural groups among which infiltration and erosion would differ significantly.

Unfortunately, the supply of such experienced professionals in the NRCS, BLM, FS, and even in the Land Grant Universities continues to decline. As experienced people retire, or are assigned to other duties, their positions are often not refilled or positions are filled with individuals who lack an adequate background and/or job description to do this work. Similarly, the number of soil scientists who have the educational background and experience to complete surveys is limited. Students interested in studying soils **and** range management have declined in numbers over the past several years because of the lack of emphasis on combining these two disciplines, or the perceived lack of opportunities after they complete their degree programs.

3. Soil Survey and ESD database needs. NRCS, BLM and the FS have a standing interagency Memorandum of Understanding (MOU), a *Rangeland Interagency Ecological Site Manual and Handbook*, and a National Implementation Plan to aid collaborated, consistent and efficient development of rangeland ecological sites and ecological site descriptions. NRCS has made valuable contributions by providing a centralized information base for use by all agencies, consultants and the general public. The BLM and FS are also engaged through the Federal Land Advisory Group (FLAG), and related NRCS Focus Groups. All three agencies have released field instructions emphasizing the Interagency ESD Implementation Plan and the critical need for strong collaboration in developing ESDs. However, some agencies continue to use their own protocol. NRCS also contracted for a cell phone app that could access the Web Soil Survey, but unfortunately, this has not been updated for newer model phones. SRM understands that the Ecological Site Information System (ESIS) is apparently not being adequately maintained and updated, and that a new program, the Ecosystem Dynamics Interpretive Tool (EDIT) is in the process of replacing ESIS. SRM strongly encourages the agencies to quickly implement EDIT (or whichever platform is deemed appropriate) so technically developed ESDs are readily available.

4. Standardized soil surveys and ESDs. The Related Agencies Appropriations Act of 2002 directed the Secretary of Agriculture and Secretary of the Interior to prepare a plan to complete standardized soil surveys and ecological classification on all rangelands for use at the local management level. The interagency effort highlighted above, and the evolution of Soil Survey 2026 are supported by the BLM,

FS and NRCS. The USFS places emphasis on Terrestrial Ecological Unit Inventory which relies on a multi-variate, integrated ecological classification and mapping process that also satisfies the requirements of the National Cooperative Soil Survey and ESD development. This process is described in the interagency range ESD Handbook. However, tabular and data management challenges exist between the FS and NRCS, which precludes the use of a common technical standard. Solutions are being sought through NRCS Focus Group efforts and administratively by other agencies. One of the three teams being established by the Interagency ESD Implementation Plan will focus on data management issues.

SRM recognizes that the process of completing and refining ESDs and soil surveys is ongoing and that federal budgets are limited. However, we believe that personnel and budgetary support for these activities need to be increased to help local, state and federal agencies cope with anticipated changes caused by global warming. We urge you to consider this need, which will be the underpinning for future administrative decisions in this time of change.

Sincerely,

Dr. Clayton Marlow
SRM President, 2019

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Enclosures

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