

Chapter 8 – Information and Education Campaign

This chapter provides an overview of the public participation process that was used to involve and educate the community in the development of this watershed management plan (WMP), and the public education campaign that will be used to implement this WMP. A major objective of the education campaign is to promote pollution prevention and inform the public on the actions they can implement to protect water quality. This education strategy is outlined in the “Information and Education” (I&E) Implementation Strategy Section 8.2 and is closely aligned with each Phase II permittee’s Public Education Plan (PEP) activities.

8.1 Public Participation Process

As identified in St. Clair County’s Northeastern Watersheds Public Participation Plan (PPP), an important part of the watershed planning process is to involve the public and to solicit their knowledge about the watershed and their opinions about how to improve conditions within the watershed. The information gathering process included targeting the public’s concerns related to nonpoint source pollution, as well as protection/improvement of the area’s natural features (such as woodlands, wetlands, open space, etc.). Most of the input for this watershed plan came from watershed advisory group (WAG) meetings where representatives from all municipalities were invited and encouraged to participate. These watershed group meetings began in March of 2003 on a monthly basis and continue today. These WAG meetings are outlined in Section 8.1.3. In order to gain input from the public outside the watershed group representatives, four public meetings were held in October 2004. At these meetings the public was introduced to the watershed planning process and asked to give input on preliminary pollutants, sources and causes, concerns, and desired uses. The results of those meetings are discussed in Section 8.1.1. Additional input on more focused areas of concern was achieved through three (3) focus group meetings. The meetings were conducted in March, May and April of 2006 and are described in Section 8.1.2.

In addition to these meetings, the St. Clair County Health Department (SCCHD) used a variety of avenues to inform and update the public on the watershed planning process. The final means of receiving public input was provided during presentations in 2006 to all Phase II local boards, the SCC Board of Commissioners, the SCC Road Commission, and the St. Clair River Bi-National Public Advisory Board.. Additional avenues included the following:

- **Municipal Watershed Survey** – each participating community was surveyed by the SCCHD at the beginning of the planning process to determine local watershed issues and record their current practices, policies and procedures. As part of this survey, many of the municipalities also took the SCCHD for a “tour” of their community to discuss watershed issues.
- **Biannual Reporting** – Initially the SCCHD made presentations to the boards and councils of the communities in the watershed as well as the SCC Board of Commissioners and the SCCRC on the storm water regulations, the planning process and the development of the watershed plan. Opportunity was provided for input on issues and concerns. Throughout the development of the WMP, WAG representatives reported to their respective boards twice a year with watershed planning updates.
- **SCC Storm Water Website** – the SCCHD maintains a website (**www.stclaircountystormwater.org**) which contains information on the planning process, watershed activities, and storm water education materials. The website was posted online in the fall of 2004 and has been updated and expanded regularly.

- Watershed Planning Brochure – the SCCHD developed a brochure to explain the planning process and encourage community participation. The brochure was distributed at many of the watershed community and county offices.
- The Blue Watershed News – In 2004 the SCCHD began publishing a newsletter twice a year that contains storm water education articles, information on watershed activities throughout the county, and updates on the planning process. Members of the WAG provide ideas and input into the content of these newsletters and the newsletters contain phone numbers and email addresses of the SCCHD Storm Water Program as a means to provide input into the WMP or obtain more information about SCC water quality. The newsletter will continue to be distributed to interested citizens, elected officials, stakeholders, and municipal boards.
- Municipal Newsletters – each community that has developed a newsletter has periodically published articles on storm water issues and watershed planning in their newsletter and has provided contact information for feedback and input.

8.1.1 2004 Public Meetings

Four public meetings were held in October of 2004 to provide the general public background on the planning process and obtain input on issues and concerns in the watershed. The information obtained at the meetings was directly used in the development of the desired uses (Chapter 2), goals and objectives (Chapter 4) for the watershed.

Two meetings were held in the St. Clair River Direct Drainage (SRD) subwatershed, one meeting in the Lower Black River (LBR) and one in the Lake Huron Direct Drainage (LHD) subwatersheds. The meetings were advertised through press releases, newspaper articles, radio interviews and cable television notices. In addition, personal invitations were sent to interest groups and local officials. Posters were placed in five local libraries and in eleven municipal offices. Attendance and input was good (18 attendees) at the meeting held at the Burtchville Township Hall but attendance (4, 7 and 9 attendees) at the other three meetings was limited to mainly watershed group representatives.

At each meeting, a 30-minute presentation was given to the group. The presentation provided information on general watershed awareness, common storm water concerns, the Phase II regulations, watershed planning and illicit discharges. The presentation also discussed the specific watershed information that had been gathered to date and a list of preliminary watershed concerns; pollutants, sources and causes and desired uses.

After the meetings a questionnaire was distributed to the attendees to get input on what they perceived to be the worst problems, the most needed improvement, the primary water quality issues and priorities in the subwatershed. Approximately 30 to 40 percent of the questionnaires were returned. The responses indicated that bacteria was an important issue with the elimination of beach closures and failing septic systems and the regulation of septage haulers and biosolids application as priorities. Drainage and flooding issues, agricultural runoff, county drains and roadside ditches were also listed as problems. Desired improvements included expanded public access to the lakes and rivers and clean, useable beaches.

8.1.2 2006 Focus Group Meetings

The NEW WAG agreed to host three (3) focus group meetings on issues pertinent to the watershed over the course of the planning stages of development of this WMP. Those issues related to:

1. Land Use Planning,

2. Determining the Goals and Objectives for the Watershed, and
3. Coordinating Design Standards for Storm Water Management to address Storm Water Runoff Quality and Quantity.

8.1.2.1 Land Use Planning Focus Group

All three (3) focus group meetings were held at the St. Clair Community College MTEC Center in Port Huron in December, 2005. Twenty-six people attended the meeting, representing the St. Clair County Health Department, Planning Commission, and Conservation Districts, the cities of Port Huron, Marine City and St. Clair, and the townships of Port Huron, St. Clair, Fort Gratiot and Clyde.

Mr. John Jones, Supervisor of Ira Township, gave a short presentation describing his community's response to growing development pressures in the area. A main emphasis of the Township's efforts is to maintain the community's rural character and protect its existing natural resources while accommodating development. Another short presentation was given by the consulting firm Carlisle/Wortman Associates, describing the process a community could conduct to implement a resource preservation district as part of their land use planning tools.

The large group then broke into four small groups to begin discussing the land use issues they felt should be included in the Watershed Management Plan. Afterwards, the participants were asked to vote for their five top issues discussed that evening.

While there were many topics recorded by the small groups, a few themes emerged as important in most of their discussions and are summarized below:

- 1) **Education.** This was a broad topic that included educational opportunities for local officials, developers, and the public. Participants felt that local officials could benefit from information on land use and water quality issues such as pollutants in runoff, and ever higher quantities of runoff. Techniques to address these issues could be incorporated into the Site Plan Review process. Another topic for local official training is administrative procedures (specifically sited was documentation / recording of zoning decisions). Other general educational topics include communicating the value of resources and potential impacts of land use decisions on natural resources.
- 2) **Soil Erosion and Sedimentation Control (SESC).** The perceived lack of effective Best Management Practices (BMPs) and the need for more soil erosion control and enforcement throughout the County in both developing and agricultural areas describes this issue. Discussions identified specific projects in developing areas that have generated concern about soil erosion, and potential solutions, including a lawn establishment ordinance.
- 3) **Natural Feature Preservation.** This topic was discussed in several of the small groups, identifying specific natural features of concern including floodplains, wetlands, woodlands, and ground water. One group identified the issue of inventorying natural features as a significant topic that could be addressed through the Watershed Management Plan.
- 4) **Site Plan Review process.** Groups thought that this process needed to be improved in general, and that enforcement of ordinance regulations in the field should be enhanced and consideration should be given for some type of oversight for construction of single-family residences.

- 5) **Pollutants in storm water.** This topic was brought up in the context of education as well as controlling pollutants from urbanized areas and road right-of-ways.
- 6) **Sanitary Treatment.** Several groups identified both septic systems and package treatment plants as potential land use issues that need to be addressed.

The full results of each group's dialogue are included in Appendix G.

8.1.2.2 Goal Setting Focus Group

The second focus group meeting was also held at the St. Clair Community College MTEC Center in Port Huron. In March 2006, twenty-two people gathered to discuss potential goals for the Watershed Management Plan. Participants represented the St. Clair County Health Department, Metropolitan Planning Commission, Drain Commissioner, and St. Clair and Sanilac Conservation Districts; the cities of Port Huron, Marine City, and Marysville; the townships of St. Clair, Fort Gratiot, Clyde, Burtchville, and Kimball; and the Pine River Nature Center.

Mr. Fred Fuller, St. Clair County Drain Commissioner, gave a presentation on projects implemented during his tenure that have addressed flooding and water quality problems. He described the benefits of stream restoration versus channelization of drains. He also discussed eliminating sewerage discharges to drains, preserving wetland and floodplain functions, the new Drain rules implemented in 2004, and grants the Drain Office received for innovative stream improvement projects. Then Jacy Garrison of Hubbell, Roth & Clark, presented the results of the water quality analysis conducted throughout the watershed. After this presentation, participants were asked to add any other potential pollutants or sources that were not already identified. The audience provided the following list:

- 1) Lead bullets from shooting sports – State game areas
- 2) Old municipal dump sites – City of Yale and Kenockee Township.
- 3) Old fly ash / coal ash piles along the St. Clair River.
- 4) Concrete crushing sites – Port Huron Township.
- 5) Commercial composting sites – Dove Road and Michigan.
- 6) Junk yards – mercury in car switches.

The audience was split into smaller groups and was given a list of watershed preliminary goals. After consolidating the small group votes, the ideas embodied in the goals below were considered the most important and were used to prioritize the first five (5) watershed goals as outlined in Table 4.1 in Chapter 4 – Watershed Goals and Objectives.

- 1) **Identify and preserve high-quality natural areas including: forested areas, floodplains, riparian buffers, wetlands, open space, and greenways. (18)** “Preservation” of natural areas was identified as important by all groups, with one also listing “identification” of natural areas as important, specifying the Michigan Natural Features Inventory process as a way of conducting the inventory.
- 2) **Ensure sustainable growth and development. (12.5)**
- 3) **Coordinated / uniform planning and standards. Enforcement of standards throughout the watershed. (11.5)** Two of the three groups cited this goal as important. One group also stated that it was important that the Drain Commissioner's standards and the Road Commission's standards be unified.

- 4) **Create a monitoring plan for the watershed. (9)**
- 5) **Protect and improve water related recreation / eliminate beach closings. (9)** All groups thought that water resources for recreation was important. One group wanted to specifically eliminate beach closings, improving swimming opportunities throughout the watershed.
- 6) **Protect and improve the warm water and cool water fishery and conditions for other indigenous aquatic life and wildlife. (8)** Conditions for fish and their habitat are related to the first goal, as well as the goal for recreation possibilities.

The full results of each group's dialogue are included in Appendix Q.

8.1.2.3 Storm Water Management Standards Focus Group

This focus group was held in May 2006 and was attended by twenty-two people who gathered to discuss possible ways of reducing storm water runoff and minimizing pollutants in storm water. Participants represented the St. Clair County Health Department, Drain Commissioner, and the Road Commission; the cities of St. Clair, Marysville, Port Huron, and Marine City; and the townships of Clyde, Fort Gratiot, Kimball, and St. Clair. Also, specific engineering consulting firms were invited, with nine attendants representing five firms.

Presentations were made by Kirk Weston representing the St. Clair County Road Commission, Fred Fuller, the St. Clair County Drain Commissioner, and Jacy Garrison of Hubbell, Roth & Clark. Mr. Weston began the presentations by describing the storm water issues faced by the Road Commission. These issues mainly dealt with handling storm water from adjacent properties in road-side swales that were designed to only manage storm water from the road surface itself. Mr. Fuller then discussed the highlights of the updated (2004) Drain Commissioner engineering standards for storm water management systems, including technical information on specific sizing criteria and allowable runoff rates. Mrs. Garrison then provided a side-by-side comparison of design criteria being used by five different county drain commissioner's including the counties of Washtenaw, Wayne, Livingston, Oakland and Ionia.

The large group then split up into small groups to discuss the following questions. Summaries of the discussions follow each question.

Question #1: *What are the best ways to limit storm water runoff to roadway drains?*

Question #2: *How can storm water runoff be controlled from lot splits?*

Most participants agreed that some action needs to be taken to control storm water coming off of individual lots into road drains. Solutions to this problem include land use planning techniques such as PUDs and clustering; ordinance enforcement of wetland protection, and requirements for buffers along roadways. Provisions added to the site plan review process could be implemented to require a topographic/grading plan for single site construction reviewed either by the Drain Commissioner's office or the municipality. Another suggestion was to require swales between all residential properties that are below the level of the road ditch.

Question #3: *Does it make sense to coordinate storm water control techniques between communities and County agencies?*

All groups agreed that coordination to some degree is necessary. One group suggested that municipalities require that all site plans be reviewed by the Drain Office. Another group thought that only *quality* standards should be the same between County agencies. They felt that *quantity* standards should be calculated per site through standardized rationale to determine the site's pre-

development rate. Another idea is that townships can adopt an ordinance that requires the Drain Commissioner to review plans to supply suggestions on storm water management, and the developer has the option to use or not use the recommendations.

Question #4: *How can County agencies work together to better control storm water runoff?*

Suggestions included a comparison of the existing standards and modifying them to make them more similar between agencies. Another suggestion was that the County agencies provide a model ordinance for municipalities that they could adopt. Education of existing standards was also considered important.

Question #5: *How can communities reduce the amount of storm water generated by existing and new development?*

The groups came up with education residents and municipal officials as an important component for this question. Other ideas were adopting purchase of development rights ordinances, reducing impervious surface requirements, and implementing progressive development incentives.

Question #6: *How can communities address storm water pollutants from farms?*

Education is key to this item, as well as increasing buffer zones and increasing funding of Natural Resource Conservation Service (NRCS) programs for farmers.

Question #7: *How can the County and communities best limit pollutants in runoff draining to waterways, road ditches, and county drains?*

Answers to this question included ordinances for new development, changing storm water facility maintenance policies, requiring native vegetation, and education.

The full results of each group's dialogue are included in the Resource Directory (CD).

8.1.3 Watershed Group Meetings

The Lower Black River (LBR), Lake Huron Direct Drainage (LHD) and the St. Clair River Direct Drainage (SRD) watershed groups began meeting and discussing watershed planning activities in March 2003. In September of 2004, they formed the Northeastern Watersheds Advisory Group (NEW WAG) where these separate subwatersheds of the St. Clair River began meeting as one watershed planning group. Over the course of approximately three years the group was solicited for their input on environmental issues in their community, in relation to water quality issues and natural resource concerns. This information has been considered and incorporated into the goals and objectives outlined in Chapter 4, and the subsequent actions that should be considered to achieve those goals and objectives.

8.2 Information and Education Implementation Strategy

One of the key implementation approaches of the NEW WMP will include an ongoing I&E strategy to increase public knowledge and awareness of nonpoint source pollution issues, importance of watersheds and how individuals can help to improve water quality. This section outlines the various media that will be used to inform and educate specific target audiences on the pollutants and concerns outlined in this WMP. The target audiences include residents, visitors to the area, public employees, businesses, industries, construction contractors, and developers.

The following information and education activities or "delivery mechanisms" of the various key messages have been or will be established throughout the County and will be used to provide the means

of distributing educational topics to residents and stakeholders throughout the NEW. Each of these topics is outlined in more detail in St. Clair County's PEP.

- Blue Watershed Newsletter and Municipal Newsletters
- Municipal Storm Water Websites and/or the St. Clair County Storm Water Website at: www.stclaircountystormwater.org
- Watershed Events: Earth Fair and River Day
- Watershed Management Brochure
- Riparian Land Management Brochure
- IDEP Brochure
- Beach Brochure
- Chamber of Commerce Materials
- Children's Activity Booklet
- Water Quality Magnets
- "Water Quality" Table Top Exhibit
- MDEQ P2 Programs
- "Pollution Solutions!" School Presentations
- "Improving Water Quality" Presentations
- Home*A*Syst Workshops
- Adopt-A-Stream Program
- Watershed Road Signage
- Storm Drain Marking
- Seven Simple Steps to Clean Water Campaign Materials
- Cable Television Access

Table 8.1 summarizes the education activities that will be implemented as it relates to the pollutant/topic of concern, the target audience, the key messages conveyed, and the evaluation measures that will be used to gauge the effectiveness of the activities. General costs associated with each I&E activity is provided in Table 8.2. The Phase II permittees will be responsible for implementing most, if not all, of the I&E strategy components, but are encouraged to participate with the St. Clair County Health Department (SCCHD) and other partner agencies (as outlined in Table 8.4 at the end of this chapter). The timeline for implementation for all education strategies should be set to begin in the short-term or within the first permit cycle (by 2008). Many of these activities are currently being implemented.

A summary of the baseline level of public perceptions of water quality in the watershed and awareness levels that exist in the NEW are summarized in Table 8.3. Recommendations are made regarding the best ways to disseminate educational information, and where awareness levels need to be improved in relation to water quality and how personal actions impact a watershed.

Table 8.1 Summary of Information and Education Activities for St. Clair County’s Northeastern Watersheds

Activity	Key Messages	Target Audience	Schedule	Pollutant/Concern Addressed										Evaluation Measure	Responsible Party/Partners
				Watershed Awareness/Stewardship	Sediment	Nutrients	Bacteria/Pathogens	Natural Resource Protection/Conservation	Heavy Metals	Salts	Pesticides	Grease/Oil	Thermal Pollution		
Blue Watershed Newsletter	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities - Importance of land use planning for water quality and natural resource protection - Value of low-impact development - Impacts to water quality and wildlife from grease/oils/gasoline; proper disposal of household hazardous waste (motor oil, transmission fluid, etc.) - Progress on watershed plan implementation 	Developers; Contractors; Students; Homeowners; Agricultural landowners; Riparian residents; Public employees; Businesses; Land use planners;	Mailed/mailed biannually throughout permit period	x	x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> • # of newsletters distributed • summary of content included in newsletter 	<ul style="list-style-type: none"> • Development and distribution-SCCHD; Distribution assistance-Phase II communities. Watershed Advisory Group (WAG) members contribute input for newsletters at WAG meetings
Watershed Management Brochure	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities - Importance of land use planning for water quality and natural resource protection - Value of low-impact development 	Developers; Contractors; Students; Homeowners; Agricultural landowners; Riparian residents; Public employees; Businesses; Land use planners;	As needed throughout permit cycle	x	x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> • # of brochures distributed • content of brochure 	<ul style="list-style-type: none"> • Development and distribution-SCCHD; distribution-Phase II communities
Southeast Michigan Partners for Clean Water Mass Media Efforts	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities - Impacts to water quality and wildlife from grease/oils/gasoline; proper disposal of household hazardous waste (motor oil, transmission fluid, etc.) 	Developers; Contractors; Students; Homeowners; Agricultural landowners; Riparian residents; Public employees; Businesses; Land use planners;	Distribute throughout permit cycle; emphasis on spring - fall seasons	x	x	x	x					x		<ul style="list-style-type: none"> • # of press releases and PSAs printed/aired • topics covered 	<ul style="list-style-type: none"> • Development and distribution-SEMCOG and SCCHD; assist in promotion and distribution-Phase II communities
Tributary /Watershed Road Signs	<ul style="list-style-type: none"> - Location of watersheds (identified at watershed boundaries) - Location of watercourses throughout watershed (identified at road/stream crossings) - Watershed awareness 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	Ongoing throughout permit cycle	x										<ul style="list-style-type: none"> • # of signs erected • location of signs erected 	<ul style="list-style-type: none"> • Coordination-SCCHD; Installation-St. Clair County Road Commission; Phase II communities to purchase signage
River Day	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities - Value of low-impact development; value of 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners;	Annually	x	x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> • # of attendees • Information distributed • # of activities • Growth of event over time 	<ul style="list-style-type: none"> • Promotion and coordination-SCCHD; Event planning, promotion, coordination-Phase II

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				Watershed Awareness/Stewardship	Sediment	Nutrients	Bacteria/Pathogens	Natural Resource Protection/Conservation	Heavy Metals	Salts	Pesticides	Grease/Oil	Thermal Pollution			
	<ul style="list-style-type: none"> coordinated planning strategies; encouraging land conservation of high-quality natural features. - Impacts to water quality and wildlife from grease/oils/gasoline; proper disposal of household hazardous waste (motor oil, transmission fluid, etc.) 	Public employees;														communities
Earth Fair	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities - Value of low-impact development; value of coordinated planning strategies; encouraging land conservation of high-quality natural features. - Impacts to water quality and wildlife from grease/oils/gasoline; proper disposal of household hazardous waste (motor oil, transmission fluid, etc.) 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	Annually	x	x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> • # of attendees • information distributed • Growth of event over time 	<ul style="list-style-type: none"> • Promotion and coordination-SCCHD; Event planning, promotion, coordination-Phase II communities 	
“Water Quality” Table-Top Exhibit	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities - Impacts to water quality and wildlife from grease/oils/gasoline; proper disposal of household hazardous waste (motor oil, transmission fluid, etc.) - Definition of an illicit discharge and what to look for - Water quality impacts associated with illicit discharges 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	3 events/year	x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> • # of events with exhibit display • Content of exhibit topics • Period of time • Location exhibit is on display 	<ul style="list-style-type: none"> • Development, promotion and scheduling-SCCHD; Phase II communities will coordinate with SCCHD for use of exhibit 		
Municipal Newsletter Articles	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities - Importance of land use planning for water quality and natural resource protection - Value of low-impact development 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	Develop and share quarterly	x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> • # of articles • content of articles 	<ul style="list-style-type: none"> • Development-SEMCOG, SCCHD, and Phase II communities 		
Storm Water Website	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities - Importance of land use planning for water quality and natural resource protection - Value of low-impact development 	Homeowners; Agricultural landowners; Riparian residents; Public employees; Businesses; Land use planners; Golf course managers; Developers; Contractors;	Update continually	x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> • # of website hits • summary of info included on website 	<ul style="list-style-type: none"> • Host: SCCMPC; content and maintenance-SCCHD; Link to website on Phase II community websites 		

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	<ul style="list-style-type: none"> - Impacts to water quality and wildlife from grease/oils/gasoline; proper disposal of household hazardous waste (motor oil, transmission fluid, etc.) - Progress on watershed plan implementation - Access to SCC NEW WMP - Updates on watershed activities and events 	Students; Community Groups (church/civic organizations); Lawn and garden companies;													
“Adopt-A-Stream” Program	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities 	Students; Teachers; Parents and residents;	Promote continually	x	x	x								<ul style="list-style-type: none"> • # of participants • summary of data collected annually 	<ul style="list-style-type: none"> • Coordination through MSU-Extension • Promotion through SCCHD and Phase II permittees
MDEQ Pollution Prevention Programs	<ul style="list-style-type: none"> - Impacts to water quality and wildlife from grease/oils/gasoline; proper disposal of household hazardous waste (motor oil, transmission fluid, etc.) 	Businesses; Industries; Construction contractors and developers;	Ongoing throughout permit cycle	x		x			x	x	x	x		<ul style="list-style-type: none"> • # of materials distributed • # of businesses participating in programs 	<ul style="list-style-type: none"> • MDEQ in coordination with SCCHD and Phase II permittees
Storm Drain/Curb Marking Program	<ul style="list-style-type: none"> - Storm drain awareness - Pollution prevention 	Schools; Students; Parents; Residents;	Ongoing throughout permit cycle	x						x	x	x		<ul style="list-style-type: none"> • # of markers placed • location of markers placed • # of participants 	<ul style="list-style-type: none"> • Coordination, purchase and promotion-SCCHD and Phase II communities
“Pollution Solutions” Presentation	<ul style="list-style-type: none"> - Impacts from nonpoint source pollution on water quality - Watershed awareness - Pollution prevention techniques 	Residents; Schools; Students; Public employees;	24 presentations/year	x	x	x	x		x	x	x	x		<ul style="list-style-type: none"> • # of presentations • # of attendees • survey of participants • content of presentation 	<ul style="list-style-type: none"> • Promotion and presentation-SCCHD; Phase II communities to coordinate with SCCHD
24-Hour Water Quality Hotline	<ul style="list-style-type: none"> - Impacts to water quality and human health from pathogens/bacteria - Information on beach closings - Watershed awareness and pollution prevention education given to students involved in Poster Contest held each year 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	Ongoing throughout permit cycle		x	x	x		x	x	x	x		<ul style="list-style-type: none"> • # of calls to hotline • nature of complaints • follow-up actions 	<ul style="list-style-type: none"> • Maintenance and follow-up-SCCHD; promotion-SCCHD and Phase II communities
OSDS Maintenance Brochure	<ul style="list-style-type: none"> - Impacts to water quality and human health from pathogens/bacteria - Proper operation and maintenance of OSDS - Identification of failing systems - Consequences/penalties associated with illicit discharges and improper waste disposal 	Landowners and businesses that operate and maintain OSDS	Ongoing throughout permit cycle			x	x							<ul style="list-style-type: none"> • # of brochures distributed • content of brochure 	<ul style="list-style-type: none"> • Development and distribution-SCCHD
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				Watershed Awareness/Stewardship	Sediment	Nutrients	Bacteria/Pathogens	Natural Resource Protection/Conservation	Heavy Metals	Salts	Pesticides	Grease/Oil	Thermal Pollution				
IDEP Brochure	<ul style="list-style-type: none"> - Definition of an illicit discharge and what to look for - Promotion of illicit discharge reporting system and how to report illicit discharge - Water quality impacts associated with illicit discharges and improper waste disposal - Identification of failing OSDS-physical symptoms to watch for - Consequences/penalties associated with illicit discharges and improper waste disposal 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	Ongoing throughout permit cycle		x	x	x							x		<ul style="list-style-type: none"> • # of brochures distributed • content of brochure 	<ul style="list-style-type: none"> • Development and distribution-SCCHD
Water Quality Magnet	<ul style="list-style-type: none"> - Illicit discharge detection/elimination 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	Ongoing throughout permit cycle	x	x	x	x			x	x	x	x			<ul style="list-style-type: none"> • # of magnets distributed • content on magnets 	<ul style="list-style-type: none"> • Development and distribution-SCCHD; promotion and distribution-Phase II communities
“Improving Water Quality” Presentations	<ul style="list-style-type: none"> - Impacts to water quality and wildlife from grease/oils/gasoline; proper disposal of household hazardous waste (motor oil, transmission fluid, etc.) - Definition of an illicit discharge and what to look for - Water quality impacts associated with illicit discharges - Consequences and penalties associated with illicit discharges 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	5 presentations/year	x	x	x	x	x	x	x	x	x	x			<ul style="list-style-type: none"> • # of presentations per year • # of attendees • content of presentations • participant’s surveys 	<ul style="list-style-type: none"> • Development and delivery-SCCHD
Children’s Activity Booklet	<ul style="list-style-type: none"> - Definition of a watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities 	Schools; Students; Parents; Residents	Distribute throughout permit cycle	x	x	x	x			x	x	x	x			<ul style="list-style-type: none"> • # of booklets distributed • content of booklet 	<ul style="list-style-type: none"> • Development and distribution-SCCHD; Distribution-Phase II communities
Household Hazardous Waste Collection Program	<ul style="list-style-type: none"> - Personal actions that impact a watershed - Pesticide and fertilizer use and their disposal - Effects of residential wastes on waterbodies - Identification of household hazardous wastes and their alternatives - Disposal locations, requirements, and availability for household hazardous wastes, chemicals, and motor vehicle fluids 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	Ongoing throughout permit cycle				x			x	x	x	x			<ul style="list-style-type: none"> • # of residents utilizing service • amount and type of materials recycled 	<ul style="list-style-type: none"> • Implementation-St. Clair County Environmental Services Department; Promotion-SCCHD and Phase II communities
Riparian Management Brochure	<ul style="list-style-type: none"> - Importance of riparian corridors - BMPs for riparian lands: <ul style="list-style-type: none"> • Protection through the use of conservation easements • Lawn maintenance for water quality (including no-mow and no-chemical application zones) 	Riparian residents and business owners; Visitors; Public employees; Construction contracts and developers;	Ongoing throughout permit cycle	x	x	x	x	x		x	x	x	x			<ul style="list-style-type: none"> • # of brochures distributed • brochure content 	<ul style="list-style-type: none"> • Development and promotion-SCCHD; Printing and distribution-Phase II communities

Table 8.1 Summary of Information and Education Activities for St. Clair County’s Northeastern Watersheds

Activity	Key Messages	Target Audience	Schedule	Pollutant/Concern Addressed										Evaluation Measure	Responsible Party/Partners
				Watershed Awareness/Stewardship	Sediment	Nutrients	Bacteria/Pathogens	Natural Resource Protection/Conservation	Heavy Metals	Salts	Pesticides	Grease/Oil	Thermal Pollution		
	<ul style="list-style-type: none"> Landscaping for water quality Shoreline stabilization techniques Proper septic system maintenance Proper management of grass clippings, leaf litter, animal wastes, and other wastes 														
Beach Brochure	<ul style="list-style-type: none"> Impacts to water quality and human health from pathogens/bacteria 	Riparian residents and business owners; Visitors; Public employees; Construction contracts and developers;	Ongoing throughout permit cycle				x							<ul style="list-style-type: none"> # of brochures distributed content of brochure 	<ul style="list-style-type: none"> Development and distribution-SCCHD; distribution-Phase II communities
Home*A*Syst Workshops	<ul style="list-style-type: none"> Well and septic maintenance Managing shoreline property and native vegetation Yard and garden care Identification of failing OSDS 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	1 workshop/year		x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> # of workshops # of attendees 	<ul style="list-style-type: none"> Development and delivery-MSU Extension; Promotion-MSU Extension, SCCHD, and Phase II communities
Chamber of Commerce Materials	<ul style="list-style-type: none"> Information that would be found in newsletters and on County storm water website 	Residents; Visitors; Developers; Contractors; Students; Homeowners; Agricultural landowners; Public employees;	Ongoing throughout permit cycle	x	x	x	x	x						<ul style="list-style-type: none"> # of materials/newsletters distributed content of articles 	<ul style="list-style-type: none"> Development-SCCHD; delivery-SCCHD and Phase II communities
WAG Meetings	<ul style="list-style-type: none"> Water quality and quantity impacts from nonpoint source pollution and land use Importance of land use planning for water quality and natural resource protection Pollution prevention education 	Residents; Public employees;	1 presentation/year	x	x	x	x	x	x	x	x	x	x	<ul style="list-style-type: none"> # of meetings # of presentations # of attendees topics covered 	<ul style="list-style-type: none"> Coordination between SCCHD and Phase II communities

Table 8.2 Summary of Information and Education Activities and General Costs

Activity	Estimated Costs
Articles in Municipal/Watershed Newsletters	Costs associated with postage for mailings; no cost for online newsletter
Southeast Michigan Partners for Clean Water Informational Materials	See Table 6.2 in Chapter 6 – Best Management Practices (BMP 2)
Southeast Michigan Partners for Clean Water Mass Media	No Cost for SEMCOG Members
Web Site Information	Annual cost of maintaining website and staff time to update site
Children’s Activity Booklet	Riverside Printing, Port Huron, estimated cost of \$1.00/piece. Digital copy provided by SCCHD.
Water Quality Hotline Magnets	Precision Printing, Port Huron, estimated cost of \$0.30/piece. Digital copy provided by SCCHD.
Storm Drain Markers	das Manufacturing, Florida, estimated cost of \$1.65/piece, plus cost of adhesive and door hangers.
Water Quality Presentations	Presentations are provided free of charge by SCCHD
Watershed Road Signs	Vulcan Signs, Alabama, estimated cost of \$75/sign. Digital copy provided by SCCHD. Signs may be printed at municipality’s in-house sign shops.
Cable Access/Community Billboard	Local cable access programs should be available for use free of charge
Water Quality Display	\$50/each for SEMCOG members; St. Clair County water quality display can be borrowed free of charge
Promote MDEQ’s Pollution Prevention Programs	State Program—no cost
Chamber of Commerce	No cost—utilize existing informational resources
Riparian Land Management Brochure	Landscaping for water quality booklets, available through the Center for Environmental Studies, virtually free of charge. Other brochures could be developed for a \$650 design fee plus \$2,500 for 3000 copies full color plus postage (\$700 for 3000) (HRC estimate).
Managing Shoreline Property to Protect Water Quality Booklet	Offered free of charge through the MSU-extension office

8.3 Public Perceptions of Water Quality in the Watershed

In the summer of 2004, a public education survey was distributed by the Southeast Michigan Council of Governments (SEMCOG) to gauge local opinions on various water quality issues and general watershed awareness. The information gathered from this survey helps to provide a baseline of awareness and stewardship activities in the watershed, and also helps to guide where implementation of public education efforts would be best focused to strengthen public attitudes. The overall results of the survey, statistically significant for the NEW, and the lessons to be learned in future educational approaches for the public are summarized in Table 8.3 (also available in Appendix R).

Table 8.3 Public Perceptions of Water Quality in St. Clair County’s Northeastern Watersheds (SEMCOG, 2004)

Subject	Perception	Lesson Learned from Survey
Perceptions and Value of Water Resources		
Water Quality of Lakes/Streams/Rivers	<ul style="list-style-type: none"> • 42%-Quality was getting worse (“somewhat worse” or “much worse”) • 29%-Quality was improving (“somewhat better” or “much better”) 	→Report water quality improvements to the public as they become known
Recreational Uses	<ul style="list-style-type: none"> • 52%-Hiking/Walking • 51%-Swimming • 35%-Picknicking • 20%-No recreation over past year in/near lakes/streams 	→The public has an appreciation for the area’s water and natural resources
Lawn Care/Home Care—does it affect water quality?	<ul style="list-style-type: none"> • 66%-Yes • 34%-No 	→Continue to educate the public regarding potential water quality impacts from lawn/home care
Actions Taken at Home to Protect Water Resources	<ul style="list-style-type: none"> • 54%-No • 35%-Yes, in past two years • 11%-Did not know if they had 	→Encourage the public to take action to protect water quality and how to achieve it
Connection of Storm Water Runoff and Water Resources		
Greatest Contributors of Pollution to Lakes/Streams/Rivers	<ul style="list-style-type: none"> • 40%-Industrial discharges • 27%-Sewage overflows • 20%-Storm water runoff • 13%-Waste water treatment plant discharges 	→Correct the perception that the greatest threat to water quality is now from nonpoint source pollution (storm water runoff) as opposed to point source pollution (industrial and wastewater discharges, etc.)
Is Storm Water Drainage Treated?	<ul style="list-style-type: none"> • 47%-Aware that storm water enters lakes/streams/rivers without treatment • 26%-Not aware of where storm water goes after it enters a storm drain or ditch • 17%-Thought storm water goes to treatment plant • 10%-Goes to lakes/streams with treatment 	→Continue to educate the public about storm drain awareness and that it enters waterways without prior treatment
Awareness of “Watershed”?	<ul style="list-style-type: none"> • 26%-Familiar that they live in a “watershed” 	→Continue to educate the public about watershed awareness
Awareness that Local Water	<ul style="list-style-type: none"> • 94%-Agreed 	→Continue to educate the public about

Table 8.3 Public Perceptions of Water Quality in St. Clair County’s Northeastern Watersheds (SEMCOG, 2004)

Subject	Perception	Lesson Learned from Survey
Quality affects the Great Lakes and Lake St. Clair?		impacts of local water quality on the Great Lakes and Lake St. Clair
Awareness of Watershed/River Signage	<ul style="list-style-type: none"> • 60%-No signage observed 	→Continue to place signage to increase watershed awareness and knowledge of river crossings
Current Activities that Impact Water Quality		
Car Wash Activities	<ul style="list-style-type: none"> • 73%-Use a commercial car wash • 24%-Wash care at home in driveway 	→Continue to encourage the public to utilize commercial car wash to protect water quality, and promote watershed-friendly car washing practices for those that do wash at home
Septic Systems	<ul style="list-style-type: none"> • 36%-Utilize an onsite septic disposal system • 72%-Owners of septic systems that had not checked or serviced their system in the past 3-5 years 	→Continue to educate the public on the importance of proper OSDS operation and maintenance and its relationship to water quality protection and protection of public health
Home Car Care	<ul style="list-style-type: none"> • 24%-Change own oil/transmission fluid/radiator fluid 	→Continue to educate the public on home car care techniques to protect water quality
Household Hazardous Waste Collection	<ul style="list-style-type: none"> • 58%-Utilize the service • 19%-Dispose of waste in regular trash • <i>*For those individuals not using the service, 55% noted it was because they didn’t know where a facility was located</i> 	→Continue to encourage the public to utilize the County’s Household Hazardous Waste Program and advertise the available drop-off dates, times and locations
Fertilizer Use	<ul style="list-style-type: none"> • 50%-Never or Seldom use fertilizers on lawn • 25%-Use fertilizers at least one or two times per year 	→Continue to educate the public on proper fertilization practices and promote the soil testing program to ensure the proper type of nutrient management program for home lawn care
Fertilizer Types Used	<ul style="list-style-type: none"> • 48%-Weed and Feed • 26%-Seasonal varieties • 22%-Slow-release Nitrogen • 21%- Not sure what kind was used • 4%-Low-phosphorus 	→Continue to educate the public on proper fertilization practices and promote the soil testing program to ensure the proper type of nutrient management program for home lawn care; →Tout the benefits to water quality protection of using low- or no-phosphorus fertilizer
Factors for Selecting Fertilizer/Pesticide Type	<ul style="list-style-type: none"> • 49%-Previous experience with product • 17%-Based on price of product • 15%-Based on safety to the environment 	→Tout the benefits to water quality protection of using low- or no-phosphorus fertilizer and the proper use and application of pesticides (i.e. apply outside of buffer area along waterways)
Use of Commercial Fertilizer/Pesticide Service	<ul style="list-style-type: none"> • 84%-Do not use lawn service for fertilizer and/or pesticide applications 	→Continue to educate the public on proper fertilization practices and promote the soil testing program to ensure the proper type

Table 8.3 Public Perceptions of Water Quality in St. Clair County’s Northeastern Watersheds (SEMCOG, 2004)

Subject	Perception	Lesson Learned from Survey
		of nutrient management program for home lawn care;
Willingness to Take Action to Reduce Pollution of Streams/Lakes		
Willingness to Change Behavior to Protect Lakes/Streams/Rivers	<ul style="list-style-type: none"> • 82%-Willing to take household hazardous waste to collection site • 81%-Sweep excess fertilizer/pesticide onto their lawn • 79%-Have septic system serviced every 3-5 years • 78%-Would change car care practices • 66%-Promptly pick up pet waste • 65%-Less willing to change lawn watering practices 	<p>→Continue to educate the public on watershed-friendly practices and report improvements to water quality from positive changes in behavior to protect water quality</p> <p>→Educate the public on how to reduce lawn watering practices through the use of native landscaping, keeping mow height to 3” or more, etc.</p>
Best Way to Disseminate Educational Materials on Water Quality Protection		
Best Way to Receive Information regarding Protection of Lakes/Streams/Rivers	<ul style="list-style-type: none"> • 60%-Community newspaper • 40%-Major newspaper • 40%-TV News • 31%-Municipal newsletter 	→Utilize news media and newsletters to report to the public on water quality improvements and watershed awareness

In summary, the lessons learned from the 2004 public opinion survey include:

1. Educate on how individual actions can impact a watershed and water quality;
2. Educate on the significant sources of pollution to area waterways:
 - Greatest threat is from nonpoint source pollution collected in storm water runoff
 - Reduced threat of pollution from industrial and wastewater treatment plant discharges since they are regulated by the state;
3. Educate on storm drain awareness and that runoff enters area waterways *without* treatment;
4. Improve watershed awareness through the installation of watershed and river crossing signage;
5. Improve education and awareness of operation and maintenance procedures for owners of onsite septic disposal systems;
6. Improve knowledge of household hazardous waste programs including drop-off locations, dates, times, and acceptable materials;
7. Increase knowledge on the benefits of low or no-phosphorus fertilizers to protect water quality; and,
8. The survey indicated that the best methods to disseminate educational information is through:
 - local and major newspapers,
 - television news broadcasts, and
 - municipal newsletters.

The Southeast Michigan Council of Governments has indicated that they intend to redistribute this type of public education survey again by 2010 if there is enough interest from watershed stakeholders in the Southeast Michigan region. This type of collaborative effort has the benefit of cost-savings to Phase II permittees as part of a method to monitor progress on changes in public awareness and education as it relates to water quality and watershed protection. Now that this survey has established a baseline of understanding how stakeholders in the watershed perceive the various water quality issues, the next round of the survey will show how the educational efforts taken by permittees has hopefully helped to improve those behaviors and awareness levels.

8.4 Project Partnerships

In addition to the organizations and departments that were involved in developing this WMP and are listed as project partners in the Acknowledgements, there are other organizations that host a number of their own natural resource protection and improvement programs that may provide resources to help implement this WMP. A list of those organizations is provided below in Table 8.4 with a brief description of each, as well as contact information for each organization.

Table 8.4 Local Water Quality and Natural Resource Protection Organizations in St. Clair County and Southeast Michigan

Organization	Mission/Applicable Programs	Contact Information
Blue Water Land Conservancy	<p>Dedicated to advancing stewardship in St. Clair County by protecting and preserving the value of natural, recreational, scenic, historic, and agricultural lands for the common benefit of its citizens.</p> <p>Provide assistance to local units of government and other government agencies as needed. Will also develop quarterly one-day workshops in partnership with governmental/educational agencies regarding land use planning, watershed impact/protection, and others.</p>	Penelope Peck, President 4352 Atkins Road Port Huron, MI 48060 Ph: (248) 265-9260 Email: penelope.peck@EDS.com Karl Steinmann, Secretary Ph: (810) 329-4451
Binational Public Advisory Council (BPAC) http://www.friendsofstclair.ca/awards/index.asp	<p>Formed in 1988 to ensure continuous public participation in the St. Clair River Remedial Action Plan (RAP), and to advise the RAP Team on all aspects of the planning process. BPAC elects four of its own representatives (two each from Michigan and Ontario) to serve on the RAP Team.</p> <p>Specific public involvement activities have included the development of environmental education programs to put RAP information in the hands of teachers and students, creation of an interactive computer game about the St. Clair River RAP, sponsorship of an annual St. Clair River photo contest, and presentation of yearly environmental achievement awards.</p>	Fred Kemp U.S. Co-Chair, BPAC 100 McMorran Blvd. Port Huron, MI 48060 Ph: (810) 984-9730 Fax: (810) 984.2463
East Michigan Environmental Action Council http://www.emecac.org/ Email: emecac@aol.com	Mission is to protect and restore land, air, water, and diversity of life through informed personal and public action.	Diana Seales Executive Director 21220 West Fourteen Mile Road Bloomfield Hills, MI 48301 Email: diana@emecac.org
Friends of the St. Clair River http://www.friendsofstclair.ca/	An all-volunteer registered Canadian charitable organization whose purpose is to promote conservation, beautification and other environmental activities associated with the St. Clair River and assist in the development and implementation of the St. Clair River Remedial Action Plan (RAP).	Stewart Thornley Program Director Email: stthornley@rogers.com
Michigan Farmland and Community Alliance Michigan Farm Bureau http://www.michiganfarmbureau.com/	The purpose of the Michigan Farm Bureau is to represent, protect, and enhance the business, economic, social and educational interests of their members.	7373 West Saginaw Highway P.O. Box 30960 Lansing, MI 48909 Ph: (517) 323-6550

Table 8.4 Local Water Quality and Natural Resource Protection Organizations in St. Clair County and Southeast Michigan

Organization	Mission/Applicable Programs	Contact Information
Southeast Michigan Land Conservancy http://www.southeastmichiganlandconservancy.org/	Southeast Michigan Land Conservancy is a 501(c)3 non-profit organization dedicated to the preservation and stewardship of natural and agricultural land in the seven county southeast Michigan region. The SMLC also works to educate the public and public policy makers about land conservation issues. SMLC operates in the following counties: Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.	6410 St. Mary's Detroit, MI 48228 Ph: (313) 582-8377
United States Department of Agriculture Natural Resources Conservation Service St. Clair County	Administers the Continuous Conservation Reserve Program (CCRP) in St. Clair County to facilitate Agricultural Best Management Practices A complete list of Farm Bill Programs is available at: http://www.nrcs.usda.gov/programs/farmbill/2002/products.html	Quincy Coleman District Conservationist Kimball Service Center 2830 Wadhams Road PO Box 7870 Kimball, MI 48074-7870 Phone: (810) 984-3001 x101 Fax: (810) 984-2345 Email: quincy.coleman@mi.usda.gov
United States Fish and Wildlife Service Partners for Fish and Wildlife Program www.fws.gov/partners/	Mission is to efficiently achieve voluntary habitat restoration on private lands through financial and technical assistance. Primary objectives of program is to: <ul style="list-style-type: none"> • Promote and implement habitat improvement projects that benefit Federal Trust Species • Provide conservation leadership and promote partnerships • Encourage public understanding and participation • Work with the U.S. Department of Agriculture (USDA) to implement conservation program 	Jim Hudgins U.S. Fish and Wildlife Service 2651 Coolidge Road East Lansing, MI 48823 Ph: (517) 351-4230 Fax: (517) 351-5419 Email: Jim_Hudgins@fws.gov