

A NATIONAL WIND EROSION RESEARCH NETWORK

N.P. Webb¹, J.E. Herrick¹, C.H. Hugenholtz², T.M. Zobeck³, G.S. Okin⁴

¹ *USDA-ARS Jornada Experimental Range, Las Cruces, NM, USA –
nwebb@nmsu.edu, jherrick@ad.nmsu.edu, Kris.Havstad@ars.usda.gov*

² *Faculty of Environmental Design, University of Calgary, Alberta, Canada –
chhughen@ucalgary.ca*

³ *USDA-ARS Wind Erosion and Water Conservation Research, Lubbock, TX, USA –
Ted.Zobeck@ars.usda.gov*

⁴ *Department of Geography, University of California Los Angeles, CA, USA –
okin@geog.ucla.edu*

Public concern about wind erosion in the United States is high. This concern has arisen as a consequence of changing and intensifying land use pressures which can lead to increased soil loss and dust emission. However, there is relatively little research to support improved management. While much attention has been given to measuring and modelling wind erosion in US croplands, little information is available on the magnitude and frequency of wind erosion in rangelands and other land cover types. Resolving this knowledge gap is important for soil conservation in the face ongoing land use change, land cover change and climate change. Predictive models supported by high quality, spatially-diverse field measurements are needed to quantify wind erosion across all land cover types so that the impacts can be assessed and management options identified and tested. We present a National Wind Erosion Research Network to support field assessments of wind erosion in all land cover types and the development of an all-lands wind erosion model. We describe the establishment of the network field sites, supported by the US Department of Agriculture's Long-Term Agroecosystem Research (LTAR) network, Natural Resources Conservation Service (NRCS), Bureau of Land Management (BLM), and Department of Defence (DoD), and outline a standard methods protocol developed to ensure consistency in wind erosion monitoring and assessment across the network. The network will provide opportunities to evaluate controls on the timing and intensity of wind erosion across land use and land cover types in the United States. These data, in support of an all-lands wind erosion model, will provide much needed tools for managing wind erosion and its impacts.