

STORMWATER PUBLIC EDUCATION PLAN

FOR PERMITTED AREAS OF

Berrien and Cass Counties, Michigan

April 2020

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
St. Joseph Charter Township
Berrien County Drain Commissioner
Berrien County Road Department
Cass County Water Resources Commissioner
Cass County Road Commission



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INTRODUCTION

In accordance with the permit requirements for Federal Phase II Storm Water Regulations, this Public Education Plan (PEP) was developed for the permitted communities in Berrien and Cass Counties. These communities will be working collaboratively to fulfill the education related 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

Most of the communities are in the Lower St. Joseph River Watershed located in southwestern Michigan, flowing northwest from the City of Niles to its convergence with Lake Michigan in the City of St. Joseph. The Villages of Grand Beach and Michiana and portions of the Village of Stevensville and Lincoln and St. Joseph Townships have small tributaries that drain directly to Lake Michigan. All of the communities drain to Lake Michigan. The following communities are participating in the PEP.

Townships - Berrien County

Lincoln Charter Township
St Joseph Charter Township

Municipalities - Berrien County

City of Benton Harbor
City of Bridgman
City of Buchanan
City of Niles
City of St. Joseph
Village of Stevensville
Village of Grand Beach
Village of Michiana

Municipalities - Cass County

Village of Edwardsburg

Drain Commission, Road Commission and Road Department

Berrien County Drain Commissioner
Berrien County Road Department
Cass County Road Commission

These permitted municipalities and agencies will work together to develop and implement the Public Education Plan. 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.

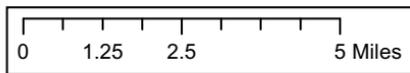
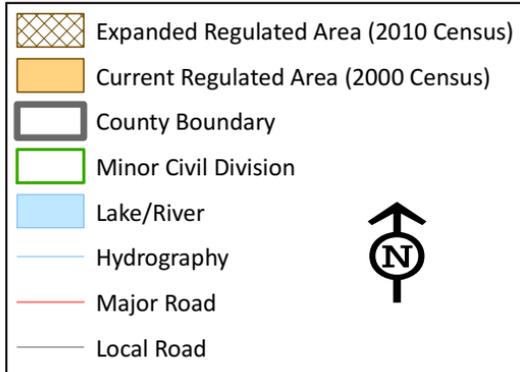
A watershed is all of the land that drains into a common body of water. Watersheds surpass political boundaries and connect communities with a common resource.

Changing the way people manage their lawns, household hazardous wastes, refuse, and septic systems, can have a considerable impact on improving water quality.

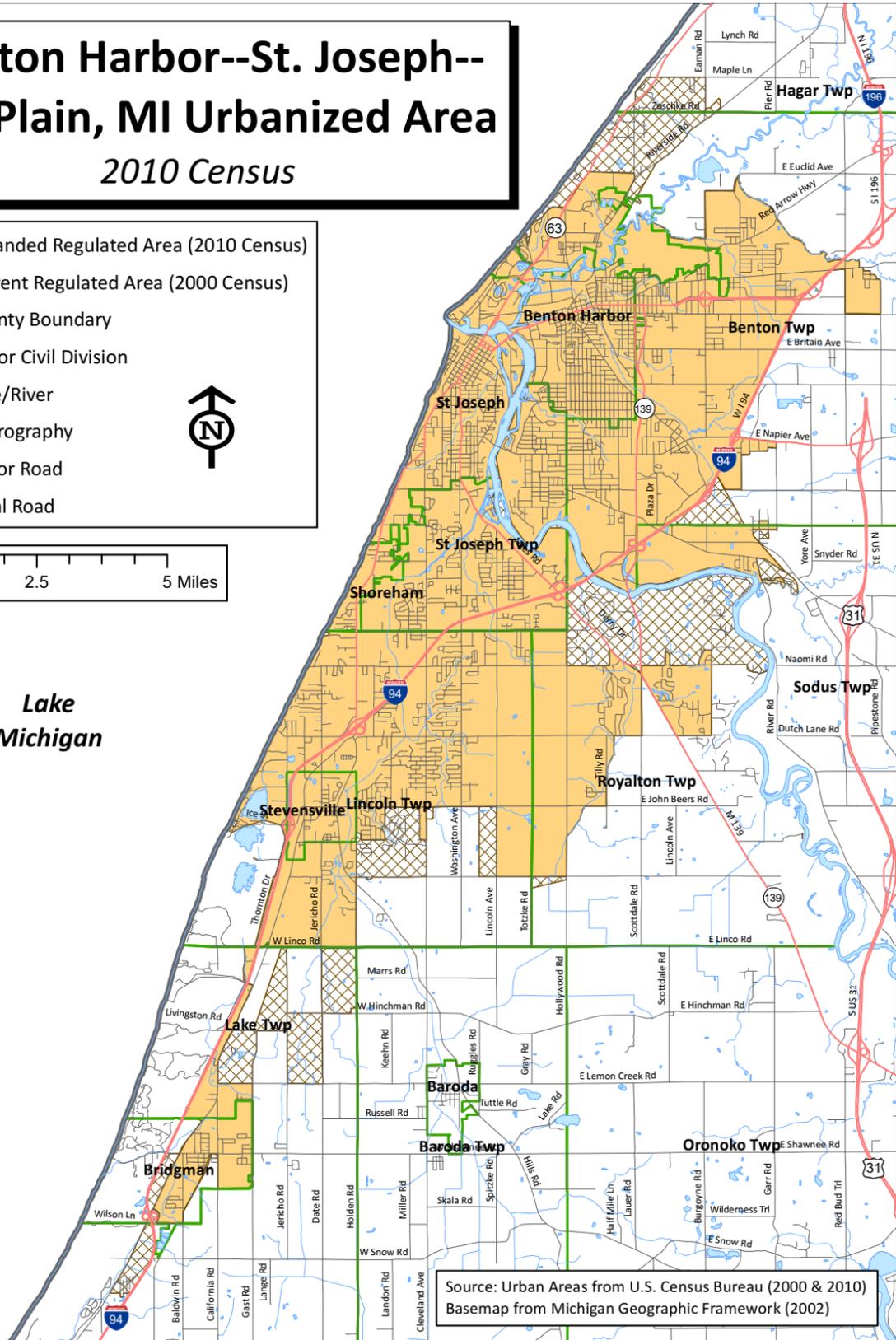
The maps on the following pages are from EGLE and show the urbanized areas covered in Berrien and Cass Counties based on the 2010 Census.

Benton Harbor--St. Joseph-- Fair Plain, MI Urbanized Area

2010 Census



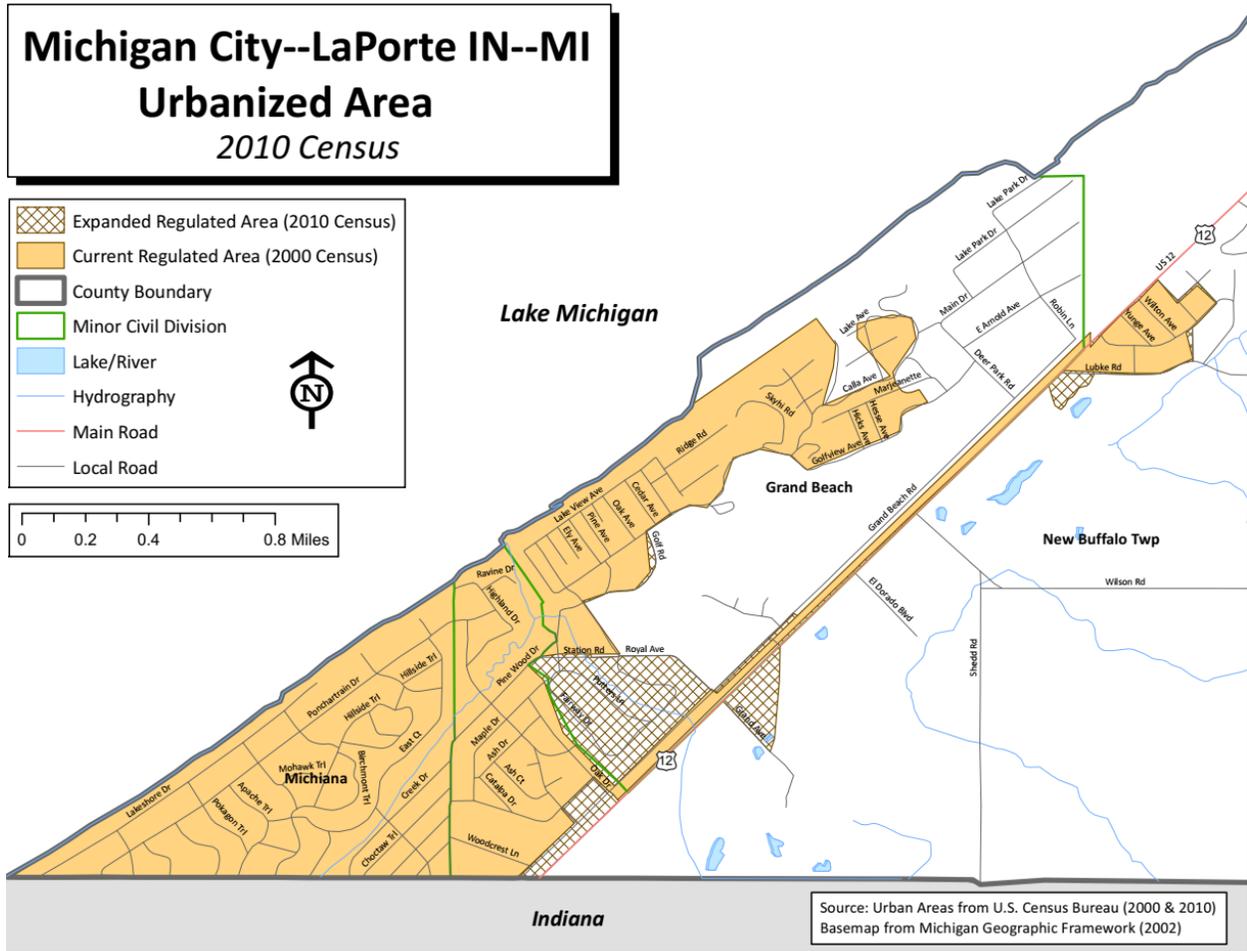
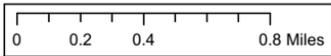
Lake Michigan



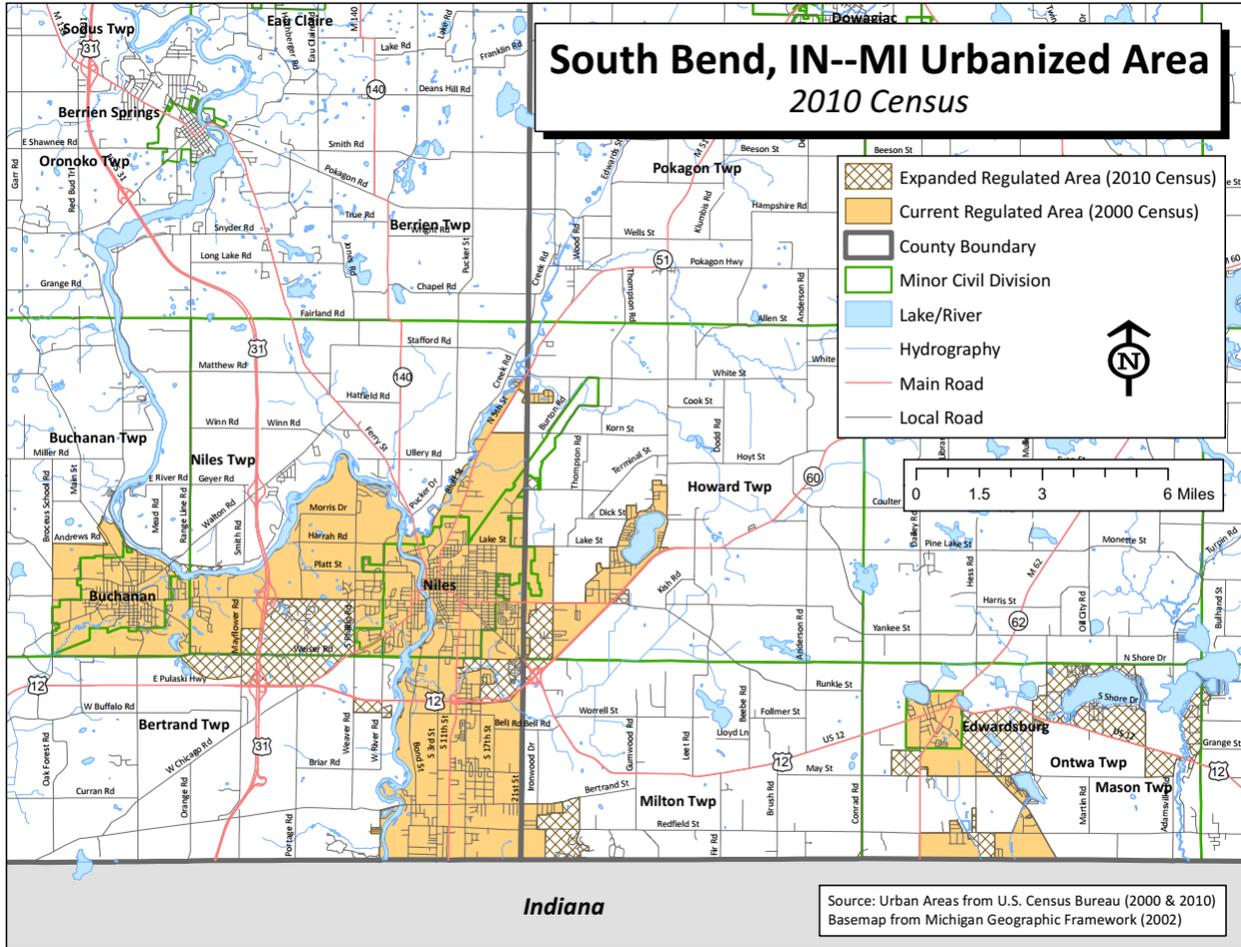
Source: Urban Areas from U.S. Census Bureau (2000 & 2010)
Basemap from Michigan Geographic Framework (2002)

Michigan City--LaPorte IN--MI Urbanized Area 2010 Census

-  Expanded Regulated Area (2010 Census)
-  Current Regulated Area (2000 Census)
-  County Boundary
-  Minor Civil Division
-  Lake/River
-  Hydrography
-  Main Road
-  Local Road



Source: Urban Areas from U.S. Census Bureau (2000 & 2010)
Basemap from Michigan Geographic Framework (2002)



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.



Become a friend of the St. Joseph River at www.fotsjr.org.

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.

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. This plan supports 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:** Promote public responsibility and stewardship in the watershed(s). 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 and the need for improvement and protection
- Actions individuals can take to improve and protect watersheds

2. **Ultimate storm water discharge location and potential impacts:** Inform and educate the public about the connection of the MS4 (catch basins, storm drains and ditches) to area waterbodies 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 waterbody to which the storm water is discharged

3. **Public reporting of illicit discharges:** Educate the public on illicit discharges and promote public reporting of illicit discharges or improper disposal of materials into the MS4. 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. **Car/Pavement/Power Washing:** Promote preferred cleaning materials and procedures for car, pavement and power washing. Key messages/concepts for this topic will be:
 - preferred cleaning materials and practices, such as use of phosphate free products
5. **Lawn and Pet Care:** Inform and educate the public on proper application and disposal of pesticides, herbicides and fertilizers. Also, promote proper disposal practices for grass clippings, leaf litter and animal wastes that may enter into the MS4. Key messages/concepts for these topics will be:
 - Pesticide, herbicide and fertilizer use and proper disposal
 - Alternatives to pesticides, herbicides and fertilizers
 - Management and disposal of grass clippings, leaf litter and animal wastes to prevent being flushed into the MS4 or waters of the state
 - Negative effects of lawn/garden chemicals, lawn wastes and pet wastes on waterbodies
6. **Waste management assistance:** Identify and promote the availability, location and requirements of facilities for collection or disposal of household hazardous waste, travel trailer sanitary wastes, chemicals and motor vehicle fluids. Key messages/concepts for this topic will be:
 - Identification of household hazardous wastes and their proper disposal
 - Alternatives to hazardous household products
 - Disposal locations and requirements for motor vehicle fluids, travel trailer sanitary wastes, recreational boating sanitary wastes and yard wastes
7. **Septic system maintenance:** For property owners with septic systems, inform and educate the public on 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
8. **Green Infrastructure/Low Impact Development:** Educate the public on, and promote the benefits of, green infrastructure and Low Impact Development. Key messages/concepts for this topic will be:
 - Green Infrastructure (GI) or Low Impact Development (LID) Techniques (rain gardens, bioswales, rain barrels, native plants, protect riparian areas and wetlands, etc.) to preserve natural hydrology as much as possible with new and existing development.
 - Benefits of GI and LID compared to conventional stormwater management.

9. **Entity specific pollutants:** Identify and educate commercial, industrial and institutional entities likely to contribute pollutants to stormwater runoff as the need is identified. Key messages/concepts for this topic will be:

- Store and handle chemicals in a manner that reduces the exposure of chemicals to storm water runoff.
- Proper disposal of grease, food wastes and litter from food preparation establishments (restaurants, school cafeterias)
- Promote zero waste initiative.

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 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 print and social 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, WYTZ 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. The Table in Appendix 2 provides an education strategy. 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 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 (SWMPC) 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), municipal/community newsletters, employee paycheck stubs, emails to employees or residents, Facebook page, scheduling presentations for planning commissions, councils/boards and community groups, etc.)

SWMPC works closely with all watershed and conservation related groups in southwest Michigan and will utilize these relationships to implement the PEP. 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. Each participating municipality and partner will report to SWMPC their education program implementation efforts. 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, SWMPC developed a logo to use on all educational materials produced as part of the PEP. To date, many of the 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 such as fact sheets, a display, brochures, press releases, post cards, presentations, and an extensive website at 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.

Most of the evaluation methods listed in the education strategy (Appendix 2) are aimed at measuring and 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.

As part of the evaluation effort, the Southwest Michigan Planning Commission (SWMPC) will work with the permitted communities to develop and implement a survey to assess changes in public awareness and behavior. In 2018, SWMPC collected and reviewed surveys used by other permittees in Michigan. With feedback from the PEP communities in Berrien and Cass Counties, SWMPC developed a survey. The survey was available on-line, using Survey Monkey in 2019. The link to the survey was distributed by SWMPC and its partners' through press releases, social media sites, webpages and email lists/newsletters. The survey ended in the Summer of 2019 and the results were compiled and analyzed in mid 2019 giving us a baseline of awareness and behaviors. The survey will be repeated in 2021 to see if there were any changes since 2019. The survey results will be submitted with progress reports.

Based on the survey and other feedback, public education efforts found to be effective for reaching a wide and varied audience will continue to be utilized. The programs that are determined to be ineffective in increasing awareness and behavior change will 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.

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 Environment, Great Lakes, and Energy (EGLE), 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 for the PEP.

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

1. There are active watershed organizations for the St. Joseph River Watershed (Friends of the St. Joe River Association), the Two Rivers Coalition (Paw Paw and Black River Watershed), and Partnership for MEANDRS (Dowagiac River

Watershed) that are actively promoting water quality protection and improvement. These organizations have websites and social media outlets 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.
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 and distributes a quarterly.
5. EGLE has a 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. The Sustainable Business Forum (SBF) serves as an effective vehicle to reach the business community.

APPENDIX 2. EDUCATION STRATEGY

Delivery Mechanism/ Activity	Audience*	Public Education Topic(s)**	Responsible Party (partners)	Timeline for Development/Implementation	Evaluation Method
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 distribute 2-3 a year to area media outlets	Number of press releases/articles in paper
Maintain and expand a website that makes watershed and stormwater information easily available	All	1,2,3,4,5,6,7,8	PEP Coordinator	Maintenance and expansion will be on-going/as needed	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	4-5 events or locations per year	Number of materials distributed and number of events with display
Assist communities with signage at public locations addressing pet waste, riparian buffers, wildlife feeding, rain gardens, etc.	All	1,2,3,4,7,8	PEP Coordinator/ Municipalities	Develop and distribute to municipalities/organizations as needed.	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 their stormwater consultant	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	Number of articles printed or distributed
Offer or co-sponsor workshops, summits or tours on water quality related issues and share successes in watershed protection efforts	All	1,2,3,4,5,6,7,8	PEP Coordinator (various partners)	Implement one workshop every two years	Number of participants; self reported expected change in behavior resulting from workshop

Delivery Mechanism/ Activity	Audience*	Public Education Topic(s)**	Responsible Party (partners)	Timeline for Development/Implementation	Evaluation Method
Offer presentations on water quality issues to community groups, rotaries, municipal meetings, lake associations, etc.	Residents, businesses, public officials and employees	1,2,3,4,5,6,7,8	PEP Coordinator/ Municipalities	Tailor presentation to each group as needed and implement one per year	Number of attendees including businesses attending
Distribute 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	Distribute each year	Number of mailings/Number of property owners reached/Number of Facebook page views
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 as needed when municipalities are updating plans/ordinances	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
Continue to implement the Berrien County Road Department Adopt a Road Program	All	1,4,5	Berrien County Road Department	On-going	Number of participants
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
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

Delivery Mechanism/ Activity	Audience*	Public Education Topic(s)**	Responsible Party (partners)	Timeline for Development/Implementation	Evaluation Method
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/Amounts collected
Distribute informational materials about travel trailer sanitary waste disposal to campgrounds	Recreation users, businesses, visitors	5	PEP Coordinator	Once every 5 years beginning in 2019	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	Once every 5 years beginning in 2020	Number of materials distributed
Work with municipalities, organizations and businesses to incorporate native plants into landscaping on public properties	All	7	PEP Coordinator/ Municipalities	On-going	Number native plant gardens installed
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.)



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 & carefully
5. Check your septic tanks regularly
6. Take your car to the carwash
7. Take your R.V. to a waste site



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 ...?



7 Steps to Clean Water

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

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!

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Coalition
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.semcog.org/OursToProtect/7SimpleSteps/CarCareTip.htm>



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.

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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.
- 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

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



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.



Clean water begins at home...

Become a friend of the St. Joseph River at www.fotsjr.org.

