

Section 6: Public Education Program (PEP)

Overview

This updated PEP is integrated into the 2022 Stormwater Management Plan (SWMP). The PEP with associated tables is included within the Section. The primary mechanism is to provide free public education material to residents via the City's website, utilize a social media campaign to cover each PEP topic, and to promote ongoing stormwater education activities by other groups and agencies.

Introduction

Background

The unique purpose of the public education portion of the NPDES MS4 permit is to increase the awareness of 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 can be generated from their normal everyday actions and not simply from large commercial and industrial sources.

This PEP is jurisdictional base; however, portions may be performed in conjunction, cooperation, and coordination with the other water quality educational efforts within the watershed, such as MS4 permit holders, partners within the Kalamazoo Stormwater Working Group (KSWG), Wellhead Protection Programs, and the TMDL Implementation Committee. It is recognized that some existing educational components were designed to address groundwater, certain watersheds, stretches of streams, particular audiences, to convey a specific message, or to implement a particular type of educational strategy or technique. However, many of the on-going educational efforts share certain general water quality messages and strategies that are relevant to the stormwater program.

The City of Kalamazoo is a participating partner of the KSWG. Together the KSWG partners provide collaborative stormwater education to better meet the collective groups goals. In 2020 a grant was obtained for the purpose of establishing and marketing an online educational presence using strategic marketing. Through strategic marketing, the group can reach numerous households and produce measurable data based on the number of impressions made. This educational outreach strategy was extremely successful during the COVID 19 restriction timeframe from 2020 through 2022. Again in 2022, the KSWG partners obtained a 1-year grant to continue these outreach efforts.

KSWG Mission Statement

The KSWG is a collaborative effort of outreach and education for our interconnected MS4s in the Kalamazoo County area. Rain falls and snow melts across hard and impervious surfaces that do not allow water to soak into the ground. The water flows to storm sewers or catch basins which direct it to a natural surface water body such as a wetland, river, pond or lake. Stormwater runoff carries salts, grass clippings, sediment, fertilizer, oils, pet waste, and other material left on driveways and sidewalks into the catch basins, and unfortunately, they eventually drain to our natural water bodies. KSWG partners work together to protect against harmful discharges to the Kalamazoo River and its tributaries.

PEP Educational Components

The following educational components are PEP requirements of the MS4 program:

1. Educate the general public about personal watershed stewardship.
2. Educate residents concerning the ultimate stormwater discharge locations and the potential impacts of pollution from discharges could have on the surface waters of the state.
3. Educate and encourage the public reporting of the presence of illicit discharges or improper disposal of materials into the community's separate stormwater drainage systems.
4. Promote preferred cleaning materials and procedures for car, pavement and power washing
5. Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers.
6. Promote proper disposal of grass clippings, leaf litter, and animal waste
7. Identify and promote the availability, location, and requirements of facilities for disposal or drop-off of household hazardous waste, travel trailer sanitary wastes, chemicals, yard waste sand motor vehicle fluids.
8. Inform and educate the public on proper septic care and maintenance, and how to recognize system failure.
9. Educate the public on, and promote the benefits of, green infrastructure and Low Impact Development
10. Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to stormwater runoff

See Section 6: Attachment A for the detailed Public Education Plan PEP Educational Components.

City of Kalamazoo PEP Task Elements

The City of Kalamazoo's planned educational activities are specified in Section 6: Attachment A. More specifically, these are the educational tasks to be undertaken by the City of Kalamazoo as a component of its Certificate of Coverage.

Section 6: Attachment A of the SWMP is intended to illustrate the relationship between the components listed above and the desired messages, delivery mechanisms, evaluation methods, measurable goals, and an associated timetable for implementation. It is recognized that results of the PEP are difficult to measure and are somewhat subjective. It is debatable what is more significant in measuring the success of a PEP - aspects of quantity, quality, or a combination of the two; it is likely that it is dependent on the specific action item.

Tons and type of trash collected and/or the number and type of people that participated in the process could measure the success of stream cleanup efforts. Furthermore, it is easy to measure the number of new signs or catch basin markings installed but it does not address the quality aspect of the marking design process, location selection process, or even perhaps a creative financing strategy to fund the cost of implementation. The measurable goals in Section 6: Attachment A were selected to balance both the quantity and quality aspects of success of the subject action items.

Typically, PEPs also identify commercial, industrial, and institutional entities likely to contribute to pollutant to stormwater run-off.

Summary

The City of Kalamazoo will increase public education by the following:

1. Participate in the Kalamazoo Area Stormwater Working Group, the TMDL, or another active group. (Attend meetings, promote educational activities on website, etc.)
2. Provide information on the Community's website and/or links to centralized web page and utilize social media platforms to direct people to the educational materials.
3. Continue to support and provide Employee Training.
4. Educate commercial, industrial, and institutional entities as the need arises.
5. Conduct public survey twice per permit cycle.
6. Evaluate the effectiveness of the PEP at time of annual report.

City of Kalamazoo – PEP Measure of Assessment

The City will conduct a public survey twice per permit cycle to measure change in education level. The first survey will be within the first 2 years of the permit cycle (year 1 or 2) and the second survey will occur in the last 2 years of the permit cycle (year 4 or 5). This survey will be a brief and is intended to measure delivery mechanism effectiveness along with change in knowledge and behavior among residents.

The City of Kalamazoo will assess at a staff level, the effectiveness of the overall PEP at the time of the annual report and make changes to improve the PEP for the remaining years within the permit cycle as it relates to the measurable goals for each Best Management Practice (BMP). The procedure for evaluating and determining the effectiveness of the overall PEP will be at the discretion of the Water Programs Manager at the time of evaluation based on survey responses and other data available (website data, comments provided, etc.).

Other

Any questions on this policy and procedure should be directed to the Water Programs Manager.

Process for Updating/Revising this Procedure

This procedure was reviewed as part of this annual reporting by the Water Programs Manager for any updates to improve effectiveness. The City is submitting a new PEP to be consistent with other agencies within Kalamazoo County for a more uniform message and better tracking of metrics.

Section 6: Attachment A

Public Education Plan (PEP) – Revised 2022



Stormwater Public Education Program - Revised 2022

Column >	1	2	3	4	5	6	7
Row	Public Education Topic	Key Messages	Target Audiences	Delivery Mechanism or Methodology	Timetable	Evaluation / Measured Element	Measurable Goal
1	Public Responsibility and Stewardship in Watershed	Definition of a watershed; education on specific watershed(s) that public can affect; purpose for protecting watershed; ways human activities can affect watersheds.	Broad Audience: Residents, visitors, public employees, students; businesses, institutions, construction contractors, and developers.	<p>A representative of the MS4 community or agency participates in the TMDL Steering Committee, Kalamazoo Stormwater Working Group (KSWG) or other active group with education activities. Ref. B, C, E, G, H & I KVCC</p>	As needed.	Meeting attendance and participation in TMDL, KSWG or other applicable active group.	Representative present at 50% or more of TMDL, KSWG, or other meetings. Participation by volunteering manpower, materials, or promoting educational activities on the website. KVCC Reference F
				<p>Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location.</p> <p>The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. KVCC Ref. B, C, E, G, H & I</p>	The topic is covered once per permit cycle (once per 5 years)	<p>Educational document on the community's website and/or centralized webpage.</p> <p>Social media platform was used to direct people to the education document(s).</p> <p>Snapshots (photos) or copies of social media posts.</p>	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average.
2	Ultimate Stormwater Discharge Location and Potential Impacts	Discharges to surface water and potential water quality impacts.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	<p>Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location.</p> <p>The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. KVCC Reference D & J</p>	The topic is covered once per permit cycle (once per 5 years)	<p>Educational document on the community's website and/or centralized webpage.</p> <p>Social media platform was used to direct people to the education document(s).</p> <p>Snapshots (photos) or copies of social media posts.</p>	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average.
3	Public Reporting of Illicit Discharges	Definition of illicit discharges/connections; illicit discharges can adversely impact surface and groundwater; importance of, and how to detect and report known and suspected illicit discharges to County, City and/or EGLE; City ordinances.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	<p>Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location.</p> <p>The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material.</p>	The topic is covered once per permit cycle (once per 5 years)	<p>Educational document on the community's website and/or centralized webpage.</p> <p>Social media platform was used to direct people to the education document(s).</p> <p>Snapshots (photos) or copies of social media posts.</p>	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average.
4	Promote Preferred Cleaning Materials and Procedures for Car, Pavement, and Power Washing	Environmentally friendly cleaning materials, and procedures for washing cars, pavement, and power washing.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	<p>Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location.</p> <p>The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. KVCC Ref. C, G, H & I</p>	The topic is covered once per permit cycle (once per 5 years)	<p>Educational document on the community's website and/or centralized webpage.</p> <p>Social media platform was used to direct people to the education document(s).</p> <p>Snapshots (photos) or copies of social media posts.</p>	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. KVCC Reference F



Stormwater Public Education Program - Revised 2022

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5	Inform and Education the Public on Proper Application and Disposal of Pesticides, Herbicides, and Fertilizers	Improper disposal of chemicals can adversely impact surface water/ importance of using the Kalamazoo County Household Hazardous Waste Center; best management practices (BMPs) can prevent adverse impacts to surface water.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	<p>Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location.</p> <p>The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. KVCC Ref. C & I</p>	The topic is covered once per permit cycle (once per 5 years)	<p>Educational document on the community's website and/or centralized webpage.</p> <p>Social media platform was used to direct people to the education document(s).</p> <p>Snapshots (photos) or copies of social media posts.</p>	<p>Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle.</p> <p>Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. KVCC Reference F</p>
6	Promote Proper Disposal Practices for Grass Clippings, Leaf Litter, and Animal Wastes that May Enter the MS4	Keep yard and pet waste from getting to the street/storm inlets to prevent negative impact to surface waters.	Residents, visitors, public employees, students, businesses, construction contractors, and developers.	<p>Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location.</p> <p>The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. KVCC Ref. C & I</p>	The topic is covered once per permit cycle (once per 5 years)	<p>Educational document on the community's website and/or centralized webpage.</p> <p>Social media platform was used to direct people to the education document(s).</p> <p>Snapshots (photos) or copies of social media posts.</p>	<p>Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle.</p> <p>Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. KVCC Reference F</p>
7	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	Improper disposal of chemicals and solid waste can adversely impact surface water; availability of and importance of using the Kalamazoo County Household Hazardous Waste Center and the City's solid waste collection services (e.g., leaf, brush, bulk trash, and recyclables).	Residents, visitors, public employees, students; businesses, institutions, construction contractors, and developers.	<p>Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location.</p> <p>The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. KVCC Ref. C & I</p>	The topic is covered once per permit cycle (once per 5 years)	<p>Educational document on the community's website and/or centralized webpage.</p> <p>Social media platform was used to direct people to the education document(s).</p> <p>Snapshots (photos) or copies of social media posts.</p>	<p>Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle.</p> <p>Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. KVCC Reference F</p>
8	Septic Tank Care and Maintenance	Proper septic system O & M; how to recognize system failure and its potential impact on water quality; proper disposal of pumped waste; where to get information; existing ordinances.	Septic system owners; septic haulers.	<p>Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location.</p> <p>The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material.</p>	The topic is covered once per permit cycle (once per 5 years)	<p>Educational document on the community's website and/or centralized webpage.</p> <p>Social media platform was used to direct people to the education document(s).</p> <p>Snapshots (photos) or copies of social media posts.</p>	<p>Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle.</p> <p>Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average.</p>



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9	Educate the Public on and Promote the Benefits of Green Infrastructure and Low Impact Development	Using native vegetation is usually beneficial, especially for surface water buffers since they typically are relatively low maintenance (do not need chemicals), they effectively absorb stormwater, decrease the need for mowing, and improve wildlife habitat. Benefits of green infrastructure and LID.	Property owners; City employees, especially Parks & Recreation staff; site plan applicants; contractors; general citizens.	Provide related documents on community's website and/or links to centralized webpage containing related topic. Utilize social media platforms (Facebook, Townsquare Media/Ignite, etc.) to direct people to website and/or document location. The intent is to cover 2 of the 9 topics (topics 1-9) per year. Once the topic is available for promoting to the public and linked to the necessary website(s), the community or stormwater working group will utilize social media platform(s) to direct people to the material. KVCC Ref. A & D	The topic is covered once per permit cycle (once per 5 years)	Educational document on the community's website and/or centralized webpage. Social media platform was used to direct people to the education document(s). Snapshots (photos) or copies of social media posts.	Education topic / documents are reviewed, revised, updated, or replaced and promoted at a minimum of once per permit cycle. Effectively reach the target audience within the community and collectively in all Kalamazoo County. Goal is to have an outreach campaign with an average of 20,000 impressions a month, and a click through rate (CTR) equal or above the national average. KVCC Reference F
10	Identify and Educate Commercial, Industrial, and Institutional Entities as Likely Contributors of Pollutants to Stormwater Runoff	Importance of proper management of chemicals and disposal practices; existing City ordinances/regulations.	Business specific sectors; City-wide operations & maintenance; City Environmental Managers.	Visit facilities (as necessary) for personal education.	As needed	Number of facilities visited, and number of employees educated.	Facilities are aware of where their on-site stormwater goes.
10-1	Public Education Delivery Mechanism	All 10 topics	Residents, families, visitors, public employees, students, businesses, construction contractors, and developers.	To be determined by Environmental Programs Manager. This may include Facebook or other social media outlet, newspaper publications, post card mailings, or other delivery mechanism.	Perform survey in year 1 or 2 to establish baseline. Perform survey in year 4 or 5 to measure change.	Webpage and Facebook metrics for KSWG and community websites, if available.	Obtain new ideas on how to reach out and educate residents. Evaluate responses to previous delivery mechanism to determine if it reached the target audience. Increase in the number of respondents with correct answers to storm water questions. KVCC Reference F

BMP = Best Management Practices
 EGLE = Michigan Department of Environment, Great Lakes & Energy
 KVCC = Kalamazoo Valley Community College, nested under the City of Kalamazoo MS4 NPDES permit
 KSWG-MS4 Group = Kalamazoo Stormwater Working Group - MS4 Collaborative Stormwater Group
 O & M = Operation and Maintenance
 TMDL = Total Maximum Daily Load