

## Peer Review Plan

Title of Review:	<u>National Assessment of Soil Erosion on Non-Federal Rangelands</u> [X] <b>Influential Scientific Information</b>
Agency:	<u>Agricultural Research Service</u> [ ] <b>Highly Influential Scientific Assessment</b>
Agency Contact:	<u>Maureen Whalen, Assistant Area Director, PWA 800 Buchanan Street, Albany, CA 94710, Phone: 510-559-6063</u>
Subject of Review:	<p>The USDA-Natural Resources Conservation Service (NRCS) has used resource inventories for over 65 years to assess the Nation's natural resources on non-Federal lands. Since 1995, an interagency group composed of the NRCS, Agricultural Research Service, and Geological Survey have worked together to develop a robust field approach for National Resource Inventory (NRI) on rangeland. The new NRI protocols are designed to detect long-term, years to decades, changes in the condition on rangeland ecosystems, and monitor short-term impacts, which may be of immediate concern. A new process based model was developed by ARS for assessing soil erosion rates on rangelands in support of the Conservation Effects Assessment Project and NRI. The Rangeland Hydrology and Erosion Model (RHEM) was developed on data collected exclusively from rangeland erosion experiments, and is designed to use data that is routinely collected by rangeland managers. The RHEM tool was used to estimate runoff and erosion at the hillslope scale for over 10,000 NRI sample points in the 17 western states on non-Federal rangelands. National average annual erosion rate on non-Federal rangeland is estimated to be 0.63 ton ac<sup>-1</sup> year<sup>-1</sup>. Nationally 20% of non-Federal rangelands generate over 65% of the average annual soil loss. Over 72 million ac or 18% of the non-Federal rangelands might benefit from treatment to reduce soil loss to below 1 ton ac<sup>-1</sup> year<sup>-1</sup>. National average annual erosion rates combine areas with low and accelerated soil erosion. Evaluating data in this manner can misrepresents the magnitude of the soil erosion problem on rangelands. Between 23 and 29% (92 to 106 million ac) of the Nation's rangelands are vulnerable to accelerated soil loss (soil erosion &gt; 1 ton ac<sup>-1</sup> event<sup>-1</sup>) if assessed as a function of vulnerability by using the risk of a runoff event of a given magnitude (25 or 50 year return storm event). NRCS has not evaluated potential erosion risk in National reports in the past and adaptation of this technique will allow USDA and its partners to be proactive in preventing accelerated soil loss on rangelands.</p>
Purpose of Review:	<p>We anticipate that the external peer reviewers will possess an in-depth knowledge of research conducted. Reviewers will be expected to focus on areas such as:</p> <ol style="list-style-type: none"><li>1. The evidence provided and whether the conclusions and inferences are correctly supported by the evidence.</li><li>2. Evaluate the methodology. Is the approach and process appropriate for the analysis?</li><li>3. Are there data or other evidence complete? Have any important data or considerations been omitted?</li><li>4. Are all important assumptions identified and uncertainties clearly stated?</li><li>5. Identify any relevant data or evidence not contained in the report.</li><li>6. Evaluate the quality and completeness of the individual components of the analysis.</li><li>7. Comment on whether/where the document is difficult to read or understand.</li></ol>

