

2016 Update

Land Owner and Grower Project Summary

Silver Creek Pilot Watershed Project

Silver Creek is a small stream located 1 mile west of the Austin Straubel airport and flows from Outagamie County into Brown County. The watershed is about 7.5 square miles (4,800 acres) and it is a tributary to Duck Creek and ultimately the bay of Green Bay. Water testing in Silver Creek shows that it has high levels of phosphorus and sediment that contributes to algae growth, low oxygen and loss of habitat for fish and aquatic life.

The Silver Creek pilot project is a demonstration partnership started in June 2014 between agricultural land owners and operators, Outagamie and Brown County Land Conservation, NRCS, and NEW Water (the Green Bay Metropolitan Sewerage District). A primary goal of the project is to improve soil health, implement operational improvements, and install conservation practices to retain phosphorus and soil on the field where it is beneficial to the farm. It is through this goal that attaining water quality standards in Silver Creek will be achieved, and a long-term partnership between NEW Water and the agricultural community can be established.

Land Owner and Operator Participation

Success of the demonstration project is due to the participation by land owners and operators in the Silver Creek watershed. Through 2015, benefits of project participation have included:

- » Soil nutrient sampling at 2.5 acre grids for all fields at no cost to the land owner were complete in 2014;
- » Fields walked with conservation and agronomic professionals to identify opportunities for reducing field-level phosphorus and soil loss;
- » Conservation and Enhanced Nutrient Management Plans developed for each land owner and grower; and Pilot project efforts, and coordination with growers and land owners in 2016 and beyond will include:
 - Meet with individual land owners and growers to review conservation opportunities and to develop implementation plans;



Collecting soil samples provides baseline data to support cost effective and technical decision making

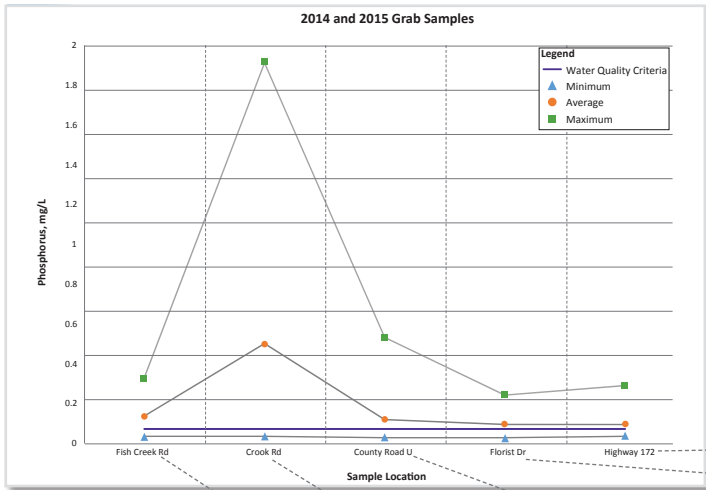
- Develop applications for conservation practice funding, utilizing a variety of funding sources to meet the needs of the grower or land owner;
- Assist with contracting, implementation, inspection and operation of the conservation practices starting in early 2016;
- Continue monitoring phosphorus water quality along Silver Creek to measure progress towards obtaining the phosphorus and sediment water quality standards; and
- Update conservation and enhanced nutrient management plans at the end of 2016 in preparation for 2017.



Grassed waterway through a farm field



Team of experts identifying conservation opportunities



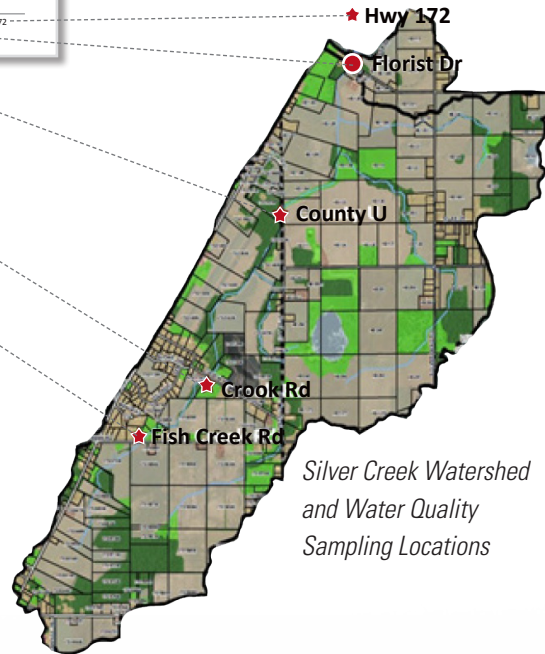
Ties to Water Quality

Through phosphorus sampling in Silver Creek, the pilot project has found 77 percent of all samples are higher than the phosphorus water quality criteria. A team of agriculture and water quality experts is working on ideas to improve Silver Creek water quality.

Upstream phosphorus concentration is greater than the downstream standard at all locations



Tillage and cover practices have different results in keeping soil on the fields. Here, runoff from a field with cover joins with runoff from a field that was tilled and had no residue or cover. (Spring 2016)



Silver Creek Watershed and Water Quality Sampling Locations

Major Findings So Far:

- » An average of 4 to 7 opportunities are available for improving structural and operational practices on each field.
- » There are options for conservation planning to achieve water quality goals.
- » Conservation, enhanced nutrient management, and profitability can all be achieved.
- » Simple yet thorough conservation plans with “tractor ready” maps are needed for successful implementation.
- » Conservation planning to only meet regulations is missing opportunities to improve operations and profitability.
- » Cost effective conservation opportunities exist with creative scheduling and farm management.

Milestone	2014	2015	2016	2017	2018	2019
Silver Creek Pilot Duration	[Active]					
Water Quality Monitoring	[Active]	[Active]	[Active]	[Active]	[Active]	[Active]
Field Soil Testing	[Active]	[Active]	[Active]	[Active]	[Active]	[Active]
Develop Conservation and Nutrient Plans		[Active]	[Active]	[Active]	[Active]	[Active]
Implement Conservation and Nutrient Management		[Active]	[Active]	[Active]	[Active]	[Active]
Develop Full Scale Program		[Active]	[Active]	[Active]	[Active]	[Active]

WBG040814012159MKE

Additional Information

For additional information about the demonstration project, please contact Jeff Smudde (jsmudde@newwater.us or 920-438-1071) or Brent Brown (brent.brown@ch2m.com or 414-847-0393).

This project has been funded in part by the United States Environmental Protection Agency under assistance agreement GL00E01450 to the Green Bay Metropolitan Sewerage District. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.



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