

# **STORMWATER PUBLIC EDUCATION PLAN**

## **FOR THE LOWER ST. JOSEPH RIVER**

### **WATERSHED**

***(Berrien and Cass Counties, Michigan)***

**General Permit No. MIG610000**

**August 19, 2011**

*City of Benton Harbor  
City of Bridgman  
City of Buchanan  
City of Niles  
City of St. Joseph  
Village of Stevensville  
Village of Edwardsburg  
Village of Grand Beach  
Village of Michiana  
Lincoln Charter Township  
Berrien County Drain Commissioner  
Berrien County Road Commission  
Cass County Water Resources Commissioner  
Cass County Road Commission*



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## **INTRODUCTION**

In accordance with the jurisdictional and watershed-based permit requirements for Federal Phase II Storm Water Regulations, this Public Education Plan (PEP) was developed for the Lower St. Joseph River Watershed. Several municipalities in the Lower St. Joseph River Watershed and Berrien and Cass Counties have obtained a Certificate of Coverage (COC) from the Michigan Department of Environmental Quality (MDEQ) and will be working collaboratively to fulfill the permit requirements.

The purpose of the Public Education Plan (PEP) is to provide a framework to increase awareness of the connection between individual actions and the health of the watershed and water resources and to motivate the public to take appropriate actions to protect water quality. The overall goal is to promote, publicize and facilitate watershed education for the purpose of encouraging the public to reduce pollutants in storm water to the maximum extent practicable (MEP).

Since the permitted municipalities in Berrien and Cass Counties are all either within the Lower St. Joseph River Watershed or have direct drainage to Lake Michigan, they share similar water quality concerns, so a partnership approach to education and outreach enables the municipalities and the counties to maximize their resources to more effectively reach a larger audience than could be accomplished alone. The plan will ensure outreach activities will reach diverse audiences with a variety of viewpoints and concerns. For successful implementation of the PEP, partnerships with local agencies and organizations have been and will continue to be formed to utilize and build on existing educational materials and programs that are familiar and relevant to the public.

The PEP defines target audiences, develops specific messages, and selects delivery mechanisms to promote the goals and objectives of reducing pollutants in storm water runoff. The PEP includes a mechanism for evaluating the success and effectiveness of the plan. The measurable goals include realistic data collection that the participating

communities can quantify and compare. A schedule was prepared for the implementation of the various components of the PEP, indicating the dates for development and distribution of educational materials.

## **GEOGRAPHIC COVERAGE**

The Lower St. Joseph River is located in southwestern Michigan, flowing northwest from the City of Niles to its convergence with Lake Michigan in the City of St. Joseph. The following communities are participating in the watershed permit and their individual permit numbers are included below:

<b>Townships - Berrien County</b>	<b>Permit No.</b>
Lincoln Charter Township	MIG610241

<b>Municipalities - Berrien County</b>	<b>Permit No.</b>
City of Benton Harbor	MIG610243
City of Bridgman	MIG610242
City of Buchanan	MIG610244
City of Niles	MIG610246
City of St. Joseph	MIG610245
Village of Stevensville	MIG610224

<b>Municipalities - Cass County</b>	<b>Permit No.</b>
Village of Edwardsburg	MIG610236

<b>Drain and Road Commissions</b>	<b>Permit No.</b>
Berrien County Drain Commissioner	MIG610229
Berrien County Road Commission	MIG610228
Cass County Road Commission	MIG610233

In addition, the following municipalities with jurisdictional permits are also participating in the Public Education Plan for the Lower St. Joseph River Watershed.

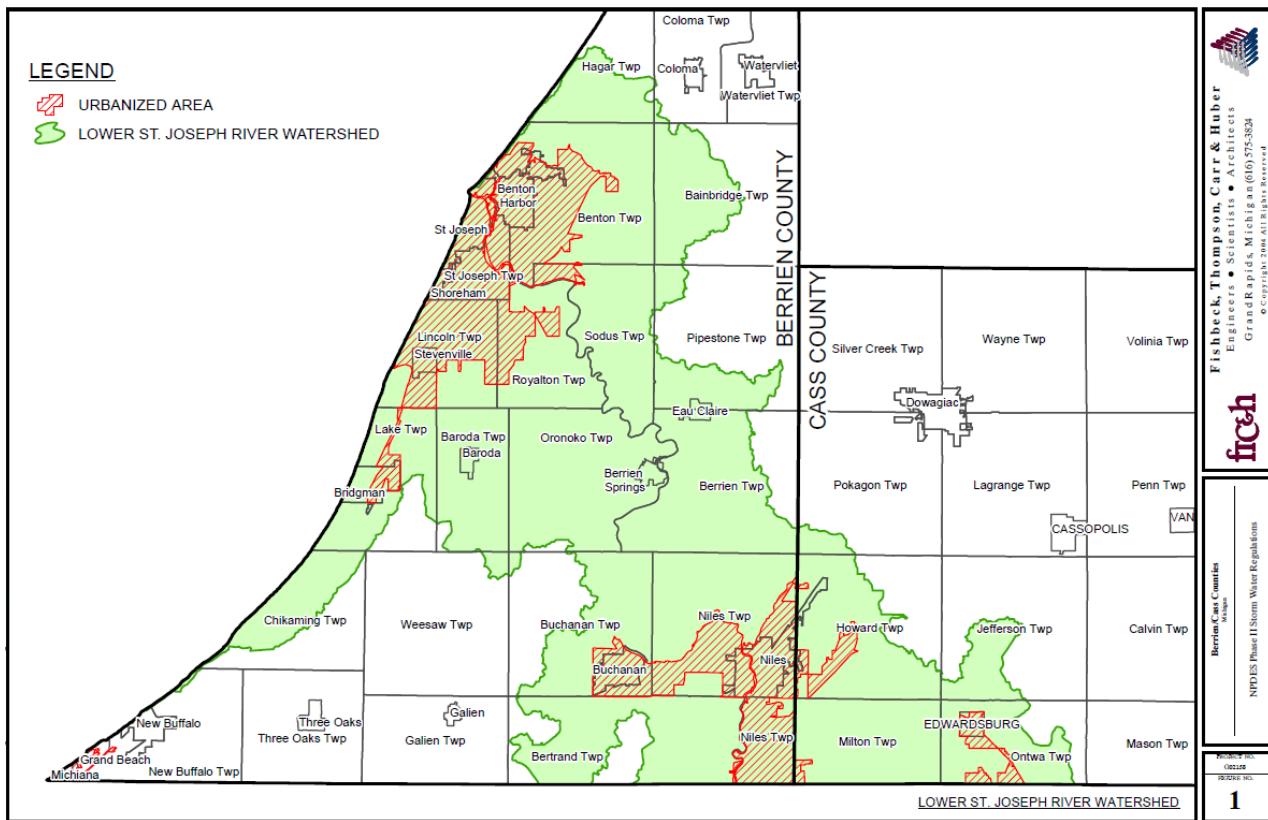
### **Municipalities – Berrien County**

Village of Grand Beach  
Village of Michiana

The designated urban communities within the Lower St. Joseph River Watershed (LSJRW) have formed a Watershed Committee to comply with the National Pollutant Discharge Elimination System (NPDES) Stormwater Regulations. These permitted municipalities and agencies will work together to develop and implement the Public Education Plan in the LSJRW. Compliance with the NPDES Phase II regulations

requires watershed residents to be informed, thus they will be more aware of their responsibilities for improving water quality. Changing the way people manage their lawns, household hazardous wastes, refuse, and septic systems, can have a considerable impact on improving water quality.

A watershed is all of the land that drains into a common body of water. Watersheds surpass political boundaries and connect communities with a common resource.



## PURPOSE

The purpose of the public education portion of the NPDES Phase II permit is to increase the awareness of watershed residents about how their everyday activities contribute pollutants to their community's water resources. Most citizens recognize the recreational and aesthetic benefits they receive from water, and most even recognize that water quality degradation is a serious concern in the Great Lakes Region. However, most people have not made the connection that the majority of this pollution is generated from their normal everyday actions and not simply from large commercial and industrial sources. This plan conveys a strategy to not only increase awareness, but to also influence the public's behaviors and actions to reduce the discharge of pollutants to stormwater.



## Clean water begins at home...

Become a friend of the St. Joseph River at [www.fotsjr.org](http://www.fotsjr.org).



## EDUCATION TOPICS

The PEP is designed to promote, publicize, and facilitate watershed education by encouraging the public to reduce the discharge of pollutants in storm water to the maximum extent practicable. Pollution prevention over treatment should be encouraged. Further, MDEQ's watershed-based General Storm Water Discharge Permit requires the implementation of a sufficient amount of educational activities to ensure that the targeted audiences are reached with appropriate messages for the following topics:

- 1. Personal watershed stewardship:** Responsibility and stewardship in their watershed. Key messages/concepts for this topic will be:
  - Definition of a watershed
  - Information on the St. Joseph River Watershed and its sub watersheds in Berrien and Cass Counties
  - The need to protect the watershed
  - Actions individuals can take to improve and protect watersheds

**2. Ultimate storm water discharge location and potential impacts:**

The connection of MS4 catch basins, storm drains and ditches to area waterways and the potential impacts these could have on the surface waters of the state. Key messages/concepts for this topic will be:

What is an MS4? It is a Municipal Separated Storm Water System which is a drainage system (including roads, catch basins, curbs, gutters, parking lots, ditches, conduits, pumping devices, or man-made channels) that is designated or used for collecting stormwater.

- Storm drains discharge to water bodies
- Stormwater discharged from separate storm sewer systems does not receive treatment prior to discharge
- Impacts of storm water pollutants in the watershed
- Knowledge of separate stormwater drainage system in a person's neighborhood and the water body to which the storm water is discharged

**3. Public reporting of illicit discharges:** Public reporting of illicit discharges or improper disposal of materials in MS4s. Key messages/concepts for this topic will be:

- What is an illicit discharge and how to identify one
- Information on how to report an illicit discharge
- Water quality impacts associated with illicit discharges and improper waste disposal
- Consequences/penalties associated with illicit discharges and improper waste disposal

**4. Personal actions that can impact the watershed:** The effects and need to minimize the amount of residential or noncommercial wastes discharged into MS4s. Key messages/concepts for this topic will be:

- Best management practices for the following actions:
  - Car, pavement, and/or power washing (preferred cleaning materials and practices, such as use of phosphate free products)
  - Pesticide use, fertilizer use and proper disposal
  - Management and disposal of grass clippings, leaf litter and animal wastes that could get flushed into MS4s and the surface waters of the state
  - Effects of residential wastes on our water bodies
  - Proper disposal of wash water

**5. Waste management assistance:** The availability, location and requirements of facilities for disposal or drop-off of household hazardous waste, travel trailer sanitary wastes, chemicals, yard wastes and motor vehicle fluids. Key messages/concepts for this topic will be:

- Identification of household hazardous wastes

- Alternatives to hazardous household products
  - Disposal locations and requirements for motor vehicle fluids, travel trailer sanitary wastes, recreational boating sanitary wastes and yard wastes
6. **Septic system maintenance:** For property owners with septic systems, the proper septic system care and maintenance, and how to recognize system failure. Key messages/concepts for this topic will be:
- Proper septic system care and maintenance
  - Identification of symptoms of a failing on-site sewage disposal system (septic system)
  - Water quality impacts associated with failing septic systems
7. **Benefits of native vegetation:** The benefits of using native vegetation instead of non-native vegetation. Key messages/concepts for this topic will be:
- Using native plants, specifically for a vegetative riparian buffer or rain garden, can significantly contribute to stream health, infiltration, improving water quality, improving wildlife habitat, reducing the chance of introducing invasive aquatic nuisance species and reducing the cost of mowing.
8. **Management of riparian lands:** For riparian land owners, methods for managing riparian lands to protect water quality. Key messages/concepts for this topic will be:
- Importance of riparian corridors
  - Best management practices for riparian lands including land protection through conservation easements, lawn maintenance (no-mow; no-chemical zones), landscaping, and shoreline stabilization)
9. **Entity specific pollutants:** Provide education on additional pollutants unique to commercial, industrial and institutional entities as the need is identified. Key messages/concepts for this topic will be:
- Chemicals need to be stored under cover and handled in a manner that reduces the exposure of chemicals to storm water runoff.
  - Grease, food wastes and litter from food preparation establishments (restaurants, school cafeterias)

## **TARGET AUDIENCES, MESSAGES AND DELIVERY MECHANISMS**

The goal of this plan is to educate the public. The level of understanding of watershed concepts and management, the concerns, values and level of enthusiasm can all vary between different audience groups. Identifying target audiences and recognizing their differences is critical to achieving success through education and outreach efforts. Educational messages may need to be tailored to effectively reach different audiences. It is important to understand key motivators of each target audience to establish messages that will persuade them to adopt behaviors or practices to protect and improve water quality. Table 1 lists and describes the major target audiences for the LSJRW and some ideas for specific messages that could serve as motivators.

Because of the differences between target audiences, it will sometimes be necessary to utilize multiple formats to successfully get the intended message across. Therefore, a successful PEP should use delivery mechanisms that are cost effective and reach a maximum number of residents with persuasive behavior changing messages. The delivery mechanisms included in the PEP are building on existing programs where possible and can feasibly be implemented by the participating communities to reach the maximum number of people with effective results. The main distribution methods include the media, newsletters and direct mailings, email lists and websites, and passive distribution of printed materials. Below is a brief description of each format with some suggestions on specific outlets or methods.

**1. Media:** Local media is a key tool for outreach to several audience groups. The more often an audience sees or hears information about watershed topics, the more familiar they will become and the more likely they will be to use the information in their daily lives. Keeping the message out in front through press releases and public service announcements is essential to the success of education and outreach efforts.

**Newspapers** include the Herald Palladium, Niles Daily Star, South Bend Tribune, Benton Spirit, Berrien County Record and Harbor Country News. Major Radio outlets include: WAUS 90.7 FM, WCNF 94.4 FM, WCSY 98.3 FM, WFRN 104.7 FM, WFRN 1270 AM, WGMY 940 AM, WGTO 910 AM, WHFB 99.9 FM, WHFB 1060 AM, WIRX 107.1 FM, WRHC 106.7 FM, WSJM 1400 AM, WSMK 99.1 FM, WUTZ 97.5 FM, WYZT 97.5 FM, WZBL 103.7 FM.

The **major television outlet** for the area is WNDU Channel 16 in South Bend.

**2. Newsletters and other direct mailings:** Several municipalities, governmental agencies, utilities, County offices and non-profit organizations send out newsletters or other mailings which may be coordinated with various outreach efforts such as fact sheets or "Did you Know" messages. Currently identified mailings include Village and City utility bills county tax bills, and newsletters of municipalities, Berrien and Cass Conservation Districts, Friends of the St. Joe River, Southwest Michigan Planning Commission, Michigan's Great Southwest Sustainable Business Forum, Sarett Nature Center, Southwest Michigan Land Conservancy and MSUE.

**3. E-Mail lists, Websites and Social Media:** The Southwest Michigan Planning Commission maintains an active website and facebook page which will be used to reach residents of the watersheds as well as elected officials and businesses. The Friends of the St. Joe River, Two Rivers Coalition and St. Joseph River Basin also have very informative websites. As part of the plan, other organizations will be encouraged to supply watershed related educational materials through their websites where appropriate. Enviro-mich, an electronic list serve for those interested in Michigan environmental issues, provides an opportunity to advertise events and workshops to a large audience. Further, SWMPC also has an extensive email contact list of local stakeholders which can be used to distribute information.

**4. Passive Distribution:** This method relies on the target audience picking up a brochure, fact sheet, or other information. This can occur by placing materials or a display at businesses, libraries, township/city/village halls and community festivals and events. An example would be to place information on using phosphate free fertilizer at a store that sells fertilizer.

**Table 1: Target audiences, messages and potential delivery mechanisms**

Target Audiences	Description of Audience	Specific Message Ideas	Potential Activities
Residents/ Property/ Home Owners	This audience includes any resident or property owner in the watershed. Specific audiences may include students and riparian property owners who own land along a river, stream, drain or lake.	Water quality impacts my property value and my health.	Public Service Announcements Press releases Display/materials at festivals Workshops and presentations Watershed Tours Tax/utility bill inserts Website/YouTube video Workshops and presentations Brochures/flyers/fact sheets One-on-one contact "Entering the watershed" signs Newsletter articles Door knob hangers
Businesses	This audience includes businesses and industries engaging in activities that can impact water quality. Priority businesses include lawn care companies, landscapers, lawn and garden centers, car washes, and marinas.	Clean water helps to ensure a high quality of life that attracts employees, other businesses and residents (potential customers).	Workshops and presentations Brochures/flyers/fact sheets One-on-one contact
Developers / Builders	This audience includes developers, builders, engineers and construction contractors.	Water quality impacts property values.	Newsletter articles Workshops and presentations Watershed tours Brochures/flyers/fact sheets Trainings
Visitors to the area	This audience includes people and families visiting the area.	Clean water is the one of the most important reasons why people visit this area.	Brochures/flyers/fact sheets "Entering the watershed" signs Kiosks Display/materials at festivals
Public Officials and Employees	This audience includes elected (board and council members) and appointed (planning commissions and zoning board of appeals) officials of cities, townships, villages and the county. This audience also includes the drain commission, road commission and public works staff. It also includes state and federal elected officials.	Water quality impacts economic growth potential. Water quality impacts property values and the tax revenue generated in my community to support essential services. Clean water protects public health.	One-on-one contact Trainings Workshops and presentations Brochures/flyers/fact sheets Watershed tours Educational videos Watershed Management Plan User Guide
Recreational Users	This audience includes any person who engages in recreational activities.	Water quality is important for enjoying recreational activities.	Website/YouTube video Kiosks Newsletter articles Brochures/flyers/fact sheets

## **EDUCATION STRATEGY**

The PEP suggests implementing specific activities to develop a program that is effective in changing individual behaviors that will result in cleaner water in the Lower St. Joseph River Watershed. The Table in Appendix 2 provides an education strategy for the LSJRW. For each major topic, the table lists target audiences, key messages, delivery mechanisms or activities, a responsible party and partners, timeline for development and implementation and an evaluation method. Each delivery mechanism and activity listed will incorporate the key concepts and messages discussed in the Education Topic section and the specific message ideas listed in Table 1. For activities which list several education topics, such as press releases, news articles and presentations, the topic will be selected based on the time of year or topics of most interest due to local circumstances. For example, a press release about car washing practices would be implemented in the spring or summer, not in the winter.

These activities will increase the general awareness of watersheds and water quality issues for all audiences, educate target audiences on specific issues and motivate target audiences to implement practices to improve and protect water quality. For each topic, the audience(s) will need to not only understand the issue, but also the solutions or actions needed to protect or improve water quality. For each topic, priority target audiences have been identified. The priority audiences were selected because of their influence or ability to take actions, which would improve or protect water quality. However, it is expected other audiences not listed will also receive the messages.

The practices being promoted through the education strategy include homeowner activities such as reducing fertilizer use, maintaining septic systems, installing a rain garden or maintaining stream buffers. Stewardship and responsibility in the Watershed will increase as awareness increases, resulting in an overall improvement in water quality. Greater awareness and pride in local natural resources at the grass roots level will create bottom up behavior and policy change. More understanding on the relationships between storm water pollution and local problems will result in a public desire for change.

## **IMPLEMENTATION**

Ultimately, the permitted municipalities are responsible for implementing the Public Education Plan. Since the beginning of the Phase II program in southwest Michigan, the permitted communities have collectively hired the Southwest Michigan Planning Commission to coordinate the implementation of the PEP. Many of the activities in the Education Strategy (see Appendix 2) have the “PEP coordinator” listed as the “Responsible Party for Implementation.” The PEP coordinator will develop and help distribute many of the educational items produced, but then each municipality will assist efforts to get the materials distributed in their individual community by the means that are available to them (municipal website (by providing a link to [www.swmpc.org/water./asp](http://www.swmpc.org/water./asp)), municipal/community newsletters, employee paycheck stubs, emails to employees or residents, Facebook page, scheduling presentations for planning commissions, councils/boards and community groups, etc.)

In the past, the communities have utilized the Southwest Michigan Planning Commission, as SWMPC works closely with all watershed and conservation related groups in southwest Michigan. An annual work plan is developed each year by SWMPC to define the education activities to be completed each year. Individual communities must work closely with the PEP coordinator to ensure that their portion of the PEP is implemented. For example, the PEP coordinator will develop materials, but for certain activities it is the municipalities’ responsibility to ensure that the materials are made available to their residents and businesses. These activities are identified in the Education Strategy in Appendix 2 where the responsible party lists the municipality. The PEP coordinator will develop a tracking/evaluation form to be used for each participating municipality and partner to effectively communicate their efforts in the education program. The PEP coordinator with assistance from the municipalities, counties and other partners will compile the information and complete the necessary evaluation measures to satisfy reporting requirements for the education component.

To achieve maximum effectiveness, the public education program needs an overarching theme that provides consistent verbal and visual cues to the target audience. Benefits of a common theme approach are:

- Creates a distinct identity and is recognizable by the public
- Sends a clear and concise message
- Makes the program more personal for the recipient
- Creates unity between all pollution prevention programs

To develop a common theme, the Southwest Michigan Planning Commission (SWMPC) developed a logo to use on all educational materials produced as part of the PEP. To date, all materials produced by SWMPC have this logo displayed. SWMPC has also encouraged participating municipalities and agencies to use this logo on their websites and other materials.



Over the last few years, many educational materials have been produced for the LSJRW such as fact sheets, a display, brochures, press releases, post cards, presentations, and an extensive website at [www.swmpc.org/water.asp](http://www.swmpc.org/water.asp) (see Appendix 3). All of these materials address the education topics in this PEP and will continue to be utilized. Future PEP implementation efforts will focus on expanding the web pages such as including more video clips and also increasing efforts with partners to reach additional audiences. For this plan, highest priority activities include:

- Activities that promote or build on existing efforts and expand partnerships with watershed organizations, municipalities, conservation organizations and other entities. (See Appendix 1.)
- Activities that promote general awareness and understanding of watershed concepts and improvement goals.
- Activities that leverage external funding from local, state or federal sources.
- Activities that lead to actions which help to improve and/or protect water quality.

## EVALUATION

It is important to identify which messages and activities are effective in changing behaviors and ultimately lead to improvements in water quality. It is also equally important to understand which messages and activities are not effective so

modifications can be made to the PEP to ensure resources are being utilized in a manner which supports the goals of the PEP. For the education efforts, one level of evaluation is documenting a change in knowledge or increase in awareness and participation.

Most of the evaluation methods listed in the education strategy (Appendix 2) are aimed at tracking citizen behavior such as the level of participation in events, watershed meetings, workshops, activities and watershed groups. Also the number of people seeking information on websites will be monitored. Further, whenever feasible, evaluation of participants at meetings, presentations and events will be conducted. Questions in these evaluations will ask specifically what behavior changes would result from the information gained at the event.

In the short term, other watershed level evaluation methods such as meeting and assessment with stakeholders and citizen advisory group meetings will be used to provide feedback. Resources are not currently available, but the long term goal is to conduct a large scale social survey effort to understand individual watershed awareness and behaviors impacting water quality.

Public education efforts found to be cost effective for reaching a wide and varied audience through the evaluation will continue to be utilized. The programs that are determined to be ineffective in increasing awareness and behavior change will be studied to find the reasons why they did not work and either be changed to increase their effectiveness or discarded from future implementation. The PEP coordinator will be responsible for ensuring that the information to be evaluated is tracked or that the responsible party will be tracking the information and reporting it to the PEP coordinator. The PEP coordinator will develop and distribute an evaluation/tracking form for each responsible party delivering educational activities.

## **APPENDIX 1. AVAILABLE RESOURCES AND EXISTING EFFORTS**

By developing a cooperative effort for implementing the PEP, the participating communities will be able to utilize many of the programs and methods of communication that already exist throughout the watershed and educational media that has been successfully used throughout the State of Michigan.

The Berrien County and Cass County area is home to a number of organizations and agencies that conduct environmental education activities. Collaboration with these organizations will be beneficial as many of these organizations have members or established audiences that will be easy to reach with water quality related messages. A joint effort between these organizations and the participating communities will reach more of the public than what could be accomplished alone.

An abundance of public education materials has already been published throughout the State of Michigan by various organizations, such as conservation districts, Rouge River Wet Weather Demonstration project, Clinton River Watershed Council, Huron River Watershed Council, the Michigan Department of Environmental Quality (MDEQ), the Michigan Groundwater Stewardship Program, Natural Resources Conservation Service, and various county drain commissioners. Information and examples of the most successful of these programs and activities have been assembled into the statewide Storm Water Savvy Campaign. The materials in the Storm Water Savvy Campaign and other relevant programs throughout the state and even the nation will be utilized in the LSJRW PEP.

Below is a list of some of the current education efforts being offered or resources that are available for use or adaptation in the LSJRW. In some cases, existing efforts may need additional advertisement or updating to more effectively transmit a water quality related message.

1. The Friends of the St. Joe River recently hired an outreach coordinator and is doing more educational activities in the watershed. Further, the Two Rivers

Coalition (Paw Paw and Black River Watershed), a new non-profit organization, is also actively promoting water quality protection and improvement. Both organizations have websites with abundant information on watersheds and water quality.

2. The Southwest Michigan Planning Commission provides many educational resources about storm water, water quality, low impact development and green infrastructure. These resources are available on the Internet at [www.swmpc.org](http://www.swmpc.org).
3. The Friends of the St. Joe River, Two Rivers Coalition, Stewardship Network, Sarett Nature Center, Fernwood, Conservation Districts, Southwest Michigan Planning Commission, MSUE and lake associations periodically host educational workshops and programs related to watershed and water quality topics.
4. The St. Joseph River Basin has a website with water quality information, distributes a quarterly newsletter and has also produced a DVD about septic systems that could be distributed.
5. MDEQ has a new Statewide Low Impact Development manual, which will be extremely useful for educating and implementing Low Impact Development.
6. MSU Extension sponsors a Citizen Planner Course each year in Southwest Michigan. The target audiences for this course are municipal and planning officials as well as citizens. Topics presented during each course include various land use planning topics and techniques.
7. A new non-profit has been created called the Michigan's Great Southwest Sustainable Business Forum (MGSSBF) which will serve as an effective vehicle to reach the business community.

## APPENDIX 2. EDUCATION STRATEGY FOR THE LOWER ST. JOSEPH RIVER WATERSHED

<b>Delivery Mechanism/ Activity</b>	<b>Audience*</b>	<b>Public Education Topic(s)**</b>	<b>Responsible Party (partners)</b>	<b>Timeline Development/Implementation</b>	<b>Evaluation Method</b>
Produce and distribute press releases on watershed and stormwater topics	Residents, home/property owners	1,2,3,4,5,6,7,8	PEP Coordinator	Develop and implement 3 a year beginning 2011	Number of press releases
Maintain and expand a website that makes watershed and stormwater information easily available	All	1,2,3,4,5,6,7,8	PEP Coordinator	Already developed, maintenance and expansion on-going	Number of web page hits
Offer display with corresponding fact sheets for community festivals, county fairs, libraries and municipal buildings	Residents, home/property owners, visitors, public officials and employees	1,2,3,4,5,6,7,8	PEP Coordinator/ Municipalities	Already developed, 4-5 events or locations per year	Number of materials distributed and number of events with display
Create text and graphics for signs that can be used at public locations addressing pet waste, riparian buffers, wildlife feeding and rain gardens.	All	1,2,3,4,7,8	PEP Coordinator/ Municipalities	Develop 2012, distribute to municipalities/organizations in 2013	Number of signs designed and installed
Promote trainings on municipal operations (including road maintenance and construction) and best management practices to protect water quality***	Public employees and contractors utilized by municipalities	1,2,3,4,5,6,7,8	Municipalities and Fishbeck, Thompson, Carr and Huber	See SWPPI commitments	Number attending trainings
Offer watershed and water quality related articles for municipal and organizational newsletters and mailings	Residents, home/property owners, businesses, public officials and employees	1,2,3,4,5,6,7,8	PEP Coordinator/ Municipalities	Develop one article per year beginning in 2012	Number of articles printed or distributed
Offer or co-sponsor workshops or summits on water quality related issues and share successes in watershed protection efforts	All	1,2,3,4,5,6,7,8	PEP Coordinator	Develop and implement one workshop every two years beginning 2011	Number of participants; self reported expected change in behavior resulting from workshop

<b>Delivery Mechanism/ Activity</b>	<b>Audience*</b>	<b>Public Education Topic(s)**</b>	<b>Responsible Party (partners)</b>	<b>Timeline Development/Implementation</b>	<b>Evaluation Method</b>
Host or co-host a watershed tour focusing on watershed/water quality issues	All	1,2,3,4,5,6,7,8,	PEP Coordinator (FotSJR, TRC)	Develop and implement one tour every 3 years beginning in 2014	Number of participants; self reported expected change in behavior resulting from workshop
Offer presentations on water quality issues to community groups, municipal meetings, lake associations, etc.	Residents, businesses, public officials and employees	1,2,3,4,5,6,7,8	PEP Coordinator/ Municipalities	Already developed (tailor to each group as needed) and implement one per year beginning in 2011	Number of attendees
Offer presentations to local business gatherings (Green Drinks or Rotary meetings) about what businesses can do to protect water quality	Businesses	1,2,3,4,5,7,8	PEP Coordinator	Develop presentation 2011, begin implementation 2011	Number of business attending presentation
Develop short messages to be included with tax or utility bills or paychecks or Facebook pages	Home/property owners	1,2,3,4,5,7,8	PEP Coordinator/ Municipalities	Develop 1 message per year beginning 2013	Number of mailings
Install storm drain markers and place door knob hangers to educate residents about stormwater runoff	Residents, businesses	1,2,3,4	PEP Coordinator/ Municipalities	Develop 2013, implement 2014-2020 (1 municipality a year)	Number of markers installed; Number of residents and businesses reached
Distribute soil erosion brochure to applicants for soil erosion permits	Contractors, builders, developers, home and home/property owners	1,2,8	Berrien Drain Commissioner and Cass Water Resource Commissioner	Already developed and being implemented – on-going	Number of brochures distributed
Provide information on green infrastructure, low impact development and model ordinances to planning commissions to improve plans and zoning ordinances for water quality protection	Public officials	1,2	PEP Coordinator/ Municipalities	Implement for 1 municipality per year	Number of improvements to plans and ordinances enacted
Promote statewide LID manual and related trainings offered	Public officials, employees, developers, builders	1,2	PEP Coordinator	As available	Number attending trainings

<b>Delivery Mechanism/ Activity</b>	<b>Audience*</b>	<b>Public Education Topic(s)**</b>	<b>Responsible Party (partners)</b>	<b>Timeline Development/Implementation</b>	<b>Evaluation Method</b>
Develop webpage with information regarding public reporting of illicit discharges	All	3	PEP Coordinator	Develop 2012 and implement 2013	Number of web page hits
Continue to implement the Berrien County Road Commission Adopt a Road Program	All	1,4,5	Berrien County Road Commission	On-going	Number of participants
Offer presentations to classrooms and school groups about resource recovery topics	Students	1,4,5	Berrien County Resource Recovery	On-going	Number of presentations
Implement a resource recovery grant program for schools in Berrien County with a newsletter showcasing successful projects for waste reduction	Students	1,4,5	Berrien County Resource Recovery	On-going – once per year	Number of grant applications received
Produce, distribute and post on website a Watershed Management Plan user guide	All	1,4	PEP Coordinator	Develop 2014, distribute 2014-2015	Number of guides distributed or requested, number of webpage hits
Distribute PSAs (from Storm Water Savvy Campaign) to local radio stations	All	1, 4	PEP Coordinator	Already developed, distribute 2012	Number of PSAs aired
Promote the St. Joseph River Basin Commission's Annual St. Joseph River Watershed Symposium	Public employees and officials	1,4	PEP Coordinator	Once a year	Number of attendees from Berrien and Cass counties
Develop and install signs and kiosks along the Paw Paw River in Benton Harbor	Recreation groups/users, visitors	1,4	Harbor Shores	Develop and implement 2011-2012	Number of kiosks/signs installed

<b>Delivery Mechanism/ Activity</b>	<b>Audience*</b>	<b>Public Education Topic(s)**</b>	<b>Responsible Party (partners)</b>	<b>Timeline Development/Implementation</b>	<b>Evaluation Method</b>
Post a video on septic system and maintenance on PEP website	Residents, home owners	4,6	PEP Coordinator	Develop and implement 2011	Number of web page hits
Develop and distribute informational materials about the impacts of failing septic systems and model ordinances	Public officials and employees (municipalities with septic systems)	4,6	PEP Coordinator	Develop 2012 and implement 2013	Number of materials distributed
Work with the Berrien County Health Department to expand information on septic systems on their website	Home/property owners, developers, builders, public employees	4,6	PEP Coordinator	Develop 2012, implement 2013	Updated information on website
Promote MSUE Master Gardner and Composter Programs for yard waste management	Property/home owners	4,5,7,8	PEP Coordinator	On-going	Number of participants
Maintain Berrien County website with information on household hazardous waste collections, Clean Sweep Program for pesticides, electronic recycling, tire collections and yard waste disposal and other materials	All	5	Berrien County Resource Recovery (promoted by PEP Coordinator and municipalities)	On-going	Number of web page hits
Distribute informational materials about travel trailer sanitary waste disposal to campgrounds	Recreation users, businesses, visitors	5	PEP Coordinator	Already developed, implement 2011	Number of materials distributed
Distribute informational materials about recreational boat sanitary waste disposal to marinas and boat dealerships	Recreation users, businesses visitors	5	PEP Coordinator	Develop 2012, implement 2013	Number of materials distributed

<b>Delivery Mechanism/ Activity</b>	<b>Audience*</b>	<b>Public Education Topic(s)**</b>	<b>Responsible Party (partners)</b>	<b>Timeline Development/Implementation</b>	<b>Evaluation Method</b>
Work with municipalities and organizations to incorporate native plants into landscaping on public properties	All	7	PEP Coordinator/ Municipalities	On-going	Number native plant gardens installed
Expand native plant and riparian management information on SWMPC website	All (especially riparian land owners)	7,8	PEP Coordinator	Develop and implement 2013	Number of web page hits
Develop and distribute informational materials for commercial, industrial and institutional facilities as the need is identified	Businesses	1,5,7,8, 9	PEP Coordinator	As needed	To be determined

\*Primary audiences are listed; there may be additional audiences that could benefit as well

**\*\*Education Topics:**

1 = Personal Watershed Stewardship

2 = Ultimate Storm Water Discharge Location and Potential Impacts

3= Public Reporting of Illicit Discharges

4= Personal Actions that can impact the watershed

5= Waste Management Assistance

6= Septic System Maintenance

7=Benefits of Native Vegetation

8= Management of Riparian Lands

9=Entity Specific Pollutants

\*\*\*For additional information on public employee and consultant trainings see individual SWPPI commitments

**Acronyms**

BCD: Berrien Conservation District

FotSJR – Friends of the St. Joe River

MSUE: Michigan State University Extension

SWMLC: Southwest Michigan Land Conservancy

SWMPC: Southwest Michigan Planning Commission

TRC: Two Rivers Coalition: An Alliance for the Black and Paw Paw River Watersheds

## APPENDIX 3. SAMPLE EDUCATIONAL MATERIALS DEVELOPED FOR THE PEP

(For additional materials visit [www.swmpc.org/pepmaterials.asp](http://www.swmpc.org/pepmaterials.asp).)

**Be Stormwater Savvy**  Don't let a good drop go bad!

**7 Steps to Clean Water**

1. Do not dump anything down the drain
2. Save water
3. Clean up after your pet
4. Fertilize sparingly & caringly
5. Check your septic tanks regularly
6. Take your car to the carwash
7. Take your R.V. to a waste site

If you ...

One drop of oil can make 6.6 gallons of water unsafe for human consumption - a teaspoon is enough to pollute all of the water in an olympic sized swimming pool.

Do you want to keep ...?

Remember, our supply of water is not limitless!

**Water Quality Display**

# Fact Sheet Examples

## WHERE DO YOU WASH YOUR CAR?



Did you know there are over 4 million vehicles in Southwest Michigan? If motor fluids or the dirty water from washing our cars are dumped or washed into the storm drain, it pollutes our local waterways. So, proper car care and disposal of fluids will help to protect our inland lakes, streams and Lake Michigan!

Southwest Michigan  
Water Quality  
Coalition  
[www.swmpc.org/water.asp](http://www.swmpc.org/water.asp)

Shown are car washing and a general storm water tips fact sheet. Other topics in this series of fact sheets include Lawn Care for Water Quality, Land Conservation Options, Septic System Maintenance, and Proper Disposal of Travel Trailer Sanitary Waste.

## What Can I Do?

### Tips for Car Washing Remember The Best Way to Wash Your Car Is At A Carwash

- Take your car to the car wash on a certain day every week

Did you know that an average car wash at home uses 116 gallons of water?

### If you choose to wash your car at home, here are a few tips:

- Wash on grass, gravel, not on a paved driveway or street
- Minimize the amount of water you use by using a hose nozzle with a trigger
- Reduce the amount of soap you use
- Do not rinse sponges and wash rags onto the ground but into buckets, then pour the buckets of soapy water down the sink when done

What soap should you use when washing at home? Wash with mild detergents or soaps that say "biodegradable" or "phosphate free" or use the recipe below. Remember to wash on an area that allows the water to soak into the ground.

#### Car Wash Recipe

Use this concoction to help keep out toxins!

1 gallon water  
2 tsp. castile soap (for example, Dr. Bonner's)  
2 tsp. lemon juice or vinegar

Mix well and wash!

#### Watch for fluids that leak from your car so they don't enter our waters.

If you choose to change your oil and other fluids yourself, label the waste containers. Then, take them to your community's household hazardous waste collection day or to a business that accepts used oil.

For HHW Collection Information contact:  
Berrien County 269-983-7111 ex. 8234 OR  
Cass County MSUE 269-445-4438

- Never dump used oil, antifreeze, or other fluids on the ground or down the storm drain.
- Use kitty litter promptly to absorb small amounts of spilled vehicle fluids. Then sweep it into a bag and throw it in the trash.

#### For more information on car washing visit:

<http://www.semco.org/OursToProtect/7SimpleSteps/CarCareTip.htm>



[www.swmpc.org/water.asp](http://www.swmpc.org/water.asp)

# DO NOT DUMP ANYTHING

## DOWN THE DRAIN!



Do not pour anything down the drain – it may flow directly to inland lakes, streams or Lake Michigan!  
Polluted stormwater runoff can harm plants, fish, animals, people, and it can even pollute our drinking water sources.  
Be sure to do your part to protect water quality.

**Southwest Michigan  
Water Quality  
Coalition**  
[www.swmpc.org/water.asp](http://www.swmpc.org/water.asp)

## What Can I Do?

### Simple Tips for Protecting Water Quality at Home

- Use fertilizers sparingly and sweep up driveways, sidewalks, and roads.
- NEVER dump anything down storm drains. Take unwanted chemicals and paint to a hazardous waste collection site.
- Check for and fix car leaks and recycle motor oil.
- Vegetate bare spots in your yard.
- Direct downspouts away from paved surfaces.
- Take your car to the car wash instead of washing it in the driveway.
- Pick up after your pet and throw the waste in the garbage.
- Have your septic tank system pumped and inspected regularly.
- Compost your yard waste.  
<http://www.deq.state.mi.us/documents/deq-wmd-swp-compostbroch.pdf>
- Avoid pesticides, use non-toxic gardening techniques and learn about Integrated Pest Management (IPM).  
<http://pasture.ecn.purdue.edu/~epados/lawn/src/pest.htm>

**For waste/motor oil collection sites call:**  
Berrien County Community Development Dept.: (269) 983-7111 ex. 8234 OR Cass County MSUE: (269) 445-4438

**DID YOU KNOW?**  
Now, more than 60% of water pollution comes from things like cars leaking oil, failing septic systems, and fertilizers from lawns, gardens and farms. All these sources add up to a big pollution problem. But each of us can do small things to help clean up our water – and that adds up to a pollution solution!

#### Other tips:

- Plant native, drought tolerant, erosion-controlling ground covers instead of lawns to reduce pesticide, herbicide, and fertilizer runoff. For more information on using native plants visit [www.for-wild.org](http://www.for-wild.org).
- Use non-chlorine pool and spa alternatives. If using chlorine, add a de-chlorination product such as sodium thiosulfate before draining the water. Then drain the water onto a permeable surface such as a lawn.

**keep it BLUE**  
 only rain in the drain

[www.swmpc.org/water.asp](http://www.swmpc.org/water.asp)

## Flyer Example

The City of Niles asks you to do your part to protect our water resources!

# keep it BLUE



only rain in the drain



PROTECTING.  
PRESERVING.

### Where does drinking water come from?

In the City of Niles, water is pumped from groundwater and then it is piped to a treatment plant where the water is treated so it safe for drinking. The water is then piped to houses and businesses for use.

### Where does water go?

**Water from Homes and Businesses** flows in pipes to a wastewater treatment plant which removes solids and wastes, but not all chemicals. The water is then discharged into the St. Joseph River.

**Water from Rain or Melting Snow** flows over the land (grass, streets and parking lots) and picks up dirt, litter, pet waste and chemicals from fertilizers, pesticides and leaky cars. This dirty water or stormwater runoff, drains either directly to our rivers and streams or to storm drains which discharge the untreated water to nearby rivers and streams.

