Lower Grand River Watershed Progress Report

City of Walker

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

Prepared by the:

GVMC

Grand Valley Metropolitan Council

Environmental Programs

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http://www.lgrow.org

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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	Rachell Nagorsen
Title	Engineering Programs Coordinator
Address	4243 Remembrance Rd NW
City, State, Zip	Walker, MI, 49506
Telephone (with area code)	616-791-6327
Fax (with area code)	616-791-6808
E-mail	Rachell.nagorsen@ci.walker.mi.us
Stormwater Program Manager	
Name	Rachell Nagorsen
Title	Engineering Programs Coordinator
Address	4243 Remembrance Rd NW
City, State, Zip	Walker, MI, 49506
Telephone (with area code)	616-791-6327
Fax (with area code)	616-791-6808
E-mail	Rachell.nagorsen@ci.walker.mi.us
Stormwater Permit Fee Billing Address	
Name	Rachell Nagorsen
Title	Engineering Programs Coordinator
Address	4243 Remembrance Rd NW
City, State, Zip	Walker, MI, 49506
Telephone (with area code)	616-791-6327
Fax (with area code)	616-791-6808
E-mail	Rachell.nagorsen@ci.walker.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					

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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

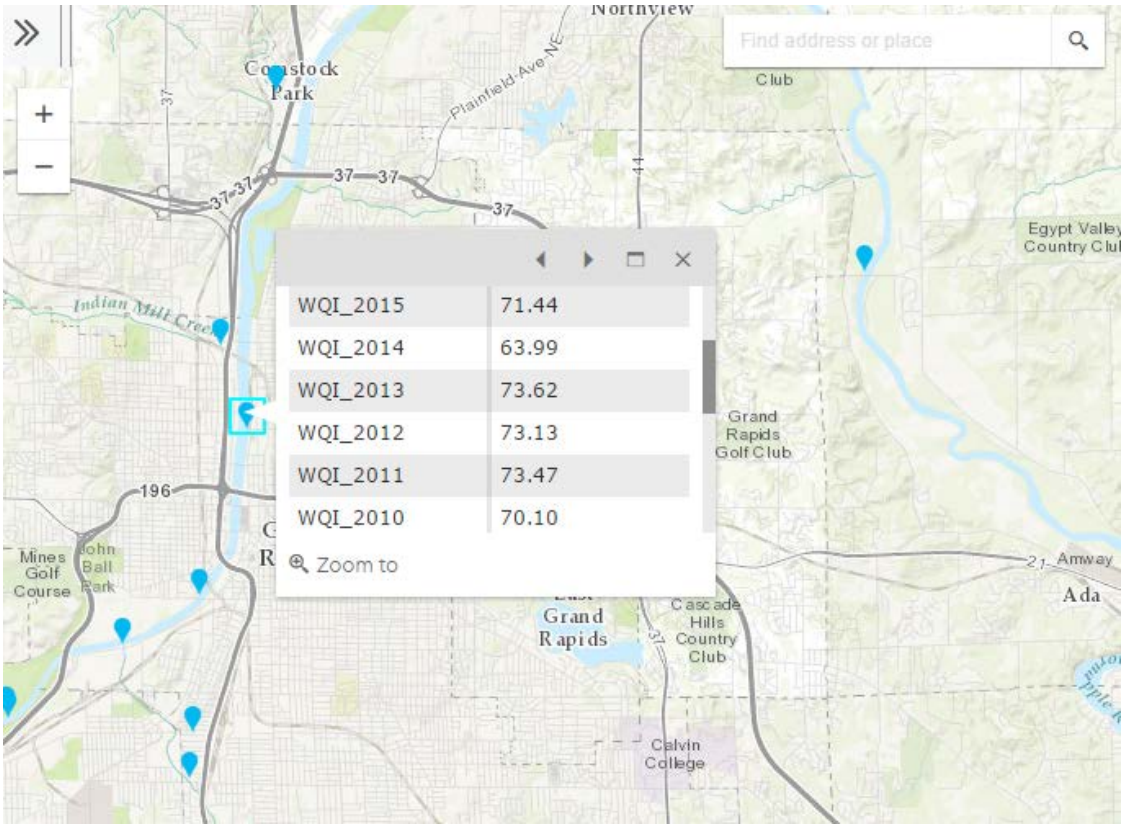


Figure 1 Grand Rapids Water Quality Index Web Interface

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.

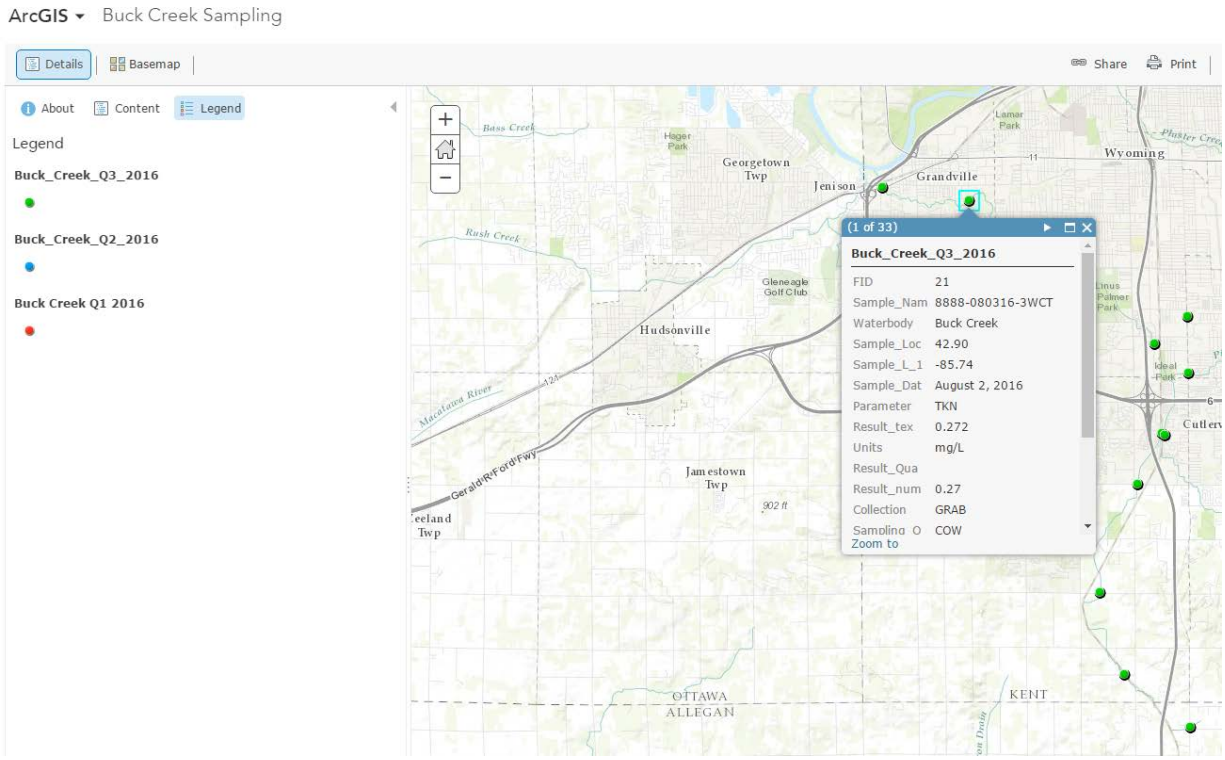


Figure 2 LGROW Data Repository

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

Property Name: City Wide

Structural Storm Water Control	Inspection Frequency	Maintenance Schedule	Inspection and Maintenance Conducted and Location of Log (if applicable)	Effectiveness of Control and Support Documentation
Catch Basins	Every 5 years	Every 5 years	205.5 hours cleaning (code #102) 118 hours repair (code #117) Catch basin cleaning logs & location map in DPW break room. 67.46 tons removed: Total from Ottawa Landfill	Effective: Catch basins are in better shape each year and need less material removed due to regular street sweeping and maintenance.
Storm Sewer	Every 5 years	Every 5 years	214.50 hours repair (code #123) 1,500.5 hours maintenance (code #101)	Effective: Critical repairs are prioritized and repairs are completed as budget allows. Some sections of sewer have also been replaced as a part of street reconstruction projects (hours not included in this list).
Grassy Swales	Yearly	Yearly	1,500.5 hours maintenance (code #101)	Effective: 11% increase in maintenance hours.
Vegetated Swales	Yearly	Yearly	1,500.5 hours maintenance (code #101)	Effective: 11% increase in maintenance hours.
Curb & Gutter	Yearly	Yearly	447 hours of street sweeping (code #103) 416.22 tons removed: Total from Ottawa Landfill	Effective: Less hours were spent street sweeping this reporting period while 90.75 more tons were removed, possibly resulting from the new sweeper truck.
Detention Pond	Yearly	Yearly	Inspections completed in September, 2015. Inspection logs located in	Effective: ponds draining well and little to no excessive vegetation.

			DPW break room.	
Property Name: DPW Yard				
Structural Storm Water Control	**Inspection Frequency**	**Maintenance Schedule**	**Inspection and Maintenance Conducted and Location of Log (if applicable)**	**Effectiveness of Control and Support Documentation**
Stormwater Detention & Settling Pond	Yearly	Yearly	Pond inspection logs completed & located in DPW break room.	Effective: Pond is being maintained and functioning properly.
Grit & Oil / Water Separator	Yearly	Yearly	Cleaned 1-7-2016 via Plummer's Environmental Services	Effective: Separator has remained in good working order & has not caused any backups.
Property Name: City Central Park				
Structural Storm Water Control	**Inspection Frequency**	**Maintenance Schedule**	**Inspection and Maintenance Conducted and Location of Log (if applicable)**	**Effectiveness of Control and Support Documentation**
Rain Garden	Yearly	Yearly Maintenance Frequency has been weekly for the summer due to new plantings.	Rain garden is weeded once a week. Some replacement plants will need to be purchased next year once amount of growth is determined. Prairie Cordgrass is doing really well, Wild Bergemont/Black-Eyed Susans have had about a 50% success rate.	Absolutely effective: no invasive species present due to weekly hand-weeding.
Storm Water Controls Inspection, Maintenance, and Effectiveness: ***Nested Jurisdiction Kenowa Hills Public Schools***				
The City of Walker has a nested drainage system agreement with Kenowa Hills District Schools. The school district has multiple stormwater facilities outlined in the facility maps located on the City of Walker's server as well as at the Kenowa Hills Public Schools Administrative Building. Inspections and maintenance for these facilities in the reporting period is outlined in the following chart and all documentation is maintained at the Administrative Building located at 2325 4 Mile Road. A SWPPI procedure review is scheduled for May 2016 to evaluate inspection frequency and maintenance effectiveness.				
Catch Basins	Yearly	Yearly	Catch basins inspected in May and June. Logbooks are located at KHPS Administration Building.	Effective, structural controls are functioning as designed

Grassy Swales	Yearly	Yearly	Grassy swale maintenance is ongoing.	Effective, structural controls are functioning as designed
Vegetated Swales	Yearly	Yearly	Vegetated swales were maintained in June 2016.	Effective, structural controls are functioning as designed
Curb & Gutter	Yearly	Yearly	Curb and gutter maintenance is ongoing. Any debris is removed upon observation.	Effective, structural controls are functioning as designed
Detention Ponds	Yearly	Yearly	Visual inspections and maintenance cleared excess vegetation in June 2016. Additional maintenance is scheduled for late summer/early fall 2016.	Effective, structural controls are functioning as designed
Oil & Grit Separator	Yearly	Yearly	The oil & grit separator located in the bus garage at 4473 Remembrance Rd NW was cleaned out on 9/30/2015. See attached invoice.	Effective, structural controls are functioning as designed

Part 2C - Procedures Status

Procedure	Date Adopted	Date Revised (if needed)
Procedure to Dispose of Storm Sewer System Operation and Maintenance Waste	July 27, 2015: Included in 2014-15 Progress Report.	
Procedures to Construct, Operate, and Maintain Streets, Roads, Highways, and Parking Lots	September 2, 2010	
Procedure to Reduce Runoff of Total Suspended Solids (TSS)	September 2, 2010	
Procedure to Prevent Salt and Sand from Entering Receiving Streams	September 8, 2010	
Procedure to Control Dust and TSS in Runoff	September 8, 2010	
Procedure for Managing Vegetation on Permittee Owned Properties	September 8, 2010	
Procedure for Using Fertilizers on Permittee Owned Properties	September 8, 2010	
Procedure to Ensure Protection of Drainage Systems from Construction-Site Runoff	September 2, 2010	
		No Changes

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	Public Works Staff	Annually Every 3 years	**Written O&M Procedures (Reviewed in Staff Meeting)** **Storm Water Pollution Prevention - A Drop in the Bucket - DVD from Excal Visual, LLC**
Training completed:	No training completed during this period.	N/A	N/A
Controls on streets, parking lots, maintenance garages, and storage yards	Public Works Staff	Every 3 years Every 3 years Every 3 years	**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**
Training completed:	No training completed during this period.	N/A	N/A
Disposal of O&M waste	Public Works	Every 3 years	**Regulatory Requirements for Waste Disposal – Live Presentation**
Training completed:	No training completed during this period.	N/A	N/A
Water quality protection in flood control projects (detention basins, dams)	City Engineer City Planner	Every 5 years Every 5 years	**Retrofitting Detention Ponds for Water Quality – Live Presentation**

Training Topic Area	Employee Group to Receive Training	Training Frequency	Potential Training Type
Training completed:	No training completed during this period.	N/A	N/A
Controls to reduce discharge of pesticides, herbicides, and fertilizers	Public Works Landscape Contractors	Every 3 years Distributed with contract	**LGRW_LandscapingContractorTrainingBrochure_2011-08-01.pub**
Training completed:	Distributed with new contracts and to DPW staff.	Ongoing	"Stormwater Information for Landscapers and Homeowners" brochure.
Other Topics			
Construction site stormwater runoff	City Contractors	Distributed with contract	**LGRW_ContractorTrainingBrochure_2011-09-16.pub**
Training completed:	No training completed during this period.	N/A	N/A
Gravel Road Maintenance	Public Works Director or designee	Distributed with contract	**Keep An Eye On It! - Environmental Awareness for Gravel Road Maintenance - DVD from SEMCOG & Road Commission for Oakland County**
Training completed:	No training completed during this period.	N/A	N/A
LID	Engineering Dept City Planner	Every 5 years Every 5 years	**BMP Tour of GVSU Campuses – Walking Tour**
Training completed:	Engineering Programs Coordinator, Staff Planner	August 8, 2015	Green Infrastructure Tour of Grand Rapids—bus and walking tour.

Training Topic Area	Employee Group to Receive Training	Training Frequency	Potential Training Type
IDEP	City Field Staff • Assessing • Public Works • Fire • Police • Engineering • Community Development	Annually Annually	**WaterPollutionReportForm.doc** **Article_City_Employees.doc**
Training completed:	All Staff	Ongoing	Copies of Water Pollution Report Form and article were posted in employee break room throughout the reporting period.
General Storm Water Education	Elected officials	Every 4 years (Election term)	**"Back to Basics" Storm Water Training – Live Presentations as part of an overall update on the NPDES Program**
Training completed:	Ordinance Committee	6-22-2016	Overviewed the proposed Stormwater Ordinance update with Commission and staff members. Review included history, purpose, and importance of proposed stormwater quality design changes.

Part 2E - Post Construction Controls Activities

The City of Walker has a Post-Construction Storm Water Ordinance, Chapter 67 of the City Code, adopted on April 28, 2003 that controls stormwater in areas of new development and significant redevelopment. It includes various levels of control depending on zones established based on the sensitivity of the receiving waters. Any site which proposes to add impervious area or proposes an addition or amendment to the onsite stormwater system is required to first obtain a stormwater permit. As part of this permit, a stormwater plan is reviewed to ensure that the design brings the site up to current ordinance standards. The ordinance also ensures that the owners of facilities constructed to meet the stormwater requirements properly operate and maintain the facilities through the use of a stormwater maintenance agreement.

The City of Walker has always been a master planned community. Topics and priorities have changed somewhat since the early 1960s. However, recent editions of the Walker Master Plan note the need to regulate development consistent within agreed-upon public utility boundaries. Other modern priorities include the sustainable management of stormwater, the protection of floodplains and wetlands, and the use of creative zoning techniques such as clustering and open space design.

The City of Walker has a Zoning Ordinance and requires the approval of the regulatory agency (DEQ) for site plans and/or development that threatens sensitive areas such as wetlands, floodplains and riparian areas.

The City of Walker encourages Low Impact Development practices at sites of new development and significant redevelopment during site plan review and stormwater design review. The City is currently working to add language to the updated Master Plan to encourage Low Impact Development.

Explain the enforcement activities of your comprehensive storm water management program for post-construction controls completed during this reporting period:

We have obtained full compliance throughout the calendar year—asbuilts and maintenance agreements have either been received from every project or are in the process of submittal. However, one property performed a storm sewer improvement project without approval. The City was able to receive asbuilts for the project, but no stormwater maintenance agreement was submitted. A notice of violation was sent via certified mail to the property owner's P.O. Box but was never returned. Since Chapter 67 of the City Code requires private facilities to perform on-site maintenance and the design was received, further enforcement to obtain a completed agreement was not pursued.

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

20

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

Yes—16 stormwater maintenance agreements have been signed and recorded at the Kent County Register of Deeds. The 4 approved projects that did not complete stormwater maintenance agreements are City projects and thus any new stormwater facilities will be maintained by the City.

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

Upon completion of a project, a stormwater permittee must submit certified asbuilts of the completed development. This year, 12 asbuilts were submitted to the City of Walker. The purpose of the asbuilt is to certify the development is in compliance with Chapter 67 of the Walker City Code and built the onsite stormwater system according to the original approved plan.

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.

The Post Construction Controls have addressed other issues by prioritizing and encouraging the sustainable management of stormwater, the protection of floodplains and wetlands, and the use of creative zoning techniques such as clustering and open space design. The City of Walker's stormwater permit program ensures long-term maintenance of private stormwater conveyance systems.

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.

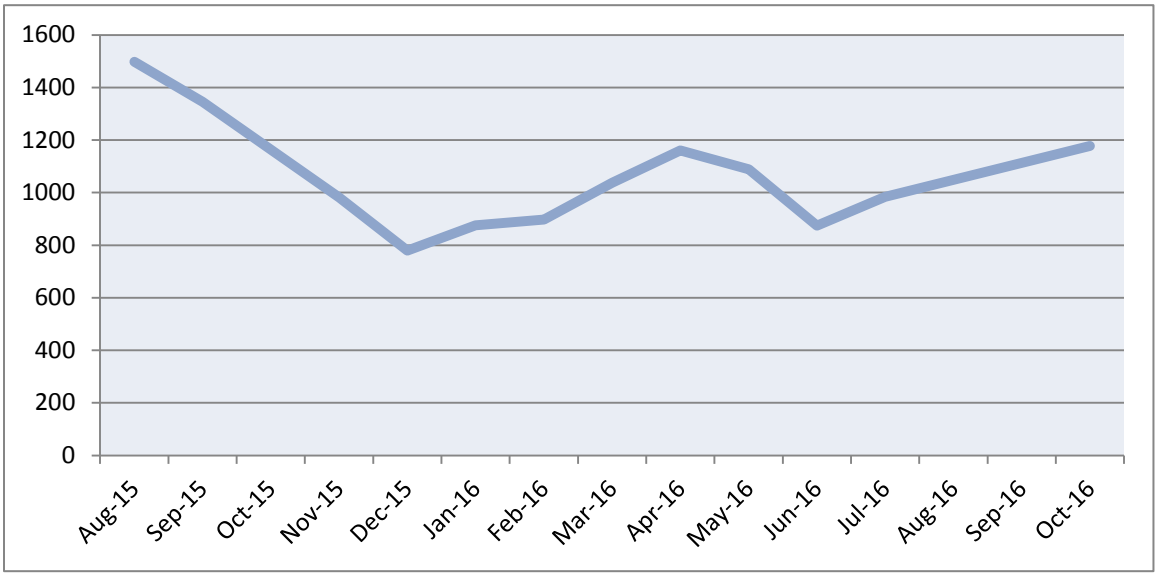
Target Audience: Residents, visitors, and public employees

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.

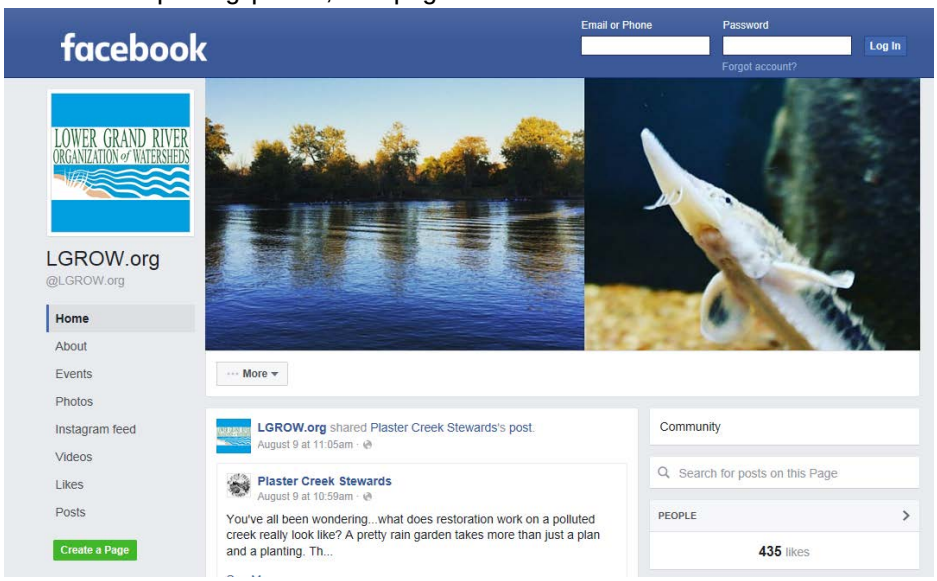
Delivery Method:

- 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

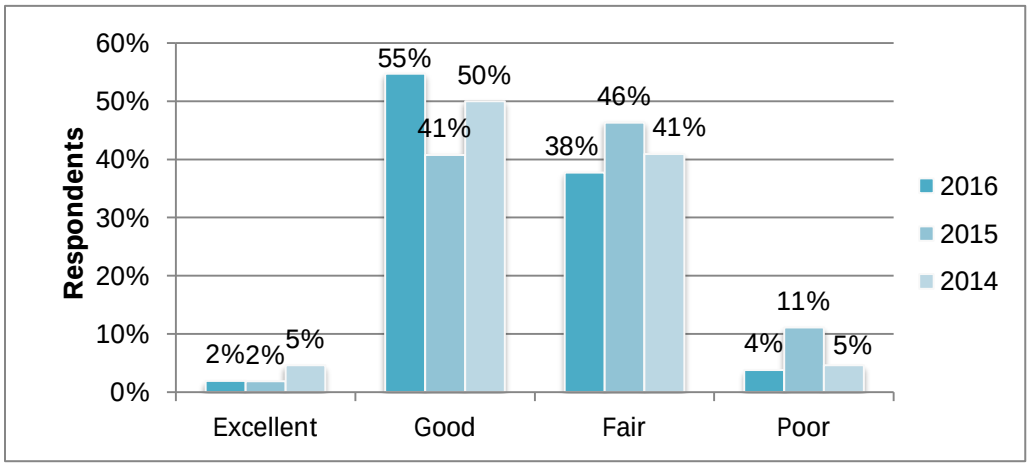
information on nonpoint source pollution, a photo of the mural and the location of the actual mural at Sixth Street Bridge Park. LGROW encouraged students to visit the mural to see the items up close. Participants also received an LGROW reusable water bottle to take home.

- 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

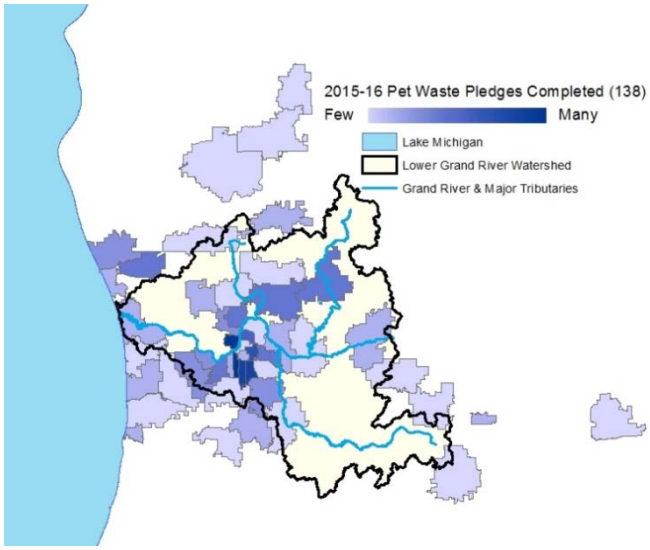
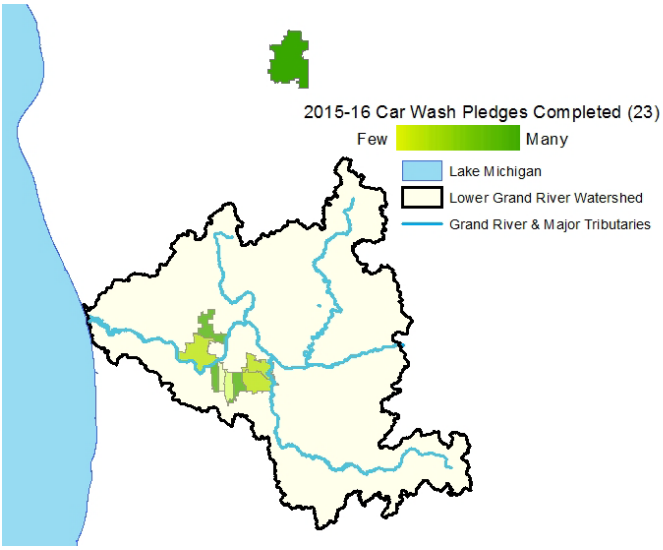


Figure 5. Car Wash Pledges by Zip Code



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

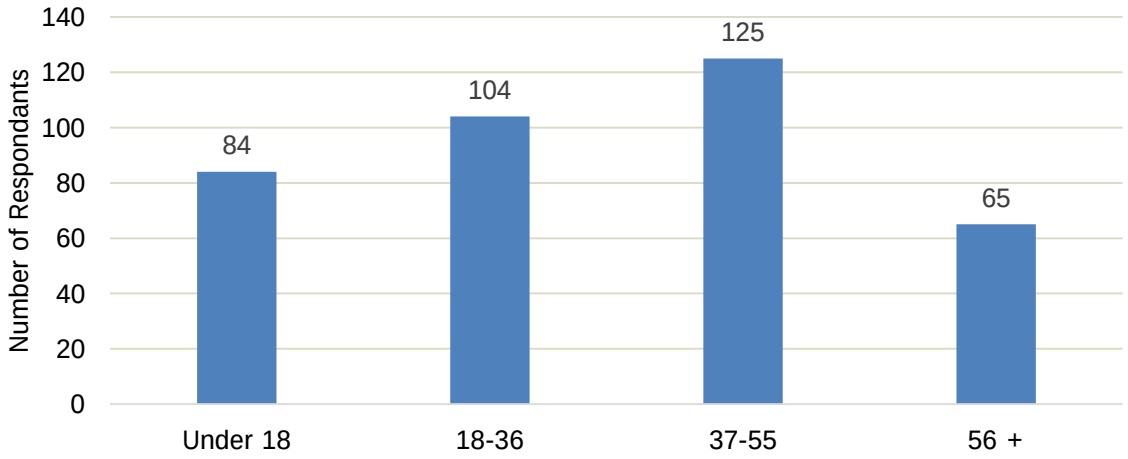
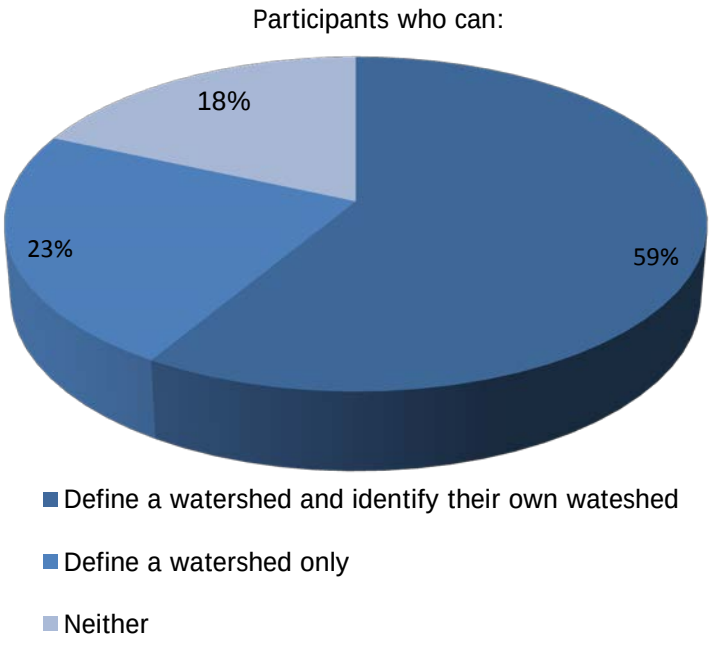


Figure 8. What is a watershed & which one do you live in?



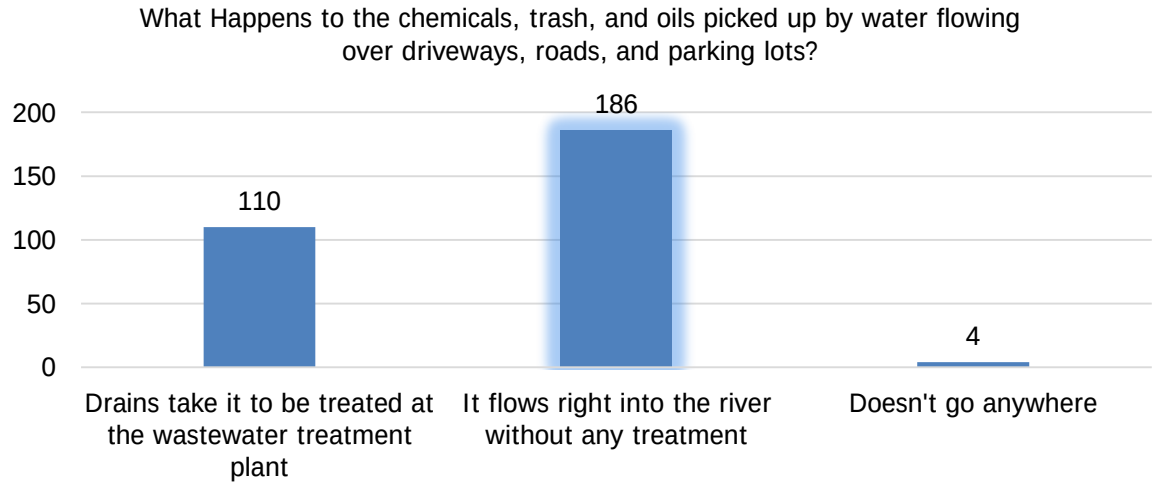
In evaluating PEP Objective 1, personal watershed stewardship, the survey first asked participants to identify the correct definition of a watershed. Of those surveyed, 82% of respondents answered correctly. Of those that answered incorrectly, 10% chose a wrong selection and 8% said they did not know 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%.

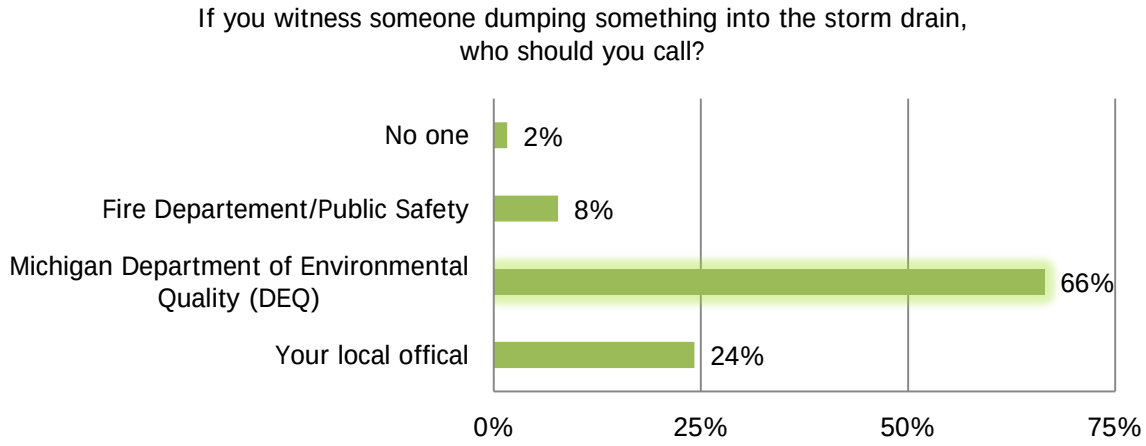
Figure 9. Where does stormwater end up?



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



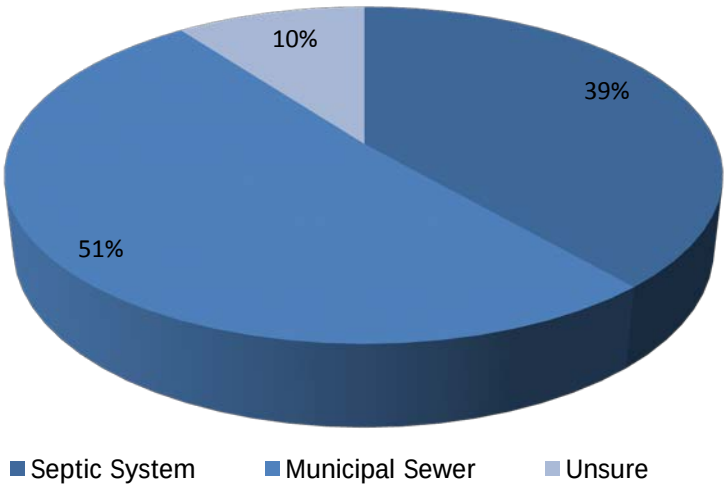
With multiple correct responses, 98% of respondents chose to report the discharge, while only 2% said that they would call no one if they witnessed someone dumping into the storm drain. Of the respondents who would report, approximately 66% identified MDEQ as the agency to contact. While this is correct, 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.

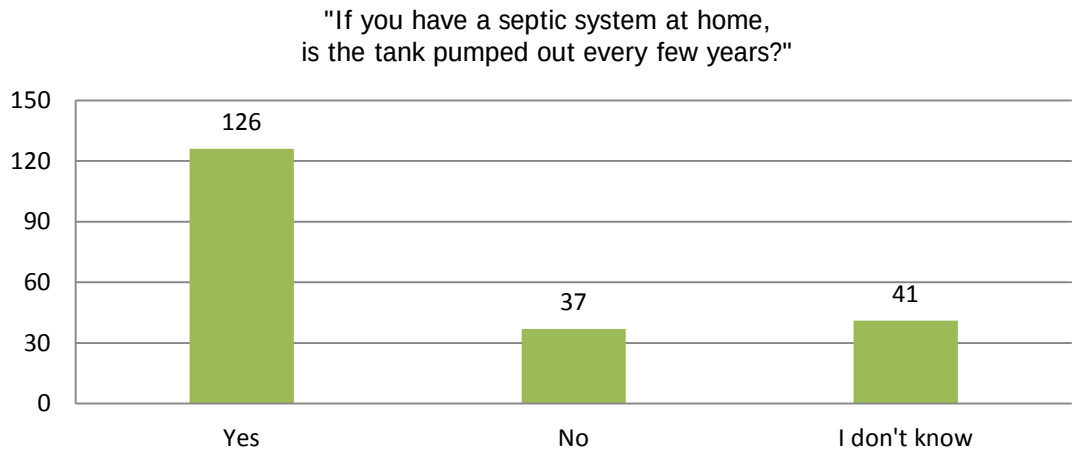
Figure 11. Where is your home's wastewater discharged?

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.

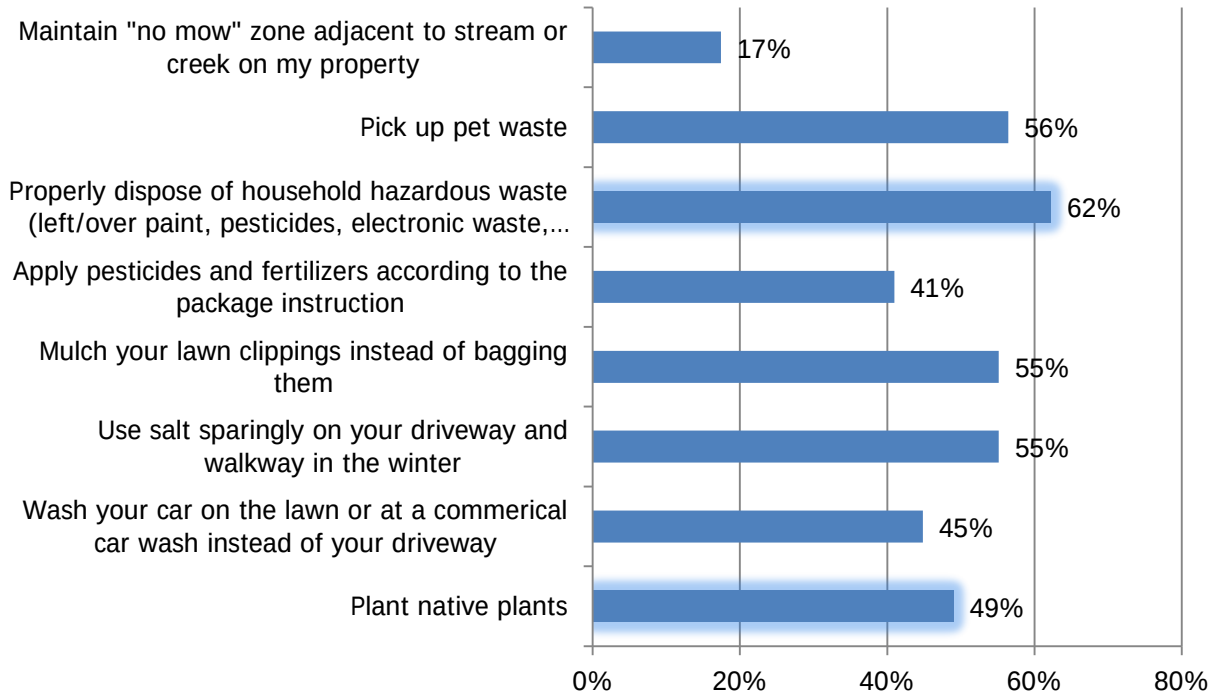
Figure 12. Septic System Maintenance



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?



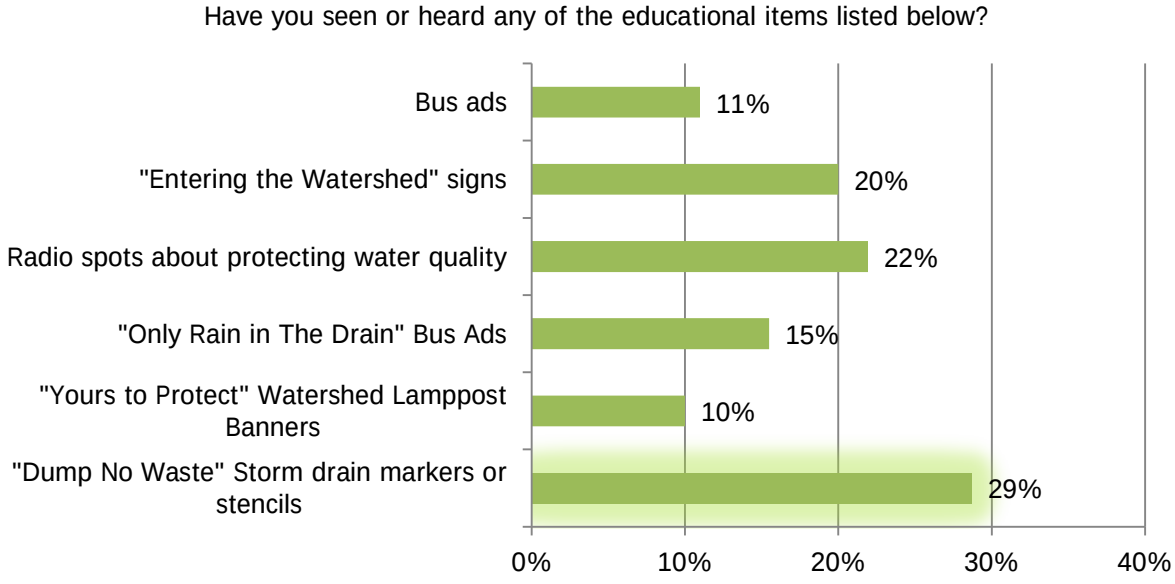
PEP objective 5 is waste management assistance and sets a 9% increase in the number of watershed residents dropping off HHW during collection events as the third year milestone. In 2015, Kent County switched their household hazardous waste collection from an appointment only system to regularly scheduled 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.

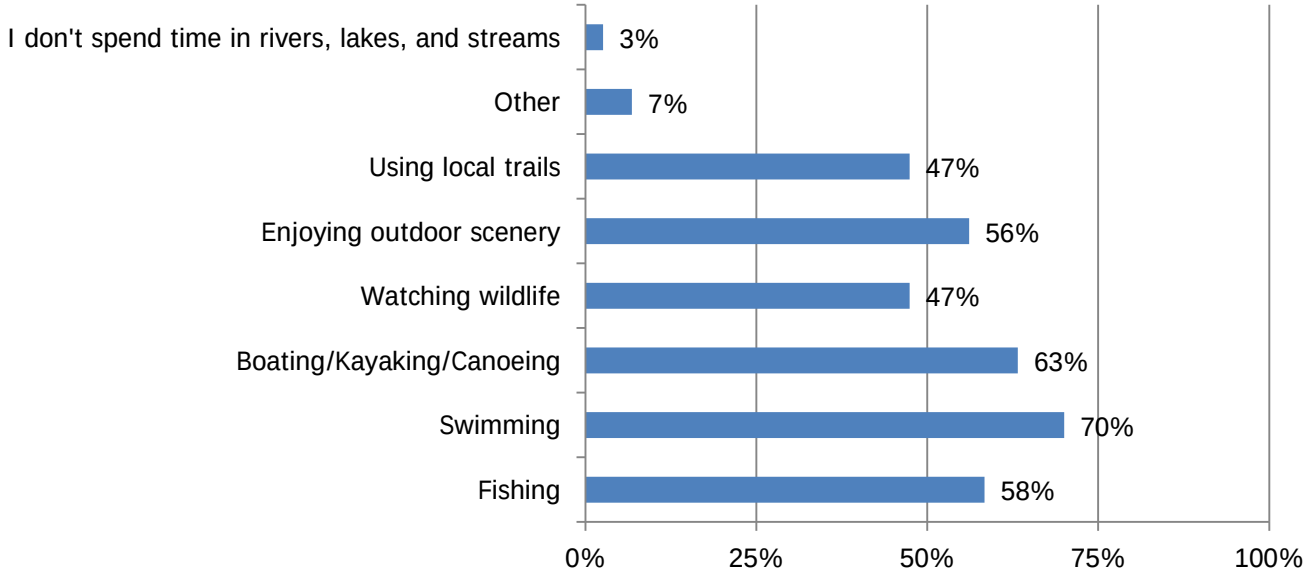
This survey was also an opportunity to evaluate which of the different outreach items/methods were the most visible. The three most visible outreach tools were the drain markers, radio spots, and entering the watershed signage. When broken out by age groups, drain markers were the most frequently observed 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 Walker

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? ~200

4. What was the most popular give-a-way from the materials distributed in your community? Kids' Coloring Books

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.lgrow.org/uploads/files/Citizens_Reporting_Brochure_withnote.pdf)

6. How many "Citizens Reporting Brochures" were customized and distributed to your residents? Provided Electronically
   Was the "Citizens Reporting Brochure" posted to your city website? ☒Yes, at http://www.ci.walker.mi.us/resident/community_resources/report_water_pollution.php ☐No
   Please describe any interest, comments, or discussion generated from the brochure: None
   How many complaints were received from the general public regarding illicit discharges? None

Lamppost Banners

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

   ☐Yes, at _____(street names/ location) on _____ (dates). Please describe any public feedback generated_____
   ☒No, but we will display our banners at North Park Bridge (street names/ location) in 2013 (dates)
   ☐We did not order lamppost banners.

Newsletter Articles (available at: http://www.lgrow.org/MS4articles)

8. Did you distribute newsletter articles to your residents?
☒Yes, on 5/1/16 (date); Via: ☐print ☒web ☐other
Topic(s): Watershed friendly activities, "We all live in a watershed". _____
_____
☐No, but we will on _____ (date)

9. Please describe any interest, comments, or discussion generated from the articles None

10. If applicable, list the newsletter name or webpage address used to distribute stormwater information to the public http://www.ci.walker.mi.us/email_newsletter_sign_up/index.php

11. If applicable, how many residents received your community newsletter? 2526

12. If applicable, how many total website hits did you receive for your online newsletter articles? _____

Stormwater Interactive Displays

13. Did you set up the stormwater poster board display?
☒Yes, on 6/13/16 (dates) at KDL Library-Walker Branch (location).
☐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, 10 (approximate number)
☐No

20. Please describe any interest, comments, or discussion generated from the pledges and the associated giveaway: Anyone who had a dog wanted to complete the pledge.

Car Wash Pledges

21. Did your community collect car wash pledges distributed with the public education materials?
☒Yes, 4 (approximate number)
☐No

22. Please describe any interest, comments, or discussion generated from the pledges and the associated giveaway: Most residents stated that they wash their cars at the carwash and not at home.

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 held a storm drain stenciling event on _____ (dates) and stenciled _____ (streets)
☐Yes, we have approximately _____ (no.) pre-marked catch basin backs/grates with the message "No dumping, drains to waterway"
☐Yes, we hung door knob flyers on _____ (streets) on _____ (dates)
☒No, but we plan to implement storm drain marking (activities) on Fall 2016 (dates)

23. Please describe any interest, comments, or discussion generated from the activities above N/A

24. Have you noticed a reduction in storm drain dumping?
☐Yes, if so, please describe _____; ☒No, if so, please describe No dumping reported.

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: 5/25/2016 Number of Attendees: 7
☐River Clean Up(Location): _____ Date: __/__/____ Number of Attendees: __
☒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 11/13/2015
☐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: Looking Glass River Expedition Date: 6/3/2016-6/5/2016 Number of Attendees:60

Describe any materials distributed, number of attendees, messages distributed: We have all of our public education materials available at each community stormwater event. These include our dog waste/carwash pledges, informational brochures, coloring books, water bottles, and reusable tote bags. Events for similar minded people, such as the Quiet Water Symposium, our materials are popular and well received. However, events that usually don't include an environmental message, such as the White Caps game, most attendees are eager to learn more about stormwater quality and have a lot of questions.

26. If applicable, please describe any other stormwater public education activities your community implemented beyond the events described above. (Submit any relevant documentation): Walker engaged the Walker Garden Club to replant our Rain Garden with native plants purchased from the Kent Conservation District. It was rewarding to engage a new demographic with stormwater quality. A new group in the works is Friends of Indian Mill Creek. This will engage area schools, Scouts, and residents of three different communities in the health of the watershed.

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.
No dry weather screening was completed during 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.
A DPW employee observed what appeared to be an oily sheen near a sanitary sewer manhole near North Center Drive at Alpine Ave in an area that previously had a sanitary backup caused by grease. Initial investigation looked like the oily sheen was caused by red algae and that the sanitary sewer was functioning properly. Ammonia test strips showed no measurable ammonia in the water. The City of Grand Rapids was contacted to pull the sanitary manhole to ensure that no backup was occurring in this area. Their investigation determined that the sanitary sewer was functioning properly and the oily sheen was caused by natural bacteria.
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 ongoing illicit discharges in this reporting period.

Please describe actions taken when indications of illicit discharges have been identified, if any.
If the discharge is observed, the discharger is contacted directly to resolve the issue. Excluding accidental discharges, such as those related to a crash or equipment malfunction, first time minor discharges receive a letter and are required to purchase a stencil to stencil all catch basins in the area of the discharge. If the discharge occurs at a business, we also require that all staff watch an informational video on stormwater pollution prevention. A sign in sheet is provided to the Cirty after the training to document who attended. Failing septic system discharges are referred to KCHD for enforcement and follow-up. Any large scale or repeat discharge is handled through ordinance enforcement. Chapter 67 Article IV details prohibited discharges. Article VI details enforcement procedures for ordinance violation which include municipal civil infraction and fines of up to $5,000.00 for a second offense.
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)*.
No known discharges occurred, therefore no discharges were eliminated and no volume is available.

Identify any specific coordination with the health department in response to illicit discharge elimination for failed or failing septic fields.
No failed or failing septic fields were reported during this reporting period.
Describe the effectiveness of the program to prevent illicit discharges and the method used to assess effectiveness.
Our program is very effective. Our ordinance, combined with the training of our staff and residents has provided a mechanism whereby discharges are quickly reported and immediately dealt with. We have enjoyed a high degree of cooperation from dischargers in the past to ensure that discharges) which for the most part have been accidental) do not negatively impact the environment. We have had no repeat dischargers.

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**
Kenowa Hills Public Schools	☒ Yes ☐ No	☐ Yes ☒ No
	☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No	☐ Yes ☐ No
Comments:		

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**:
In May 2016, the local garden club teamed up with the City of Walker employees to replant our rain garden outside our public library. The garden was originally overgrown with an aggressive plant species that Department of Public Works employees ripped out with mechanical equipment. Native plants were sourced from the Kent Conservation District's Native Plant sale. Now, with frequent weeding, the garden is beginning to reestablish. This garden lies in the Sand Creek watershed and is also an excellent learning opportunity for kids in the library.
Please list any other actions your community has conducted to reduce stormwater pollution
The City of Walker hosts clean up days in the spring and fall. During this time, residents can drop off leaves at City Hall during business hours. This is a wildly popular service: almost 40 tons of yard waste, old appliances, and various other items were dropped off in May. On top of making appliance disposal accessible, this service also reduces yard waste, lowering the amount of leaves in catch basins, ditches, and drainage easements.

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

Main Report

Summary Customer Activity Report

All Ticket Types
History and Waiting
* - Confirmed Qty Applied to Billing

August 01, 2015 to July 31, 2016
Specific Customer(s) : 386

All Facilities

Customer	Weight Inbound	Weight Outbound	Volume Inbound	Volume Outbound	Count Inbound	Count Outbound	Billing Qty	Material Total	Tax Total	Total	Item Count	Ticket Count
000386- WALKER CITY OF												
MSW	2.74	0.00 TN	0.00	0.00 YD	0.00	0.00	2.74 TN	$236.07	$5.59	$241.66	5	
C&D → Spring cleanup	37.08	0.00 TN	0.00	0.00 YD	0.00	0.00	37.08 TN	$566.57	$75.64	$642.21	13	
SW-CONT SOIL	67.46	0.00 TN	0.00	0.00 YD	0.00	0.00	67.46 TN	$944.44	$137.63	$1,082.07	9	
SW-STREET SWEEPINGS	416.22	0.00 TN	0.00	0.00 YD	0.00	0.00	416.22 TN	$6,945.04	$711.58	$7,656.62	47	
Customer Totals:	523.50	0.00 TN	0.00	0.00 YD	0.00	0.00	523.50 TN	$8,692.12	$930.44	$9,622.56	74	74
	523.50	0.00 TN	0.00	0.00 YD	0.00	0.00	523.50 TN	$8,692.12	$930.44	$9,622.56	74	74

C.B.

Crowley, Catie No Items

City of Walker

Reporting Dates 08/01/2015 07/31/2016

Cost Summary By Task

Task	Activities	Labor Hours	Labor Cost	Eqp Cost	Mat Cost	Con Cost	Overhead	Total Cost
101-Sewer & Ditches	359	1,500.50	$35,563.03	$41,638.90	$0.00	$0.00	$0.00	$77,201.93
102-Basin Cleaning	42	205.50	$4,833.70	$4,558.37	$0.00	$0.00	$0.00	$9,392.07
103-Street Sweeping	64	447.00	$10,540.58	$32,915.58	$0.00	$0.00	$0.00	$43,456.16
104-Sewer/Street Sweeping Disposal	21	41.00	$1,014.13	$1,830.55	$0.00	$0.00	$0.00	$2,844.68
116-Curb Replacement/Sidewalk Repl	47	207.00	$4,881.80	$7,752.62	$0.00	$0.00	$0.00	$12,634.42
117-Catch Basin Repair	24	118.00	$2,740.52	$5,624.28	$0.00	$0.00	$0.00	$8,364.80
123-Cave-In	44	214.50	$5,144.72	$8,980.23	$0.00	$0.00	$0.00	$14,124.95
206-Sidewalks-Summer Maint.	48	234.50	$5,582.06	$10,995.40	$0.00	$0.00	$0.00	$16,577.46
Tasks: 8	**649**	**2,968.00**		**$114,295.93**		**$0.00**		**$184,596.47**
			$70,300.54		**$0.00**		**$0.00**	

Appendix 2-B-i: Storm Water Controls
Inspection, Maintenance, and Effectiveness
Nested Jurisdiction Stormwater Activities
August 1, 2015 to July 31, 2016

The City of Walker has a nested drainage system agreement with Kenowa Hills District Schools. The school district has multiple stormwater facilities outlined in the facility maps located on the City of Walker's server as well as at the Kenowa Hills Public Schools Administrative Building. Inspections and maintenance for these facilities in the reporting period is outlined in the following chart and all documentation is maintained at the Administrative Building located at 2325 4 Mile Road. A SWPPI procedure review is scheduled for May 2016 to evaluate inspection frequency and maintenance effectiveness.

Structural Storm Water Control	Inspection Frequency	Maintenance Schedule	Inspection and Maintenance Conducted and Location of Log (if applicable)
Catch Basins	Yearly	Yearly	Catch basins inspected in May and June. Logbooks are located at KHPS Administration Building.
Grassy Swales	Yearly	Yearly	Grassy swale maintenance is ongoing.
Vegetated Swales	Yearly	Yearly	Vegetated swales were maintained in June 2016.
Curb & Gutter	Yearly	Yearly	Curb and gutter maintenance is ongoing. Any debris is removed upon observation.
Detention Ponds	Yearly	Yearly	Visual inspections and maintenance cleared excess vegetation in June 2016. Additional maintenance is scheduled for late summer/early fall 2016.
Oil & Grit Separator	Yearly	Yearly	The oil & grit separator located in the bus garage at 4473 Remembrance Rd NW was cleaned out on 9/30/2015. See attached invoice.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	MIK 366415610	1	616-836-2282	005395335 FLE

5. Generator's Name and Mailing Address: Kerkstra Waste Recovery + Enviro Svc Inc. 7290 Brandon Ave Muskegon MI 49442

Generator's Site Address (if different than mailing address): 1451 Walker Ave Muskegon, MI 49442

Generator's Phone: (616) 231-773-2326

6. Transporter 1 Company Name: Kerkstra Waste Recovery + Enviro Svc Inc. — U.S. EPA ID Number: MIK 366415610

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Kerkstra Waste Recovery + Enviro Svc Inc. 1451 Walker Ave Muskegon MI 49442 — U.S. EPA ID Number: MIK 366415610

Facility's Phone: (616) 231-773-2326

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. Other Waste	01	TT	500	G	034L
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

Oily Water / Sludge, From oil/Shop - [illegible]

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: [illegible] | Signature: [signature] | Month 9 Day 30 Year 15

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible] | Signature: [signature] | Month 9 Day 30 Year 15
Transporter 2 Printed/Typed Name: | Signature: | Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Leah Dunmella | Signature: [signature] | Month 1 Day 1 Year 15

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

City of Walker
Ordinance Committee Meeting
Wednesday, June 22, 2016
5:00 PM

Committee Members Present: Commissioners: Cyndy Stek, Dan Kent and Sandra Howland. Also Present: Staff Planner / Zoning Administrator Dan Power and Engineering Programs Coordinator Rachell Nagorsen.

Commissioner Stek called the meeting to order at 5:25 pm.

Motion by Howland, seconded by Kent, to approve the Ordinance Committee Minutes from 7-22-15. Motion carried.

Rachell Nagorsen, City Engineering Programs Coordinator, presented on the Stormwater Ordinance update to the ordinance committee. She stated that adoption of rules from 2008 are now being enforced with Walker's new permit application and terms, which is due to the Michigan Department of Environmental Quality (MDEQ) in 2016. She stated actual adoption and implementation of the new Stormwater Ordinance will take anywhere between 6-18 months. The ordinance was sent back to engineering to review the payment-in-lieu option.

Staff Planner / Zoning Administrator Power brought the following four items to the Ordinance Committee for discussion:

1) **Removal of signs on demolished site – revisited (update)**

Dan Power introduced a series of versions of the proposed ordinance with notes and options to move forward with. He requested that the committee review and make their recommendations before he asks the Planning Commission to solidify their goals and preferred language prior to a final public hearing. There was discussion held on possibly placing a stipulation of a time frame / time limit or showing proof of actively looking to put in a business. Power stated that the problem with enforcing a time limit will be that it is difficult to know when a site is vacated. Power stated that he could look into what possible time limit to enforce and compare to other jurisdictions. Power was instructed to send it back to the Planning Commission for discussion and review of two option: keeping it as is currently revised or adding the time limit stipulation.

2) **Front yard parking allowances in ML – Light Industrial and MH – Heavy Industrial zoning districts**

Dan Power stated that the current ordinance goes against what is common fact. There are a lot of front yard parking lots in industrial lots. Walker's zoning ordinance has a provision that prohibits front yard parking in industrial. The committee reviewed the proposed zoning ordinance amendment to disambiguate these ordinances. The ordinance amendment will address the temporary parking of trucks or employee vehicles and not long-term vehicle or trailer storage. There was discussion held.

Motion by Howland, seconded by Kent to have Dan Power send the proposal to Jeff Sluggett for further language cleanup and then to the Planning Commission for further review. It will then be brought back to the Ordinance Committee for final approval.

3) **Graphic zoning ordinance guides**

Dan Power presented visual references and graphics to be placed in the city's zoning ordinance. Power stated that many layout and placement requirements in the zoning ordinance are best understood through visual references. There was discussion held.

The Ordinance Committee instructed Power, Community Development Department to add graphics and visual references to the Zoning Ordinance to be brought to the City Commission for approval.

4) **Fence ordinance updates: Clarifying the "Fence" definition and graphic references**

Dan Power requested permission from the committee to draft definition and graphic references for the Fence ordinance. He stated that the city does not currently have a definition of what a fence is. There was discussion held and the committee approved. CDD will draft an ordinance definition for 'Fence' and graphic references and bring back to the Ordinance Committee for review and further discussion.

Meeting adjourned at 6:45 pm.

Respectfully submitted,

Jessica A. Marion, Deputy City Clerk

Rachell Nagorsen

From: Rivette, Carrie <crivette@grand-rapids.mi.us>
Sent: Monday, April 25, 2016 3:22 PM
To: Rachell Nagorsen
Subject: RE: Oil Sheen in Walker near Sanitary Manhole

Rachel,

We inspected these last week and the mains were flowing fine and there was no sign of grease backup in the manhole.

Thanks for letting us know, though!

Carrie

City of Grand Rapids
Wastewater/Stormwater Maintenance Superintendent
crivette@grcity.us
(616) 456-3057 (phone)

From: Rachell Nagorsen [mailto:rachell.nagorsen@ci.walker.mi.us]
Sent: Tuesday, April 19, 2016 3:28 PM
To: Rivette, Carrie <crivette@grand-rapids.mi.us>
Subject: Oil Sheen in Walker near Sanitary Manhole

Carrie:

One of our DPW employees saw an oily sheen today near a sanitary manhole near North Center Drive near Alpine Ave in an area that previously had a sanitary backup caused by grease. I checked it out and some looks like the sheen caused by red algae but there was a darker area with a sheen that seemed to be heavier. Ammonia tests yielded 0, so it may just be standing water and nothing to worry about. We couldn't get the manhole up though so I wanted to let you know the location in case you want one of the sewer maintenance people to check it out.

A good reference address is 730 North Center Ct NW. My coordinates at the manhole cover were 43 1' 34" N 85 41' 3" W. I attached photos for your more trained eye to see if this is worth checking out.

Hope your week/spring is going well!

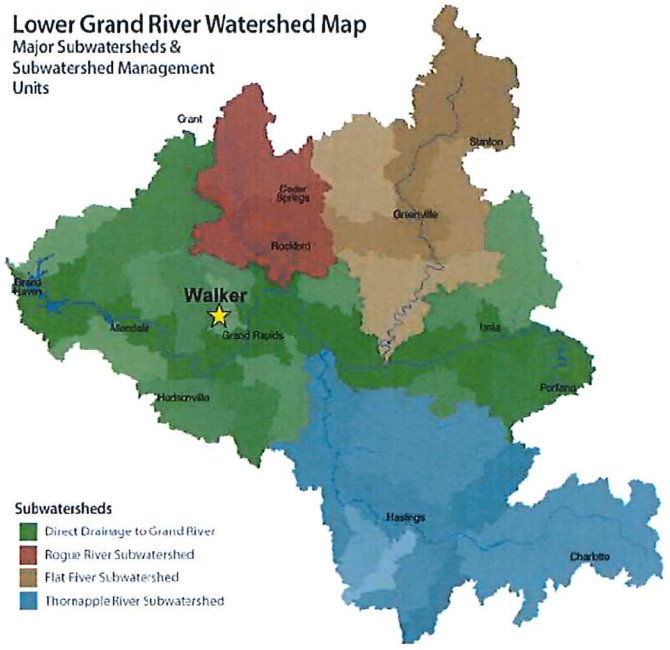
Rachell Nagorsen
Engineering Programs Coordinator
City of Walker | 4243 Remembrance Road NW
Phone: 616-791-6327 | Fax: 616-791-6808

The Engineering Department is staffed Monday-Friday from 7:00 AM to 3:30 PM

Engineering Department

What Can You do to Help Protect Your Watershed?

Do you know what a watershed is? Did you know you're in a watershed right now? A watershed is an area of land that drains into the same place, whether that be a lake, river, or other body of water. When it rains in Walker, all of the rainfall, or storm water runoff, drains into the Grand River. In fact, all of the land that drains into the Grand River, also referred to as the Grand River Basin, represents a subwatershed of the Lake Michigan Basin since all of our storm water runoff eventually enters the lake. Not all of the rain that falls in Walker immediately enters the Grand River, however. We ha ve multiple streams in the City that storm water from your property may enter first. To find out which subwatershed you live in, enter your address in the Lower Grand River Watershed Map .



Unfortunately, storm water can carry a lot of harmful waste on its w ay to our lakes and streams. This includes gas and oil from parking lots, litter, pet waste, and various other pollutants. You can help reduce the pollutants entering our waterways and their negative impact on our environment, ranging from picking up after your pet to installing a rain barrel on your property. For a full list of stormwater friendly activities, visit the Lower Grand River Organization of Watershed's Resource Page .

Walker Ice & Fitness Center

Updates and Events

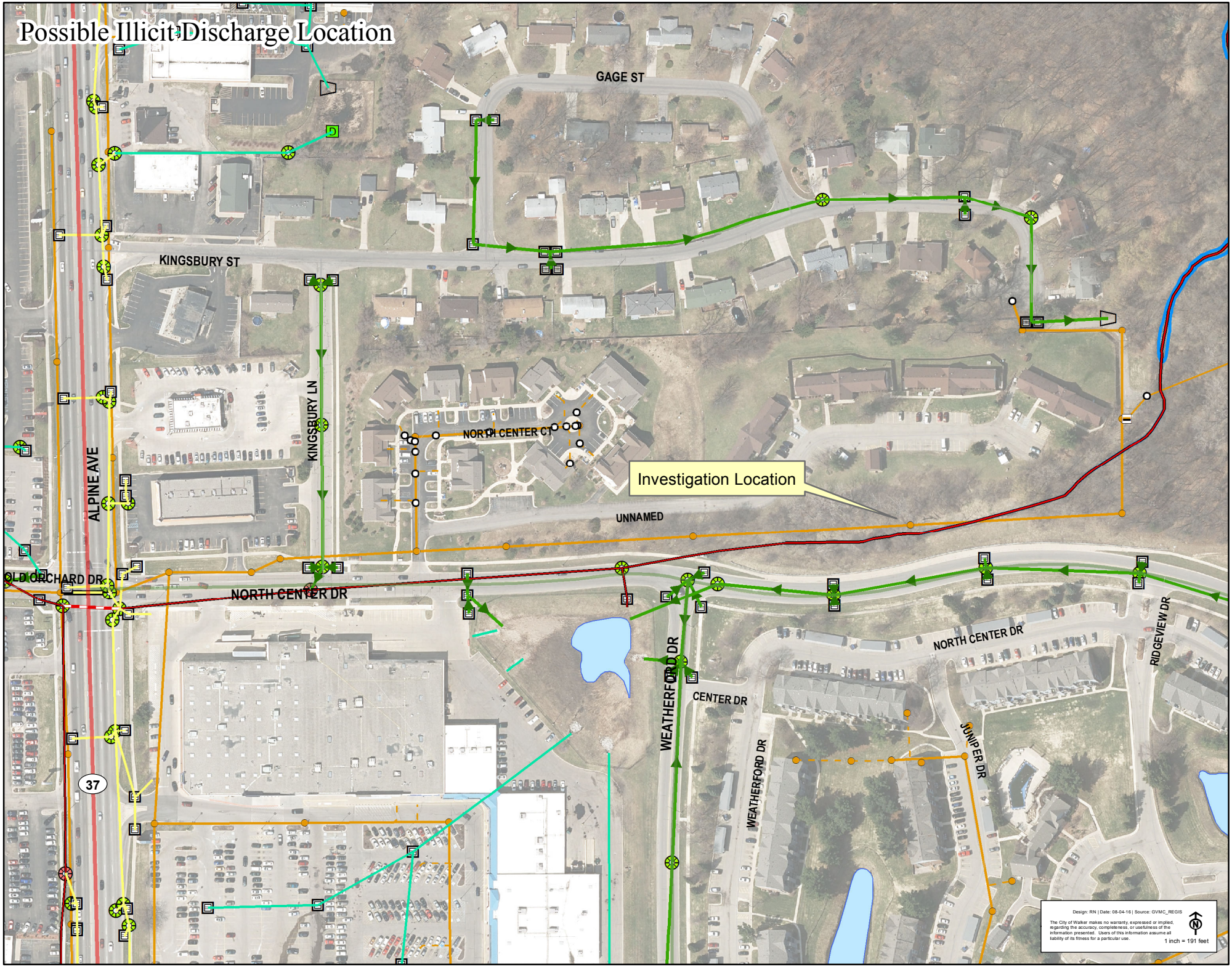
Walker Memorial Day Parade

- Monday, May 30, 2016 - 12:00 p.m
- Parade route - Lake Michigan Dr. NW between Lincoln Lawn NW and St. Clair NW
- All veterans, bands, floats, companies and organizations are invited to participate

For complete information on all of our programs, special events and schedules, please contact the Walker Ice and Fitness center at (616)735-6286, visit our facebook page or our website at www.walkericeandfitness.com

Photos of possible sanitary backup. Investigations yielded no sanitary backup and no presence of ammonia in standing water. Water was ruled to be simply standing water.

Possible Illicit Discharge Location




rain garden