

**Public Education Plan
for the
Grand Valley Metropolitan Council**

**NPDES MS4
Storm Water Regulations**

**February 1, 2013
Project No. F99511P/G120878**



Fishbeck, Thompson, Carr & Huber
engineers • scientists • architects • constructors

PUBLIC EDUCATION PLAN

FOR THE

GRAND VALLEY METROPOLITAN COUNCIL

NPDES MS4 STORMWATER REGULATIONS

SEPTEMBER 1, 2010
REVISED SEPTEMBER 19, 2012
REVISED DECEMBER 19, 2012
REVISED FEBRUARY 1, 2013

PROJECT NO. F99511P/G120878

INTRODUCTION..... 1

PEP OVERVIEW..... 1

GOALS AND OBJECTIVES..... 3

PEP STRATEGY..... 4

 Target Audiences 5

 Developing Messages 6

 Delivery Mechanisms 6

 Evaluation Methods..... 9

 Schedule of Implementation..... 10

 Partnership Development..... 19

SUMMARY 19

REFERENCES..... 20

LIST OF TABLES

Table 1 LGRW Stormwater Education Committee Participants

Table 2 Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Table 3 Previously Developed Delivery Mechanisms Available for Reuse

LIST OF APPENDICES

Appendix 1 Focus Group Summary Report

LIST OF ABBREVIATIONS/ACRONYMS

AWRI	Annis Water Resources Institute
BMP	Best Management Practice
CES	Center for Environmental Study
DPW	Department of Public Works
FTC&H	Fishbeck, Thompson, Carr & Huber, Inc.
GLSI	Great Lakes Stewardship Initiative
HD	Health Department
HHW	Household Hazardous Waste
I&E	Information and Education
KCDC	Kent County Drain Commissioner
LGROW	Lower Grand River Organization of Watersheds
LGRW	Lower Grand River Watershed
LID	Low Impact Development
MDEQ	Michigan Department of Environmental Quality
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
OCDC	Ottawa County Drain Commissioner
PAM	Public Awareness and Marketing
PEP	Public Education Plan
USEPA	U.S. Environmental Protection Agency
WEF	Water Environment Foundation
WMEAC	West Michigan Environmental Action Council

INTRODUCTION

The National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Stormwater Regulations in Michigan allow compliance through a regional watershed-based initiative. This Public Education Plan (PEP) takes advantage of the watershed permit structure by combining available resources in the Lower Grand River Watershed (LGRW) to contact a larger area regarding watershed education. The PEP was created for the participating communities in Kent and Ottawa Counties and is intended to educate the public on ways they can reduce stormwater pollution. Outreach activities will reach diverse audiences with a variety of viewpoints and concerns. Successful implementation of the PEP will form partnerships with agencies and organizations that have existing programs and use educational materials and strategies familiar and relevant to the area residents.

The unique purpose of the public education portion of the NPDES MS4 Stormwater Regulations is to increase the awareness of watershed residents that their everyday activities can 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. Most people, however, have not made the connection that significant pollution is generated from their normal everyday actions and not simply from large commercial and industrial sources.

The advantage of the regional watershed-based initiative is the cooperation and resource sharing developing between the participating communities. Implementing a successful PEP will take funding and preparation time that one community may find impossible to do alone. However, if coordination develops between many communities in the watershed, these resources can be shared, and a larger audience can be reached at a lesser cost per contributing community. Since the overall aim is to encourage pollution prevention by coordinating a regional effort, it makes sense to pool all available resources and delegate tasks to the communities that will be the most efficient at accomplishing their responsibilities. In this manner, duplication of efforts in neighboring communities which increases cost of development will be reduced.

PEP OVERVIEW

Participating communities in Kent and Ottawa Counties worked with Fishbeck, Thompson, Carr & Huber, Inc. (FTC&H) to develop the original PEP in March 2003. The Michigan Department of Environmental Quality (MDEQ) approved the PEP and issued a directive to begin implementation by January 1, 2004. A LGRW Stormwater Education Committee was formed and met quarterly to discuss and plan activities scheduled for implementation. The status and evaluation of the public education activities administered by the participating communities were reported to the MDEQ either annually or biennially, as required. The successes and challenges encountered during the first five-year period of implementation were

evaluated during a focus group session held in November 2009. The results were compiled in a Focus Group Summary Report (Appendix 1), which included recommendations for the next update of the PEP.

This updated PEP describes a new five-year strategy designed to promote, publicize, and facilitate watershed education for encouraging the public to reduce the discharge of pollutants in stormwater. As required, the PEP defines target audiences, develops specific messages, and selects delivery mechanisms to promote the goals and objectives of reducing stormwater runoff. The PEP includes mechanisms for evaluating the success and effectiveness of the plan. The measurable goals include realistic data collection and milestones to be quantified and compared. A schedule was also prepared for the implementation of the various components of the PEP, indicating the dates for distribution of educational materials and the completion of activities. The PEP also builds on the Information and Education (I&E) Strategy developed for the LGRW as part of the LGRW Management Plan (FTC&H 2011).

The LGRW Stormwater Education Committee will continue to guide the implementation of the PEP. Committee participants (Table 1) will meet quarterly to plan, discuss, and review the implementation of education activities to reduce stormwater pollution. The committee will work with the LGRW Public Awareness and Marketing (PAM) Committee to help ensure PEP implementation is coordinated with the LGRW I&E strategy whenever possible to share resources, convey similar messages, and encourage the reduction of watershed pollution. The committee will also assist in coordinating with other current programs and projects in the LGRW involving public stewardship of water resources. Input from the public will ensure the participating communities will make environmental decisions with an understanding of the interest and concerns of affected people and entities. This type of cooperation between those making the decisions and those affected by the decisions will bring about an effective change in public behavior.

Table 1 - LGRW Stormwater Education Committee Participants

Allendale Charter Township
Cascade Charter Township
City of Grand Haven
City of Grand Rapids
City of Grandville
City of Kentwood
City of Rockford
City of Walker
Fishbeck, Thompson, Carr & Huber, Inc.
Forest Hills Public Schools
Grand Valley Metropolitan Council
Kent County Drain Commissioner's Office
Kent County Resource Recovery

Table 1 - LGRW Stormwater Education Committee Participants

Kent County Road Commission
MDEQ
Ottawa County Drain Commissioner's Office
Ottawa County Environmental Health Services
Village of Sparta
West Michigan Environmental Action Council

GOALS AND OBJECTIVES

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 a bottom up policy change. More understanding on the relationships between stormwater pollution and local problems will result in a public outcry for change. The following goals and objectives will direct the implementation of the PEP and produce additional public support for stormwater regulations.

GOALS

1. To promote, publicize, and facilitate watershed education for the purpose of encouraging the public to reduce the discharge of pollutants in stormwater to the maximum extent practicable.
2. To encourage prevention of pollution over treatment of pollution.

OBJECTIVES

To meet the stormwater education goals, a sufficient amount of education activities will be implemented to ensure target audiences are reached with the appropriate messages for the following six topic areas:

1. Education of the public about their responsibility and stewardship in their watershed.
2. Education of the public on the location of residential separate stormwater drainage system catch basins, the waters of the state where the system discharges, and potential impacts from pollutants from the separate stormwater drainage system.
3. Encouragement of public reporting of the presence of illicit discharges or improper disposal of materials into the applicant's separate stormwater drainage system.
4. Education of the public on the need to minimize the amount of residential, or non-commercial, wastes washed into nearby catch basins (this should include the preferred cleaning materials and procedures for care, pavement, or power washing; the acceptable application and disposal of pesticides and fertilizers; and the effects cause by grass clippings, leaf litter, and animal wastes that get flushed into the waterway).

5. Education of the public on the availability, location, and requirements of facilities for disposal or drop-off of household hazardous wastes, travel trailer sanitary wastes, chemicals, yard wastes, and motor vehicle fluids.
6. Education of the public concerning management of riparian lands to protect water quality.

PEP STRATEGY

During the development of the updated PEP, the LGRW Stormwater Education Committee discussed and reviewed the past successes and challenges in implementing the original PEP. By understanding the accomplishments and lessons learned during the first five years of implementation, a more comprehensive PEP could be developed. Available resource information was reviewed, including the Watershed General Permit guidance, *Getting Your Feet Wet with Social Marketing* (Wilbur 2006), recommendations from previous annual evaluations of effectiveness, and the Focus Group Summary Report (Appendix 1). The committee also sought input and recommendations from the LGRW PAM Committee, participating communities in Kent and Ottawa Counties, and other Michigan watershed groups focused on stormwater education.

Based on this information, the LGRW Stormwater Education Committee and FTC&H were able to identify appropriate target audiences, key messages, delivery methods, and evaluation measures that would be effective in the LGRW. These components are explained below and included in Table 2.

- **Target Audiences:** Key stakeholder groups contributing, or with the potential to contribute, to stormwater pollution.
- **Key Messages:** Messages to raise awareness, educate, or inspire action.
- **Delivery Mechanisms:** Activities to promote, publicize, and facilitate education to reduce and prevent stormwater pollution.
- **Evaluation Measures:** Methods to assess the progress of education efforts at meeting the identified goals and objectives.

Because the PEP strategy is designed to raise awareness, educate, and inspire action among target audiences, the delivery mechanisms were selected to move target audiences through three outreach stages: awareness, education, and action. These components are explained below and included in Table 2.

- **Awareness:** Target audiences will become aware of how day-to-day activities affect the quality of water resources.
- **Education:** Target audiences will learn the link between urban development, land use management, and water quality impacts.

- **Action:** Target audiences will adopt and implement practices and support other actions resulting in water quality improvements.

The complete PEP strategy (as outlined in Table 2) is organized by six stormwater education categories: 1) personal watershed stewardship, 2) ultimate stormwater discharge location and potential impacts, 3) public reporting of illicit discharges, 4) personal actions that can impact the watershed, 5) waste management assistance, and 6) management of riparian lands. These six categories are based on the six categories outlined in the 2003 General Watershed Permit. Target audiences, key messages, delivery methods, and evaluation measures were identified for each category by the LGRW Stormwater Education Committee.

TARGET AUDIENCES

The target audiences are groups that affect or are affected by stormwater quality in their everyday actions. The target audiences identified in this PEP are the public and those key stakeholder groups contributing to, or potentially contributing to, stormwater pollution. The 2003 permit defines the public as including, but not limited to:

- residents
- visitors to the area
- businesses
- commercial operations
- construction activities

The LGRW Stormwater Education Committee and Focus Group identified additional target audiences to include in the 2013 PEP as follows:

- public employees
- industries
- nonprofits conducting car washes
- schools
- riparian landowners
- recreational users
- lawn care companies
- landscapers

In addition, the 2013 PEP also includes the following audiences recommended in the 2010 Focus Group Summary Report:

- auto repair shops
- commercial power washers
- carpet/floor cleaning companies
- septic system owners and haulers

Table 2 lists the high-priority target audiences for each public education category. Target audiences not listed within a certain category are considered to be a lower priority, but can be expected to be reached indirectly through the identified actions.

A social profile was developed for the LGRW by the Center for Environmental Study (CES) (2011). The social profile, in part, outlines the “socioeconomic characteristics of the Lower Grand River Watershed in order to recognize the historic, cultural, and political dynamics that shape watershed communities.” This document will be used to further characterize the target audiences in the LGRW to better reach these groups.

DEVELOPING MESSAGES

The majority of people would be willing to change their habits if they knew their everyday behaviors were causing stormwater pollution. However, most people will not respond to negative criticism by changing a behavior that is being criticized. Therefore, it will be important all messages delivered to target audiences emphasize personal empowerment, build on their concerns, and are not accusations. To achieve maximum effectiveness, this outreach campaign intends to provide consistent verbal and visual cues to the targeted audiences. Messages relayed to the target audiences will be concise to retain the attention of the readers or listeners. Messages will build on previous efforts allowing the plan to evolve to include information that is more detailed and still be identifiable to the recipient. Specifically, the Focus Group Summary Report (Appendix 1) recommended the following regarding the development of messages:

- Create messages indicating direct benefits to the individual and what they care about (e.g. monetary benefits of environmental protection).
- Create messages providing consistent, repeated messages to create awareness.
- Create messages avoiding technical or complex terminology.
- Reinforce messages by leading by example; if local governments can lead by example, their residents are more likely to follow suit.

Messages developed for the updated PEP are included in Table 2.

DELIVERY MECHANISMS

Delivery mechanisms will relay stormwater messages to the target audiences. Previous delivery mechanisms from the original PEP were evaluated during a focus group session in 2009 (Appendix 1). While some mechanisms were recommended for elimination or reduction (i.e., brochures), others were considered successful and will be continued over the next five years (e.g., lamppost banners, storm drain markers). New delivery mechanisms were also identified, including social media networks, “Johnny” advertisements, public service radio advertisements, and Wood TV 8 pop-up advertisements. The Focus

Group Summary Report (Appendix 1) recommended the following regarding the implementation of delivery mechanisms:

- Create concise, visual, and emotionally moving delivery mechanisms.
- Create and promote identifiable branding.
- Use delivery mechanisms to promote a stormwater slogan.

Table 2 identifies the delivery mechanisms and responsible parties to promote, publicize, and facilitate education to reduce and prevent stormwater pollution. Table 3 lists the delivery mechanisms developed under the original PEP that can be reused in the future. Digital versions of these delivery mechanisms can be found at <http://www.ftch.com/lowergrandriverwatersheddocuments>.

Table 3 - Previously Developed Delivery Mechanisms Available for Reuse

<i>Delivery Mechanisms</i>	<i>Year Developed/ Revised</i>
Brochures/Flyers	
Auto and Boat Care brochure (<i>pdf</i>)	2007
Lawn Fertilizer brochure (<i>pdf</i>)	2007
Stormwater Education brochure (<i>pdf</i>)	2007
Pet Waste flyer (<i>pdf</i>)	2009
"Landscaping for Water Quality" brochure (<i>pdf</i>)	2010
"Solution to Stormwater Pollution" brochure (<i>pdf</i>)	2010
Septic System guide (<i>pdf</i>)	2010
"Healthy Lawn, Healthy Environment" brochure (<i>pdf</i>)	2010
Illicit Discharges/Connections brochure (<i>pdf</i>)	2010
"Rain Rain" brochure (<i>pdf</i>)	2011
Citizens Reporting brochure (<i>pdf</i>)	2012
Citizens Reporting brochure instructions (<i>doc</i>)	2012
MS4 Employee Pollution report form (<i>doc</i>)	2012
Non-phosphorus Fertilizer brochure (<i>pdf</i>)	2012
"Do You Know Where Your Septic System Is?" brochure (<i>pdf</i>)	2012
"Get the Most Out of Rain" flyer (<i>pdf</i>)	2012
"West Michigan Take Back Meds" brochure (<i>pdf</i>)	2012
Ottawa County Household Hazardous Waste brochure (<i>pdf</i>)	2012
Meijer and TNC "Plant for a Better Earth" flyer (<i>pdf</i>)	2012
Newsletter Articles	
Fertilizer article - <i>New Michigan Law Restricts Phosphorus Fertilizers (doc)</i>	2012
Household Waste article Kent - <i>Guide to Household Waste Disposal (doc)</i>	2012
Household Waste article Ottawa - <i>Guide to Household Waste Disposal (doc)</i>	2012
Rain Garden article - <i>What is a Rain Garden? (doc)</i>	2012
Septic System article - <i>Maintaining Your Septic System" (doc)</i>	2012
Stormwater article - <i>How You Can Help Reduce Pollution Entering the Grand River (doc)</i>	2012
MS4 Employee Stormwater article - <i>How You as an Employee Can Help Reduce Pollution Entering the Grand River (doc)</i>	2012
Kids Materials	
Water Cycle coloring book (<i>pdf</i>)	2012
Posters	
Stormwater display board poster (<i>pdf, high resolution</i>)	2009
Kitchen Grease poster (<i>pdf, 12"x18"</i>)	2011
Watershed Website	
http://www.lowergrandriver.org	Ongoing
Radio Advertisements	
Stormwater Runoff ad (<i>mp3</i>)	2009
Stormwater Pollution 1 ad (<i>mp3</i>)	2009
Stormwater Pollution 2 ad (<i>mp3</i>)	2009
Household Hazardous Waste ad (<i>mp3</i>)	2009
Other Materials	
Give-a-ways (library book/grocery bag, highlighter, letter opener, magnet clip, lunch bag, t-shirt)	2005 - 2012
Grand River Watershed sign design (<i>pdf</i>)	2009
Lamppost Banner designs (<i>pdf</i>)	2009
Storm Drain Marker installation instructions (<i>pdf</i>)	2012
Eco Friendly Carwash Fundraiser letter (<i>doc</i>)	2012

EVALUATION METHODS

Evaluation measures are necessary to determine the level of permit compliance and program effectiveness. The LGRW Stormwater Education Committee selected evaluation measures to evaluate the activities outlined in the PEP strategy. For each delivery mechanism, an action measurement and result measurement were developed. Action measures evaluate the work performed by the permittees (e.g., number of brochure distributed), and result measures evaluate the outcomes and improvements resulting from the action (e.g., change in resident behavior after reading the brochure). Evaluation measures are listed in Table 2.

ACTION MEASURES

To evaluate the work performed by the permittees to implement the delivery mechanisms, a permittee questionnaire will be used. The questionnaire will ask questions such as “How many website hits did your stormwater webpage receive?” Over time, the increase or decrease in the number of website hits by residents can be determined. In this way, the effectiveness of the webpage can be shown by comparing one period's number of hits to another.

To evaluate the work performed by the LGRW Stormwater Education Committee to implement the delivery mechanisms, other tools will be used. For example, a “booth form” will be developed to determine the increase in the number of booth visitors over time. The form will be attached to the LGRW stormwater display so permittees can fill it out as the display is used. In accordance with Table 2, the LGRW Stormwater Education Committee will also track Facebook “likes” and “friends,” watershed website hits, number and frequency of regional advertisements, etc., as well as prepare exit surveys for workshops.

RESULT MEASURES

Milestones were developed for each delivery mechanism to assist with the results evaluation process. The milestones were established derived from baseline data obtained during the LGRW survey. CES conducted a survey of residents living in the LGRW in 2009 and 2010. CES developed a two-stage survey to assess whether specific I&E efforts, implemented during the Lower Grand River Organization of Watersheds (LGROW) Initiatives Project, would increase awareness of watershed issues. Results of this LGRW survey were then used to assist in establishing baseline data (e.g., 12% of people surveyed in the watershed know they live in the LGRW or one of its subwatersheds).

Three- and five-year milestones were then set based on this baseline data. For example, the following three-year milestone was established, “23% of people in the watershed know they live in the Lower Grand River Watershed or one of its subwatersheds.” Based on this milestone, PEP implementation efforts are expected to raise watershed awareness by 11% in three years. Achievement of this measurable goal will

be assessed using annual online resident surveys. Survey Monkey (www.surveymonkey.com/) is an affordable mechanism for creating online surveys. Public education efforts that were cost-effective for reaching a wide and varied audience will be used in future community outreach programs. The activities that did not reach their milestones will be eliminated or modified to increase their effectiveness.

In addition to the annual online resident surveys, the effectiveness of the entire PEP program will be assessed during a focus group session after five years of implementation. The format of the focus group session will follow the 2009 focus group session (Appendix 1). The focus group session will solicit for feedback on the successes and challenges of the PEP strategy. Recommendations will then be prepared for the next five-year PEP.

SCHEDULE OF IMPLEMENTATION

Michigan has more fresh water than any state in the United States and most will agree our state's water resources are becoming more and more polluted. Many Michigan residents, however, are still not aware that their everyday actions contribute to stormwater pollution. Based on the Focus Group Summary Report (Appendix 1), this also holds true for residents in the LGRW. Therefore, delivery mechanisms implemented between 2012 and 2017 will build on past efforts to raise awareness, educate, and inspire action. Once target audiences have become aware of the problems they are causing to their community's lakes and streams, they will be educated on how they can prevent further impairments to their watershed. Finally, programs and actions encouraging behavioral changes will be promoted. Table 2 includes the proposed schedule of each component in the PEP.

Table 2 - Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Public Education Categories (2003 Permit)	Key Messages	Delivery Mechanisms		High-Priority Target Audiences	Awareness, Education, or Action	Timeline	Responsible Party	Action Evaluation Measure	Result Evaluation Measure			
		Mechanism	Specific Example(s)						Baseline Data (First Year)	Milestones (Third Year)	Milestones (Fifth Year)	Result Evaluation Tool
1. Personal watershed stewardship Education about responsibility and stewardship.	1) A watershed is an area of land draining to a common point. You live in the LGRW. You impact the watershed. 2) Learn more about the LGRW by visiting www.lowergrandriver.org 3) Reasons for protecting the watershed. 4) Ways individuals can affect the watershed through their activities.	Give-a-ways	Library book bag, reusable grocery bag	Residents, visitors, public employees	Awareness	Winter / Spring 2013, 2015	Permittees	Increase in number of give-a-ways taken by target audiences	12% of people surveyed in the watershed know they live in the LGRW or one of its subwatersheds *	23% of people surveyed in the watershed know they live in the LGRW or one of its subwatersheds	30% of people surveyed in the watershed know they live in the LGRW or one of its subwatersheds	Annual Resident Online Survey, Five-Year Focus Group
		Facebook	LGRW group page		Awareness	Updates - Summer Annually	Stormwater Education Committee	Increase in number of Facebook "friends" and "likes"				
		Festival booths	Grand River Clean-Up, John Ball Zoo's "Party for the Planet," Grandville's Michigan Week, Hudsonville Showcase, Sparta Business Expo		Education	Winter / Spring Annually	Permittees	Number of festival booths staffed each year, increase in number of booths visitors educated				
		Lamppost banners	"Grand River Watershed" banner		Awareness	Winter / Spring 2013, 2015, 2017	Permittees	Number and duration of banners installed				
		Maintain "Entering the Watershed" road signs	9 signs currently in Kent County and 9 signs in Ottawa County		Awareness	Summer 2013, 2015, 2017	Stormwater Education Committee	Number of road signs checked for maintenance needs, number of signs repaired				
		Watershed website	www.lowergrandriver.org		Education	Updates - Summer Annually	Stormwater Education Committee	Number of weblinks to watershed website, increase in number of website hits				
		Wood TV 8 pop-up advertisement	www.woodtv.com		Awareness	Summer 2017	Stormwater Education Committee	Number and frequency of advertisements				

Table 2 - Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Public Education Categories (2003 Permit)	Key Messages	Delivery Mechanisms		High-Priority Target Audiences	Awareness, Education, or Action	Timeline	Responsible Party	Action Evaluation Measure	Result Evaluation Measure			
		Mechanism	Specific Example(s)						Baseline Data (First Year)	Milestones (Third Year)	Milestones (Fifth Year)	Result Evaluation Tool
2. Ultimate stormwater discharge location and potential impacts- Education on the location of residential stormwater system catch basins, where the system discharges, and impacts from pollutants.	1) Storm drains connect to your local lakes and streams, not a water treatment plant. 2) Prevent pollution from entering your storm drains and protect the health of your family, your community, and the Grand River. 3) Education on the impacts of stormwater pollutants. 4) Education on the stormwater system and receiving water bodies in a person's or company's neighborhood.	"Johnny" advertisements	www.johnnyadvertising.com	Residents	Awareness	Summer 2016	Stormwater Education Committee	Number and duration of advertisements	17% of people surveyed indicated dumping chemicals on the ground or in the storm sewer negatively affects water quality.*	25% of people surveyed understand 1) their storm drains discharge to local lakes and streams, and 2) their behaviors impact the quality of storm drain discharges	30% of people surveyed understand 1) their storm drains discharge to local lakes and streams, and 2) their behaviors impact the quality of storm drain discharges	Annual Resident Online Survey, Five-Year Focus Group
		Articles in professional publications or direct mailings	Association of Grand Rapids Landscape Professionals newsletter. Direct mailings to: Auto Repair - www.yellowpages.aol.com/auto-repair/mi/grand-rapids/ Power Washers - www.yellowpages.com/grand-rapids-mi/power-washing-Carpet/Floor Cleaners - www.yellowpages.aol.com/carpet-and-rug-cleaners/mi/grand-rapids/	Landscapers / lawn care companies, auto repair shops, commercial power washers, carpet/floor cleaning companies, commercial operations, industries	Education	Summer 2013, 2015, 2017	Stormwater Education Committee	Number of professional articles / mailings				
		Billboard	U.S. Environmental Protection Agency (USEPA) materials - http://cfpub.epa.gov/npstbx/searchMaterials.cfm?GroupID=62	Residents	Awareness	Summer 2015, 2017	Stormwater Education Committee	Number and duration of advertisements				
		Brochures	City of Grand Rapids' <i>Rain Rain</i> , FTC&H's <i>Stormwater Management: Illicit Discharges and Connections</i>	Residents	Education	Winter / Spring 2014, 2016	Permittees	Increase in number of brochures taken by target audiences				
		Bus advertisements or gas station pump advertising	ridetherapid.org , captive1.com	Residents	Awareness	Summer 2013, 2015, 2017	Stormwater Education Committee	Number and duration of advertisements				
		Business window flyer	Rouge River Project's <i>Our Business Practices Can Affect Our Rivers</i> - http://www.michigan.gov/deq/0,1607,7-135-3313_3682_3714-106374--00.html	Local businesses	Awareness/ Education	Winter / Spring 2014, 2016	Permittees	Number and duration of flyers posted				
		Newsletter/Newspaper article	FTC&H's <i>How You Can Help Reduce Pollution Entering the Grand River</i>	Residents	Education	Winter / Spring Annually	Permittees	Number of articles disseminated to the public; number of households reached				

Table 2 - Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Public Education Categories (2003 Permit)	Key Messages	Delivery Mechanisms		High-Priority Target Audiences	Awareness, Education, or Action	Timeline	Responsible Party	Action Evaluation Measure	Result Evaluation Measure			
		Mechanism	Specific Example(s)						Baseline Data (First Year)	Milestones (Third Year)	Milestones (Fifth Year)	Result Evaluation Tool
		Radio public service announcement (or "on hold" phone messages)	City of Grand Rapids' <i>Water Spots</i>	Residents	Awareness / Education	Summer 2014, 2016	Stormwater Education Committee	Number and frequency of advertisements				
		Storm drain markers / stenciling, with door hanger distributions if volunteers are available	Markers: East Jordan Iron Works Stenciling: FTC&H's stenciling instructions Hangers: http://www.michigan.gov/documents/deq/ess-nps-savvy-door_209411_7.pdf	Residents	Action	Winter / Spring Annually	Permittees	Number of drain markers installed / stenciled, increase in number of volunteers involved in installation / stenciling, number of door hangers distributed, decrease in illicit discharges / dumping				
		Watershed website links to YouTube video	www.youtube.com/watch?v=GrBEEjijxaY&feature=related	Residents	Education	Ongoing	Stormwater Education Committee	Number of web links to the watershed website (containing YouTube videos), increase in number of website hits				

Table 2 - Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Public Education Categories (2003 Permit)	Key Messages	Delivery Mechanisms		High-Priority Target Audiences	Awareness, Education, or Action	Timeline	Responsible Party	Action Evaluation Measure	Result Evaluation Measure						
		Mechanism	Specific Example(s)						Baseline Data (First Year)	Milestones (Third Year)	Milestones (Fifth Year)	Result Evaluation Tool			
3. Public reporting of illicit discharges - Encourage public reporting of the presence of illicit discharges or improper disposal into the stormwater system.	1) How to identify illicit discharges. 2) How to report illicit discharges. 3) Water quality impacts from illicit discharges. 4) Consequences / penalties associated with illicit discharges and improper waste disposal.	Brochures with reporting / contact information	FTC&H's Citizen reporting brochure, MS4 employee pollution report form	Residents, public employees, businesses, construction activities, industries	Awareness / Education / Action	Winter / Spring 2014-2017	Permittees	Increase in the number of brochures taken by target audiences	Typically <5 illicit discharge reports per community annually**	9% increase in the number of illicit discharge reports per community each year.	15% increase in the number of illicit discharge reports per community each year	Annual Resident Online Survey, Five-Year Focus Group			
		Community public reporting webpages	http://www.ci.kentwood.mi.us/CityOfKentwood/media/files/original-files/publicworks/pdf/How-to-Report-Water-Pollution.pdf		Awareness / Education / Action	Ongoing	Permittees	Number of community reporting web pages, increase in number of phone calls resulting from website							
		Newsletter article	FTC&H's <i>How You Can Help Reduce Pollution Entering the Grand River</i> FTC&H's <i>How You as an Employee Can Help Reduce Pollution Entering the Grand River</i>		Awareness / Education	Winter / Spring Annually	Permittees	Number of newsletter articles disseminated, increase in number of phone calls resulting from article							
	1) Proper septic system care and maintenance. 2) How to recognize system failure. 3) Impacts failing systems have on water quality. 4) Where to go for assistance.	Brochure	USEPA's <i>A Homeowner's Guide to Septic Systems</i>	Septic system owners / haulers	Awareness / Education	Winter / Spring Annually	Permittees	Increase in number of brochures taken by target audiences					1% of watershed residents reported they regularly pump out their septic system when asked to name one thing they were doing to improve water quality*	9% of watershed residents surveyed report they regularly pump out their septic system	15% of watershed residents surveyed report they regularly pump out their septic system
		County Health Department (HD) septic system inspections / repairs	Ottawa County - https://www.miottawa.org/Health/OCHD/landev.htm Kent County - http://www.accesskent.com/Health/HealthDepartment/WellAndSepticWellSepticPermits.htm	Septic system owners	Action	Ongoing	Ottawa / Kent County HDs	Decrease in annual number of septic system repairs							

Table 2 - Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Public Education Categories (2003 Permit)	Key Messages	Delivery Mechanisms		High-Priority Target Audiences	Awareness, Education, or Action	Timeline	Responsible Party	Action Evaluation Measure	Result Evaluation Measure			
		Mechanism	Specific Example(s)						Baseline Data (First Year)	Milestones (Third Year)	Milestones (Fifth Year)	Result Evaluation Tool
		Newsletter article	FTC&H's <i>Maintaining Your Septic System</i>	Septic system owners	Awareness / Education	Winter / Spring Annually	Permittees	Number of newsletter articles disseminated to the public; number of households reached if articles were mailed				
		Watershed website links to YouTube videos or brochure	www.lowergrandriver.org	Septic system owners	Awareness / Education	Ongoing	Stormwater Education Committee	Number of web links to the watershed website (containing YouTube videos / brochure), increase in number of website hits				
4. Personal actions that can impact the watershed- Education on the need to minimize the amount of residential, or non-commercial, wastes washed into storm sewer system.	1) Best management practices (BMP) for car, pavement, power washing. 2) Preferred cleaning materials and practices - "phosphate free" as important as "biodegradable." 3) BMPs for pesticide use, fertilizer use, and their disposal. 4) BMPs for proper management of grass clippings, leaf litter, and animal wastes. 5) BMPs for residential de-icer use.	Brochures	USEPA's <i>The Solution to Stormwater Pollution</i> , CES's <i>Landscaping for Water Quality</i>	Residents	Awareness / Education	Winter / Spring Annually	Permittees	Increase in number of brochures taken by target audiences	72% of watershed residents can name one thing they are doing to improve water quality.*	80% of watershed stakeholders surveyed can name one thing they are doing to improve water quality.	85% of watershed stakeholders surveyed can name one thing they are doing to improve water quality.	Annual Resident Online Survey, Five-Year Focus Group
		Children's coloring or activity book	Kent County Drain Commissioner's (KCDC) <i>Troutie</i> and Water Environment Foundation's (WEF) <i>Water Cycle</i> coloring books	Schools	Education	Winter / Spring Annually	Permittees	Increase in number of books taken by target audiences				
		Enviroscape classroom presentations	Enviroscape models available through the Ottawa County Drain Commissioner (OCDC) and KCDC	Schools	Education	Winter / Spring Annually	Permittees	Number of presentations, increase in number of participants				

Table 2 - Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Public Education Categories (2003 Permit)	Key Messages	Delivery Mechanisms		High-Priority Target Audiences	Awareness, Education, or Action	Timeline	Responsible Party	Action Evaluation Measure	Result Evaluation Measure			
		Mechanism	Specific Example(s)						Baseline Data (First Year)	Milestones (Third Year)	Milestones (Fifth Year)	Result Evaluation Tool
6) BMPs for native vegetation on residential properties as an alternative to turf grass. 7) Effects of residential wastes on our water bodies. 8) Education on low impact development (LID) techniques. For example, "Lower your water bill. Install a rain barrel to capture and reuse your stormwater."		Mailing to schools regarding environmentally friendly car wash fundraisers	FTC&H's environmentally-friendly car wash fundraiser letter	Non-profit groups conducting car wash fundraisers	Education / Action	Winter / Spring 2013, 2015	Permittees	Number of letters mailed to schools or organizations, increase in number of environmentally friendly car washes				
		Newsletter articles	FTC&H's <i>New Michigan Law Restricts Phosphorus Fertilizers</i> , FTC&H's <i>What is a Rain Garden</i>	Residents	Awareness / Education	Winter / Spring Annually	Permittees	Number of newsletter articles disseminated to the public; number of households reached if articles were mailed				
		Radio public service announcement (or "on hold" phone messages)	City of Grand Rapids' <i>Water Spots</i>	Residents	Awareness	Summer 2014, 2016	Stormwater Education Committee	Number and frequency of advertisements, increase in the number of phone calls resulting from radio advertisement				
		LID Workshops	Rain gardens, native plant landscaping, stream buffers, or rain barrels	Residents, public employees	Action	Summer 2013, 2015	Stormwater Education Committee	Number of workshops, increase in the number of participants, increase in number of practices installed				
		Park signage	Pet waste or duck feeding signs	Residents, visitors, recreational users, riparian landowners	Awareness	Winter / Spring 2016	Permittees	Number of signs installed, decrease in pet waste or duck feeding				

Table 2 - Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Public Education Categories (2003 Permit)	Key Messages	Delivery Mechanisms		High-Priority Target Audiences	Awareness, Education, or Action	Timeline	Responsible Party	Action Evaluation Measure	Result Evaluation Measure			
		Mechanism	Specific Example(s)						Baseline Data (First Year)	Milestones (Third Year)	Milestones (Fifth Year)	Result Evaluation Tool
		Stormwater display board	LGRW Stormwater display board	Residents	Education	Ongoing	Permittees	Number and duration of stormwater displays				
		Watershed website link to YouTube video or information	www.lowergrandriver.org	Residents, public employees	Education	Ongoing	Stormwater Education Committee	Number of web links to the watershed website (with YouTube videos / information), increase in number of website hits				
5. Waste management assistance- Education on proper disposal of household hazardous waste (HHW), travel trailer / boating sanitary wastes, chemicals, motor vehicle fluids, and unused medications.	1) Protect your family's health, dispose of unwanted paints, solvents, and cleaners at your county collection center. 2) Recycle used oil and automotive fluids. Just one gallon of used motor oil dumped down a catch basin can contaminate one million gallons of your drinking water. 3) Education on types of HHW and available alternatives. 4) Education on disposal locations for HHW, travel trailer / boating sanitary wastes, chemicals, motor vehicle fluids, and unused medications.	Radio public service announcement (or "on hold" phone messages)	City of Grand Rapids' <i>Water Spots</i>	Residents	Awareness	Summer 2014, 2016	Stormwater Education Committee	Number and frequency of advertisements	To be determined	9% increase the number of watershed residents dropping off HHW during HHW collection events	15% increase the number of watershed residents dropping off HHW during HHW collection events	Annual Resident Online Survey, Five-Year Focus Group
		Brochures	<i>County Guide to Household Waste Disposal, West Michigan Take Back Meds</i>	Residents	Education	Winter / Spring Annually	Permittees	Increase in number of brochures taken by target audiences				
		Information boards or brochures at beaches or boat docks on sanitary waste disposal	http://www.mcgi.state.mi.us/mrbis/	Recreational users	Awareness / Education	Winter / Spring 2016	Permittees	Number of signs installed, decrease in improper sanitary waste disposal				
		County Household Waste Collections	http://www.accesskent.com/YourGovernment/PublicWorks/recycle_household.htm http://www.miottawa.org/Health/OCHD/hh_waste.htm	Residents, visitors, public employees	Action	Ongoing	Ottawa County HD / Kent County DPW	Number of waste collection days held, increase in amount of material received during collection days or increase in number of people participating				

Table 2 - Public Education Plan Strategy for Participating Communities of the Lower Grand River Watershed

Public Education Categories (2003 Permit)	Key Messages	Delivery Mechanisms		High-Priority Target Audiences	Awareness, Education, or Action	Timeline	Responsible Party	Action Evaluation Measure	Result Evaluation Measure			
		Mechanism	Specific Example(s)						Baseline Data (First Year)	Milestones (Third Year)	Milestones (Fifth Year)	Result Evaluation Tool
		Newsletter article	FTC&H's <i>Guide to Household Waste Disposal</i>	Residents	Education	Winter / Spring Annually	Permittees	Number of newsletter articles disseminated to the public; number of households reached if articles were mailed				
		Watershed website information with web link to County Household Waste websites	http://www.accesskent.com/YourGovernment/PublicWorks/recycle_household.htm http://www.miottawa.org/Health/OCHD/hh_waste.htm	Residents	Education	Ongoing	Stormwater Education Committee	Number of website links to County HHW website, increase in number of website hits, if available				
6. Management of riparian lands - Education concerning management of riparian lands to protect water quality.	1) Importance of riparian corridors / stream buffers. 2) How to landscape for better water quality. 3) Education on shoreline stabilization techniques, stream buffers, filter strips, conservation easements, and bioengineering techniques.	Direct mailing to priority preservation and restoration areas noted in the Watershed Management Plan	Annis Water Resources Institute's (AWRI) <i>Riparian Owner's Guidebook</i> - http://www.gvsu.edu/forms/isc/ripguide.pdf		Education	Summer 2014, 2017	Regional	Number of mailings to riparian owners, increase in square footage of practices installed	To be determined	9% of watershed stakeholders surveyed report they planted native plants, planted a stream buffer / rain garden, or used shoreline stabilization techniques	15% of watershed stakeholders surveyed report they planted native plants, planted a stream buffer / rain garden, or used shoreline stabilization techniques	Annual Resident Online Survey, Five-Year Focus Group
		Riparian management workshop	Michigan Natural Shoreline Partnership - https://sites.google.com/site/mishorelinepartnership/	Riparian landowners, construction activities, landscapers	Action	Summer 2014	Stormwater Education Committee	Number of workshops held; increase in number of participants, increase in number of practices installed				

* Gajewski, B. 2010. A Social Profile of the Lower Grand River Watershed. Center for Environmental Study, Grand Rapids, MI. 105 pp.

** NPDES MS4 Stormwater Progress Reports (2005-2009)

PARTNERSHIP DEVELOPMENT

During implementation of the original PEP, several partnerships were developed. Partners included LGROW, West Michigan Environmental Action Council (WMEAC), Kent County Department of Public Works (DPW), and the Great Lakes Stewardship Initiative (GLSI). These organizations assisted in reviewing products, providing useful resources, and expanding existing efforts. These partnerships will be continued and strengthened over the next five-year period.

Additional partnerships will be sought during the next five years (2012 to 2017), with assistance from the LGRW Stormwater Education Committee. During the first year of the five-year strategy, the LGRW Stormwater Education Committee will focus on identifying opportunities for additional partnerships. Partnership opportunities are currently underway with Trout Unlimited, Plaster Creek Stewards, Meijer Stores, CA Frost Environmental Science Academy, and the Kent and Ottawa Conservation Districts. The second year will focus on gaining commitments from these partners to various aspects of the updated PEP. During years three, four, and five, efforts will shift to securing additional funds through in-kind services and existing grant programs.

SUMMARY

The sharing of information, time, expertise, and programs among the participating communities in Kent and Ottawa Counties allows the updated PEP to efficiently reach out to the target audiences in the LGRW. Since increasing awareness, education, and action of all residents in the watershed will help improve water quality and protect water resources of the watershed-based initiative, this PEP effectively meets the 2003 General Watershed Permit requirements with the greatest benefit for the participating communities. This regional approach to public education will share responsibilities, communicate messages to a greater number of audiences, and provide consistent and repetitive information to the public.

REFERENCES

Center for Environmental Study. 2011. A Social Profile of the Lower Grand River Watershed. Prepared for the Grand Valley Metropolitan Council. Lower Grand River Organization of Watersheds Initiatives Implementation Project. MDEQ Tracking Code: 2007-0137. FTC&H, Grand Rapids, Michigan. 105 pp.

Fishbeck, Thompson, Carr & Huber, Inc. 2011. Lower Grand River Watershed Management Plan. Prepared for the Grand Valley Metropolitan Council. Lower Grand River Organization of Watersheds Initiatives Implementation Project. MDEQ Tracking Code: 2007-0137. FTC&H, Grand Rapids, Michigan.

Wilbur, J. 2006. Getting Your Feet Wet with Social Marketing, A Social Marketing Guide for Watershed Programs. Utah Department of Agriculture and Food, Salt Lake City, Utah. 132 pp.

Appendices

**LOWER GRAND RIVER WATERSHED
STORM WATER EDUCATION PROJECT**

FOCUS GROUP SUMMARY REPORT

**PREPARED FOR:
GRAND VALLEY METROPOLITAN COUNCIL**

**FEBRUARY 2, 2010
PROJECT NO. F99511P**

TRACKING CODE: 2007-0113

1.0 INTRODUCTION 1

2.0 METHODS..... 1

3.0 RESULTS AND DISCUSSION..... 3

4.0 CONCLUSIONS AND RECOMMENDATIONS..... 5

LIST OF ABBREVIATIONS/ACRONYMS

CES	Center for Environmental Study
CMI	State of Michigan's Clean Michigan Initiative
FTC&H	Fishbeck, Thompson, Carr & Huber
GVMC	Grand Valley Metropolitan Council
LGRW	Lower Grand River Watershed
MDNRE	Michigan Department of Natural Resources and Environment
NPDES	National Pollution Discharge Elimination System
PEP	Public Education Plan
PROJECT	Storm Water Education Project
QAPP	Quality Assurance Project Plan

1.0 INTRODUCTION

As part of the compliance activities associated with the National Pollution Discharge Elimination System (NPDES) Phase II Storm Water Regulations watershed-based permit, local and county governments within Kent and Ottawa Counties have participated in the Lower Grand River Watershed (LGRW) Storm Water Education Project (Project). The goal of this Project is to promote, publicize, and facilitate watershed education for the purpose of encouraging the public to reduce the discharge of pollutants in storm water. The Project is guided by the LGRW Storm Water Education Committee, formed by the Grand Valley Metropolitan Council (GVMC) in 2004. Committee members include the GVMC, local units of government, schools, and environmental organizations within the LGRW.

In 2008, the GVMC was awarded grant funds through the State of Michigan's Clean Michigan Initiative (CMI) to support the Project. Grant funds were subsequently used to hold a focus group session with residents living in the LGRW. The purpose of the focus group session was to determine changes in the awareness, education, and behavior of the public as a result of storm water education efforts in 2008 and 2009. Results of the focus group session are presented in this document and will be used by GVMC and the LGRW Storm Water Education Committee to further enhance the goals, objectives, and deliverables of the Project.

2.0 METHODS

Data Collection Description

Focus group participants were drawn from a pool of individuals nominated by local units of government participating in the Project. Each participating local unit of government was asked to submit a list of two potential participants meeting the nominee criteria: 1) nominee is not directly involved in the NPDES Phase II Storm Water Program; 2) nominee lives in Kent or Ottawa Counties, the LGRW, and the community he or she represents; and 3) nominee had the potential to encounter Project deliverables. Ten individuals were selected from the pool of nominees and invited to the focus group session.

The focus group session was held November 10, 2009, at Fishbeck, Thompson, Carr & Huber (FTC&H)'s Grand Rapids office. Mr. Andrew Bowman, GVMC, administered the two-hour focus group session. Mr. Bowman has led similar focus group sessions in the past as part of GVMC's Blueprint II regional planning process, the development of the LGRW Management Plan, and West Michigan Strategic Alliance's Vital Signs Regional Indicator Report. All ten individuals invited to the session were in attendance. Before the start of the focus group session, participants were asked to complete a short questionnaire (Table 1). During the focus group session, six dialog questions were asked of the group by Mr. Bowman (Table 2). Three recorders were used to document the responses of participants. Recorders included Ms. Betty Gajewski, Center for Environmental Study (CES); Ms. Laurie Beth Nederveld, FTC&H; and Ms. Janice Tompkins, Michigan Department of Natural Resources and Environment (MDNRE).

Table 1 - Questionnaire

1. Name?
2. Affiliation or workplace?
3. What community (city, township, or village) do you live in?
4. What community do you shop for groceries in?
5. What community do you work in?
6. What is the zip code where you live?

Table 2 - Dialog Questions

1. What Project deliverables have you seen, heard, or read? (i.e. bus side, radio, television ads; brochures and flyers; give-a-ways; displays; lamppost banners, news articles; roadway signage; and drain markers)?
2. Did Project deliverables influence you? How?
3. Have you noticed changes in your workplace based on messages of Project deliverables?
4. How could Project deliverables be improved?
5. Where and how do you get information on community activities?

Data Management, Analyses, and Reporting Procedures

Documented responses from the focus group session were analyzed and interpreted by FTC&H staff. CES, GVMC, and MDNRE also contributed to the interpretation of responses. The final draft of the focus group summary report was prepared by FTC&H and reviewed by CES, GVMC, and MDNRE. The final report will be distributed to CES, GVMC, LGRW Storm Water Education Committee, and MDNRE, and local units of government participating in the Project. Results of the focus group session will be used by the GVMC, FTC&H, and the LGRW Storm Water Education Committee to further enhance the goals, objectives, and deliverables of the Project.

Quality Control

A Quality Assurance Project Plan (QAPP) for the focus group session was developed by FTC&H and GVMC and submitted to the MDNRE for approval in June 2009 (Appendix 1). The QAPP was approved, with revisions, in November 2009. As part of the review process, staff from the MDNRE reviewed the proposed dialog questions, based on the focus areas noted in the QAPP, to ensure they were unbiased, clear, and objective. To ensure quality control and assurance, CES, FTC&H, GVMC, and MDNRE staff agreed to review all documented responses from the focus group session. If these organizations felt any responses were not recorded, these responses would be added to the summary of documented responses, if all parties were in agreement.

A contingency plan was also developed and included in the QAPP. The contingency plan indicated that if less than four individuals participated in the focus group, a questionnaire would be sent to those

individuals that were nominated to participate to solicit greater participation. Since all the invited participants were in attendance at the focus group session, this questionnaire was not necessary.

3.0 RESULTS AND DISCUSSION

The results of the questionnaire distributed during the focus group session indicated that nine out of ten participants lived in the LGRW. Most participants (60%) shopped within the city or township where they lived. The majority (70%) worked in a city or township that they did not live in, but was located within the same metropolitan region.

During the focus group session, five dialog questions were asked of participants. Responses to the five dialog questions are discussed below. Recommendations and conclusions based on the discussion from the focus group sessions are included in Section 4.0.

1. The first dialog question asked, “What Project deliverables have you seen, heard, or read?”

Recollection of Project Deliverables

Participants were able to recall from memory the brochures, storm drain markers, newsletter articles, the watershed website, storm drain stencils, and give-a-ways developed through the Project. After viewing a PowerPoint of all the Project deliverables, participants were able to recall the bus advertisements, lamppost banners, and storm water display. Although participants were aware of the storm water related brochures provided to their offices, they did not necessarily consider them effective delivery mechanisms of the messages that related to the targeted audiences. Despite feeling that storm drain stencils and markers were effective, participants felt that most residents still were not aware that storm drains were connected to local streams and lakes. The participants suggested that greater numbers of installed markers may increase exposure and raise greater awareness.

While participants listened to the radio channels that aired the “Water Spot” advertisements, they did not recollect them. Since advertisements only aired for two weeks on each of four radio stations, it is possible that the radio ads did not air long enough to be remembered by a large percentage of the target audience. The participants suggested airing the “Water Spot” radio advertisements for a longer duration to ensure repeated exposure would be most effective. They also indicated that the appropriate selection of radio channels was necessary to target the intended audiences.

Recollection of Products from Other Projects

While not all participants were able to recall the “Water Spot” radio advertisements aired through the Project, some were able to remember those radio advertisements produced by the Clean Water Action Council. In addition, participants were aware of roadway signage (e.g. Plaster Creek sign) installed by other watershed organizations. These efforts by other organizations were unrelated to the Project.

2. The second dialog question asked, “Did Project deliverables influence you? How?”

Participants indicated that Project deliverables had educated them on proper car washing procedures and storm sewer connections. Participants expressed concern about lawn care companies contributing yard waste to the storm sewer. The same concern was expressed about carpet cleaning companies. The participants mentioned that they had observed individuals dumping motor oil down catch basins. Participants reiterated that they felt that most residents were not aware that storm drains were connected to local streams and lakes, rather than a waste water treatment plant.

3. The third dialog question asked, “Have you noticed changes in your workplace based on messages of Project deliverables?”

Participants were aware of the delivery and implementation of several Project deliverables (e.g. brochures, storm drain markers and stenciling, give-a-ways) by their local unit of government. The distribution of brochures and give-a-ways at public meetings was mentioned. It was noted that county road commissions had changed their management of waste oil over the past several years. In addition, one local unit of government was providing classroom presentations to elementary students regarding storm water education. Participants also discussed the availability of county hazardous waste collection programs and medicine recycling programs, but indicated that these programs were not specifically initiated due to the Project. Dialog on changes in the workplace indicated that changes due to the Project were limited. This suggests that significant changes at the local level as the result of the Project’s storm water education efforts were also limited.

4. The fourth dialog question asked, “How could Project deliverables be improved?”

Participants suggested new target audiences, reworking current messages, and repackaging delivery mechanisms. Recommendations from the focus group session are listed below.

New Target Audiences

- Students and teachers - to promote general education on watersheds and storm water.
- Automotive repair shops - to promote opportunities for motor oil recycling.
- Landscaping companies - to promote proper waste disposal.
- Pharmacies - to promote opportunities for the disposal of unused medications.
- Carpet cleaning companies - to promote proper waste disposal.

Reworking Messages

- Create messages that indicate direct benefits to the individual and what they care about (e.g. monetary benefits of environmental protection).
- Provide consistent, repeated messages to create awareness.

- Avoid technical or complex terminology.
- Develop and promote a storm water slogan.
- Reinforce messages by leading by example. If governments can lead by example, their residents are more likely to follow suit.

Repackaging Delivery Mechanisms

- Create concise, visual, and emotionally moving delivery mechanisms (e.g. “Crying Indian” television spot from 1971).
- Create and promote identifiable branding.
- Develop new delivery mechanisms, such as, social networking sites (e.g. Facebook), “Johnny” advertisements, public service radio advertisements, and Wood TV 8 pop-up advertisements.

5. The fifth dialog question asked, “Where and how do you get information on community activities?”

Participants reported that their primary news sources were radio, internet, television, newspaper, and social networking sites (e.g. Facebook). This suggests target audiences also receive their news from mass media and social networking sources.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The conclusions of the focus group session revealed both challenges and successes of the Project deliverables in creating changes in the awareness, education, and behavior of the public as a result of storm water education efforts in 2008 and 2009.

Challenges

Brochures, although considered helpful to government staff, were not necessarily indicated as an effective delivery mechanism for target audiences.

The majority of residents are still were not aware that storm drains are connected to local streams and lakes.

Changes at local units of government due to the public outreach efforts of this Project appeared to be limited.

Reaching target audiences and communicating the value of environmental benefits has been a challenge.

Successes

Storm drain markers were considered an effective delivery mechanism for the public and were recommended for future use.

The website was recommended to be maintained, although it was suggested future products promote a Project slogan, logo, or other branding, rather than the website.

“Water spot” radio advertisements, although not identifiable due to limited air time and budget, were considered to be well done and were also recommended for future use.

Although education was limited, local units of government had been educated on storm water related issues through the Project.

Brochures, storm drain markers, newsletter articles, the watershed website, storm drain stencils, and give-a-ways were identifiable and popular deliverables for local units of government.

Local units of government indicated that Project deliverables had educated them on proper car washing procedures and storm sewer connections.

Recommendations

Include new target audiences: students and teachers, automotive repair shops, landscaping companies, pharmacies, and carpet cleaning companies.

Create messages that indicate direct benefits and are consistent, clear, and repeated. Develop and promote a memorable slogan with these messages. Local units of government can reinforce messages by leading by example.

Create delivery mechanisms that are concise, visual, and identifiable (e.g. “Crying Indian” television spot from 1971). Use future delivery mechanisms to promote a slogan or logo, rather than the website.

Increase exposure of delivery mechanisms when possible, such as extending the period of time a radio spot is on the air, to increase awareness, education, and action, as budgets allow.

Include new delivery mechanisms: social networking sites (e.g. Facebook), “Johnny” advertisements, public service radio advertisements, and Wood TV 8 pop-up advertisements.

Focus on mass media, particularly internet and social networking sites, as these are “go to” sources for community information.

Future Action Steps

Local units of government participating in the LGRW NPDES Phase II Storm Water Regulations watershed-based permit have implemented the current Public Education Plan (PEP) since 2004. The PEP outlines the goals, target audiences, messages, delivery mechanisms, and evaluation measures of the LGRW public outreach campaign. The existing PEP will be updated by September 30, 2010, for submittal to the MDNRE. The challenges, success, and recommendations communicated in this document will be evaluated to modify the PEP as needed. The updated PEP will result in a more finely tuned public outreach campaign to reduce storm water pollution between 2010 and 2014.

Appendix 1

REVISED
Quality Assurance Project Plan

Lower Grand River Watershed Storm Water Education Project

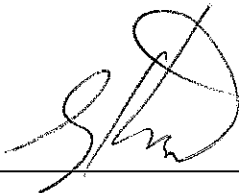
Tracking Code No. 2007-0113

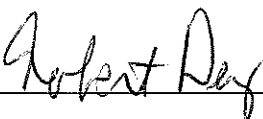
Andy Bowman, Grand Valley Metro Council, Project Manager
616-776-7611

Janice Tompkins, MDEQ Project Administrator

Author of QAPP:
Laurie Beth Nederveld,
Fishbeck, Thompson, Carr & Huber, Inc.

June 1, 2009


_____, Tyler Kitchel, Department of Environmental Quality

 11/6/09
_____, Robert Day, Department of Environmental Quality

Project Description / Purpose

Explanation of the survey need:

A focus group will be facilitated to determine changes in residents' awareness, education, and behavior as a result of the Lower Grand River Watershed (LGRW) Storm Water Education Project (Project).

The information and education goals of the project are:

To increase awareness, promote education, and inspire behavioral changes among Kent and Ottawa County residents regarding storm water pollution sources and solutions.

Purpose of the evaluation:

The purpose of the evaluation is to provide GVMC and the LGRW Storm Water Education Committee with information about the effectiveness of the current Project. Resulting information will be used to enhance the Project beginning in 2010.

Question-Answer profile:

The survey questions will focus on the following five areas:

- Awareness of project deliverables.
- Effectiveness at changing participant behaviors.
- Degree of changing behaviors at workplace.
- Ways to improve project deliverables
- Other ways participants receive information

Survey method:

This survey will be administered using a two-hour focus group session involving residents living in Kent or Ottawa County, within the LGRW.

Project Organization

Grantee and other partners:

The parties involved include those permittees participating in the watershed-based NPDES Phase II Storm Water Project, Grand Valley Metropolitan Council (GVMC), FTC&H, Center for Environmental Studies (CES), and the West Michigan Environmental Action Council (WMEAC).

Organization conducting evaluations / qualifications:

Mr. Andrew Bowman, GVMC, will be facilitating the focus group session. Mr. Bowman has led similar focus group sessions in the past as part of GVMC's Blueprint II regional planning process, for the Lower Grand Watershed Management Plan and with West Michigan Strategic Alliance in developing their Vital Signs regional indicator report. Ms. Betty Gajewski, CES, will be assisting with the development of this QAPP and facilitation of the focus group. Ms. Gajewski also has past experience with social evaluations through her work at CES and the GVSU Annis Water Resources Institute.

Data Collection Description

During the focus group session, three recorders will be used to document the responses of participants. Recorders include Ms. Betty Gajewski, CES; Ms. Laurie Beth Nederveld, FTC&H; and Ms. Janice Tompkins, MDEQ. Responses will be analyzed for preparation of a focus group summary report.

Proposed Dialog Questions:

- What Project deliverables have you seen, heard or read? (i.e. bus side, radio, television ads; brochures and flyers; give-a-ways; displays; lamppost banners, news articles; roadway signage; and drain markers)?
- Did Project deliverables influence you? How?
- Have you noticed changes in your workplace based on messages of Project deliverables?
- How could Project deliverables be improved?
- Where and how do you get information on community activities?

Survey Questionnaire:

- Name
- Affiliation or workplace
- What community (city, twp, village) do you live in?
- What community do you shop for groceries in?
- What community do you work in?
- Zip code where you live.

Ice breaker questions will be used at the beginning of the session to encourage participation in the discussion.

Sample Demographics:

A sample of Kent and Ottawa County residents employed at a county, municipality, or township participating in the Project.

Method of Selection of the sample:

Participants will be drawn from a pool of individuals nominated by the permittees. Each permittee will be asked to submit a list of potential participants meeting the participant nominee criteria.

Nominee Criteria:

- 1) nominee is not part of the municipal Phase II stormwater program;
- 2) nominee lives in Kent or Ottawa County, within the Lower Grand River Watershed, and in the community s/he represents; and
- 3) nominee had the potential to encounter Project deliverables.

Size of sample with explanation:

Six to ten participants are recommended for an effective focus group session.

Method of implementation of survey, including frequency:

A two-hour focus group will be held during the final quarter (October to December 2009) of the Project. Lunch will be offered as an incentive to participate.

Quality Control

Question review:

MDEQ staff will review the proposed questions, based on the focus areas noted in this document, to ensure they are unbiased, clear, and objective. Any revisions or additional questions shall be communicated to Andy Bowman, GVMC, and Laurie Beth Nederveld, FTC&H.

Contingency plan:

If less than four individuals participate in the focus group, a questionnaire will be sent to those individuals that were nominated to participate to solicit greater participation.

Data review:

MDEQ, GVMC, FTC&H and CES staff will review all documented responses from the focus group session.

Validity determination of survey responses:

If MDEQ, GVMC, FTC&H or CES staff feel any responses were not recorded, these will be added to the summary of documented responses, if all parties are in agreement.

Data Management, Analyses, and Reporting Procedures

Data Analysis and Interpretation:

Documented responses from the focus group session will be analyzed and interpreted by FTC&H staff in comparison with Project objectives. The MDEQ, GVMC, and CES will be asked to contribute their interpretation of the responses as well. Documented responses will be included as an attachment to the final focus group summary report.

Results:

Results will be presented in a written focus group summary report.

Attachment 6

Distribution of results:

The focus group summary report will be distributed to the MDEQ, GVMC, FTC&H, LGRW Storm Water Education Committee, CES, and the permittees.

Products

Products include an approved QAPP, list of participants, copy of focus group responses, and the final focus group summary report.