PERFORMANCE-BASED CONSERVATION TO ADVANCE REGENERATIVE AGRICULTURE

JANUARY 2026

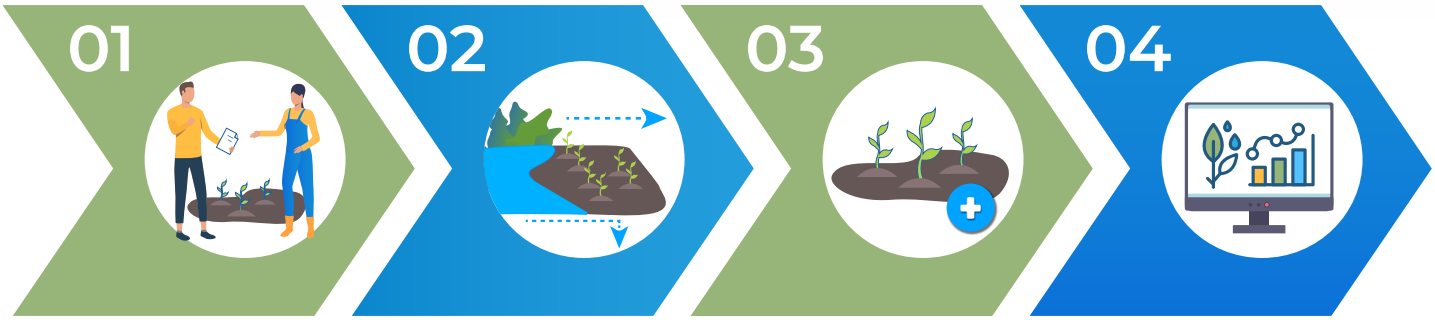
Environmental Benefits Resulting from a Three-Year, Wisconsin NRCS Conservation Innovation Grant

Performance-based conservation (PBC) is a system for agricultural conservation delivery that is predicated on planning and modeling whole farm systems to identify management and practice changes or additions that result in the highest environmental response to a resource concern(s). Instead of providing a flat incentive payment for implementing a farming practice, regardless of the amount of positive environmental benefit, the PBC approach applies a direct financial value tied to the quantified environmental improvement that results from the management change (i.e., price paid per pound of phosphorus or sediment loss prevented by the practice added). PBC uses farm-specific management and soil data, with environmental models to identify areas where conservation improvements can be made to reduce erosion and nutrient runoff loss.

Sand County Foundation (SCF) assisted 23 farmers through a three-year (2023-2025) Wisconsin-based, NRCS supported Conservation Innovation Grant by applying the PBC approach. Working with each farmer to understand their agronomic goals, practical conservation scenarios that could improve downstream water quality were modeled to quantify the potential benefits. With access to this information, the farmer made informed decisions on how to maximize the environmental returns on their conservation investment.

Participating Farm Locations

Performance-Based Conservation Approach



Sand County Foundation meets with farmers to gather soil tests, field details, and management history to establish baseline data.

Sand County Foundation models soil and nutrient loss from each field under baseline and other conservation scenarios.

Farmers implement the best conservation scenarios for their field(s).

After verification, farmers receive data to quantify the environmental benefit of the management change.

Total reductions across the three years were equivalent to:

$8,323 of DAP fertilizer[1]

1,683 tons of algae[2]

113 dump trucks of sediment

114,803 tree seedlings grown for 10 years[3]

[1]Quinn, R. 2025. DTN Retail Fertilizer Trends, Most Fertilizers Lower in Price Than Last Month. Retrieved from www.dtnpf.com

[2]Vallentyne, J.R. 1974. The Algal Bowl, Lakes and Man. Ottawa, Department of the Environment.

[3]USDA-NRCS & Colorado State University. 2025. COMET Planner (Version 4.0) www.comet-planner.com

USEPA. 2024. Greenhouse Gas Equivalencies Calculator (Nov 2024 Update). www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

Results

SCF engaged over 1,050 people through field days, workshops, presentations, and other outreach events. **This collaborative project led to the implementation of 22,776 acres of new conservation practices across over 9,000 unique farm acres.**

SnapPlus (Soil Nutrient Application Planner), Wisconsin's nutrient management planning software, was used to model conservation scenarios and quantify changes in soil and nutrient field losses. These outcomes allow us to estimate the potential water quality benefits. **Results indicated that conservation implementation reduced field runoff losses by 8,217 pounds of phosphorus and 1,589 tons of soil sediment.**

The implemented scenarios were also input to Comet-Planner, an evaluation tool designed to provide generalized estimates of the greenhouse gas (GHG) and carbon sequestration benefits of conservation practices. **Results estimated a GHG reduction of 6,943 metric tons of CO_2 equivalent.**

SCF assessed the cost and success of the PBC approach compared to traditional federal incentive programs, finding that on average, PBC saved $41,142 per farm over the three years relative to the expected cost of using traditional NRCS EQIP funding.

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

USDA is an equal opportunity provider, employer, and lender.

This project is supported by USDA Natural Resources Conservation Service (Conservation Innovation Grant). Collaboration is provided by Green Lake Sanitary District, Ozaukee County Land and Water Management Department, Tilth Agronomy, and Wisconsin Department of Agriculture, Trade and Consumer Production.

Sand County Foundation inspires and empowers farmers, ranchers, and forestland owners to ethically care for the land to sustain water resources, build healthy soil, and enhance wildlife habitat.

www.sandcountyfoundation.org