

Municipal Separate Storm Sewer System (MS4) Program

PUBLIC EDUCATION PROGRAMS

Introduction

Municipal Separate Storm Sewer (MS4) individual permittees must develop, implement, and enforce a Storm Water Management Program (SWMP). The MS4 permit application is designed to help the applicant develop a SWMP by prompting a description of current or proposed structural or operational best management practices (BMPs) implemented to comply with the six minimum control measures and water quality requirements of the permit. A Public Education Program is the first of those six minimum control measures and should be designed to promote, publicize, and facilitate watershed education for the purpose of encouraging the public to reduce or prevent the discharge of pollutants in stormwater. This compliance assistance document addresses the MS4 permit application requirements associated with the PEP and identifies the key components that are necessary in order to have a complete application and an approvable SWMP. Applicants may work collaboratively with watershed or regional partners on any or all BMPs during the permit cycle if approved as part of the PEP. A collaborative PEP will demonstrate that the audiences of all permittees will be targeted.

The PEP should be designed to implement BMPs where the permittee owns and operates an MS4 in the regulated area identified on the current [urbanized area maps](#). All references to the applicant's MS4 in this compliance assistance document refer to the applicant's regulated MS4. An applicant that chooses to be responsible for permit requirements for another regulated MS4 should include BMPs to address both MS4s as part of the PEP.

“Public” is defined to include all persons who potentially could affect the authorized storm water discharges, including, but not limited to, residents, visitors to the area, public employees, businesses, industries, construction contractors and developers.

PEP Content Requirements

The PEP topics are:

- a) Promote public responsibility and stewardship in the applicant's watershed(s).
- b) Inform and educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have on surface waters of the state.
- c) Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4.
- d) Promote preferred cleaning materials and procedures for car, pavement, and power washing.
- e) Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers.
- f) Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter the MS4.
- g) Identify and promote the availability, location, and requirements of facilities for collection or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, and motor vehicle fluids
- h) Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure.
- i) Educate the public on, and promote the benefits of, green infrastructure, and low impact development.
- j) Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to storm water runoff.

The applicant may choose to implement BMPs that provide education on all applicable PEP topics listed above. Or the applicant may choose to provide a procedure to assess high priority, community-wide issues and targeted issues to reduce pollutants in storm water runoff. The assessment would need to include a list of the priority issues.

If the applicant has chosen to prioritize public education topics, this prioritization will need be completed based on the procedure. Topics can be prioritized as high, medium, and low, or may be ranked in order from 1-10 based on the assigned priority level (e.g., 1 being the highest priority topic and 10 being the lowest priority topic).

Regardless of the approach taken, the applicant needs to identify PEP topics that are applicable to the MS4. Some topics may not be applicable in certain communities. For example, some communities have sanitary sewers throughout the entire area served by the MS4. In this case, there may be no septic systems, and education on the proper maintenance of septic systems would be considered not applicable.

For each topic being addressed by the PEP, the applicant needs to provide the information required in [MiEnviro Portal](#). For any topic that is not applicable or not a priority during the current permit cycle, the applicant must provide an explanation as to why the topic is not being addressed.

The applicant needs to describe the current and proposed BMPs to meet the minimum control measure requirements for the PEP to the maximum extent practicable. The required information includes:

- Target Audience
- Key Message
- Delivery Mechanism
- Schedule (months and year) and Frequency for BMP implementation
- Responsible Party
- Measurable Goal with a Measure of Assessment

PEP Delivery Mechanisms

There are many creative ways in which the applicant may effectively convey stormwater public education. Both consistency and repetition are important in increasing awareness and bringing a desired behavior change. Because of this, regional and local entities have developed educational materials that could be used by permittees to ensure consistent messages and repeated usage while maximizing limited budgets (e.g., Facebook, Twitter posts). There are examples of successful education programs available at:

- [One Water](#), Southeast Michigan Council of Governments (SEMCOG) – Regional educational campaign to address stormwater, wastewater, and drinking water
- [Greater Lansing Regional Committee for Stormwater Management](#) – Regional campaign focused on coordinating website and social media to reach diverse audiences
- [Lower Grand River Organization of Watersheds \(LGRROW\)](#) – Regional watershed-based initiative combining PEP requirements with general watershed outreach. LGRROW's efforts increase awareness while also making specific calls to action for stewardship efforts. For information on modernizing a PEP, see LGRROW's presentation, [Outreach Goals and Facebook Trolls](#).

The PEP must include one or more delivery mechanisms for each PEP topic being addressed. Some delivery mechanisms can be used to convey education on two or more topics. For example, a social media campaign may rotate the topics covered, focusing on household hazardous waste disposal one month, and responsible lawn care practices the next month.

The applicant must consider whether each proposed delivery mechanism will reach all intended audiences. It may be necessary to add additional delivery mechanisms to provide information on a particular topic to reach the intended audience. For example, a school-based program at an evening event may successfully reach students and parents, but another mechanism would be needed to reach those without school-aged children.

Evaluation of Individual BMPs

The applicant needs to provide a measurable goal with a measure of assessment for each BMP. **Measurements will determine whether or not efforts are making progress towards increasing knowledge on the ten topics required under the permit and changing stakeholder behavior related to local water quality issues.** It is advisable to measure the effectiveness of each action so that time and financial resources are best utilized.

It is important to engage in evaluation of education efforts to ensure the PEP is successful as designed and maximizes financial resources. Effectiveness may be gauged in several ways. The most important measure of success is shown through changes in public awareness of pollution and possible solutions, changes in environmental attitudes, behavioral changes such as an increase in use of pollution prevention resources, and/or an increase in water quality.

The following are case studies of actual delivery mechanisms implemented by Michigan municipalities and accompanying measurable goals and measures of assessment.

Delivery Mechanisms (Case Study Examples)	Measurable Goal with a Measure of Assessment
<p>City of Kalamazoo implemented a public education campaign to inform city residents of Kalamazoo County Household Hazardous Waste Center. The city has a contract with the county that allows city residents to drop off eligible items free of charge, including used oil and oil-based paints, pesticides and herbicides, and old TVs. Public education mechanisms include the Protect Your Water website, pre-movie theatre ads, radio ad campaign, View from the Curb newsletter, and annual drinking water quality report. In addition, the Household Hazardous Waste Center is discussed during presentations, model demonstrations and facility tours as opportunities arise.</p>	<p>Count and compare the amount of materials collected and the number of visitors at the household hazardous waste center. The center collects information on each user's municipality of residence.</p> <p>Show an increase in number of users from the city of Kalamazoo over a specified time.</p> <p>Determine whether there is an increase specifically after an education activity.</p>
<p>Western Michigan University placed educational signage next to many storm water Best Management Practices, including retention basins, detention basis, and rain gardens. Signage is also present in an area with underground storage and infiltration. Signs are maintained and repaired/replaced as needed. New signs are added as opportunities arise.</p>	<p>Count the number of educational signs on campus. Determine if the number of educational signs is increasing as additional BMPs are added. Determine if signs are being repaired and replaced as needed.</p>
<p>Each member of the Greater Lansing Regional Committee for Stormwater Management (GLRC) has a commitment to use the GLRC Educational Display annually at a regional event, as well as annually within their community. The display provides general stormwater education and promotes pollution reduction.</p>	<p>Identify the number of annual events and timeframe of the display. Provide attendance estimates from events.</p>

Delivery Mechanisms (Case Study Examples)	Measurable Goal with a Measure of Assessment
<p>The Greater Lansing Regional Committee for Stormwater Management's (GLRC) website and individual community websites include information on illicit discharges and contacts for reporting illicit discharges and acts of pollution. These websites are promoted on social media.</p>	<p>Record webpage link traffic on the GLRC webpage and community webpage. Track social media analytics.</p>
<p>Southfield Public Schools has developed a storm water webpage to educate the public on all PEP topics identified in the MS4 permit. This is hosted on the School District's website, and is intended for faculty, students, and parents.</p>	<p>Review the webpage annually to ensure that content is up-to-date and accurate, and that links are in working order.</p>
<p>The Battle Creek Area Clean Water Partners sponsors the Children's Water Festival each year. This event is for 4th and 5th grade students and includes hands-on presentations and environmental entertainment.</p>	<p>Participation of at least 35 classes.</p>
<p>The Battle Creek Area Clean Water Partners holds an annual event called "Krazy for the Kazoo" which includes trash pickup, tire removal, invasive species removal, planting of native species, tree planting, birdhouse installation, and brush removal. This event is used to educate and engage volunteers with the local waterways.</p>	<p>Participation of at least 100 volunteers per year. Surveys are sent to participants after the event for future improvements.</p>
<p>Kalamazoo Area Storm Water Work Group members work together to create educational content for all applicable public education topics. Social media platforms (Facebook, Townsquare Media/Ignite, etc.) are being used to educate, and to direct local residents to the website and/or document location online for additional information. The intent is to cover 2 topics per year. All topics will be covered in the 5-year permit cycle.</p>	<p>Educational documentation is posted on community websites and/or a centralized website (protectyourwater.net). Social media was used to direct people to the educational document(s). Snapshots or copies of social media posts are retained for progress reports. The goal is to have an outreach campaign with an average of 20,000 impressions per month, and a click-through rate equal or above the national average.</p>

Delivery Mechanisms (Case Study Examples)	Measurable Goal with a Measure of Assessment
<p>Gibraltar School District places educational posters created by Southeast Michigan Council of Governments (SEMCOG) at the main entrance, the staff lounge, and the receiving area of each school district facility. The posters educate staff, students, and parents on a variety of stormwater related topics, including the connection of storm drains to water bodies, vehicle washing, lawn care, pet waste, and the storage and disposal of pesticides, fertilizers, vehicle maintenance fluids, and household chemicals.</p>	<p>Photo documentation of poster displays is collected and summarized in an annual report.</p>
<p>Auburn Hills MS4 has a robust Facebook page along with hosting pollution prevention cleanups where education materials are made available to volunteers</p>	<p>Documentation was provided with Facebook posts; number of followers; increased participation in cleanup events and more requests for those types of activities from the community are documented.</p>

Overall Evaluation

In addition to providing measurable goals and evaluation for individual BMPs, the applicant also needs to provide the procedure for evaluating and determining the effectiveness of the overall PEP. Overall effectiveness can be measured through broad tools, such as comparisons of social survey results or comparisons of public participation over a period of time. The procedure needs to include a method for assessing changes in public awareness and behavior resulting from the implementation of the PEP and the process for modifying the PEP to address ineffective implementation.

This assessment of the overall PEP is typically conducted as a survey. It may be conducted using a social media platform, a municipal website, by mail, by phone, by text messages, or in person. The application encourages a collaborative PEP approach; therefore, permittees may choose to meet the evaluation requirements by working collaboratively with their partners to develop and implement a watershed-wide effectiveness program.

A survey at the beginning of program implementation can serve as a benchmark for future surveys. Surveys are best utilized at the watershed or regional level. This allows the costs to be shared across the communities that are covered as part of a survey. Probability sampling allows the surveyor to sample a small percentage of the population, and still have a survey that adequately characterizes the population. As an example, the cost to conduct a survey of a municipality would be similar to the cost to survey a watershed that covers multiple municipalities.

Surveys should be carefully developed with the help of a professional trained in the social sciences and statistics. Guidance documents and checklists to help with the development of surveys are also available on the [NPS Program's Social Monitoring and Evaluation website](#).

Reporting Progress

The MS4 permit requires that the permittee describes the status of compliance with the PEP in the progress report. Whether using an individual or collaborative PEP approach, an individual permittee must document in its progress report the status of the public education activities targeted at audiences in its jurisdiction, as well as its participation and contribution. The report should describe the progress made towards achieving the identified measurable goals for each BMP. This information is important to the permittee, to ensure that time and financial resources are best utilized.

Reporting the public education progress might include information like the following:

- Number of materials developed
- Numbers of pieces of informational materials distributed
- Number of workshops or presentations held
- Curriculum which was developed and used in classes

The progress report should also include a procedure for evaluating and determining the effectiveness of the overall PEP. Any data collected since the last progress report needs to be included, and older data should also be included for comparison. If the evaluation results indicate that the PEP is ineffective, proposed revisions to the PEP should be included.

The examples presented in this compliance assistance document are for compliance assistance only. Individual permittees should report their actual efforts, which may differ from the examples presented in this document and the associated tables.

If you have any questions regarding PEPs or other aspects of the MS4 application, please contact your [MS4 Compliance Staff Person](#).

This publication is intended for guidance only and may be impacted by changes in legislation, rules, policies, and procedures adopted after the date of publication. Although this publication makes every effort to teach users how to meet applicable compliance obligations, use of this publication does not constitute the rendering of legal advice.

EGLE does not discriminate on the basis of race, sex, religion, age, national origin, color, marital status, disability, political beliefs, height, weight, genetic information, or sexual orientation in the administration of any of its programs or activities, and prohibits intimidation and retaliation, as required by applicable laws and regulations.

To request this material in an alternate format, contact EGLE-Accessibility@Michigan.gov or 800-662-9278.