Lower Grand River Watershed Progress Report

City of Kentwood

Reporting Period: August 1, 2015– July 31, 2016

Prepared by the:

GVMC

Grand Valley Metropolitan Council

Environmental Programs

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List of Abbreviations/Acronyms

AWRI	Annis Water Resources Institute
BMP	Best Management Practice
CES	Center for Environmental Study
CoC	Certificate of Coverage
Technical	Data, Information, and Procedures
DPW	Department of Public Works
GI	Green Infrastructure
GVMC	Grand Valley Metropolitan Council
HD	Health Department
ICMA	International City/Country Management Association
IDEP	Illicit Discharge Elimination Plan
I&E	Information and Education
KCDC	Kent County Drain Commissioner
KCRC	Kent County Road Commission
KIH	Kent Innovation High School
LGROW	Lower Grand River Organization of Watersheds
LGRW	Lower Grand River Watershed
LID	Low Impact Development
MACC	Macatawa Area Coordinating Council
MDEQ	Michigan Department of Environmental Quality
MGROW	Middle Grand River Organization of Watersheds
MS4	Municipal Separate Storm Sewer System
MSUE	Michigan State University Extension
MWEA	Michigan Water Environment Association
NOAA	National Oceanic and Atmospheric Administration
NPS	Nonpoint Source
O&M	Operation and Maintenance
OCWRC	Ottawa County Water Resources Commissioner
PCC	Post-Construction Controls
PEP	Public Education Plan
POS	Point-of-Sale
SEMCOG	Southeast Michigan Council of Governments
SESC	Soil Erosion and Sedimentation Control
SWPPI	Stormwater Pollution Prevention Initiative
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USEPA	U.S. Environmental Protection Agency
WMEAC	West Michigan Environmental Action Council
WMP	Watershed Management Plan
WMSECN	West Michigan Soil Erosion Control Network
WMSRDC	West Michigan Shoreline Regional Development Commission
WQI	Water Quality Index

Part 1 – Contact Information

Contact Information for Michigan Department of Environmental Quality (MDEQ):	
Please provide current contact information for MDEQ to use regarding stormwater issues.	
Permit Application Contact	
Name	James M Beke
Title	Senior Engineering Technician
Address	4900 Breton Ave SE
City, State, Zip	Kentwood, MI 49508
Telephone (with area code)	(616) 554-0737
Fax (with area code)	(616) 698-7118
E-mail	bekej@ci.kentwood.mi.us
Stormwater Program Manager	
Name	Tim Bradshaw, PE
Title	Director of Engineering & Inspections
Address	4900 Breton Ave SE
City, State, Zip	Kentwood, MI 49508
Telephone (with area code)	(616) 554-0739
Fax (with area code)	(616) 698-7118
E-mail	bradshawt@ci.kentwood.mi.us
Stormwater Permit Fee Billing Address	
Name	Tim Bradshaw, PE
Title	Director of Engineering & Inspections
Address	4900 Breton Ave SE
City, State, Zip	Kentwood, MI 49508
Telephone (with area code)	(616) 554-0739
Fax (with area code)	(616) 698-7118
E-mail	bradshawt@ci.kentwood.mi.us

Part 2 – Municipal Stormwater Pollution Prevention Initiatives (SWPPI) Commitments

Committees have been working to address different subject areas to make program implementation as efficient as possible. Every participating Municipal Separate Storm Sewer System (MS4) permittee has a representative on at least one committee. Committee meetings have also been used to update everyone on the progress of the other committees and the program in general. The committees are as follows:

- Public Engagement Committee
- Stormwater Ordinance Committee (SWOrd)
- Technical Committee

The list of committee members who have served on the committees during this reporting period are indicated in Table 2 below. Members denoted with an asterisk are not MS4 permitted representatives.

Table 1. LGRW Committee Membership List as of July 31, 2016

Community	Representative	Public Engagement	Stormwater Ordinance (SWOrd)	Technical	Sustainability	Fund Development & Membership	LGROW Executive
Cascade Charter Township	Mr. Steve Peterson	X	X				
East Grand Rapids, City of	Mr. Brian Donovan					X	
East Grand Rapids, City of	Mr. Doug LaFave			X			
Forest Hills Public Schools	Mrs. Lea Sevigny	X					X
Fruitport, Village of	Ms. Marjorie Stonecypher	X					
Georgetown Charter Township	Mr. Rod Weersing	X					
Grand Haven, City of	Ms. Cheryl Davidson	X					
Grand Rapids Charter Township	Mr. Bob Versluys		X				
Grand Rapids, City of	Mr. Mike Lunn			X			
Grand Rapids, City of	Ms. Carrie Rivette	X	X		X	X	X
Grand Rapids, City of	Mr. Michael Staal	X	X		X		
Grand Rapids, City of	Mr. Dan Taber			X			
Grandville, City of	Mr. Ken Krombeen		X			X	X

Table 1. LGRW Committee Membership List as of July 31, 2016							
Community	**Representative**	**Public Engagement**	**Stormwater Ordinance (SWOrd)**	**Technical**	**Sustainability**	**Fund Development & Membership**	**LGROW Executive**
Grandville, City of	Mr. Jay Kwiatkowski	X					
GVSU*	Mr. John Koches			X			X
Hudsonville, City of	Ms. Jill Frielink				X		
KCDC	Mr. Brad Boomstra		X				X
KCDC	Ms. Angie Latvaitis			X			
KCDC	Ms. Lani Brown	X					
KCRC	Mr. Sean McKean	X					
KCRC	Mr. Dave Bennett						
KCRC	Mr. Wayne Harrall		X				
Kent County Health Department*	Mr. Jason Buck			X			
Kent Resource Recovery*	Ms. Megan Kretz	X					
Kentwood, City of	Mr. Jim Beke		X	X			
Kentwood, City of	Mr. Dan Vanderheide		X				
Kentwood, City of	Mr. John Gorney	X					
MDEQ*	Ms. Amanda St. Amour	X	X	X			
MDEQ*	Ms. Michelle Storey	X				X	
MDEQ*	Ms. Dana Strouse	X		X			
OCWRC	Mr. Dennis Cole		X				
OCWRC	Ms. Angela Walachovic	X					
OCRC	Mr. Jerry Olman	X					
Plainfield Charter Township	Mr. Rick Solle		X				
Plainfield Charter Township	Ms. Mary Trapp-Gunst	X					
Spring Lake, Village of	Ms. Chris Burns	X					

Table 1. LGRW Committee Membership List as of July 31, 2016							
Community	**Representative**	**Public Engagement**	**Stormwater Ordinance (SWOrd)**	**Technical**	**Sustainability**	**Fund Development & Membership**	**LGROW Executive**
Walker, City of	Mr. Scott Conners		X			X	X
Walker, City of	Ms. Rachell Nagorsen	X	X	X	X		
Wyoming, City of	Mr. Aaron Vis	X	X	X			X
Wyoming, City of	Mr. Myron Erickson		X				

Public Engagement Committee

The Public Engagement Committee met on September 9, 2015, November 18, 2015, January 13, 2016, March 9, 2016, and May 11, 2016 during the reporting period. Agendas and minutes for the meetings are posted to http://www.lgrow.org/MS4pampep. Throughout the reporting period, the group focused on implementation of the updated Public Education Plan (PEP) approved in February of 2013, available here: http://www.lgrow.org/uploads/files/PEP%20Master.pdf.

The Public Engagement Committee has been functioning as a joint committee of the Lower Grand River Organization of Watersheds (LGROW) and the permitted Lower Grand MS4 communities since January of 2014. The goals of LGROW, the Lower Grand River Watershed Management Plan, the strategic plan and the MS4 Public Education Plan align closely, and through this joint committee's combined efforts, the result has been a larger group of involved stakeholders. This group shares the common goals of raising awareness about the Lower Grand River Watershed (LGRW) and improving the stormwater quality within the watershed. During this reporting period, the group selected messaging and outreach events which focused on the target messages of Personal Watershed Stewardship, Ultimate Stormwater Discharge, Public Reporting of Illicit Discharges, Personal Actions that can Impact the Watershed, and Waste Management. A detailed list of these events and the outreach conducted is provided in Part 3.

SWOrd Committee

The SWOrd Committee met on August 31, 2015, October 26, 2015, December 14, 2015, January 25, 2016, February 29, 2016, March 31, 2016, May 23, 2016, June 15, 2016, and July 25, 2016 during the reporting period. Meetings were focused on developing a model ordinance, a standards manual, and a stormwater design calculator tool for MS4 permittees to utilize in their implementation of the new post-

construction stormwater control requirements outlined in the 2016 NPDES Permit Application. Minutes and agendas for the meetings are available at: http://www.lgrow.org/MS4pccord.

Based on feedback from the Michigan Department of Environmental Quality (MDEQ) after the submittal of the alternative approach for channel protection submitted in April of 2015, the committee began drafting a detailed standards manual. This manual follows the steps outlined in the flow chart submitted with the permit applications for the design, review, and permitting of sites with post construction controls. The standards manual was developed in tandem with a stormwater calculator to assist site designers and reviewers to ensure site designs meet all the regulatory criteria outlined in the permit. The manual and calculator tools are also designed to ensure that the alternative approach is only utilized as a last resort. Finally, the committee continues to work on developing and updating the model ordinance for communities to adopt in their application of these standards. At this time, permitted MS4 communities are customizing the standards manual and model ordinance while updating their elected officials on these new requirements and their implementation.

Technical Committee

The Technical Committee met on October 21, 2015, December 16, 2015, February 17, 2016, April 20, 2016, and June 15, 2016 during this reporting period. Agendas and minutes from the meetings are available at the following site: http://www.lgrow.org/MS4Technical. In 2015, the committee members focused on the development of a watershed monitoring manual to guide the collection, processing, and storage of data in the Lower Grand River Watershed. This manual will guide groups, including the newly formed Friends of Buck Creek, and the Lower Grand River Total Maximum Daily Load (TMDL) monitoring, as required by the MS4 permit. The group also resumed work on the LGROW data repository which will serve as a resource for the sharing and viewing of water quality data collected throughout the watershed. As of the close of this reporting period, the committee is finalizing preliminary TMDL monitoring in the stream reaches identified in the MS4 Permit application letters. The City of Wyoming and the City of Grand Rapids are providing sampling equipment and laboratory space to collect and analyze the samples. Interns funded by the Lower Grand MS4s will be conducting the field work.

Training

GVMC provides multiple training documents and DVDs for Permittee use. In addition, GVMC has hosted or partnered on several training events during the reporting period including:

- Stormwater Information for Landscapers (brochure, updated)
- REGIS Outfall and Storm Sewer System Mapping In GIS
- West Michigan Green Infrastructure Conference & Grand Rapids Green Infrastructure Tour
- Soil Erosion & Sediment Control 101 Panel Discussion (West Michigan Soil Erosion Control Network)

- Soil Erosion Control Network Field Demonstration Day (West Michigan Soil Erosion Control Network)
- DVD from North Central Texas Council of Governments Municipal Employee Training Series: Preventing Stormwater Pollution: What We Can Do (includes the following videos)
    - Introduction: What We Can Do
    - Construction Activities and Land Disturbances
    - Fleet Maintenance and Material Handling
    - Streets and Drainage Maintenance
    - Parks and Grounds Maintenance
    - Solid Waste Management

Training Library

A lending library of training materials is housed at GVMC and is available to all watershed partners to assist with the Municipal Employee Training requirements of the discharge permit. The following materials are currently available:

DVD from Excal Visual, LLC

- IDDE – a grate concern: Illicit Discharge Detection & Elimination (14¼ Minutes)

DVD from Excal Visual, LLC

- Storm Watch - Municipal Stormwater Pollution Prevention (20 Minutes)

DVD from Excal Visual, LLC

- Stormwater Pollution Prevention - A Drop in the Bucket (16 Minutes)

DVD from Excal Visual, LLC

- Ground Control - Stormwater Pollution Prevention for Construction Sites (14.5 Minutes)

DVD from Excal Visual, LLC

- Spills & Skills - Non-Emergency HazMat Spill Response (18.5 Minutes)

DVD from Southeast Michigan Council of Governments (SEMCOG) and the Road Commission for Oakland County

- Keep An Eye On It! - Environmental Awareness for Gravel Road Maintenance (18.5 Minutes)

DVD from USEPA - Reduce Runoff: Slow It Down, Spread It Out, Soak It In (includes the following videos)

- Reduce Runoff: Slow It Down, Spread It Out, Soak It In 9 Minutes
- RiverSmart Homes: Getting Smart about Runoff 12 Minutes

- Building Green: A Success Story in Philadelphia 11 Minutes
- After the Storm 22 Minutes

FILLING THE GAPS: Environmental Protection Options for Local Governments, 2nd Edition, revised December 2010 (including appendices on CD) (90 Pages)

Each permitted community also conducted a detailed review of their current inspection and maintenance procedures for structural BMPs, as well as a detailed review of operational BMPs in preparation for the submittal of the new individual MS4 permit application in April of 2015. Preparation of the submitted BMP manuals, proved to be a valuable training tool for Permittees to ensure that their current procedures were updated and adequately protect stormwater.

Live Training

On August 4-5, 2015, LGROW, in cooperation with the MDEQ and many other community partners, hosted the West Michigan Green Infrastructure Conference. This two-day event expanded on the 2014 statewide conference to highlight a broad range of benefits and opportunities provided by Green Infrastructure (GI) planning and preservation in West Michigan. Along with two plenary sessions, this conference included concurrent sessions in three tracks: 1. Finance and Policy; 2. Stormwater and Flood Management; and, 3. Infrastructure at the Regional Scale. LGROW also hosted one of three Green Infrastructure tours which provided attendees with an up close look at the following Green Infrastructure sites in and around Grand Rapids:

- Grand Rapids Water Resource Recovery Facility: Native landscaped rain garden
- The Rapid Operations Center: Green roof and live wall
- Joe Taylor Park: Underground stormwater treatment and infiltration; porous concrete parking lot
- Kreiser Pond: Native landscaped bioswale
- Whiskey Creek: Native landscaped bioswale
- John Ball Zoo: Live wall and green roof

The Michigan Water Environment Association (MWEA) offers two events annually that are widely attended by LGRW MS4 permittees. The first is the Watershed and Stormwater seminar, offered this year on December 3, 2015. The 2015 seminar is designed for all who have a direct stake in stormwater

and watershed management, non-point source pollution or the modeling of urban stormwater systems. Attendees include: civil and environmental engineers; landscape architects and engineers; scientists; policy makers; local, regional, and state engineering professionals; public works personnel; municipal/township managers; environmental consultants; and, college/university instructors and researchers.

The second event, the Michigan Watershed Summit offered on March 16, 2016, focused on the following objectives:

- Assembling a diverse group of Michigan's watershed groups
- Providing an opportunity for speakers from other organizations to share information and updates
- Giving these groups a chance to interact with and learn from each other
- Facilitating discussion on current status, concerns and outlooks regarding Michigan's water environment

The West Michigan Soil Erosion Control Network (WMSECN) is a professional organization focused on the protection and enhancement of the natural environment by promoting effective soil erosion control. WMSECN hosts regular training and professional development events including field demonstrations, speaker panels, networking events and technical design sessions. On March 3, 2016, the WMSECN hosted a live training session titled "Best of the BMPs" which focused on the selection and implementation of BMPs for construction site stormwater pollution prevention. Permitted MS4 communities implementing soil erosion control permitting programs either as Municipal Enforcing Agents (MEAs) or County Enforcing Agents (CEAs) attended the event.

Attendance at these events is recorded in each MS4's individual training logs (Part 2D).

Monitoring

The Grand River Water Quality Index (WQI) is used to show the trend of Grand River water quality downstream of Grand Rapids. A WQI of 71-90 indicates good water quality with high diversity of aquatic life and very few limits for recreational use. Grand Rapids has been monitoring the Grand River for forty years and all of the data are available upon request. A record of the WQI for Wealthy Street Bridge is provided as an example of improving water quality in the Grand River. An interactive map and data from recent sampling events can be viewed as follows:
http://grcity.us/enterprise-services/Environment-Services/Pages/Water-Quality-Index2.aspx

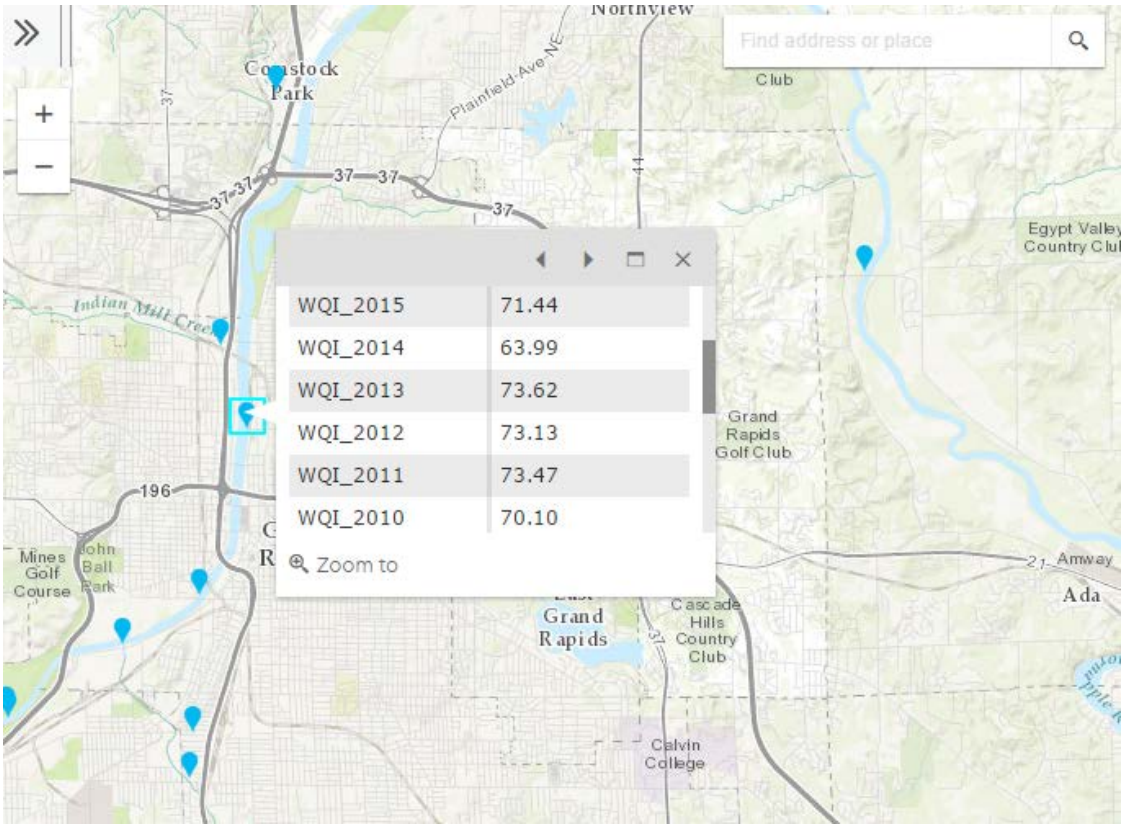


Figure 1 Grand Rapids Water Quality Index Web Interface

Data Repository

The LGROW Technical Committee began working on the design for a watershed-wide data repository. Using data collected by the Friends of Buck Creek as part of their 319 monitoring grant, the committee designed a landing page, which provides access to the collected data via an Arc GIS online interface – a free online GIS software that allows users basic viewing and searching capabilities. The group also

designed a tutorial for data repository users. The long-term goal is that the data repository will be a central location to access water quality data from sampling events in the Lower Grand River Watershed. With this goal in mind, the Technical Committee also developed submittal tools to allow users to share collected scientific water quality data. The data will be reviewed and checked by LGROW before it is uploaded into the data repository for public viewing at this site: http://www.lgrow.org/datarepository.

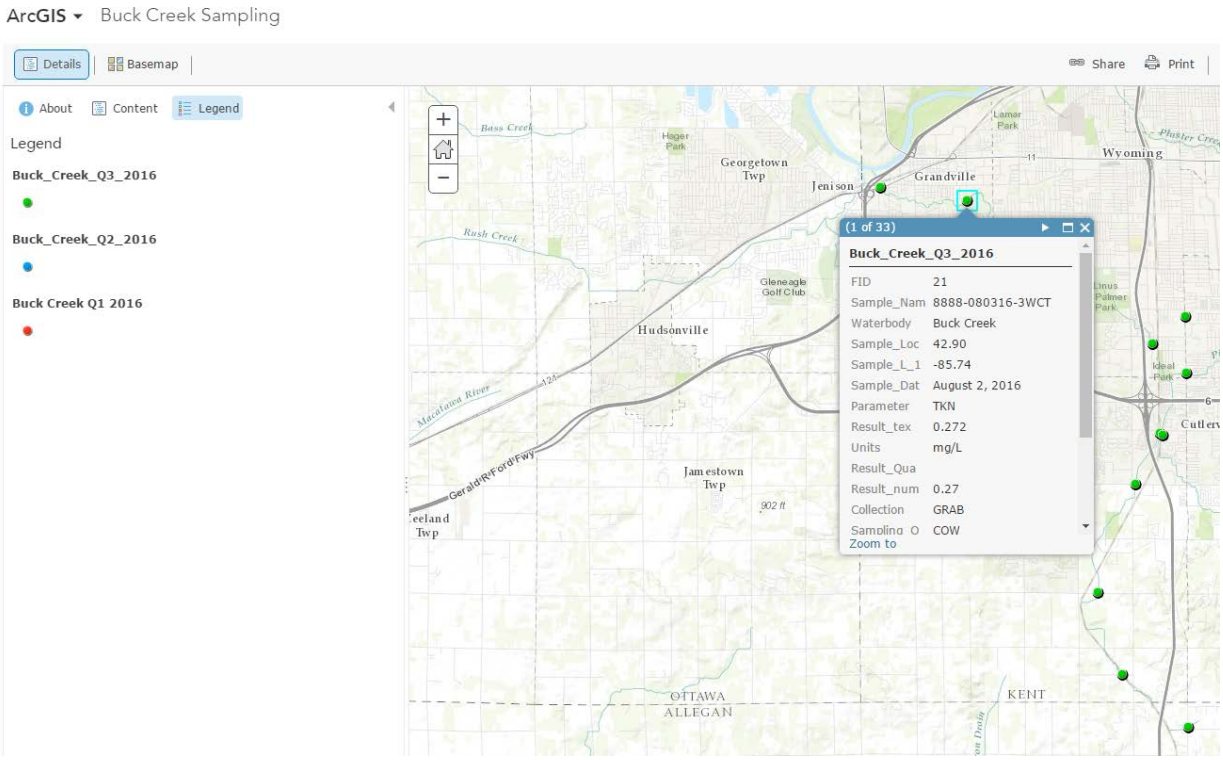


Figure 2 LGROW Data Repository

MDEQ Program Audits

MDEQ is expecting to perform MS4 Program Audits in all MS4 communities within 5 years. GVMC assists communities in preparing for audits, and in addressing any deficiencies identified by MDEQ. During this reporting period, MDEQ performed audits on the following LGRW communities:

August 18, 2015 Village of Spring Lake

Part 2A - Lower Grand River Watershed Management Plan Prioritized Objectives

Encouraging proper septic tank maintenance

Each year a portion of the public education materials distributed address proper septic tank maintenance. Detailed information regarding the nature of these materials is included in Part 3 - PEP of the progress report. Additionally, communities in both Kent and Ottawa Counties work collaboratively with their

respective Health Departments to report and ensure correction of failing or failed septic systems. Individual communities track this data in Part 4 – IDEP of the progress report.

Encouraging septage ordinance

The Ottawa County Health Department presently has an ordinance in place requiring point of sale inspections. The permitted communities located within Ottawa County collaborate with and rely on the Ottawa County Health Department for ongoing enforcement of the ordinance.

Kent and Muskegon Counties have not passed an ordinance requiring point of sale septic system inspections. The permitted entities within Kent and Muskegon County rely on implementation of the IDEP and reporting/enforcement through their stormwater ordinances and the Health Department to follow up on failing or failed septic systems. In the case of a failed septic system, a connection to sanitary is typically required if a sanitary sewer connection is available within 250 feet.

Implement vegetative buffering practices and restore and protect the stream buffer and canopy

Several communities including the City of East Grand Rapids and the City of Grand Rapids have instituted or evaluated the potential for buffer ordinances. The Cities of Hudsonville and Rockford have included buffer provisions within their zoning ordinances. Many other communities have adopted mowing buffer procedures on the properties they own and maintain. These procedures are identified in Appendix 2C.

Implement Michigan Department of Natural Resources wildlife population management practices

Three communities are working with the Michigan Department of Natural Resources on supervised programs to control populations of Canada Geese. These programs include Egg Destruction (East Grand Rapids and Kent County Drain Commissioner) Goose Relocation (Kent County Drain Commissioner), Nest Destruction (Kent County Drain Commissioner), and Targeted Goose hunts for population reduction (Plainfield Charter Township). Communities throughout the watershed are utilizing signage to discourage the feeding of waterfowl, actively installing goose deterrents, and/or instituting procedures for a no-mow buffer adjacent to streams and ponds to function as a natural deterrent. The City of Hudsonville has provided a portal on their website for residents to report nuisance wildlife.

Implement sanitary sewer maintenance practices

Sanitary sewer service is provided by several communities to residents in expanded service areas. Through these partnerships, many communities are able to utilize sanitary sewer infrastructure instead of

relying on septic fields. The City of Grand Rapids collaborates with Cascade Charter Township, the City of East Grand Rapids, Forest Hills Public Schools, Grand Rapids Charter Township, Kent County, Kentwood, and the City of Walker. The City of Wyoming collaborates with the City of Kentwood and portions of the City of Grandville. The City of Grandville collaborates with the City of Hudsonville and portions of Georgetown Charter Township. The City of Grand Haven collaborates with the City of Ferrysburg and the Village of Spring Lake. The North Kent Sewer Authority collaborates with Plainfield Charter Township and the City of Rockford. Information related to the maintenance and upgrades of sewer infrastructure is included in Appendix 2B of the report.

Implement Low Impact Development Practices

Low Impact Development (LID) and green infrastructure are critical components in both the SWPPI and the PEP. Detailed information on the training related to LID practices and implementation is detailed in Appendix 2D. Tracking of the installation and consideration of LID practices by Permittees is tracked in Appendix 2E. The PEP incorporates messages on the implementation of LID practices such as rain gardens, buffer strips, and native plantings for their direct benefits to water quality. The PEP focuses on LID practices that are feasible for individual homeowners to implement, rather than large scale development. GVMC, in cooperation with the MDEQ, Macatawa Area Coordinating Council (MACC), and the West Michigan Shoreline Regional Development Commission (WMSRDC), cooperatively planned a West Michigan Green Infrastructure Conference for August of 2015 which was attended by 170 industry professionals including many representatives of regulated MS4 communities.

Implement watershed focused land-use planning

Throughout the watershed, construction in FEMA mapped floodplains is regulated by the Michigan Building Code to ensure that construction below the base flood elevation does not occur. This is accomplished by providing prescribed release rates for Bank Erosion Control, as well as Flood Control. Water Quality control is addressed with detention and infiltration, where possible, or delayed and restricted release where it is not.

As the Stormwater Ordinance Committee worked on developing the new model stormwater ordinance, many of the design requirements needed to prevent or mitigate flooding in site designs were left intact. Though these were not required as part of the MS4 permit application, permitted communities recognize the need for flood protection for the protection of downstream residences and receiving waters.

GVMC Departments are collaborating on a Single Source Project, which would involve collecting and mapping, via REGIS, updated zoning information from all GVMC members as well as all other

communities within Kent County to create one information source for economic developers, transportation planners, and environmental managers. In addition to the zoning maps, transportation information such as traffic counts, congestion, and road conditions, and environmental data, such as brownfields, impaired water bodies, and watershed boundaries would be included. This cooperative effort has been discussed as a priority for many years and is now possible, building upon internal GVMC communications between programs and staff. This information will be useful to MS4 permittees in making smart land use decisions.

Implement proper soil erosion and sedimentation control techniques

Part 91, Soil Erosion and Sedimentation Control (SESC), of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, regulates the activity of earth work and mandates that projects disturbing an area greater than one acre in size or an area less than 500 feet from a lake or stream obtain a soil erosion permit from the regulatory agency with jurisdiction over the area in which they are working. Table 2 details which Permittees work collaboratively with the county enforcing agent (CEA), which Permittees administer their own program as a municipal enforcing agent (MEA), and which Permittees have the authority to oversee their own projects as authorized public agencies (APA). MEA, CEA, and APA programs implement thorough soil erosion and sediment control plan review and regular site inspections in their programs for permitted sites. Plan review and site inspections are conducted by staff with either a comprehensive or inspector construction site stormwater operator certification respectively.

Training on topics related to construction site stormwater runoff is detailed in Part 2D. Training ensures that even if a community does not oversee their own program, field staff will be informed regarding observations on a construction site and the appropriate entity to report to if there is an offsite discharge or poorly maintained SESC measures. Many LGRW MS4 permitted communities who administer a Part 91 program also work closely with the West Michigan Soil Erosion Control Network, a professional network that provides regular training, panel discussions and filed demonstrations on BMPs and new technologies in this field. Events offered during the reporting period through the WMSECN and attended by MS4 are detailed in the training section of the report.

Table 2. LGRW Part 91 Administration Authority as of July 31, 2015

Community	Part 91 Contact Info	MEA	Utilizes CEA	APA

	Name	Phone		Kent	Muskegon	Ottawa	
Cascade Charter Township	KCRC	616-242-6914		X			
East Grand Rapids, City of	KCRC	616-242-6914		X			
Ferrysburg, City of	OCWRC	616-994-4530				X	
Forest Hills Public Schools	KCRC	616-242-6914		X			
Fruitport, Village of	Muskegon County DPW	231-724-6411			X		
Georgetown Charter Township	OCWRC	616-994-4530				X	
Grand Haven, City of	OCWRC	616-994-4530				X	
Grand Rapids Charter Township	KCRC	616-242-6914		X			
Grand Rapids, City of	Environmental Services Dept.	616-456-3057	X				X
Grandville, City of	KCRC	616-242-6914		X			
Hudsonville, City of	OCWRC	616-994-4530				X	
Kent County Drain Commissioner & Administration	Deputy Drain Commissioner	616-632-7910					X
Kent County DPW	Kent Co. DPW	616-336-3694					X
Kent County Road Commission (Kent County CEA)	KCRC	616-242-6914		X			X
Kentwood, City of	Engineering Dept.	616-554-0737	X				X
Ottawa County Water Resources Commissioner & Administration (Ottawa County CEA)	OCWRC	616-994-4530				X	X
Ottawa County Road Commission	Engineering Dept.	616-842-5400					X
Plainfield Charter Township	KCRC	616-242-6914		X			
Rockford, City of	Public Services Dept.	616-866-9631	X				
Sparta, Village of	KCRC	616-242-6914		X			
Spring Lake, Village of	OCWRC	616-994-4530				X	
Walker, City of	Engineering Dept.	616-453-6311	X				
Wyoming, City of	KCRC	616-242-6914		X			

Implement channel and stream bank stabilization, bio-engineering and erosion control techniques

The MDEQ requires a joint permit from the state of Michigan for all work performed in channels that are designated as waters of the state. Any work that occurs within 500 feet of a lake or stream requires a soil erosion control permit from the authorized Part 91 agency, as referenced above. These permitting procedures work in tandem to prevent negative impacts during and after construction, as well as to ensure adequate restoration. Permitted communities in the Lower Grand River Watershed have policies in place to ensure protection of drainage systems from construction site runoff as detailed in Appendix 2C and perform regular training as referenced in Appendix 2D related to construction site stormwater runoff and water quality protection.

Implement turf management and proper fertilizer application practices

Permitted communities within the Lower Grand River Watershed have developed procedures for managing vegetation and using fertilizers on Permittee owned properties as outlined in Appendix 2C. These policies and procedures were reviewed as permittees prepared their individual permit applications in Spring 2015. All staff at the communities and their subcontractors adhere to these procedures. Training is also provided in the form of the brochure, “What Every Landscaper Must Know”. This brochure is distributed as part of the comprehensive training plan on controls to reduce the discharge of pesticides, herbicides, and fertilizers, as described in Appendix 2D. The brochure was updated in 2014 to allow for permitted MS4s to customize it for distribution to their staff and contractors as well as local landscaping businesses.

Part 2B - Stormwater Controls Inspection, Maintenance and Effectiveness

BMPs on Multiple Municipal Properties				
Structural Storm Water Control	**Inspection Frequency**	**Maintenance Schedule**	**Inspection and Maintenance Conducted and Location of Log (if applicable)**	**Effectiveness of Control and Support Documentation**
Curb, gutter, catch basin, & storm sewers	5 year cycle on catch basins Annually on curb & gutter As necessary on storm sewer	5 year cycle on catch basins Annually on curb & gutter As necessary on storm sewer	Kentwood Engineering & DPW	Very effective

Structural Storm Water Control	**Inspection Frequency**	**Maintenance Schedule**	**Inspection and Maintenance Conducted and Location of Log (if applicable)**	**Effectiveness of Control and Support Documentation**
Vegetated Swales & Buffer Strips	Annually	As necessary	Kentwood Engineering & DPW	Very effective
Structural Storm Water Control	**Inspection Frequency**	**Maintenance Schedule**	**Inspection and Maintenance Conducted and Location of Log (if applicable)**	**Effectiveness of Control and Support Documentation**
Detention Ponds & Sediment Basins	Annually	As necessary	Kentwood Engineering & DPW	Very effective

BMPs at Kentwood Public Schools				
Structural Storm Water Control	**Inspection Frequency**	**Maintenance Schedule**	**Inspection and Maintenance Conducted and Location of Log (if applicable)**	**Effectiveness of Control and Support Documentation**
Detention Ponds & Sediment Basins	Annually	As necessary	Kentwood Engineering	Very effective

Municipal property inspection sheets attached

Part 2C - Procedures Status

Procedure	Date Adopted	Date Revised (if needed)
Procedure to Ensure Protection of Drainage Systems from Construction-Site Runoff	August 23, 2010	No revision
Procedure to Dispose of Storm Sewer System Operation and Maintenance Waste	August 23, 2010	No revision
Procedures to Construct, Operate, and Maintain Streets, Roads, Highways, and Parking Lots	August 23, 2010	No revision
Procedure to Reduce Runoff of Total Suspended Solids (TSS)	August 23, 2010	No revision
Procedure to Prevent Salt and Sand from Entering Receiving Streams	August 23, 2010	No revision
Procedure to Control Dust and TSS in Runoff	August 23, 2010	No revision
Procedure for Managing Vegetation on Municipal Properties	August 23, 2010	No revision
Procedure for Using Fertilizers on Municipal Properties	August 23, 2010	No revision

Part 2D - Staff and Contractors Training on Pollution Prevention and Good Housekeeping

Training Topic Area	Employee Group to Receive Training	Training Frequency	Potential Training Type
Required Topics			
Maintenance activities, maintenance schedules, and inspection procedures	DPW Inspections	Annually	**Written O&M Procedures for all new employees** **NCTCOG ED – How to Spot & Report Stormwater Pollution**
Training completed: July 18, 2016			
Controls on streets, parking lots, maintenance garages, and storage yards	DPW	Annually	**ASCE – Asset Management Planning (Storm & Sanitary Systems)** **Storm Watch - Municipal Storm Water Pollution Prevention - DVD from Excal Visual, LLC** **Spills & Skills - Non-Emergency HazMat Spill Response - DVD from Excal Visual, LLC** **MDEQ Storm Water Employee Training (March 2009)** This session explains the importance of preventing contamination from storm water run off and ways employees can be involved at your facility. This session is designed to meet the permit requirements for employee training. (Approx 17 minutes)
Training completed: May 13, 2016			
Disposal of O&M waste	DPW	Annually	**Stormwater Awareness – Live Presentation**

Training Topic Area	Employee Group to Receive Training	Training Frequency	Potential Training Type
Training completed: July 18, 2016			
Water quality protection in flood control projects (detention basins, dams)	Engineering	Annually	**Groundwater Discharge program in MIWaters**
Training completed: April 5, 2016			
Controls to reduce discharge of pesticides, herbicides, and fertilizers	DPW Contract Employees	Annually Given to contractors with bid documents	**LGRW_LandscapingContractorTrainingBrochure_2011-08-01.pub**
Training completed: annually see certs			
Other Topics			
Construction site stormwater runoff	Engineering Contract Employees	Annually Given to contractors with bid documents	**IECA – Best of the BMP's** **LGRW_ContractorTrainingBrochure_2011-09-16.pub**
Training completed: March 3, 2016			
Gravel Road Maintenance	DPW	Annually	**Keep An Eye On It! - Environmental Awareness for Gravel Road Maintenance - DVD from SEMCOG & Road Commission for Oakland County**
Training completed: not this year, only 1 gravel road in city, no scheduled maintenance			

Training Topic Area	Employee Group to Receive Training	Training Frequency	Potential Training Type
LID	Engineering	View 1 per year	**USEPA – Green Infrastructure Reiliency Charrette** **BMP Seminar of GVSU Campuses** **ASFPM – Planning & Local Watershed Intitiatives** **ASCE – Redevelopment of Uncontrolled Landfill Sites** **ASCE – Infiltration & Water Recharge**
Training completed: October 6, 2015 **June 23, 2016** **May 13, 2016** **February 9, 2016**			
IDEP	All City Staff	Annually	**WaterPollutionReportForm.doc** **Article_City_Employees.doc**
Training completed: October 2015			
General Storm Water Education	Municipal officials	Every 2 years	**WMEAC - Green Infrastructure & LID Presentation to Kentwood Planning Commission** **ASFPM – Sustainable Floodplain Management** **ASFPM – Climate informed Science & Flood Risk Management** **ASFPM – Success in Flood Forecasting** **ASFPM – Dam Removals** **ASFPM – Local Efforts in building Flood Resilience**
Training completed: June 28, 2016 **June 21, 2016** **June 23, 2016**			

Part 2E - Post Construction Controls Activities

The Kentwood Zoning Ordinance directs development type and density to specific areas and corridors throughout the City.

The Kentwood Stormwater Ordinance requires “Do Not Disturb Zones” along riparian corridors and prohibits any development within the floodplain. SESC Ordinance requires a Natural Soil Erosion Control Zone.

Open spaces are required in the Zoning Ordinance.

Kentwood encourages infill development in higher density urban areas and areas with existing infrastructure by adopted measures within Planning & Zoning.

It is impracticable for Kentwood to establish in-stream maximum flow targets due to lack of staffing and funding.

It is impracticable for Kentwood to coordinate release volumes and rates from detention basins to achieve an in-stream maximum flow target due to lack of staffing and funding.

The City of Kentwood has adopted a Stormwater Management Ordinance, No. 9-84, on June 30, 1984 which controls stormwater in areas of new development and significant redevelopment. It requires control, maintenance, and regulation of stormwater so as to prevent flooding, loss of life, property damage, erosion, nuisance conditions and to promote groundwater recharge, lower storm sewer costs, and water quality improvement in the City. The ordinance also ensures that the owners of facilities constructed to meet the stormwater requirements properly operate and maintain the facilities.

The City requires that all new medium and high density development be served by municipal utilities so proper sanitary services and drainage can be provided while guaranteeing that no cross connections between utilities will occur.

The City has numerous Ordinances (Zoning, Stormwater Management and SESC) which prohibit development along riparian corridors, preserving water quality and requiring a reasonable amount of open space to be preserved on each parcel of property.

The City requires stormwater detention on all properties greater than one acre in size unless that property is upstream of a Municipal Master Detention Pond, is more than 25% floodplain, can use leach basins or the density is less than one unit per acre. These requirements promote water quality through the reduction of sedimentation of the downstream channel, reduces peak flow velocities to prevent erosion, encourages infiltration and groundwater recharging, and reduces areas of impermeable surfaces.

Currently working with members of the Lower Grand River Organization of Watersheds on the construction and implementation of a County-wide Model Storm Water Ordinance and design manual to

implement Post Construction Controls.

Explain the enforcement activities of your comprehensive storm water management program for post-construction controls completed during this reporting period: None necessary

How many developments were approved with storm water controls according to PCC? 0

Have any long-term operation and maintenance agreements been signed? 0

How many inspections or enforcement/compliance of O&M agreements were conducted? 0

Explain how the Post Construction Controls have addressed other issues, such as protecting sensitive areas, directing growth to identified areas, encouraging infill development in higher density urban areas and areas with existing infrastructure, and/or maintaining or increase open spaces As the new permit application is currently under review by the Michigan Department of Environmental Quality, no approval for the proposed PCC measures have been received by the City of Kentwood from the Department.

PART 3 - PEP

Regional PEP

The updated PEP was approved by MDEQ in February 2013. The purpose of the PEP is to promote, publicize, and facilitate education for the purpose of encouraging the public to reduce the discharge of pollutants in stormwater to the maximum extent practicable. This section provides a report of public education activities implemented between August 1, 2015, and July 31, 2016.

Public Education Committee

The LGROW Stormwater Education Committee was formed in 1999 to begin development and implementation of the PEP. Since that time the committee has met on a regular basis to discuss and plan activities scheduled for implementation in the PEP. The 2015/2016 Public Engagement Committee consists of the following participants:

Table 3. Public Engagement Committee Membership

Agency	Representative
City of Wyoming	Aaron Vis
MDEQ	Amanda St. Amour
GVMC	Andrea Faber
Ottawa Co. Water Resources Commissioner's Office	Angela Walachovic
Steelcase	Betsy Hernandez
Annis Water Resource Institute, GVSU	Betty Gajewski
GVMC	Bonnie Broadwater
Ottawa Conservation District	Carla Kocher
City of Grand Rapids	Carrie Rivette
City of Grand Haven	Cheryl Davidson
Village of Spring Lake	Christine Burns
Kent Conservation District	Connie Redding
MDEQ	Dana Strouse
Grand Rapids Parks Department	David Marquardt
Trout Unlimited	Jamie Vaughan
City of Grandville	Jay Kwiatkowski
Ottawa County Road Commission	Jerry Olman
City of Hudsonville	Jill Frielink
Groundswell, GVSU	Joanna Allerhand
City of Kentwood	John Gorney
Cannon Township	Julie Lovelace
Jennison Public Schools	Kim Kiel
Kent County Resource Recovery	Megan Kretz
GVMC	Kristine Bersche
Kent County Drain Commissioner's Office	Lani Brown
Forest Hills Public Schools	Lea Sevigny*

Table 3. Public Engagement Committee Membership	
Agency	**Representative**
Village of Fruitport	Marjorie Stonecypher
Plainfield Charter Township	Mary Trapp-Gunst
City of Grand Rapids	Michael Staal
MDEQ	Michelle Storey
City of Rockford	Mike Bouwkamp
Trout Unlimited	Nichol DeMol
WMEAC	Ondrea Spychalski
City of Walker	Rachell Nagorsen
GVMC/GVSU	Rajesh Sigdel
The Right Place	Rick Chapla
Georgetown Township	Rod Weersing
Kent County Road Commission	Sean McKean
Grand Rapids Public Museum	Stephanie Ogren
Cascade Charter Township	Steve Peterson
GVMC	Wendy Ogilvie
*Chair of Committee	

PEP Implementation in Year 14

This section describes the public education activities implemented by the Permittees in the fourteenth year of PEP implementation, August 1, 2015 through July 31, 2016. The following report is from the updated PEP, which meets the requirements of the 2013 approved PEP. Target audiences, messages, and delivery mechanisms are described for each Public Education Topic.

Public Education Topic 1 - Personal Watershed Stewardship

PEP Objective 1: Educate the public about their responsibility and stewardship in their watershed.

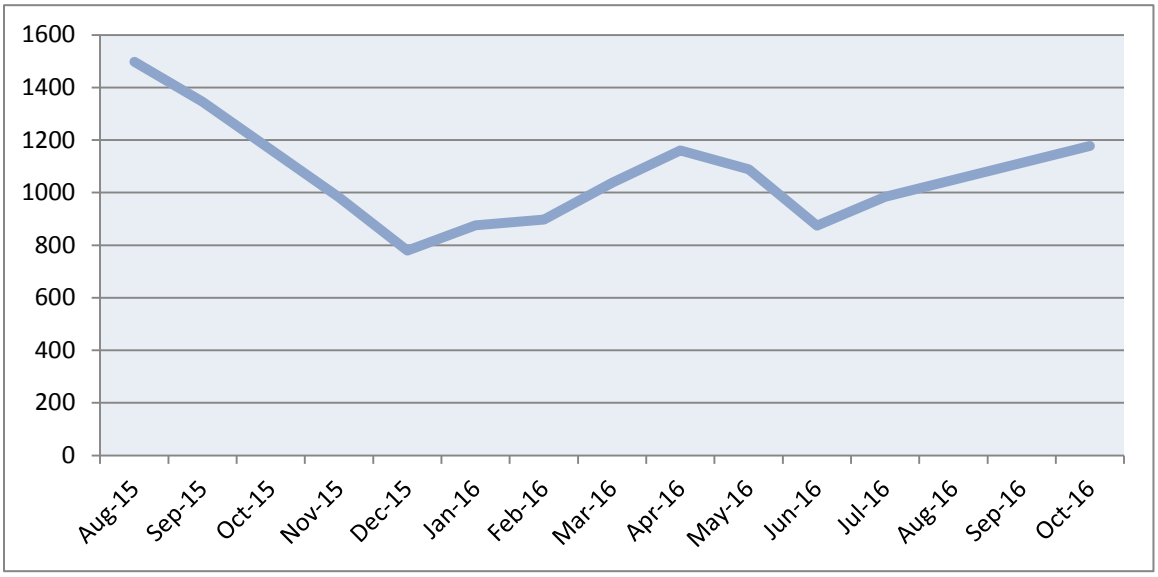
Target Audience: Residents, visitors, and public employees

Content of Message: 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 LGROW by visiting LGROW.org. 3) Reasons for protecting the watershed. 4) Ways individual can affect the watershed through their activities.

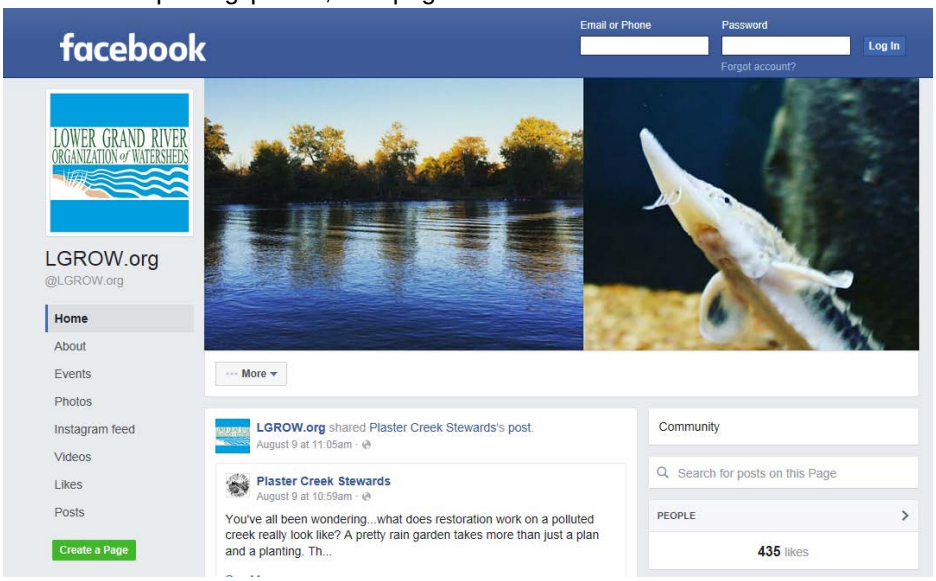
Delivery Method:

- Permittees' websites link to LGROW's website, www.lgrow.org. The watershed website provides information on non-point source (NPS) pollution, local watershed issues, water science education, and watershed management. Through the reporting period, LGROW's website has been accessed by an average of 524 unique visitors each month resulting in over 12,700 total hits to the website during the reporting period. Website traffic by month is displayed in Figure 2.

Figure 3. Pages Visits to LGROW.org by Month



- LGROW worked to promote participation through its Facebook page with a regular posting schedule including, Watershed Wednesdays, upcoming events, and volunteer opportunities. Throughout the reporting period, LGROW Facebook posts have had a total reach of over 21,000 people. As of the end of the reporting period, the page reached over 430 likes. Facebook user engagement has shown consistent growth over the reporting period with the average number of likes, shares, and comments. A total of 115 posts were created or shared during the reporting period.



- Permittees distributed the LGROW, stormwater, and watershed education materials listed below to residents in the LGRW at multiple events, and venues. Materials were distributed according to the type of event, and the target audiences in attendance.

- 1000 Paint by number Watershed Maps
- 500 Keep Your Lakes Great and Your Rivers Grand Magnets
- 1000 Keep Your Lakes Great and Your Rivers Grand vinyl stickers
- 1000 Watershed Temporary Tattoos
- 1500 Household Stormwater Solution Brochures
- 1000 Septic System Care Brochures
- 2000 Troutie Coloring Books
- 500 Pet Waste Pledges
- 500 Pet Waste Bag Dispensers
- 500 Car Wash Pledges
- 500 Car Wash Shammies
- 1000 Reusable Water Bottles
- 500 Reusable Tote Bags
- 1000 LGROW Brochures
- 300 LGROW Custom Baseballs

- Many Permittees displayed lamppost banners first purchased in 2012 to advertise the presence of the Grand River, Rogue River, and Plaster Creek Watersheds. The banners featured the LGROW logo and the message "Yours to Protect."

- Through cooperation of staff in permitted MS4 communities, Public Engagement committee participants, GVMC staff, and other members of LGROW, over 35 events around the watershed had representation from the Lower Grand River. Event participation, by community is detailed in Table 4. Community-specific event activities are detailed in each Permittees' PEP questionnaire. Events attended by more than one MS4 or were coordinated through LGROW are discussed in the section following Table 4.

Table 4. LGROW and MS4 Participant Events

MS4 Community	Event / Activity	Date
Cascade Charter Township	LGROW Spring Forum Host	5/6/2016
East Grand Rapids, City of	DPW Open House	5/18/2016
Ferrysburg, City of	Community Breakfast	7/4/2016
Forest Hills Public Schools	Classroom Programming	Ongoing
	Roselle River Festival	9/24/2016
Fruitport, Village of	Old Fashioned Days	5/27-29/2016
Georgetown Charter Township	Jenison Public Schools	Ongoing

Table 4. LGROW and MS4 Participant Events		
MS4 Community	**Event / Activity**	**Date**
	Collaboration	
Grand Haven, City of	Earth Day Festival	4/16/2016
	Party for the Planet	5/7/2016
	Coast Guard Festival	7/26 - 8/7/2016
	Salmon Festival	9/16-16/2016
Grand Rapids, City of	WhiteCaps Game	8/7/2015
	Home Show	3/2-5/2016
	River City Water Festival	3/11/2016
	Party for the Planet	5/7/2016
	WhiteCaps Game	7/7/2016
	Water Resource Recovery Facility Tours	Ongoing
Grand Rapids Charter Township	Partner with FHPS	Ongoing
Grandville, City of	DPW Open House	5/18/2016
Hudsonville, City of	Women's Expo	4/16/2016
	DPW Open House	5/19/2016
Kent County Drain Commissioner	Party for the Planet	5/7/2016
Kent County Road Commission	Facility Tours	Ongoing
Kentwood, City of	Touch A Truck	6/29/2016
Ottawa County Administration and Water Resources Commissioner	Ottawa County Water Quality Forum	11/13/2015
Ottawa County Road Commission	Partner with Georgetown Township & Jenison Public Schools	Ongoing
Plainfield Charter Township	Rain Barrel Workshops	4/12, 5/10, 6/21, 7/19, 8/16/2016
	River City Water Festival	3/11/2016
	Grand River Water Festival	6/26/2016
Rockford, City of	Rogue River/ TU Macro Sampling	5/7/2016
Sparta, Village of	Nash Creek Cleanup	4/30/2016
Spring Lake, Village of	Heritage Festival	6/13-18/2016
	WhiteCaps Concourse Table	7/7/2016
Walker, City of	Quiet Water Symposium	3/5/2016
	Walker Reading Carnival	6/13/2016
	Grand River Water Festival	6/26/2016
Wyoming, City of	STEM Week at Grand Rapids Public Museum	2/29-3/5/2016
	DPW Open House	5/16/2016

- The Quiet Water Symposium promotes non-motorized outdoor recreation and a shared concern for our Great Lakes environment. The 21st annual symposium was held on March 5th, 2016, and had over 2,600 attendees. LGROW hosted a booth with several watershed displays and distributed information and giveaways focused on storm drain awareness and watershed awareness messaging. Although this event takes place outside the LGRW, many of the attendees travel through the Lower Grand during their excursions. The Symposium also presents a valuable opportunity to partner with our upstream watershed, the Middle Grand River Organization of Watersheds (MGROW), who is actively involved in public outreach through their own MS4 program. The symposium also featured the LGROW educational video produced by Drew Mason. This year MGROW and LGROW are partnering to utilize the new storm drain markers designed by the LGROW Public Engagement Committee.

- LGROW was pleased to participate again this year at the River City Water Festival on March 11, 2016. Approximately 530 students were in attendance. LGROW hosted two brand new activities this year. The first was a variation on the interactive corn hole game. After a brief lesson on macroinvertebrates as indicators of stream health, students had to match one of three types of macroinvertebrates; sensitive, moderate, or tolerant with the correct habitat. Stickers featuring the new storm drain marker design and temporary tattoos were given out as prizes for participation. Students loved the game and had many great questions about both macroinvertebrates and water quality. The second activity was a scavenger hunt based on the 2015 Art prize entry "The Stream of Life" by Sara Grzegorski, in which LGROW assisted. After an introduction to the concepts of both a watershed and nonpoint source pollution, participants received a scavenger hunt card with a list of items that impact or are impacted by water quality to find in the mural. The cards, which students were able to take home, also included

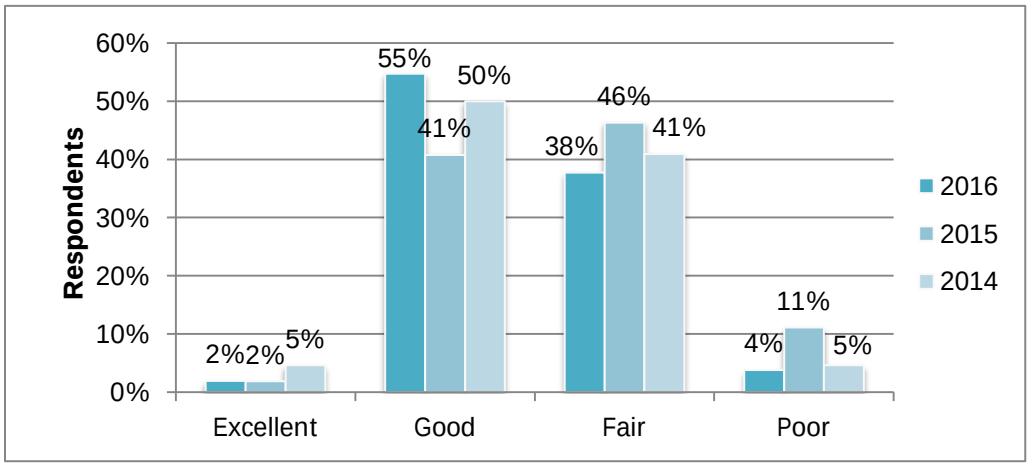
information on nonpoint source pollution, a photo of the mural and the location of the actual mural at Sixth Street Bridge Park. LGROW encouraged students to visit the mural to see the items up close. Participants also received an LGROW reusable water bottle to take home.

- LGROW hosted a table at the first annual 2016 Conservation Collective on March 31, 2016. This was a public event designed to connect residents of the Grand Rapids metro area with their local community conservation resources, information on new and upcoming projects, and highlight volunteer opportunities to get involved. LGROW hosted a table with information on the watershed, upcoming LGROW events, and distributed stormwater educational materials. The event was well attended with over 80 participants and 12 community organizations.

- The 13th Annual Grand River Forum on May 6, 2016, was put on by LGROW at the Wisner Center in Cascade Township. The event offered 100 attendees a regional perspective on emerging issues and accomplishments from around the Watershed. This year's keynote speaker, Mark Coscarelli of Public Sector Consultants, discussed Michigan Infrastructure issues including funding gaps and the need for sewer and water infrastructure statewide. Next, John Weiss (GVMC) moderated a Panel Discussion on Infrastructure issues and collaborative efforts in the Lower Grand River Watershed with panelists Eric DeLong, Deputy City Manager of the City of Grand Rapids; Joellen Thompson, P.E., Water System Manager of City of Grand Rapids; and Myron Erickson, P.E., Deputy Director of Public Works of the City of Wyoming. The remainder of the forum focused on emerging watershed issues including presentations by Marc Miller (MDNR) on the Grand River Water Trail; Eric Nordman (GVSU), and Nichol DeMol (Trout Unlimited) presented the Rogue River Economic Impact Study; and, Marty Holtgren (MDNR), Stephanie Ogren (Grand Rapids Public Museum), and Matt Chapman (Grand Rapids Whitewater), spoke about Lake Sturgeon Populations and Habitat Improvements in the Grand River. The Forum concluded with a video

presentation from various subwatershed groups. Each forum participant completed surveys after both registering and attending the event. A selection of the questions from each survey is asked annually to determine if there is a measurable change in people's attitudes toward and perception of the river. Figure 2 shows that from last year to this year, the majority of respondent identified the water quality in the Grand River as good in 2016, instead of Fair in 2015.

Figure 4. Survey Results: How would you rate the water quality in the Grand River?



- The Party for the Planet was held at John Ball Zoo on Saturday, May 7, 2016. The event brought the public together with environmentally conscious groups from West Michigan. Approximately 2,400 people visited the Zoo on the day of the event. LGROW, the City of Grand Rapids, and Groundswell coordinated for the event with a theme of stormwater education. LGROW provided paint-by-number watershed maps, temporary tattoos, and coloring books. Our volunteers collected car wash pledges in exchanges for Shammies, ran the stormwater themed corn hole board game, gave away prizes to participants, and wore the Major Runoff costume to draw visitors into the exhibits. The City of Grand Rapids collected pet waste pledges and distributed pet waste bag dispensers. Informational brochures, tote bags, stickers and water bottles were also distributed. Interaction was largely required for the public to receive give-away items. Public feedback was overwhelmingly positive with many children eager get a

photo with Major Runoff, participate in a game, or engage in one of our water-themed art projects. Many parents visiting our booth elected to take one or both of the pledges offered or discuss household activities that support clean water while they were waiting on their children.

- LGROW sponsored the Grand River Water Festival on June 29, 2016, at Riverside Park, which was attended by approximately 2,000 people. The festival is a free-of-charge day-long, music driven environmental festival featuring traditional folk, country, bluegrass, cajun, blues, and world beat music performed by Michigan musicians. Volunteers at the LGROW booth helped attendees create native, wildflower seed bombs to encourage the use of native plants. This was another new public education idea developed by the Public Engagement Committee. The seed bomb station was busy for most of the day and several other groups have expressed interest in utilizing this activity at other events. Landscaping for water quality booklets and other informational items about stormwater were distributed to participants as well. During the water festival Wendy Ogilvie gave a brief presentation on LGROW and its activities within the watershed, including the status of the Grand River Revitalization and Rapids Restoration project.

- LGROW hosted concourse tables at two WhiteCaps games during this reporting period. The first was on Sunday August 9, 2015. GVMC sponsored the game in cooperation with the Clean Air Action Coalition and titled the event "Clean Air Clean Water at 5/3 Ballpark". LGROW participated in a live radio interview, Major Runoff, the stormwater mascot, threw out the first pitch at the game, and over 15 volunteers from MS4 permitted communities helped conduct the public education survey. The survey, developed by the Public Engagement Committee during the previous reporting period, consisted of 12 questions and took about 5 minutes to complete. Survey participants received LGROW baseballs as a thank you gift. Approximately 300 surveys were collected the day of the game. The results of this survey are detailed in a later in this section. Participants also put a pushpin in the

Watershed map to identify their location and watershed temporary tattoos were distributed. The second table was hosted on Thursday July 7, 2016. Stormwater educational materials and giveaways were distributed to attendees. Each game had an attendance of approximately 4,000.

Public Education Topic 2 - Ultimate Stormwater Discharge Location and Potential Impacts

PEP Objective 2: Education on the location of residential stormwater system catch basins, where the system discharges, and impacts from pollutants.

Target Audience: Landscapers/ lawn care companies, auto repair shops, commercial power washers, carpet/floor cleaning companies, commercial operations, industries, residents, and local businesses

Content of Message: 1) Storm drains connect to your local lakes and streams, not a wastewater 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.

Delivery Method:

- Permittees installed the plastic storm drain markers designed by the Public Engagement Committee. The new drain markers carry the messages "Keep your Lakes Great and your Rivers Grand". Many Permittees also engaged with community partners to do storm drain stenciling events which are detailed in the PEP Questionnaire. This image was also used on several giveaways including vinyl stickers and magnets. In total over 450 drain markers were installed at locations throughout the watershed.

- Permittees utilized a variety of stormwater displays including the drop toss game, the watershed pushpin map, the LGROW banners on non-point source pollution, and the "Grand River Yours To Protect" informational poster board at a variety of events and locations throughout the Watershed. The PEP Questionnaire details when and where these displays were used by individual Permittees. The Public Engagement Committee worked with a local artist, Sara Grzegorski, in cooperation with Groundswell on her ArtPrize Entry "River of Life". This mural was later incorporated into an

interactive outreach banner which utilized the scavenger hunt developed during the Art Prize Voting period.

- Synchronized ads featuring the message "Only Rain in the Drain" highlighting concepts of "this community maintains separate storm sewers" and "anything entering a storm drain goes to the Grand River" were run at the following locations:

  - Interior panels in five Harbor Transit busses and trollies between Memorial Day and Labor Day. Ridership during this period is estimated at approximately 25,000 people.

  - Interior panels were also placed on all 21 Rapid busses (bus #50) in the fleet that run between the GVSU campus and downtown for 6 months ending at the close of the reporting period on July 31. Ridership on the buses during this time is estimated at approximately 1.5 million.

  - Johnny Ads were placed in March and April at a total of 150 locations throughout Kent and Ottawa Counties with an estimated 750,000 views.

Public Education Topic 3 - Public Reporting of Illicit Discharges

PEP Objective 3: Encourage public reporting of the presence of illicit discharges or improper disposal into the stormwater system.

Target Audience: Residents, public employees, businesses, construction activities, industries, and septic system owners/haulers.

Content of Message: 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. 5) Proper septic system care and maintenance. 6) How to recognize system failure. 7) Impacts failing systems have on water quality. 8) Where to go for assistance.

Delivery Method:

- Permittees distributed copies of the *"Citizen Report Form"* to their residents. This form included information on how to report illicit discharges and connections to one's community. Permittees individually customized these brochures for their residents.
- Permittees distributed the article *"How you as an Employee Can Help Reduce Pollution Entering the Grand River"* to their employees. This article encourages employees to report stormwater discharges to their community's stormwater coordinator.

- Permittees distributed copies of USEPA's *"Do your Part- Be Septic Smart!"* brochure to their residents. This brochure describes what a septic system is, how it works, and how to maintain it.

- Permittees distributed the newsletter article *"Do You Know Where Your Septic System Is?"* to their residents via their webpage, community newsletter, or a link to LGROW.org. This article encourages residents to regularly pump their septic tanks, warning signs of a failing drain field, and the environmental consequences of a failed or improperly maintained septic system.

Public Education Topic 4 - Personal Actions that can Impact the Watershed

PEP Objective 4: Education on the need to minimize the amount of residential or non-commercial wastes washed into the storm sewer system.

Target Audience: Residents, schools, non-profit groups conducting carwash fundraisers, public employees, visitors, recreational users, riparian landowners

Content of Message: 1) BMPs 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 deicer use. 6) BMPs for native vegetation on residential properties as an alternative to turf grass. 7) Effects of residential wastes on our waterbodies. 8) Education on low impact development techniques.

Delivery Method:

- Permittees distributed the brochure "*Make your Household the Solution to Water Pollution*".
- Several communities hosted rain barrel events as detailed in their PEP Questionnaires.
- Permittees collected pet waste pledges from dog owners in exchange for a free pet waste bag dispenser to hook to the pet's leash. The pledges also provide information on dog parks in the Watershed and discuss the connection between picking up pet waste and protecting stormwater. This brochure was adapted, with permission, from a similar program in Portland, Oregon.

  Permittees collected car wash pledges from residents in exchange for a free shammy to use for home car washes. The pledge provides the following information about car washes: *There's no problem with washing your car, it just matters how and where you choose to wash it. The average homeowner uses 116 gallons of water to wash a car. If you wash your car in your driveway, all that water, along with the soap, grease, brake dust, oil, and dirt that you wash off your car flows directly into the nearest storm drain. From there, it's just a short trip to the Grand River and eventually Lake Michigan*. In addition, residents keep a portion of the pledge that provides other environmental friendly car care tips.

Public Education Topic 5 - Waste Management Assistance

PEP Objective 5: Education on proper disposal of household hazard waste (HHW), travel trailer/ boating sanitary wastes, chemicals, motor vehicle fluids, and unused medications.

Target Audience: Residents, visitors, and public employees

Content of Message: 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 of HHW, travel trailer/ boating sanitary wasters, chemicals, motor vehicle fluids and unused medications.

Delivery Method:

- Several communities utilized the pre-recorded "*Water Spots"* on the topic of properly disposing of household hazardous waste to keep it out of the storm drains, as a hold message on their phone systems.

- Permittees and LGROW.org shared the newsletter article *"How You Can Help Reduce Pollution Entering The Grand River"*. This article encourages residents to dispose of pet waste, paints, motor oil, etc., in the appropriate locations, not in the storm drains.

- Permittees distributed the flyer "*Make Your Household the Solution to Stormwater Pollution",* which also details the importance of proper disposal of household hazardous waste.

- Both Kent and Ottawa County communities distributed household hazardous waste flyers at events and provided information on recycling household hazardous waste via the phone and websites. Many permittees also opted to distribute these materials at their respective community events. This year Kent County continued to expand their collection hours to allow more Kent County residents to take advantage of this service.

- Many communities hosted clean-up days to encourage proper disposal of unwanted materials. Details of these events, as applicable are provided in individual PEP Questionnaires and Part 7.

Public Education Topics 6 - Management of Riparian Lands

PEP Objective 6: Education concerning management of riparian lands to protect water quality.

Target Audience: Riparian landowners, construction activities, landscapers

Content of Message: 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.

Delivery Method:

- Permittees distributed the brochure "*What Every Landscaper Should Know"*, to their subcontractors and facilities staff. These brochures detail BMPs for fertilizer and pesticide application, lawn care, and native plantings.

- Attendees at the Grand River Water Festival created native seed bombs and received a copy of the booklet "*Landscaping for Water Quality"* at the LGROW booth. Booth volunteers discussed the importance of native plantings and their role in water quality with attendees at the Festival

- LGROW planned a green infrastructure conference which was held on August 4-5, 2015. Many of the speakers, as well as a tour of local green infrastructure, focused on the importance of native vegetation in protecting water quality. Several Permittees participated in the planning and preparation for this event. Attendance and specific content were detailed in the training section of the report.

School Outreach Summary

Since the organization was formed, educators and administrators consistently look to LGROW for guidance and technical support in engaging students in watershed education projects to enhance and support the long-term goal of a healthier Lower Grand River watershed. LGROW offers experiences and education through classroom demonstrations and hands-on projects that support educational programming around nonpoint source water pollution and stormwater management.

The key objectives of the environmental education programming are as follows:

- Connect schools and classrooms with existing municipal issues, efforts, and projects, in accordance with the PEP, with a focus on nested school districts as a priority;
- Develop tools to track progress and success in environmental education programs identified in the Lower Grand River Watershed Management Plan; and,
- Build and maintain collaborative partnerships to educate students in our region through meaningful, place-based service learning projects located in their communities.

In the 2015/2016 school year, LGROW environmental educational programming served over 500 students in eight (8) schools in Kent and Ottawa Counties. Through partnerships with school districts, area intermediate school districts, community partners, and local units of governmental units, LGROW provided students and teachers with technical assistance in classrooms and filed experience, including but not limited to:

- Introduction to Stormwater, Nonpoint Source Pollution, and Best Management Practices: Students were introduced to the Lower Grand River Watershed. LGROW staff discussed stormwater pollutants and ways to reduce them, as well as green infrastructure and best management practices to minimize stormwater discharge. Finally, students were presented with maps and diagrams of the local stormwater sewer system and catch basins, as well as how it connects to the Grand River.

- Catch Basin Markings: Students cleaned storm drains and marked catch basins in their communities. LGROW worked with local units of government to identify the best place for students to install markers to bring awareness to the communities on the impacts to surface

water through stormwater discharge. Overall, students installed over 300 storm drain stickers in their neighborhoods. Furthermore, students distributed over 150 door hangers in the residential neighborhoods around their schools. These door hangers were researched and designed with students in one of the MS4 nested school districts and used throughout the region.

- Green Infrastructure Tour: Students from a local high school joined LGROW, partner organizations, and local municipalities on a Green Infrastructure tour. Students received a first-hand look at the following sites in and around Grand Rapids:
    - Grand Rapids Water Resource Recovery Facility: Native landscaped rain garden
    - The Rapid Operations Center: Green roof and live wall
    - Joe Taylor Park: Underground stormwater treatment and infiltration; porous concrete parking lot
    - Plainfield Avenue: Native landscaped bioswales
    - Whiskey Creek: Native landscaped bioswale

- Water Quality Monitoring: Students analyzed water quality in points along Indian Mill Creek, Brandywine Creek, Maplewood Lake, and other tributaries to the Grand River using various methods of data collection. Water quality kits were used to measure multiple chemical components, including pH, phosphorus, dissolved oxygen, and nitrates. Other students collected and counted macroinvertebrates using dip nets along stream side, as well as leaf packets that were installed and retrieved six weeks later. Using these methods, students were able to draw conclusions about the health of the surface water and possible impacts through land use practices.

Evaluation Measures

This section includes a description of the quantitative and qualitative evaluation measures of PEP effectiveness implemented between August 1, 2014, and July 31, 2015.

Permittees completed PEP Questionnaires to provide a quantitative and qualitative evaluation of their individual stormwater education efforts. Based on the input provided by the Permittees, the most popular brochures were the Household Solution to Water Pollution. In total, materials were distributed at over 50 events (Table 4) and at various locations throughout the watershed. The information collected from the pet waste pledges included the pledger's zip code. Pledge participants' zip codes are shown in Figures 4 and 6. The majority of responses for both pledges were from residents within the watershed. These pledges represent more than simply an educational outreach effort; these are a commitment to a behavioral change which has an important impact on water quality. This program was very popular with over 500 pledge forms requested and 161 pledges completed during the reporting period.

Figure 6. Pet Waste Pledges by Zip Code

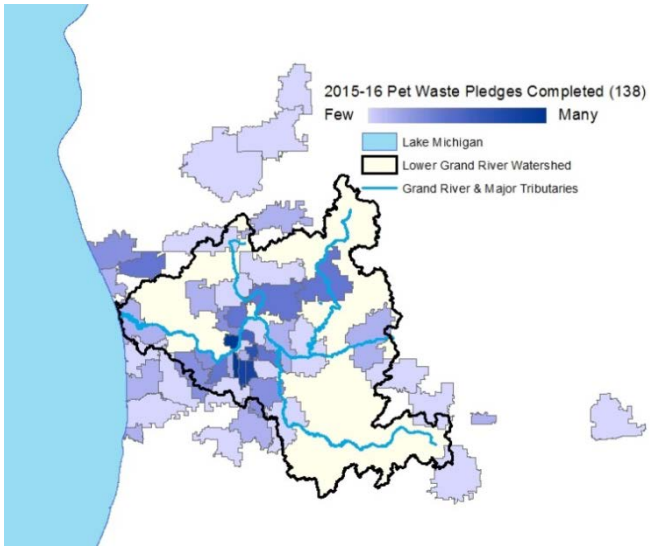
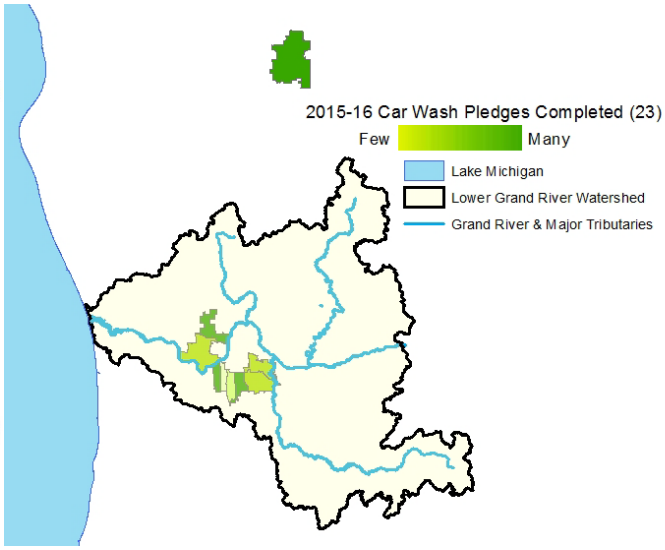


Figure 5. Car Wash Pledges by Zip Code



2015 Public Education Survey

During the previous reporting period, the Public Engagement Committee developed a 12 question survey to be administered at a WhiteCaps Ballgame during this reporting period on August 9, 2015. The survey was designed to gauge the awareness of the public on each of the six objectives outlined in the approved 2013 PEP. Respondents were asked to provide their zip codes and age to help identify residents of the watershed and connect their location with other available census data. Evaluating responses has provided insights to help refine and expand the future Lower Grand River Watershed educational efforts.

The Lower Grand River Watershed covers over 100,000 square miles encompassing 69 zip codes. LGROW received 369 survey responses from 84 zip codes. Of the responses, 180 participants in 44 zip codes were residents of the Lower Grand River Watershed. Respondent zip codes represented 64% of the land area and 82% of the population of the watershed based on 2010 Census Data. The 18-36 and 37-55 year old ranges were the largest groups of responders comprising, together, 61% of the respondents.

Figure 7. Tell us your age

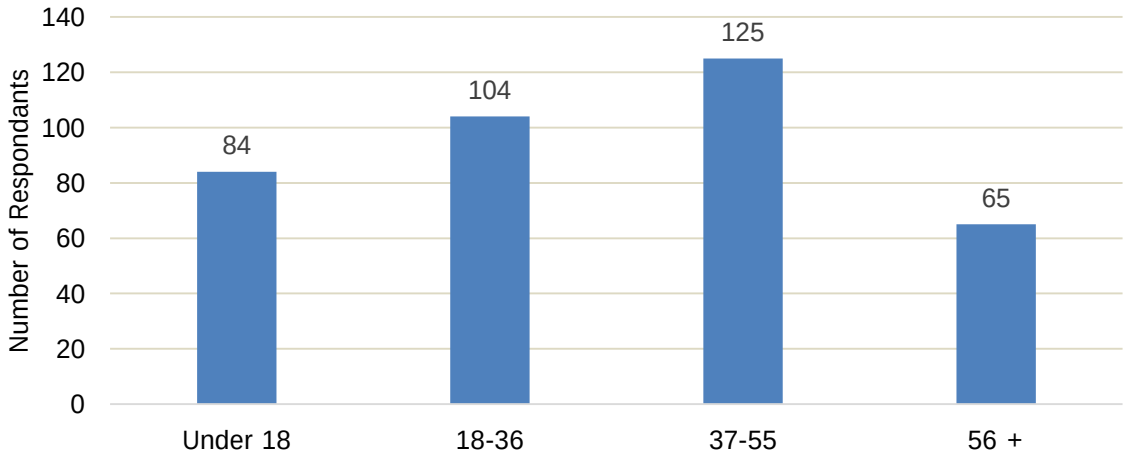
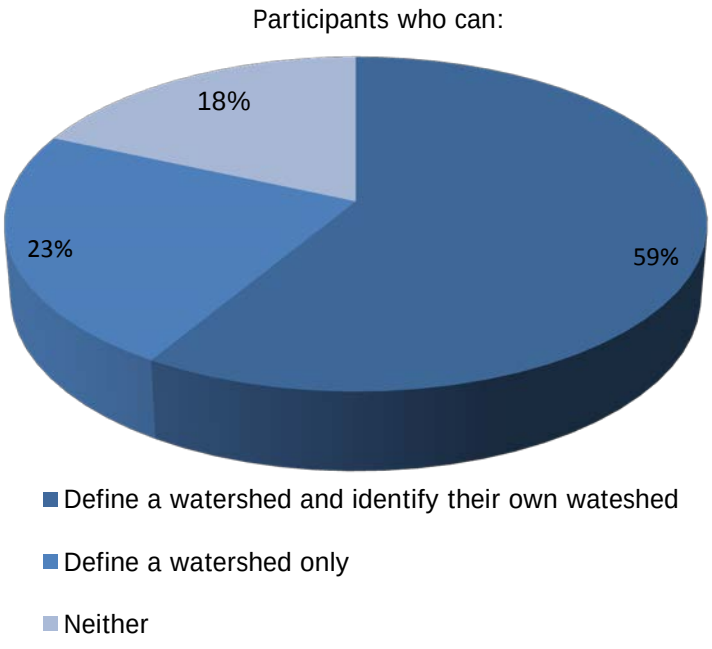


Figure 8. What is a watershed & which one do you live in?



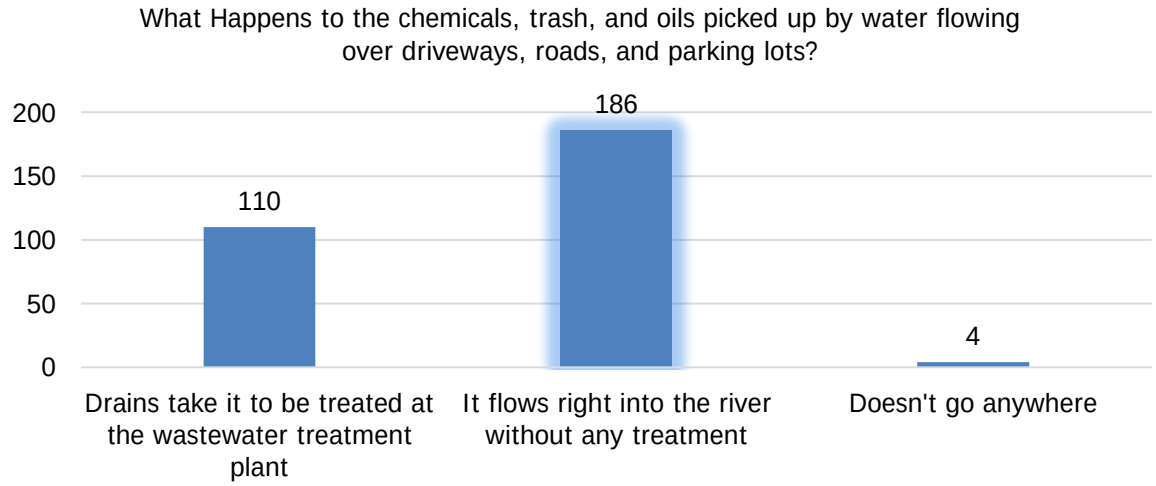
In evaluating PEP Objective 1, personal watershed stewardship, the survey first asked participants to identify the correct definition of a watershed. Of those surveyed, 82% of respondents answered correctly. Of those that answered incorrectly, 10% chose a wrong selection and 8% said they did not know the answer. Next, participants were asked if they could identify the watershed in which they lived. Of those surveyed, 72% were able correctly identify their subwatershed. The remainder named

a geographic area instead of a watershed. These results exceed the third year (2015) milestones approved in the plan.

Of the respondents who correctly identified the definition of a watershed, 91% were also able to correctly name their home watershed. This suggests that for participants who understand what a watershed is, they also have a strong grasp of how this translates to their personal watershed. Future efforts should target educating those who do not already grasp the meaning of a watershed. Once that concept is clear many will seek out how this relates to them personally in the form of identifying their subwatershed.

PEP Objective 2 focuses on ultimate stormwater discharge location and potential impacts. Survey participants were asked what happens to the chemicals, trash and oils picked up by water flowing over driveways roads and parking lots. Over 60% of respondents were aware of where storm water ends its journey, which exceeds the PEP objective of 25%.

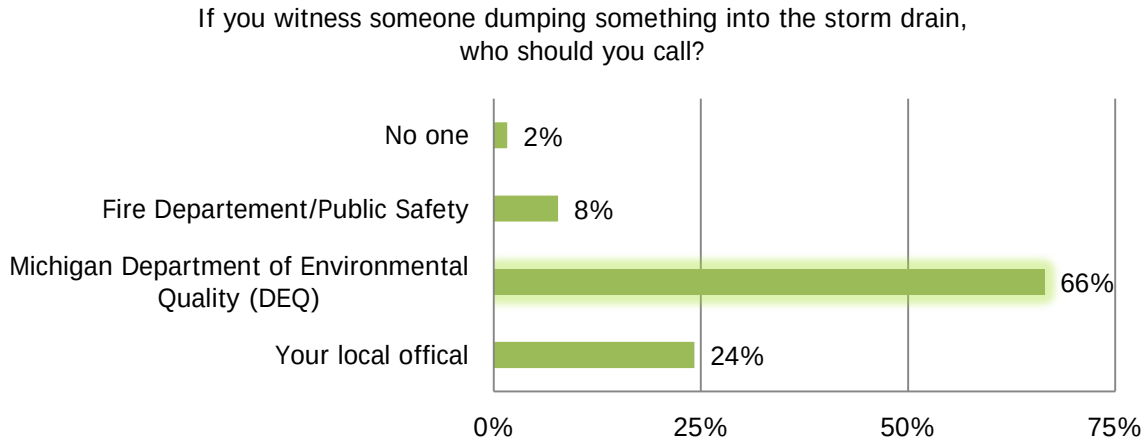
Figure 9. Where does stormwater end up?



The City of Grand Rapids has focused significant resources during the 2015-16 reporting period on educating the public about the early completion of their Combined Sewer Overflow separation project through a regional ad campaign. This effort, when combined with the education and outreach efforts of the Lower Grand River Permittees, including storm drain marking detailed in this report, may yield even greater awareness during the next round of surveys.

PEP Objective 3 focuses on the prevention and reporting of illicit discharges and by extension, septic system maintenance. The survey first asked participants how to respond if they witness an illicit discharge occurring.

Figure 10. Reporting Illicit Discharges



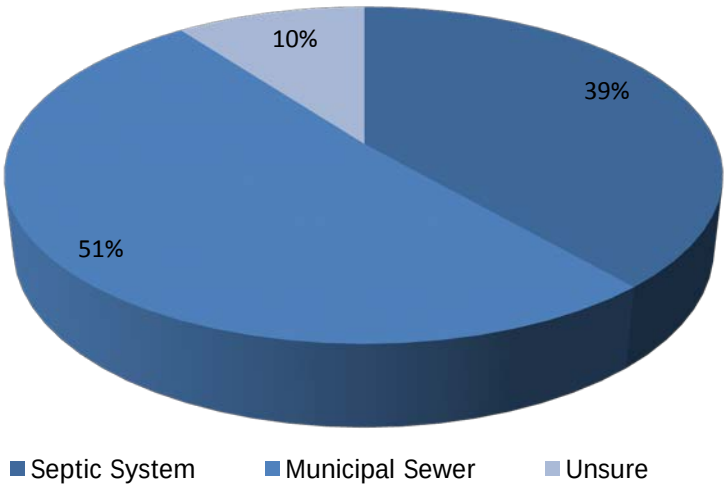
With multiple correct responses, 98% of respondents chose to report the discharge, while only 2% said that they would call no one if they witnessed someone dumping into the storm drain. Of the respondents who would report, approximately 66% identified MDEQ as the agency to contact. While this is correct, it does suggest that future educational efforts should focus on how and why to contact communities about illicit discharges.

The PEP objective identifies an overall 9% increase in illicit discharge reports each year in each community as the goal. Because the baseline for many communities was zero reports initially, it is difficult to evaluate if this objective is being effectively met with a 9% increase since an increase in reports may or may not also indicate an increase in dumping. Cumulatively, the reporting MS4s had 28 illicit discharges reported during the 2014-15 reporting period and 61 illicit discharges reported during the 2015-16 reporting period, a 54% increase. The number of illicit discharges reported in each community, however, varied widely between 0 and 16, with about half of the permittees receiving zero reports. Looking at the number on a watershed-wide scale shows a steady upward trend in reporting that far exceeds the goal of a 9% increase set in the PEP.

The public education plan also identifies people with septic systems as a target audience for Objective 3. The focus of the public education initiative is on people who have a septic system and within that group, those who are unsure of what maintenance is necessary. Of survey respondents, about half are connected to municipal sewer. This is consistent with the state average according to Michigan Municipal League Data.

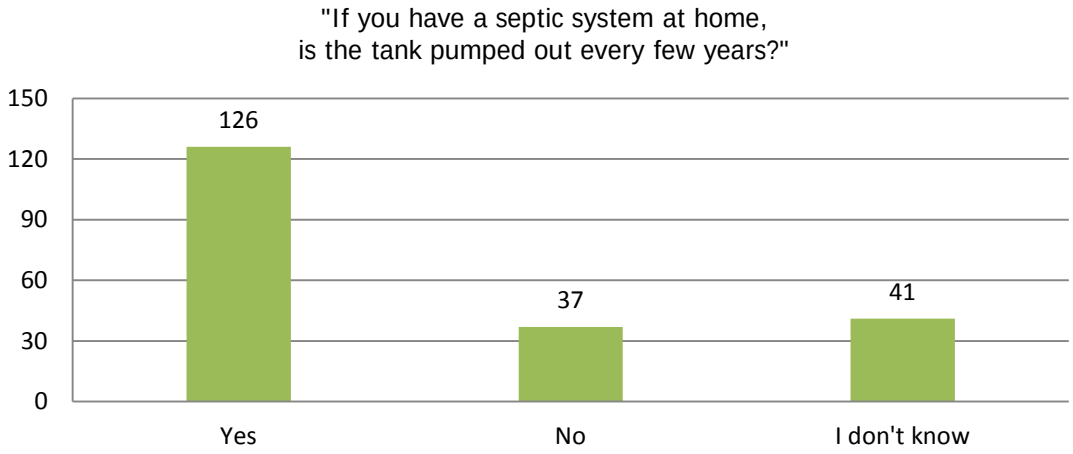
Figure 11. Where is your home's wastewater discharged?

Of those who took the survey, 10% did not know if they were connected to municipal sewer or a septic system. So, by extension, those who are unsure where their waste is discharged are not actively maintaining a septic field if they do have one.



Survey participants who are connected to a septic were next asked if they conduct regular maintenance. Of those, 61% of the responses indicated that they conducted regular septic system maintenance which exceeds the PEP Objective of 9%. Only 18% of respondents reported that they do not regularly pump their septic systems and 21% were unsure if regular maintenance was occurring. The DEQ estimates between 10-20% of septic systems in Michigan are improperly functioning or failing. Regular maintenance and inspection play a critical role in identifying and correcting these failing systems. In subsequent years adding additional messaging about identifying signs of trouble in your septic system in addition to regular maintenance guidelines may help target those who have a failing septic field that could be repaired before it fails completely.

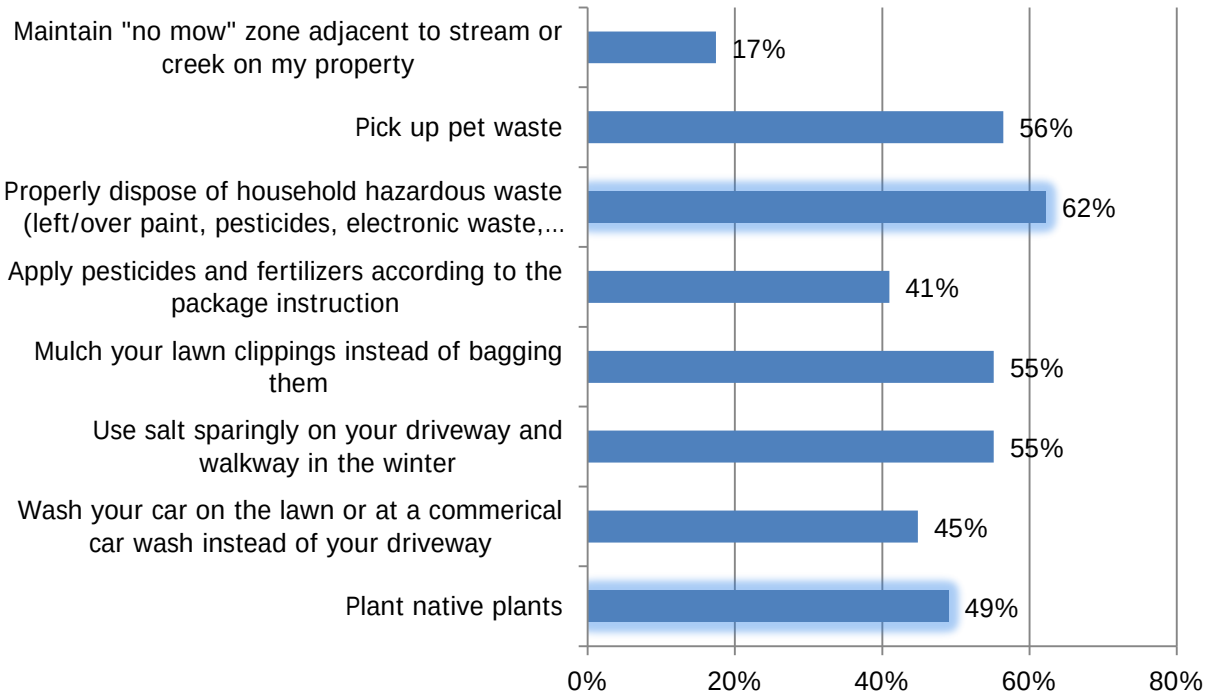
Figure 12. Septic System Maintenance



US Census data estimate that approximately 25% of residences in the Watershed are rental properties. Therefore, a portion of those who responded that they were unsure may be renters who are not responsible for maintaining their own systems.

PEP Objective 4 evaluates personal actions that can impact the watershed. Survey participants were asked to select from a list all items in which they are participating. Of the 369 total responses, only 5 selected no actions from the list. In other words, 98% of the participants could name one or more actions they were taking which exceeds the objective of 80% in the PEP plan. The actions with the highest percentages of respondents participating were proper disposal of household hazardous waste at 62% and picking up pet waste at 56%.

Figure 13. What Actions are you doing to protect Water Quality?



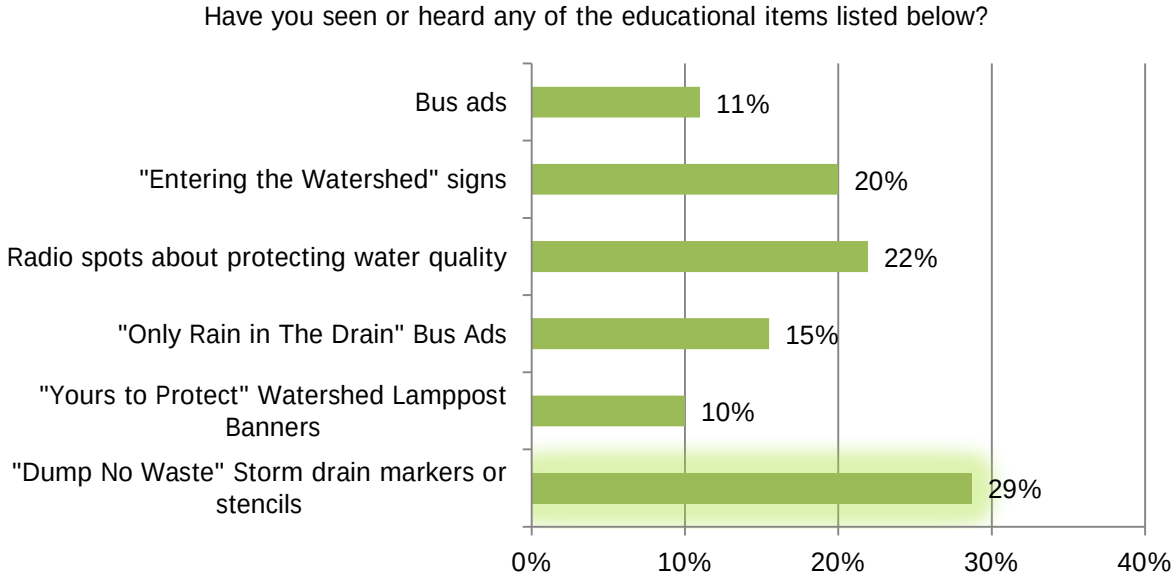
PEP objective 5 is waste management assistance and sets a 9% increase in the number of watershed residents dropping off HHW during collection events as the third year milestone. In 2015, Kent County switched their household hazardous waste collection from an appointment only system to regularly scheduled hours of operation. During the 2014-15 reporting period, an estimated 3,784 users dropped off household hazardous waste. During the 2015-16 reporting period the number of users climbed to approximately 5,046, a 25% increase which exceeds the PEP objective. Going forward, this year's utilization data should serve as the new baseline for measuring increases since this model encourages more participation from Kent County residents. Utilization data for Ottawa County includes many areas

outside the Lower Grand River Watershed so it doesn't provide a clear baseline for the permitted community participation within the watershed. Properly disposing of household hazardous waste was also the most frequently selected response to the question: "What are some things you are doing to protect water quality?" With 64% of respondents selecting this activity, this indicates that that many residents are utilizing this option throughout the watershed.

PEP objective 6, management of riparian lands sets a 9% increase in the number of watershed residents surveyed who are planting native plants, stream buffers, rain gardens or shoreline stabilization techniques. Survey responses included 17% maintaining a "no mow" buffer zone, and over half of those surveyed reported using native plants, exceeding the PEP Objective.

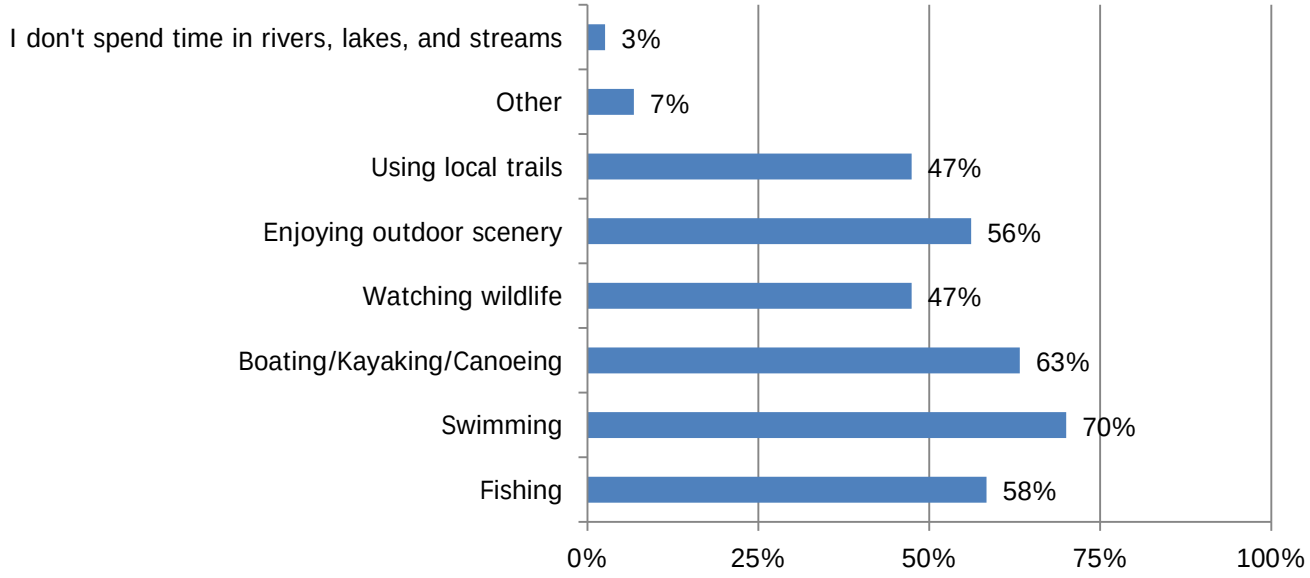
This survey was also an opportunity to evaluate which of the different outreach items/methods were the most visible. The three most visible outreach tools were the drain markers, radio spots, and entering the watershed signage. When broken out by age groups, drain markers were the most frequently observed in every age range below 56, while radio spots were selected with the highest frequency for those 56 and up. The website and Facebook were the least visible across all age groups. The Public Engagement Committee did select several new outreach methods for the reporting period following this survey so in subsequent evaluations these will be added to the list for comparison.

Figure 14. Comparing PEP outreach methods



The final two survey questions asked about the importance of water quality and how participants spent time in rivers, lakes and streams. Responses show that 98% of participants consider protecting clean water to be somewhat or very important and 97% of participants enjoy one or more of the activities listed below.

Figure 15. How do you spend your time in lakes, rivers, and streams?



Based on survey results, the Lower Grand River has exceeded the established evaluation measures for each of the six PEP objectives outlined in the approved 2013 Public Education Plan as shown in Table 5.

Table 5. PEP Objective	**Evaluation Measure**	
	Meets	**Exceeds**
1. Personal watershed stewardship		X
2. Ultimate stormwater discharge		X
3. Public reporting of illicit discharges		X
4. Personal actions impact the watershed		X
5. Waste Management assistance		x
6. Management of riparian land		X

2016 Stormwater Public Education Plan (PEP) Questionnaire

Reporting Period of August 1, 2015, to July 31, 2016

Please complete this questionnaire to provide an evaluation of the stormwater education activities you have implemented between **August 1, 2015, and July 31, 2016**. GVMC will include this information, along with watershed-wide measures of effectiveness, in your 2016 Progress Report.
Please return this form to GVMC by August 15, 2016.

Community Name: CITY OF KENTWOOD

Brochures, Flyers, and Give-a-ways

1. Have brochures, flyers, and give-a-ways been distributed?
   ■ Yes: ☐ all ■ in progress
   ☐ No

2. Where did you distribute your brochures, flyers, and give-a-ways?
   ■ Government office ■ Library ■ Community event ☐ Other _____

3. Approximately how many people did you interact with during the distribution of the materials? 100+

4. What was the most popular give-a-way from the materials distributed in your community? Tote Bags

5. What topics are of the greatest interest to members of your community?
   ■ How to report stormwater pollution
   ☐ Stormwater discharge locations/impacts
   ☐ Native vegetation/rain gardens/riparian buffers
   ☐ Proper vehicle care/motor oil disposal
   ☐ Proper use of pesticides/fertilizers/herbicides
   ☐ Proper yard waste disposal
   ☐ Proper pet waste disposal
   ☐ Proper septic system maintenance
   ■ Household hazardous waste management

Illicit Discharge Reporting

(brochure available at: http://www.ci.kentwood.mi.us/CityOfKentwood/media/files/original-files/engineer/npdespdf/How-to-Report-Water-Pollution.pdf

6. How many "Citizens Reporting Brochures" were customized and distributed to your residents? Available 24/7 on website
   Was the "Citizens Reporting Brochure" posted to your city website? ■ Yes, at: see above ☐ No
   Please describe any interest, comments, or discussion generated from the brochure: _____
   How many complaints were received from the general public regarding illicit discharges? 3

Lamppost Banners

7. Did you display your lamppost banners provided to you in 2009- 2013?

   ■ Yes, at Kentwood City Hall & Library during the Spring & Summer. Please describe any public feedback generated: None this year
   ☐ No, but we will display our banners at _____ (street names/ location) on _____ (dates)

☐We did not order lamppost banners

Newsletter Articles (available at: http://www.ci.kentwood.mi.us/cityhall/Departments/engineer.asp)

8. Did you distribute newsletter articles to your residents?
■Yes, on _____ (date); Via: ☐print ■web ☐other
Topic(s): Rain Gardens, Home-A-Syst, Household Hazardous Waste, Recycling, IDEP, After the Storm, Boat Care, Lawn Fertilizers, Native Landscaping, Car Care Tips, Septic System information, Healthy Lawns, Home Tips, Pet Waste Disposal, Protecting our Greatest Resource, Riparian Owner's Guidebook, Storm Drains & Stormwater Runoff
☐No, but we will on _____ (date)

9. Please describe any interest, comments, or discussion generated from the articles: none reported

10. If applicable, list the newsletter name or webpage address used to distribute stormwater information to the public http://www.ci.kentwood.mi.us/cityhall/Departments/engineer.asp

11. If applicable, how many residents received your community newsletter? N/A

12. If applicable, how many total website hits did you receive for your online newsletter articles? Unknown – The City has had 3 - IT Directors and switched from in-house to a consultant for IT support within the last year.

Stormwater Interactive Displays

13. Did you set up the stormwater poster board display?
■Yes, year round at the Kentwood Public Works Facility
☐No, but we will set up our display on _____ (dates) at _____ (location)

14. Did you use an EnviroScape interactive stormwater model to educate the public on stormwater pollution?
☐Yes, on _____ (dates) at _____ (location); ■No
Approximately how many people participated in a demonstration? _____

15. Did you use a watershed map with pushpins at an event?
☐Yes, on _____ (dates) at _____ (location); ■No
Approximately how many participants pinpointed their location in the watershed? _____

16. Did you use the stormwater mural banner & scavenger hunt at an event?
☐Yes, on _____ (dates) at _____ (location); ■No
Approximately how many participants completed the scavenger hunt? _____

17. Did you utilize Major Runoff the stormwater mascot at an event?
☐Yes, on _____ (dates) at _____ (location); ■No
Approximately how many participants interacted with Major Runoff? _____

18. Did you utilize interactive Corn Hole Game Board at an event?
☐Yes, on _____ (dates) at _____ (location); ■No
If yes, which game did you host?
☐ Drop toss: stormwater matching
☐ Match the Macro with their habitat

Pet Waste Pledges

19. Did your community collect pet waste pledges distributed with the public education materials?
☐Yes, (approximate number)
■No

20. Please describe any interest, comments, or discussion generated from the pledges and the associated giveaway: N/A

Car Wash Pledges

21. Did your community collect car wash pledges distributed with the public education materials?
☐Yes, (approximate number)
■No

22. Please describe any interest, comments, or discussion generated from the pledges and the associated giveaway: N/A

Storm Drain Awareness Activities

22. Did you implement a storm drain awareness activity between August 1, 2015, and July 31, 2016?
☐Yes_____ (streets) on _____ (dates)
■Yes, we had a storm drain stenciling event in June & July and stenciled 16 (streets)
■Yes, we installed 52 pre-marked catch basin backs/grates with the message "No dumping, drains to waterway"
■Yes, we hung door knob flyers on 16 (streets) in June & July.
☐No, but we plan to implement _____ (activities) on _____ (dates)

23. Please describe any interest, comments, or discussion generated from the activities above: None yet

24. Have you noticed a reduction in storm drain dumping?

■Yes, if so, please describe: We received only 3 complaints about illegal dumping into the City's storm drains this year ☐No, if so, please describe _____

Additional Efforts

25. Did you participate in any community stormwater events? (check all that apply)

☐Rain Barrel Workshop Date: __/__/____ Number of Attendees: __
☐Rain Garden Installation Date: __/__/____ Number of Attendees: __
■River Clean Up(Location):Buck Creek Date: 08/15/15 Number of Attendees: 2
☐Clean Air- Clean Water @ the West Michigan WhiteCaps 8/9/2015
☐Healing Our Waters Conference 9/29-10/1/1/2015
☐Ottawa County Water Quality Forum 11/713/2015
☐MWEA Watershed Seminar 12/2/2015
☐Quiet Water Symposium 3/5/2016
☐River City Water Festival 3/11/2016
☐MWEA Watershed Summit 3/29/2016
■13th Annual Grand River Spring Forum 5/6/2016
☐John Ball Park Party for the Planet 5/7/2016
☐Grand River Water Festival 6/26/2016
☐ West Michigan WhiteCaps Concourse Table 7/6/2016
■Other: Kentwood Touch-A-Truck Date: 06/29/16 Number of Attendees: Hundreds

Describe any materials distributed, number of attendees, messages distributed : Coloring books, tote bags, stickers

26. If applicable, please describe any other stormwater public education activities your community implemented beyond the events described above. (Submit any relevant documentation): _____

PART 4 – IDEP

Regional IDEP Activities

The IDEP for the Lower Grand River Watershed was approved in July of 2013 as meeting requirements of the General Permit Application for Storm Water Discharges from MS4s. The IDEP is intended to prohibit and effectively eliminate illicit discharges to the MS4.

The IDEP is being implemented under a cooperative program administered by the Grand Valley Metropolitan Council (GVMC) and involving the county agencies and municipal units participating in the Watershed Approach. The approved IDEP utilizes an alternative approach which includes the sampling of all storm sewer outfalls to Waters of the State within the urbanized area for the following parameters: surfactants, temperature, ammonia, and pH. Cooperative agreements were signed by participating communities to ensure that any illicit discharges detected would be traced upstream to their point of origin within the approved timeline whether or not they crossed jurisdictional boundaries.

Outfall sampling was conducted during the summers of 2013 and 2014 for regulated communities in Kent and Ottawa County respectively. Outfall sampling was conducted for the Village of Fruitport in Muskegon County during the summer of 2016. In total, over 2,000 outfalls were sampled in the urbanized area of the Lower Grand River Watershed. Of those outfalls, only 13, or 0.5% required high priority or immediate follow-up. By comparison, 61 illicit discharges not associated with outfall testing were identified either by public reporting or staff identification during the reporting period and 28 illicit discharges were identified during the last reporting period. Recognition and reporting training for both the public and the staff of permitted communities is more than twice as effective at eliminating illicit discharges as outfall sampling during a screening year. Additionally, illicit discharge reporting is an ongoing initiative while outfall sampling provides only a snapshot in time. A detailed description of the IDEP activities undertaken on an individual basis is included below. The IDEP activities include dry-weather screening of discharge points, locating possible sources of contamination, responding to reported incidents, correcting the problems, and preventing new illicit connections.

Community IDEP Activities

Please describe any dry-weather screening conducted during the reporting period and the findings of that screening.
None this reporting period.
Please list any other known and/or resolved illicit discharges identified during the reporting period and status of elimination. For significant discharges, also list the pollutants involved with an estimate of the volume and loading. Examples of illicit discharges include: malfunctioning septic systems; sanitary sewer leaks, overflows, or cross-connections; laundry water discharges; leaking fluids from vehicles, barrels, dumpsters, or tanks; concrete truck wash water; polluted runoff from temporary or permanent storage areas; improper fire hydrant flushing; spills from auto accidents; power washing wastewater; industrial/commercial wastewater, dumping; and any other violation of the IDEP ordinance.
Please list the status and schedule for elimination for any illicit discharges identified but not eliminated during this reporting period. Also, report the status of any illicit discharges identified but not eliminated during previous reporting periods.
No known illicit discharges this reporting period.
Please describe actions taken when indications of illicit discharges have been identified, if any.
1375 Meadowlane Drive – neighbor reported property owner dumping liquid waste from food containiers at their backyard Bar-B-Q into the Paris Drain. ProCare Restoration (4101 – 40th Street) – Silent Observer complaint submitted to Kentwood police Dept, stating that employees had been dumping sewage & chemicals into the storm sewer drains. 4884 Madison Ave – neighbor complaint received by Code Enforcement concerning illicit dumping into the Heyboer Drain in Windmill Pointe Mobile Home Park

Please provide:

- An estimated quantification of the number of discharges eliminated, and
- An estimated quantification of the volume of illicit flow eliminated (*For large spills or, where the amount discharged is possible to estimate)*.

1375 Meadowlane

- Site inspection did not turn up any credible evidence that any dumping occurred. No staining, trash or other foreign objects spotted in the Paris Drain. Letter sent to Property Owner informing them of complaint, IDEP Ordinance and warning for future complaints / civil infractions.

4101 – 40th Street

- Site inspection yielded no visual or physical evidence of any illicit dumping onsite. Dumpsters placed by the building away from CB's. CB's showed no staining or litter and still had siltsacs installed in one from adjacent site construction. No letter sent to owner. Complaint most likely generated by a disgruntled employee.

4884 Madison Ave

- Site inspection did not turn up any credible evidence of illicit dumping or illegal activities. Information / warning letter sent to property owner.

(see attached correspondence)

Identify any specific coordination with the health department in response to illicit discharge elimination for failed or failing septic fields.

On February 13, 2016 a neighbor reported smelling sewage and standing water in the yard in the middle of winter. An onsite inspection confirmed that the septic system had failed and the City notified the owner and the Kent County Health Department that the property would need to be connected to the municipal waste water system. On February 23, 2016 the property owner had a local plumbing contractor make connection to the sanitary sewer and abandon the old septic system. (see attached correspondence)

Describe the effectiveness of the program to prevent illicit discharges and the method used to assess effectiveness.

The program is very effective. Through close contact with the Health Department either the City will notify the County or the County will notify the City when septic systems fail or new permits are requested. At this time the City informs the Health Department of sewer availability and permits from the health Department are refused if sewer coverage is available. All concerns are handled within a matter of weeks and any health violations are corrected / abated.

PART 5 - New Point Source Discharges of Stormwater

Do you own or operate any NEW or previously unidentified stormwater discharges? ☐Yes ■No If "yes," please indicate which discharge points are new on your outfall map or list.
Is your stormwater discharge point map attached or provided electronically? ☐ Map is attached ☐ Map is provided electronically ■ Other. Please explain in comments section.
Is your stormwater discharge point list attached or provided electronically? ☐ List is attached ☐ List is provided electronically ■ Other. Please explain in comments section.
Comments: Map and list were submitted to MDEQ as Appendix 2 in Illicit Discharge Elimination Plan revision, July 30, 2013. Updated lists were submitted to the MDEQ as part of the 2016 MS4 Permit Application which is currently under review.

PART 6 - Nested Drainage System Agreements

Please list all nested jurisdictions with whom you have a cooperative agreement:

Name of Nested Jurisdiction	Agreement previously provided to MDEQ	Agreement attached
Kentwood Public Schools	☒ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No	☐ Yes ☐ No

Comments:

Forest Hill Public Schools and Kelloggsville Public Schools both have their own facilities within the City of Kentwood but no agreement has been established.

PART 7 - Other Actions

Please list any extra efforts your community has conducted above and beyond your commitments recorded above (e.g., stream buffer ordinance adoption, new management techniques, invasive species control, habitat enhancement/protection, logjam removal, stream/beach clean-ups, etc.) that have helped implement the **Lower Grand River Watershed Management Plan**:
Assisted Plaster Creek Stewards in the installation of a rain garden in Stanaback Park to catch and infiltrate runoff from the roof tops of the pavilions.
Please list any other actions your community has conducted to reduce stormwater pollution
Currently working with members of LGROW to develop a new model storm water ordinance which shall be implemented County-wide.

PART 8 - Revisions to the SWPPI

Based on your evaluation of the effectiveness of your stormwater BMPs, are there any commitments that should be added to or removed from the SWPPI?

☒ No, the SWPPI does not need any revisions

☐ The following revisions to the SWPPI could be considered:

Original SWPPI Section / Subsection	Revision

Additional Documentation