

WIND EROSION AND ITS IMPACT ON OFF-SITE AIR QUALITY IN THE COLUMBIA PLATEAU -AN INTEGRATED RESEARCH PLAN

K. E. Saxton

ABSTRACT. With the advent of the 1990 Clean Air Act came the responsibility to monitor and control fugitive air particulates with diameters less than 10 micron (10×10^{-6} -m, PM_{10}). Many urban areas, particularly in the Western United States, have experienced concentrations of these particulates which exceeded the federal health standards of this legislation a sufficient number of days that costly remedial measures have been required. In several of these cases, it has been evident that a significant amount of this material was generated by wind erosion on upwind agricultural fields, entrained in the regional air mass, and impacted downwind urban areas. There is an urgent need to better define the hazards and controls of PM_{10} particulate material emitted by wind erosion on agricultural lands. It is not possible with current knowledge to determine the quantity of PM_{10} material emitted from agricultural areas or to prescribe appropriate control methods. An extensive research and evaluation plan has been developed and initiated for the Columbia Plateau Eastern Washington State with multi-disciplinary and multi-agency involvement.

Keywords. Wind erosion, Air quality, Conservation, Dryland, Cereal, Models, Dust, Particulate, PM_{10} .