



## **The Daily Erosion Project - lessons learned by expanding a statewide erosion and runoff model beyond state boundaries**

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The Daily Erosion Project (DEP) model is an extension of the Iowa Daily Erosion Project (IDEP) 2.0 model to additional states in the US, initially Kansas and Minnesota. DEP provides comprehensive and dynamic estimates of sediment delivery, soil erosion, and hill slope runoff for agricultural land areas across the area of interest. The integration of high spatial and temporal resolution precipitation and climate data, high resolution LiDAR topography, spatially variable soil properties from current SSURGO information, remotely sensed crop rotation and residue management data, provides increased spatial resolution of runoff and erosion estimates over IDEP 1.0, the previous version derived from land management survey data. The reasoning used to define a representative measurement unit, subcatchments of Hydrologic Unit Code (HUC) 12 watersheds (each approximately 1000 hectares) throughout the modeled area along with methods used to incorporate disparate LiDAR datasets as well as varying crop rotations and management practices and their effects on model accuracy will be discussed.