



Soil Explorer – Impressive Interpretations from the USA Soil Survey Maps

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The Soil Explorer website and app provides access to soil maps based on specialized interpretations of the USA's massive SSURGO database. Soil Explorer is the result of the Integrating Spatial Educational Experiences (Isee) project. The Isee project, which started as an educational tool to help students at Purdue University better visualize Indiana soil landscapes during field trips, has evolved to a publicly available iPad and iPhone app and the SoilExplorer.net website. Currently available maps include Soil Orders for the conterminous USA and several soil attribute layers for a growing number of states. One of the features of Soil Explorer is the presentation of individual layers that focus on single soil attributes, which can be more easily absorbed by both novice and expert users. Viewers can change layers quickly, allowing them to recognize complex spatial relationships among different soil properties. A core map is the Dominant Soil Parent Materials map, which is useful for geologic study and for better understanding a major factor in the distribution of soil properties. This new interface, with its educationally focused layers, is making soil information more accessible. In addition, Soil Explorer highlights the phenomenal work that went into the USA's National Cooperative Soil Survey. The maps in Soil Explorer are interpretations of the gSSURGO database, which is a rasterized version of the high-resolution, ground-truthed soil maps of the most recent soil surveys. While there is a case to be made for why the USA's Soil Survey maps should be improved, the detail, accuracy, and continuous extent of the current maps are unrivaled and makes them more than sufficient to generate the thematic maps in Soil Explorer. In an era of digital soil mapping and interactive web maps, Soil Explorer strikes a balance in leveraging the tremendous information in first-class soil maps generated by traditional methods and new benefits from geographic information systems.