

County/Municipality/Organization: Niagara County Soil & Water Conservation District

Name of Project or Activity: Golden Hill Creek Agricultural BMP Implementation Project

Project Contact Information

Name of Primary Contact & Title: Victor DiGiacomo RAP Coordinator	Physical Address (street, town, state, zip): 4487 Lake Avenue Lockport, NY 14094
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Project Location

Municipality (City/Town/Village): Somerset, NY	County: Niagara
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Time Duration: 5/07 - 5/08 Completed On-going Planned

Type of Project (check all that apply)

<input checked="" type="checkbox"/> Implementation Project <i>(check which type →)</i>	<input type="checkbox"/> <i>Wastewater treatment and infrastructure</i>	<input type="checkbox"/> <i>Coastal remediation and restoration</i>	<input checked="" type="checkbox"/> <i>Sustainable use / Strategic planning (Protection and Conservation)</i>
	<input type="checkbox"/> <i>Coastal Education</i>	<input type="checkbox"/> <i>Other (specify):</i>	

Research Project

Source of Funding (check all that apply, i.e. there could be more than one funding source)

<input type="checkbox"/> <i>Municipal</i>	<input type="checkbox"/> <i>County</i>	<input checked="" type="checkbox"/> <i>State</i>	<input checked="" type="checkbox"/> <i>Federal</i>	<input type="checkbox"/> <i>LOCI</i>	<input checked="" type="checkbox"/> <i>Other (specify): landowner</i>
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Summary of Project (include problem being addressed, techniques or methods used, expected outcomes, outcomes if completed, and progress/status if on-going)

The Golden Hill Creek Agricultural BMP Implementation Project is a cooperative effort between the Niagara County Soil and Water Conservation District (NCSWCD) and the Natural Resources Conservation Service (NRCS). Golden Hill Creek is located in the Eighteen Mile to Johnson Creek watershed (04130001.050) which drains approximately 41,000 acres of land from the Towns of Newfane, Somerset, and Hartland in Niagara County into Lake Ontario. Several streams important to fisheries in the county drain the watershed and include Keg Creek, Fish Creek and Golden Hill Creek. Land use in the watershed is primarily agricultural but also consists of woodlands, wetlands, abandoned farmland, the Village of Barker and a State park.

This watershed is the number three priority in the County AEM strategy, and is a high priority in the Water Quality Strategy. The AEM tiered planning for the watershed was initiated in 2005 and is currently being completed. To date there have been 46 Tier I's and 10 Tier II's completed in the watershed. The overall goal of the AEM process is to document and prioritize water quality impairments and to identify specific farm practices contributing to these impairments. The Tier I and II planning has been completed on the Atwater Dairy Farm and the problem identified on this farm is being addressed by this grant application. A phased approach is being used to address the issues in this watershed. The initial step was the completion of the AEM Tier I and II surveys of the watershed which is currently on-going. Subsequent steps include progressing through Tier IIIA and IV to correct the problems identified on farms in the watershed. The problem being addressed in this application is silage leachate runoff from the Atwater Dairy Farm. The Atwater Dairy Farm is a medium CAFO with 525 milk and dry cows. This farm is creating a threat to water quality to Golden Hill Creek. This proposal offers the most economic and effective solution to remediate the problem identified on this farm by the implementation of a silage leachate management system.

Silage at the farm is stored in two upright silos and an earthen storage area. The existing earthen silage storage area is approximately 170 feet by 340, and the upright silos are 30 feet in diameter by 100 feet and 120 feet tall. The silage leachate from the upright silos leaks through the access doors and the bottom of the silos and drains into an adjacent ditch which drains into Golden Hill Creek. The earthen area becomes very muddy during rain events and throughout the winter and spring months. The area is rough and does not allow the easy removal of spilled silage and does not provide for the collection of concentrated leachate and storm water runoff from the area. The uncontrolled runoff drains into Golden Hill Creek located 100 feet from the low end of the storage area. This project will consist of paving the silage storage area to allow the removal of spilled silage and collection of concentrated leachate as well as the collection and routing of storm water runoff through a wastewater treatment strip. In addition a collection system will be configured around the two upright silos to collect the leachate leaking from the upright silos. The system will improve water quality by eliminating the discharge of over 51,000 gallons of concentrated leachate into the adjacent stream, and treating 1.4 million gallons of rainfall run-off from the bunk silo through a wastewater treatment strip.

The planned BMP will greatly reduce nutrient and sediment loading of the creek from this farm. It will assist the farm to comply with the CAFO regulations as well as improve water quality in an important fishing stream in Niagara County.