

Department of Natural Resources and Environmental Control

Delaware Clean Water Advisory Council

Community Water Quality Improvement Grant

REPORTING FORM

I. General Report Information

1. Project title: **Implementing at the Local Level: Cost Effective Best Management Practices that will Reduce Nutrients Loads and Bacteria Levels in the Broadkill Watershed**
2. Project sponsor: Milton Community Foundation
3. Address: P.O. Box 12, Milton, DE 19968
4. E-mail address: Emory West, President emory@ce.net
5. Project technical coordinator: Joe Farrell, Delaware Sea Grant jfarrell@udel.edu
6. Funding Awarded: Grant \$50,000, Match \$63,000 Total \$113,000
7. P.O. Number: 50000001
8. Project Manager: Sharon Webb
9. Watershed: Broadkill
10. Best Management Practices (BMP's): 4 rain gardens
11. Drainage Area per BMP: see enclosed design plans
12. Type of pollutant(s): nitrogen, phosphorous, sediment, bacteria
13. Contract dates: Oct 1 2010 to September 30, 2011

II. Project Description

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1. Project Description In 2010-11, A project partnership, led by the Milton Community Foundation with support from Delaware Sea Grant established four bioretention/rain gardens in Milton – two at H.O Brittingham Elementary School and two at Milton Public Library. The gardens provide new stormwater management function and pollution control, schoolyard habitat at community school, and new community gardens adjacent to downtown riverside park. The partnership has also been a model for demonstrating how local community groups can play a key role in watershed pollution control implementation.

The project had a strong education component as well. It included two days of educational programs including planting two large gardens/schoolyard habitats with 500 students and teachers at H.O Brittingham. For the local Milton community, rain garden exhibits were provided at the Annual Shorebird and Horseshoe Crab Festival, Milton Farmers' Market, and Milton Public Library.

2. The project partners included Milton Community Foundation, Town of Milton, H.O Brittingham Elementary School (Cape Henlopen School District), Milton Public Library (Sussex County), DNREC, Div. of Watershed Stewardship - Watershed Assessment Section, Duffield Associates, Environmental Concern Inc, Sussex Conservation District, Milton Garden Club

3. Goals/Objectives The main objectives of this project are to implement pollution prevention and mitigation of stormwater practices within the Broadkill watershed and to develop competence within Milton community to manage stormwater and other nonpoint source pollutants.

The specific project objectives are to:

- a. Implement Best Management Practices (BMPs) in an impaired watershed based on the Broadkill River Implementation Plan
- b. Demonstrate significant nonpoint source pollution load reductions in a sustainable and cost-effective manner;
- c. Educate Milton community on benefits of reducing stormwater and provide education programs and demonstrations for businesses, government and homeowners

III. Final Report Information

1. Project activities completed during the last six (6) months according to the program elements or tasks: Milestones and Activities during final phase of project

04-01-11 - Final design plan completed and rain garden #1 submitted to DNREC for approval.

04-15 - Sussex Conservation District delivered leaf compost to H. O. Brittingham School to be used as soil amendment.

04-18 - DNREC approved the design plans for rain garden #1 at H. O. Brittingham School.

04-18 - Submitted Subaqueous Lands permit request to DNREC for placement of rip-rap in the Broadkill River for rain garden #4

04-20 Pre-construction meeting at Sussex Conservation District

04-25 to 29 - Sussex Conservation District construction rain garden 1 and 2 at H. O. Brittingham Elementary School. Duffield Associates provided technical assistance during construction.

05 - 2 to 5 - Sussex Conservation District construction rain garden 3 & 4 at the Milton Library. Duffield Associates provided technical assistance during construction.

05-06 - Environment Concerns Inc. provided native plants and coordinated the student involvement for the planting of rain garden 1 & 2 at H.O. Grades Brittingham School. Grades K-5 (almost 500 students) participated in planting. DNREC, Duffield Associates, Delaware Sea Grant provided planting and education assistance.

05-26 – Planting of rain gardens 3 & 4 at the Milton Public Library. Environment Concerns Inc. provided native plants and installation. DNREC, Duffield Associates, and Delaware Sea Grant provided additional planting assistance.

05-28 – Rain Garden exhibit at Annual Shorebird and Horseshoe Crab Festival in Memorial Park, adjacent to Milton Library rain gardens. Exhibit manned by DNREC and Milton Community Foundation.

06-24 – Rain Garden and Rain barrel exhibit at Milton Farmers' Market – exhibit manned by DNREC and Delaware Sea Grant

07-07 – Set up Rain Garden exhibit as a temporary exhibit inside Milton Public Library Summer –Maintenance (watering) provided by Cape Henlopen School District staff for H.O. Brittingham and Milton Garden Club volunteers for Milton Public Library rain gardens.

2. Challenges faced: Regular watering and maintenance during the summer was a challenge for partners. Milton Library (County) could not commit staff, so Milton Garden Club volunteers watered library gardens through summer. HO Brittingham

used sprinklers with timers but the gardens are large and require weeding. The new principal is trying to engage school volunteer groups to support ongoing maintenance issues.

3. List anticipated activities for the next six (6) months: The Milton Community Foundation was awarded additional funding (\$44k) from Clean Water Advisory Council to conduct Phase 2. We are in planning stage - lining up community partners and developing maintenance plan agreements. The project will consist of three components.

We will work with one downtown property owner to develop large bioretention area to treat parking lot areas along riverbank. This will require engineering and design for proper function. In addition, three sites in downtown area will be identified to provide simple, non-engineered rain gardens to reduce/treat stormwater runoff to river. Finally, we will re-nourish the four rain gardens established in Spring 2011 with native vegetation. All new community garden partners will provide maintenance plans prior to any construction or commitment of funds. Garden maintenance will be provided as community match.

4. Accomplishments:

School garden planting provided two days of programs for kids to be outside engaged in outdoor learning about their local environment. The gardens will serve as a schoolyard habitat for future programming in support of K-5 curriculum and state "no child left inside" program.

Remediate stormwater quantity and quality to Broadkill River with 4 bioretention areas. Rain gardens at elementary school remediated historical standing water problem at school

Laid groundwork for community partnerships to implement Pollution Control Strategy in Broadkill watershed

IV. Photographs

Provide before, during and after construction photos. Provided under separate cover

Date form completed: March 8, 2012

Submitted: Joe Farrell, technical coordinator