

Protect and enhance the soil with

# The Daily Erosion Project

When travelling across the U.S. Corn Belt in the spring, the occurrence of soil erosion is evident in the cracks in bare farm fields and cloudy water gushing through streams. Heavy tillage, a weak root system from continuous row crop production, and maintaining bare soils can have devastating long-term impacts on soil health and regional water quality.

The loss of topsoil is strongly correlated with the loss of future crop yields. Year-to-year losses have a small impact, but the cumulative loss over time could equal a significant loss. According to a 2016 study led by Dr. Richard Cruse, the cumulative cost of soil erosion in corn and soybean production for a ten-year period could be *up to \$315 million in Iowa in yield losses alone.*

*Farmers and landowners who make long-term investments in their land could be positioned to not only have long-term savings in their soil on the land, but also in their finances.*

The first step in managing soil as a resource is to understand how it is being lost in real time. **The Daily Erosion Project** estimates soil erosion and water runoff on over 200,000 hillslopes across Iowa. This is done by estimating and inventorying sheet and rill erosion. *Using this information will enable farmers and conservation planners to be more knowledgeable about the land and to be more effective with resources.*

This tool is powered by NEXRAD precipitation data, LiDAR surface elevations, the USDA NASS Cropland Data layer, the USDA Soil Survey Geographic database, and the WEPP soil erosion model.

This is a **free tool** that is accessible online at **[dailyerosion.org](http://dailyerosion.org)**. Log on today to learn about soil erosion rates and to identify priority conservation areas within your area of the state.

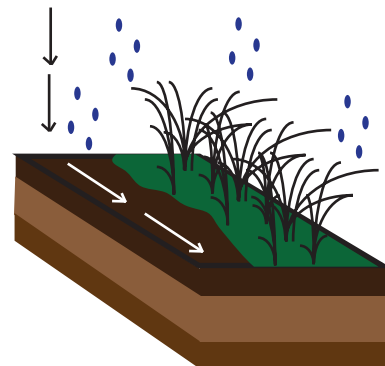
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Image of soil erosion in Iowa in Spring 2017.



Soil erosion is the result of the combined effects of precipitation, wind, and land management decisions.

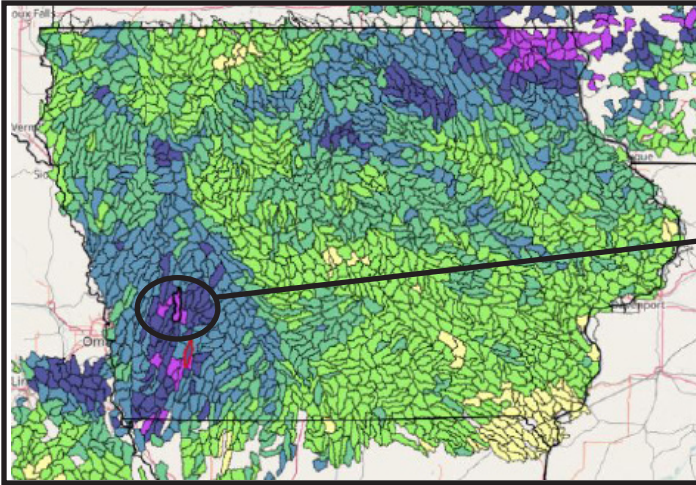


Image of soil erosion in Iowa in Spring 2017.

# What will you learn from the Daily Erosion Project?

## Headwaters of Walnut Creek in Southwest Iowa

Example of a HUC-12 Watershed from January 2016 - December 2016

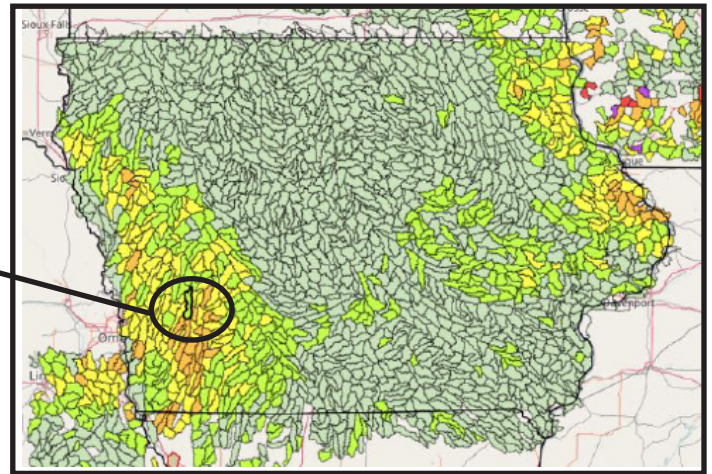


Water Runoff is 12.91 inches.

*Runoff is the movement of excess water following a rainfall event. Runoff is used to understand the amount of water that cannot infiltrate in the soil in the landscape.*

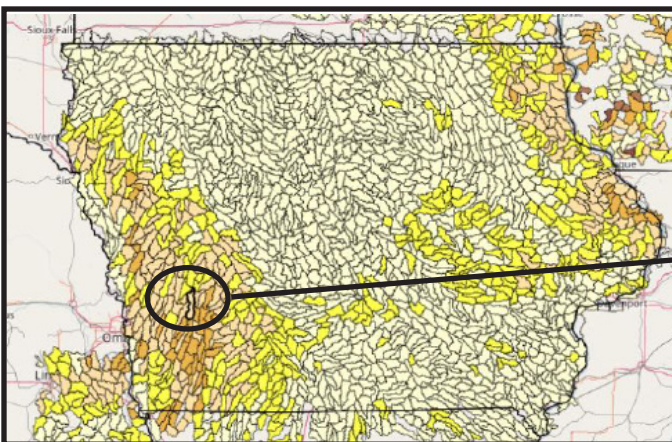
Soil Detachment is 11.63 Ton/Acre

*Detachment is the amount of soil that separates from a land area. Detachment helps us understand the amount of protection the current farming system gives to the soil surface against weather related events. No detachment would indicate the land is fully covered with plant material.*



Soil Delivery is 11.14 Ton/Acre

*Soil delivery is the amount of soil that moves down a slope past a predetermined point on a hillslope. Soil delivery is used to understand the amount of soil lost indefinitely from the landscape.*



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