

# IX. Education Plan

## **Introduction**

An effective community outreach and education plan is important to implementing the Swartz Creek Watershed Management Plan. A successful education plan is important because reducing the pollutants affecting water quality in Swartz Creek will require increases in knowledge by the community and voluntary behavior changes by residents and decision makers. The Swartz Creek Education Plans goals focus on watershed **awareness**, watershed **education** and the encouragement of stakeholders to take **action** to improve and sustain water quality in the Swartz Creek Watershed. The Swartz Creek education plan consists of the following components:

- A review of existing watershed education activities
- Swartz Creek education plan goals, objectives and actions to implement the plan and identification of audiences and pollutants targeted in education activities
- Watershed education tool kit
- Potential funding sources

## **Existing watershed education efforts**

Currently, there are several watershed education efforts ongoing in the Swartz Creek Watershed and/or adjoining watersheds. A brief discussion of these programs is provided here to identify opportunities and to minimize duplication of efforts.

### **Phase II Stormwater Education**

The Genesee County Drain Commissioner's (GCDC) office has been working with the municipalities of Genesee County to develop and implement a Public Education Plan (PEP) as required under Phase II of the NPDES program. The focus of this broad campaign is on basic watershed education topics including defining a watershed and illustrating the impacts of storm water pollution. The plan also focuses on several topics required under the NPDES program including:

1. The encouragement of people reporting the presence of illicit discharges or improper disposal of materials into separate storm water systems
2. Education of the public regarding the proper disposal of household hazardous waste, travel trailer waste, chemicals, grass clippings, leaf litter, animal waste and motor vehicle fluids
3. Acceptable application and disposal of pesticides and fertilizers
4. The use of preferred cleaning materials and procedures for car washing
5. Education of the public regarding the ultimate discharge point and potential impacts of separate storm water drainage systems serving their place of residence
6. Stewardship of local watersheds

7. Education of the public regarding management of riparian lands to protect water quality

Implementation of the Phase II public education program will use a number of methods and techniques to educate the public concerning the topics outlined above. These formats will include radio and television announcements, speaker circuits, billboards, newspaper articles and other mass media promotions. The implementation of the Phase II Stormwater Education program is scheduled to begin in 2006.

The Phase II program provides many of the basic elements required for the implementation of a public education program for the Swartz Creek Watershed. The education activities associated with Phase II programs, however, do not address specific issues identified as affecting designated uses within the Swartz Creek Watershed. The program outlined here will complement the Phase II program by providing specific education activities based on target audiences and specific pollution problems identified in the planning process.

#### **Other Watershed Education Activities**

In addition to the activities underway as part of the Phase II storm water program, education activities will also be underway in the Kearsley Creek and Gilkey Creek Watersheds. These watersheds are currently undergoing watershed planning and watershed education plan development. Efforts will be made to coordinate the sub-watershed management plans to ensure that learning and collaboration can continue over the course of the projects.

Education of individuals and organizations about aspects of the Swartz Creek Watershed is extremely important in order to protect the water quality of the watershed. There are several education activities identified in the goals and objectives portion of the watershed plan. The activities were presented in earlier portions of the WMP because of the close relationship they have to other specific BMPs.

### **Swartz Creek Education Plan**

The Swartz Creek Planning Team developed the following campaign to focus on specific problems identified in the physical, hydrologic and policy analysis conducted during the planning phase. This program targets primarily specific audiences, pollutants, sources and causes that are impacting water quality in the Swartz Creek Watershed.

The Swartz Creek Watershed Education Plan will focus on three primary categories of activities including increasing stakeholder's **awareness** of the watershed, **educating** them about the watershed and finally **motivating** them to actively participate in protecting, preserving and restoring the watershed. In order to be successful in implementing the plan a set of goals, objectives and specific activities was developed. Using this framework ensures focus in the education plan and provides a means for evaluating the success or failure of the education efforts. The team also identified responsible parties

and recommendations on how to evaluate the success or failure of each action item. Below is a description of the three general goals recommended by the Swartz Creek Steering Committee. This is followed by Table 11, which includes the objectives, tasks, measures, tools, responsible party and estimated cost /year.

### **Swartz Creek Education Plan Goals**

#### **Goal 1. Build and retain stakeholder awareness of the Swartz Creek Watershed.**

The first goal of the plan focuses on general awareness of the Swartz Creek and the condition of water quality in the watershed. The objectives detailed under this goal will ensure that watershed stakeholders become familiar with the Swartz Creek project, the physical location of the watershed, and the NPS issues facing the watershed. This portion of the plan does not entirely focus on specific pollutants identified in the plan. This section addresses several observations made during stakeholder meetings regarding the public's awareness of watersheds and their management. The recommendations put forth here combined with the ongoing Storm Water Education program should ensure a solid understanding of the basics of watersheds and their protection.

#### **Goal 2. Educate stakeholders about the linkage between human activity and water quality in the watershed.**

The focus of goal 2 is to provide more specific information about the non-point source pollution issues facing stakeholders of the Swartz Creek Watershed. This goal focuses on specific target audiences and causes of pollution identified in the planning process. This goal also includes objectives to promote the benefits of personal stewardship and responsibility of municipal officials to protect water quality.

#### **Goal 3. Motivate individuals to take action to protect, preserve and restore water quality in Swartz Creek Watershed.**

Active involvement in watershed protection by a diverse group of stakeholders is the key to sustainable water resource protection. Goals one and two set the basis of our education plan and facilitate the achievement of goal three. This goal focuses largely on assisting citizens and decision makers in implementing voluntary BMPs, policy changes and participating in stewardship activities.

# Swartz Creek Education Plan

	Goal	Objective	Pollutant Targeted	Actions	Timeline	Measures	Tools	Responsibility	Cost/Year
1	Build and retain stakeholder awareness	Raise awareness of the results of the Swartz Creek planning efforts	All	Conduct presentations to local planning and elected officials	Short-term	Number of presentations completed	Brochure, Slide Show, Sw	FRWC, CAER, GCCD	\$1,500
			All	Distribute copies of Swartz Creek Watershed Management plan	Short-term	Number of Copies distributed	Brochure	FRWC, CAER	\$1,500
			All	Distribute media releases of the completion of the Swartz Creek Planning Process	Short-term	Number of stories published	Brochure, WMP, Slideshow	FRWC, CAER	N/A (Match)
			All	Participate in community events	Mid-term	Number of events displayed at	Watershed Display, Watershed Maps, Swartz Creek Interstitials	FRWC, CAER	NA (Match)
		Build Awareness of the Geographic location of the Swartz Creek Watershed	All	Conduct watershed tours for Township Trustees Planning Commissioners Municipal Councils (1/year for 3 years)	Short-term	Tours conducted, number of attendees, pre/post test	Map series,	CAER, FRWC, GCCD	\$2,500
			All	Develop and distribute watershed map series to municipal officials, interested residents and school children	Short-term	Maps distributed	Map series	CAER	\$5,000
			All	Place signage on major roads around drainage divide and at road/stream crossings	Short-term	Number of signs, Number vehicles passage of signs	Signage	GARS	\$4,000
		Build awareness of Land use and Non-Point source impacts on water quality in Swartz Creek	All	Conduct storm drain stenciling outreach program	Mid-term	Number of students participating, # of drains stenciled	Stencils	FRWC, CAER	\$5,000
			All	Publish and distribute Swartz Creek specific riparian landowners outreach guide	Short-term	Number of guides distributed,	Riparian Landowner Guide to Swartz Creek	FRWC, CAER	\$10,000
2	Educate stakeholders about linkage between human activity and water quality in watershed	Educate target audiences about priority pollutants and causes of water quality reduction in Swartz Creek	All	Distribute information about proper Riparian Vegetation/Flood Plain Management	Short-term	Number of guides distributed	Riparian Landowner Guide to Swartz Creek	FRWC, CAER, GCCD	\$3,000
			Sediment	Conduct outreach to riparian landowners identified with gull erosion and eroding outfalls	Short-term	Number of BMPs installed	Special Communications	FRWC, CAER, GCCD	\$5,000
			Thermal, Sediment, Nutrients	Conduct workshops for riparian landowners on the use of native vegetation to enhance riparian corridor	Mid-term	Number of workshops conducted, number of participants, number of locations where corridor enhancements were made, pre/post test	Needs to develop	Wildones, GCCD	\$1,500
			Sediment, Nutrients	Conduct incentive based soil erosion and sedimentation education training for developers in watershed	Mid-term	Number of trainings, number of participants, number of incentives received	Needs to develop	GCDC, Phase II	NA (Phase II)
			Nutrients	Conduct nutrient management planning assistance for agricultural producers in watershed	Mid-term	Number of nutrient management plans developed	See USDA	USDA, GCCD	\$10,000
			Sediment	Conduct alternative road design workshop for county road commission employees and crews	Mid-term	Number of participants, pre/post test	Need to develop	MDOT, GCRC, CAER	\$3,000
			All	Conduct training for municipal officials and developers on alternative storm water management techniques	Short-term	Number of participants, pre/post test number of policy changes	Need to develop	CAER, FRWC, MDEQ	\$3,000
			Thermal, Sediment, Nutrients	Conduct trainings for reducing runoff from high density residential areas (rain gardens, etc)	Short-term	Number of participants, Number of Rain gardens installed	Need to develop	CAER, Applewood Estate	\$3,000
			Oil, Grease	Conduct outreach program focus on regular automobile repairs	Short-term	Done under Phase II	Phase II	GCDC, Phase II	NA (Phase II)
		Educate residents about personal benefits of watershed stewardship	All	Coordinate River Cleanups	Mid-term	User Friendly WMP, Riparian Stakeholder Guide	NA (FRWC already conducts cleanups)	FRWC	NA (Match)
		Promote the physical and psychological benefits of using Swartz Creek as a recreational resource	All	Conduct educational hiking trips along Swartz Creek from City of Flint to Happy Hollow Recreation Area	Short-term	Number of participants, pre/post test	Brochure, User friendly WMP, Map Series, Watershed Certificate	FRWC, Sierra Club, CAER	NA (Match)
3	Motivate individuals to take actions to protect, preserve and restore water quality in the Swartz Creek Watershed	Encourage participation in FRWC by SCW Stakeholders	All	Focus annual membership drive in strategic neighborhoods and commercial districts in watershed	Short-term	Number of memberships generated	Business stakeholder list,	FRWC, CAER	NA (Match)
			All	Develop and advertise "adopt a creek" committee under FRWC	Long-term	Formation of citizen committee, Number of participants, hours met, actions taken		FRWC, CAER	NA (Match)
			All	Promote participating of residents in FRWC benthic monitoring program	Mid-term	Number of participants involved, number of sites sampled on Swartz Creek	Riparian stakeholder list	FRWC, CAER	NA (Match)
		Conduct education program on benefits of land preservation with land conservancies	All	Contact high priority landowners to gauge interest in land conservation	Mid-term	Landowners contacted	Riparian stakeholder list	FRWC, CAER, GCCD	NA (Match)
			All	Facilitate meetings between land preservation specialists and land owners	Mid-term	Number of meetings held, number of conservation easements established		FRWC, CAER, Land conservation	NA (Match)
		Work with municipal officials to adopt water quality related ordinances	All	Provide technical assistance to municipalities interested in adopting natural features setback, storm water ordinance, local wetland protection ordinance	Mid-term	Number of ordinances adopted	Filling the Gaps, User Friendly WMP, Swartz Creek Interstitials, Ordinance/Policy matrix	CAER, FRWC	\$15,000

Table 11. Swartz Creek Education Plan

## **Watershed Education Tools and Responsible Parties**

Conducting a public education campaign requires the use of numerous tools and educational aids. This section provides a description of the tools that have been mentioned in the education plan.

### **Proposed Swartz Creek Watershed Logo**



**Information Brochure (Not developed):** A brochure that contains general information about the watershed (location, definition of watershed, practices) will be developed to use with various audiences. The brochure will include graphics of a hypothetical watershed, the Swartz Creek Watershed logo and contact information about the project. (Steering Committee)

**Riparian Stewardship Brochure (Not developed):** Riparian residents were identified as a primary target audience during the physical inventory of the SCW. A brochure will be developed that focuses on retaining and restoring vegetative buffers, improving shoreline habitat, and reducing run-off pollution from the landscape. (FRWC/CAER/MSUE)

**Riparian Stakeholder list (Developed):** A riparian stakeholder list will be generated using a Geographic Information System. This GIS system will inexpensively produce a mailing list of residents who own property adjacent to Swartz Creek. These stakeholders were identified in the physical inventory as a primary target audience. This list will provide an effective way to disseminate information to this key target audience. (GCDC)

**Business Stakeholder List (Not developed):** Including business in the implementation of the watershed management plan will be important to the success of the education plan. A list can be divided into two categories including a general business group and those that directly impact water quality. (CAER /County equalization data)

**General business:** This list will provide several potential assets to the Swartz Creek Project for information dissemination and for potential sponsorship of education activities such as Project Green Adopt-A-School. These locations will generally consist of businesses that require individuals to wait for a service such

as local offices, barber shops, oil change locations, restaurants, etc. Disseminating information at these locations will provide an increased chance of individuals reading relevant information while they wait for services. (CAER)

**Direct Impact List:** This list will identify businesses that are engaged in activities that have the potential to positively or negatively impact water quality. These could include businesses like septic companies, fertilizer retailers, auto repair, local nurseries, car washes etc. Partnerships should be developed between local watershed advocates and these businesses to promote the responsible use of their products. (CAER)

**Swartz Creek Interstitials (Developed):** During the development of the public education program for the SCW two, three minute interstitials were developed to be used for education purposes.

The first interstitial, titled **Whispers of a Watershed** presents various concepts about watersheds and watershed management. This piece is intended to be used as an introduction to watersheds and why an individual should behave responsibly in a watershed.

The second interstitial, titled **Field of Dreams** presents a number of activities that individuals can participate in to protect their local watershed. Activities range from restoring a wetland, participating in HHW recycling, to joining your local watershed organization. This interstitial will be used to provide specific information about “things people can do” to assist in protecting water quality.

**Water Quality Report (Not developed):** A water quality report based on the findings of the Swartz Creek Watershed plan will be developed to be used with watershed stakeholders. This report will summarize the findings of the management plan in a format that will be more user friendly than the long and complex watershed plan. Key information will include:

- A map of the watershed
- Summary of the findings
- Contact information about the plan
- Photos and descriptions of critical areas
- How to get engaged in present activities

**Watershed Tours (Not developed):** A series of tours of the Swartz Creek watershed will be conducted for local planning and elected officials. The purpose of these tours will be to familiarize local officials with the geographic location, physical appearance and water quality of various parts of the watershed. These tours will also provide

opportunities for stakeholders to visit various BMP implementation sites.  
(FRWC/CAER/Conservation District)

**Watershed Maps (Partially developed) :** The ability to identify one's location within a watershed is fundamental to understanding individual impacts on the watershed and the impacts the watershed has on individuals and communities. A series of simple maps will be generated that identify the location of municipal boundaries, watershed divide, cultural landmarks such as township offices, historical locations etc. (GCDC/CAER)

**Swartz Creek Watershed Display (Not developed):** A permanent display about the watershed including information about general watershed principles and Swartz Creek specific problems and solutions. This permanent display will be used on a rotating basis at school, libraries and public spaces such as shopping centers. (FRWC Education Committee)

**Swartz Creek Stewardship Certificate/Seal (Not developed):** Use the Swartz Creek Watershed logo in the development of certificates/seals to present to governments.  
(FRWC/UM-Flint)

**Ordinance Policy Matrix (Developed):** During the planning process, a review of local ordinances was conducted. The results of this review are presented in a matrix that identifies the degree to which individual municipalities have policies in place to protect water quality. This matrix also illustrates the individual policies that are being or not being used across the watershed. This matrix will allow decision makers to understand how their municipality is "doing" with regards to water resource protection and identify ways in which they may improve their policies.

**Filling the Gaps (Developed):** Filling the Gaps is a document produced by the Michigan Department of Environmental Quality to assist local governments in protecting their natural resources. This document provides a comprehensive overview of relevant enabling legislation, example ordinances and case studies of their application. This tool will be extremely useful in most education activities involving local elected and appointed officials.

**Slide Library (Developed):** A PowerPoint slide library will contain a wide variety of slides that can be used to develop presentations for target audiences. These slides will include a wide range of topics and will incorporate the Swartz Creek Watershed logo.

**Watershed Signage (Not developed):** These signs will be designed and developed in coordination with the Genesee County Road Commission and be placed around the watershed to increase identification of the Swartz Creek Watershed.

In addition to applying for education grant dollars from MDEQ, several other sponsors have been identified that would likely fund portions of the education plan for the Swartz

Creek. Below are several other sources that should be used in the education plan implementation.

### **Local Foundations**

The Ruth Mott Foundation services the greater Flint community by providing funding for projects that range in focus. As part of the Foundation's Beautification Program several watershed planning activities have been funded that include educational components. Concept papers are accepted by the foundation three or four times a year. A proposal that focuses on the aesthetic value of watershed education should be submitted to the foundation in the early phases of a project.

The Community Foundation of Greater Flint has recently shifted some of its program focus to include land use education. The details of this program area are still to be published but should be monitored for developments that may assist in the education of residents about land use impacts upon the Swartz Creek.

### **EPA-Five Star Program**

The Five Star Restoration Program brings together students, conservation groups, other youth groups, citizen groups, corporations, landowners and government agencies to provide environmental education and training through projects that restore wetlands and streams. The program provides challenge grants, technical support and opportunities for information exchange to enable community-based restoration projects. Funding levels are modest, from \$5,000 to \$20,000, with \$10,000 as the average amount awarded per project. However, when combined with the contributions of partners, projects that make a meaningful contribution to communities become possible. At the completion of Five Star projects, each partnership will have experience and a demonstrated record of accomplishment, and will be well-positioned to take on other projects. Aggregating over time and space, these grassroots efforts will make a significant contribution to our environmental landscape and to the understanding of the importance of healthy wetlands and streams in our communities.

### **Great Lake Aquatic Habitat Network Fund (GLAHNF)**

The mission of the Great Lakes Aquatic Habitat Network and Fund (GLAHNF) is to foster and support a vital, effective grassroots sector working locally to protect aquatic habitats throughout the Great Lakes Basin. GLAHNF provides financial resources, shares information, and fosters communication between citizens and organizations working to protect aquatic habitats. The GLAHNF grants program is designed to increase the ability of grassroots groups and individuals to succeed in advocacy projects to protect rivers, lakes, and wetlands in their areas.

The goal of GLAHNF's grants program is to provide financial support to advocacy activities that strengthen the role of individuals and community groups working locally to protect and restore shorelines, inland lakes, rivers, wetlands, and other aquatic habitats in the Great Lakes Basin. Advocacy work, as defined here, involves local community



members actively promoting aquatic habitat protection by influencing community and/or individual behavior or opinion, corporate conduct, and/or public policy.