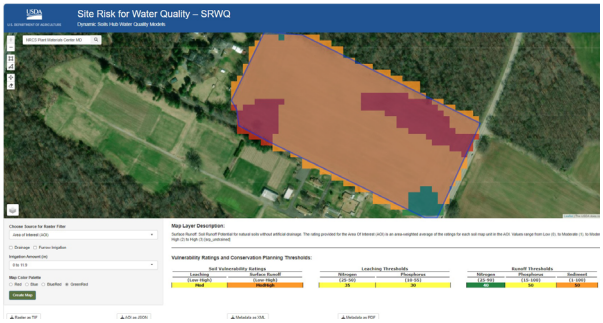
USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Site Risk for Water Quality Risk Tool

Dynamic Soils Hub Water Quality Models



Background

USDA's Natural Resources Conservation Service (NRCS) uses site-specific nitrogen and phosphorus planning thresholds for leaching and runoff within the Conservation Assessment Ranking Tool (CART) to help producers utilize nutrients more efficiently to protect water quality. Those same planning thresholds are available to planners in a new Geographic Information System (GIS) Site Risk for Water Quality (SRWQ) tool available on the Dynamic Soils (DS) Hub. This tool can help technical service providers (TSPs), certified crop advisors (CCAs), and NRCS planners visualize how the risk of nutrient loss varies across the landscape. They can then tailor nutrient management that address each site's risk for nutrient loss pathways including leaching, runoff, and sediment loss.

Tool Access

TSPs, CCAs, NRCS conservation planners, academia, and the public can access the tool to support nutrient management decisions. The goal is to make other conservation practices like crop rotation, cover crop, residue management, irrigation water management, and drainage water management more effective.

Dynamic Soils (DS) Hub

The DS Hub is a new platform and toolset for soil scientists to do high-performance geospatial modeling and terrain analysis. The DS Hub increases USDA's capacity to rapidly respond with critical authoritative soil and climate data and information. The DS Hub will dramatically reduce data delivery timelines and improve transparency with documentation that is compliant with the Geospatial Data Act of 2018.

The partnerships contributing to the Dynamic Soils (DS) Hub site risk for water quality tool include:

- The Conservation Information Delivery Section, Soil & Plant Science Division, Soil Science & Resource Assessment
- The Water Quality and Quantity Technology Development Team, Science & Technology
- The Conservation Planning & Technical Assistance Division, Programs
- The Ecological Sciences Division, Science & Technology

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