

Sand County Foundation Conservation Brief

2021 Issue 1 • No. 1

Innovations for Phosphorus Compliance in the Milwaukee River Basin

The complexity of water-related challenges is expected to be exacerbated by increased frequency of high-intensity precipitation events over the next few decades. Over the last 50 years, nitrate and phosphorus (P) concentrations increased in many Midwestern water bodies, specifically, those in agricultural watersheds. **Municipal water utility departments have been challenged with communicating to their users the concept that urban and rural communities are connected by a shared watershed.**

The Wisconsin Department of Natural Resources (DNR) allows point-source P dischargers to utilize adaptive management or nutrient trading options to obtain Wisconsin Pollutant Discharge Elimination System (WPDES) permit compliance as an alternative to expensive utility infrastructure upgrade requirements. To date, 45 permittees are using these options, often investing in streambank stabilization or retiring one or two farm fields from production. **Few incentivize conservation practices on annual cropland**, due to complexity in documenting P reductions dispersed across multiple farms.

With a 2018 Fund for Lake Michigan (FLM) grant, SCF piloted a novel Performance-Based Conservation (PBC) approach with the Village of Grafton wastewater utility department, focusing on bridging urban and rural communities and sharing outcomes with local and state agency representatives.

The objective of the PBC pilot was to incentivize the adoption of agricultural conservation practices to farmers upstream of the utility's discharge point to reduce P loading to the Milwaukee River. As a result, the Village of Grafton pursued a Wisconsin DNR adaptive management plan to meet their waste water treatment plant water quality permit needs.



Sand County Foundation is supporting the first WPDES permit compliance effort engaging agriculture in the Milwaukee River Basin with a Performance-Based Conservation approach to adaptive management.





Under the 2018 FLM grant, SCF has been advising the Village of Grafton to adopt a PBC approach (versus a pay-for-practice approach) to meet municipal WPDES permit compliance needs while facilitating cash incentive contracts to farmers implementing practices for nutrient and sediment reduction. SCF developed a strategy to better facilitate farmer engagement by crop consultants and conservation professionals. The PBC farmer incentive approach pays farmers according to the modeled (SnapPlus) P (pounds) retained on the land (compared to what was previously lost with surface runoff) resulting from the implementation of new conservation practices on their fields.

A PBC incentive system, customized to fit local conditions (*landscape and economic*) and farmer networks in existing watershed-based projects, can accelerate nutrient management adoption and leverage non-federal conservation funding for farmers.

With a 2021 FLM grant, SCF will continue to work with and train Village of Grafton staff, local conservation staff, and farmers to foster relationships that will ensure adaptive management plan success. Project outreach will focus on empowering other regulated facilities within the Lake Michigan Basin to apply an adaptive management approach for permit compliance, establishing a process that builds trust between stakeholders and creates a culture of commitment to the goals and objectives of the entire watershed community.

A successful watershed approach is a critical piece to achieving the Village's 15-year adaptive management goal of over 62,000 pounds of P reduction to the Milwaukee River Basin, and ultimately Lake Michigan.

"It takes a village....."



To learn more please contact:

Greg Olson, 989.430.5483
golson@sandcountyfoundation.org

Craig Ficenec, 608.729.1388
cficenec@sandcountyfoundation.org

For more information visit:

Sand County Foundation
www.sandcountyfoundation.org/PerformanceBasedConservation

Project partners and sponsors:



Sand County Foundation inspires and enables a growing number of private landowners to ethically manage natural resources in their care, so future generations have clean and abundant water, healthy soil to support agriculture and forestry, plentiful habitat for wildlife and opportunities for outdoor recreation. www.sandcountyfoundation.org