Lower Grand River Watershed Progress Report

City of Walker

Reporting Period: August 1, 2017– July 31, 2018

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
DIP	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
NPDES	National Pollutant Discharge Elimination System
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

Purpose

This Lower Grand River Watershed Progress Report was developed by the Grand Valley Metropolitan Council's (GVMC) Department of Environmental Programs in collaboration with the regulated communities within the Lower Grand River Watershed. This document satisfies the requirement set forth in the Michigan Department of Environmental Quality's (MDEQ) National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge General Permit, Storm Water Discharges from Municipal Separate Storm Sewer Systems (MS4s) Subject to Watershed Plan Requirements as outlined in Section B(3).

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 49534
Telephone (with area code)	616-791-6327
Fax (with area code)	616-791-6808
E-mail	rnagorsen@walker.city
Stormwater Program Manager	
Name	Same as above
Title	
Address	
City, State, Zip	
Telephone (with area code)	
Fax (with area code)	
E-mail	
Stormwater Permit Fee Billing Address	
Name	Same as above
Title	
Address	
City, State, Zip	
Telephone (with area code)	
Fax (with area code)	
E-mail	

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. Municipal Separate Storm Sewer System (MS4) permittees participate in the Lower Grand River Organization of Watersheds (LGROW) committees. 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
- Sustainability Committee
- Fund Development and Membership Committee
- LGROW Executive 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. LGROW Committee Membership List as of July 31, 2018

Community	Representative	Public Engagement	Stormwater Ordinance	Technical	Sustainability	Fund Development & Membership	LGROW Executive
Cascade Charter Township	Mr. Steve Peterson						
East Grand Rapids, City of	Mr. Brian Donovan					X	X
East Grand Rapids, City of	Mr. Doug LaFave						
Forest Hills Public Schools	Ron Boezwinkle						
Fruitport, Village of	Jeremy Statler						
Georgetown Charter Township	Mr. Rod Weersing	X					
Grand Haven, City of	Ms. Cheryl Davidson	X					
Grand Rapids Charter Township	Bob Versluys						
Grand Rapids, City of	Mr. Mike Lunn			X			

Table 1. LGROW Committee Membership List as of July 31, 2018							
Community	**Representative**	**Public Engagement**	**Stormwater Ordinance**	**Technical**	**Sustainability**	**Fund Development & Membership**	**LGROW Executive**
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	X			
Grandville, City of	Mr. Ken Krombeen		X			X	X
Grandville, City of	Mr. Todd Wibright			X			
GVSU*							
Hudsonville, City of	Ms. Jill Frielink	X					
KCDC	Mr. Brad Boomstra		X				
KCRC	Mr. Bruce Schutte	X					
Kent County Health Department*	Mr. Brendan Earl	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	Ms. Kelsey Sloan	X		X			
MDEQ*	Ms. Amanda St. Amour						
MDEQ*	Ms. Michelle Storey	X				X	
MDEQ*	Ms. Dana Strouse	X		X			
OCWRC	Mr. Dennis Cole	X	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					

Table 1. LGROW Committee Membership List as of July 31, 2018							
Community	**Representative**	**Public Engagement**	**Stormwater Ordinance**	**Technical**	**Sustainability**	**Fund Development & Membership**	**LGROW Executive**
Spring Lake, Village of	Ms. Chris Burns						
Walker, City of	Mr. Scott Conners		X			X	X
Walker, City of	Ms. Rachell Nagorsen	X	X	X	X		X
Wyoming, City of	Mr. Aaron Vis	X		X			X
Wyoming, City of	Mr. Myron Erickson		X				

Public Engagement Committee

The Public Engagement Committee met on September 13, 2017, November 8, 2017, January 10, 2018, February 14, 2018, and May 16, 2018 during the reporting period. Agendas and minutes for the meetings are posted to https://www.lgrow.org/public-engagement. Throughout the reporting period, the group focused on implementation of the updated Public Education Plan (PEP) approved in February of 2013, available here: https://www.lgrow.org/ms4information.

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. The group focuses on messaging and outreach events that address the target messages of: Personal Watershed Stewardship, Ultimate Stormwater Discharge, Public Reporting of Illicit Discharges, Personal Actions that can Impact the Watershed, Waste Management, Management of Riparian Lands. A detailed list of these events and the outreach conducted during this reporting period is provided in Part 3.

SWOrd Committee

The Storm Water Ordinance (SWOrd) Committee met on January 12, 2018, March 9, 2018, March 27, 2018, May 15, 2018 and July 16, 2018 during the reporting period. Meetings were focused on follow up

items related to the LGRW alternative approach, the model ordinance, the standards manual, and the stormwater design spreadsheet for MS4 permittees to utilize in their implementation of the new post-construction stormwater control requirements outlined in the 2016 NPDES Permit Application.

The committee finalized templates for the standards manual, model ordinance, the standards manual BMP design criteria appendix, and the LGROW Design Spreadsheet based on feedback from the Michigan Department of Environmental Quality (MDEQ) after the April 2015 submittal of the alternative approach for channel protection. The standards 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 LGROW Design Spreadsheet to assist site designers and reviewers to ensure site designs meet all the regulatory criteria outlined in the permit. The development of maintenance agreements per the stormwater post-construction controls is ongoing, and will continue through the next reporting period.

The manual and Design Spreadsheet tools are also designed to ensure that the alternative approach is only utilized as a last resort. The committee finalized the model ordinance for communities to customize for the application of these standards. On March 14, 2018 a meeting was held by GVMC for all MS4's in order to update each community with the progress made regarding their permit application. Since this work began in 2015, much of this reporting period was spent editing and revising permit application documents to accurately reflect how each community implements their MS4 program, accounting for new stormwater regulations under the next MS4 permit.

Technical Committee

The Technical Committee met on August 16, 2017, October 18, 2017, December 20, 2017, February 14, 2018, April 18, 2018, and June 20, 2018 during this reporting period. Agendas and minutes from the meetings are available at the following site: https://www.lgrow.org/technical-committee. During the reporting period, the committee members focused on the development of the LGROW Data Repository, which will serve as a resource for the sharing and viewing of water quality data collected throughout the watershed. The Data Repository can be accesses here: https://www.lgrow.org/data-repository/

The Committee also continued work on the watershed monitoring manual to guide the collection, processing, and storage of data in the Lower Grand River Watershed and the Lower Grand River Total Maximum Daily Load (TMDL) monitoring, as required by the MS4 permit. The committee is coordinating the 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. This work will continue into the next reporting period. At the October 2017 meeting, the committee enjoyed an engaging presentation from a representative from the United States Geological Survey (USGS). IDEP outfall screening was also a focus of the Technical Committee, since many of the MS4's in the watershed were planning to complete this work during the summer of 2018.

Training

GVMC provides multiple training documents and DVDs for Permittee use. Documents are available at: https://www.lgrow.org/ms4information. Training materials, including newsletter articles for communities to provide to residents, can be found on the LGROW website. In addition, GVMC has hosted or partnered on several training events during the reporting period including:

- 15th Annual Grand River Spring Forum
    - Held on May 11, 2018 at the Cascade Library
- Stormwater General Awareness and IDEP
    - Offered May 22 and 23, 2018 in both Kent and Ottawa Counties
- Lunch and Learn
    - Offered at GVMC on June 29, 2018 hosted by Upstream Technologies

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

- 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

Attendance at the live events and completion of other training is recorded in each MS4's individual training logs (Part 2D).

Newsletters

GVMC sent out seasonal MS4 Newsletters to communities to provide information regarding upcoming training, events, regulatory deadlines, committee meetings, and general program information during the reporting period.

www.lgrow.org Fall 2017

MS4 UPDATE

Information for MS4 Permitees in the Lower Grand River Watershed

Fish swimming over the 6th Street Dam in Sept. 2017

Newsletters such as this will periodically be sent to you. Since we are all a part of the Lower Grand River Watershed, it is important that everyone has current information, is up to date with regulatory requirements, and is aware of other activities happening in the watershed. This messaging also serves as a reminder for upcoming meetings and events, and offers MS4 training opportunities.

Leaves have begun to fall! Attached to this electronic newsletter, you will find an informational brochure about seasonal yard waste. Please post and/or distribute to your employees and community as you see fit. GVMC can print and customize this flier for your community, just let us know what changes you would like to make.

ON THE HORIZON

Next summer, many Lower Grand River MS4's will need to complete dry-weather screening of their outfalls. The last time outfall sampling occurred was in 2013 and 2014. GVMC will hire interns to complete IDEP testing. In Spring 2018, GVMC will give IDEP training and provide the materials needed to complete testing. In the coming months, please be thinking about any new outfalls, updates that need to be made to maps, problem or high-priority sites, and the amount of time it will take field personnel to complete your testing. More information will become available as testing time gets closer.

2016-2017 PROGRESS REPORT UPDATE

All MS4 Progress Reports were submitted to MDEQ by their October 1st due date. Please keep track of the trainings that you and your DPW staff complete during this reporting period. Note that the trainings listed in the progress report are examples and recommendations. MS4 training requirements may be met by other means; for example: information covered during staff meetings, fliers

STORMWATER TRAINING OPPORTUNITIES

13th Annual MiCorps Conference and Training
Nov. 8-9, 2017 in Tustin, MI

Ottawa County Water Quality Forum
Nov. 30, 2017 in West Olive, MI

MWEA Watershed and Stormwater Seminar
Dec. 5, 2017 in East Lansing, MI

More information on these trainings can be found here. *Training DVDs are still available through GVMC. GVMC is looking to acquire more up-to-date training that is applicable to your municipality. If you have any ideas for MS4 materials to train DPW employees, please let us know.*

UPCOMING COMMITTEE MEETINGS @ GVMC

Public Engagement Committee
November 8, 2017 3-4 PM
Sustainability Committee
December 4, 2017 1:30-2:30 PM
Technical Committee
December 20, 2017 10:30 AM- 12 PM
2018 Meeting dates and times can be found here.

MS4 COMMUNITIES

If you have any stormwater information or events coming up in your community that you would like to share with other MS4s in the area, please let us know so we can get the word out! (Send an email to cara.decker@gvmc.org)

www.lgrow.org Winter 2018

MS4 UPDATE

Information for MS4 Permitees in the Lower Grand River Watershed

Snowmelt carrying nonpoint source pollution (salt) to storm drain with direct connection to the Grand River

Winter is still here! Attached to this electronic newsletter, you will find an informational brochure about ways to prevent pollution during the winter. There is also a newsletter article that highlights LGROW's illicit discharge reporting website. Please post and/or distribute to your employees and community as you see fit.

MS4 PERMIT MEETING

A full MS4 meeting will be held on Wednesday, March 14, 2018, from 1:30-3:30pm, at the City of Walker's Commission Chambers located at: 4243 Remembrance Rd NW, Walker, MI 49534.

GVMC will give updates to the permit application process and review new stormwater standards that your community will be responsible for implementing once the ordinance is adopted. This is an important meeting to have all municipal employees and elected officials attend in order to review and understand the new permit requirements before they go to MDEQ's permit section and your new permit is issued. Please make every effort to attend and invite engineers, planners, supervisors, and other employees from your community who will have responsibility in implementing these new standards.

2017 PUBLIC EDUCATION PLAN FOCUS GROUP

A focus group was held on December 18, 2017 at GVMC with the purpose to determine changes in the awareness, education, and behavior of the public as a result of stormwater education efforts since 2009. This focus group ended up being a very educational experience for its participants, while providing valuable feedback on LGROW outreach activities. The mixed demographic of participants and the number of MS4 communities participating provided a fairly diverse view of LGROW's reach into the watershed, and participants shared many ideas to improve LGROW messaging. We plan on using recommendations from this focus group to update the MS4 Public Education Plan, and provide more effective stormwater messaging throughout the watershed. The complete report can be found at: **www.lgrow.org/ms4information**

More information can be found on the LGROW website

www.lgrow.org Summer 2018

MS4 UPDATE

Information for MS4 Permitees in the Lower Grand River Watershed

LOWER GRAND RIVER ORGANIZATION of WATERSHEDS

Thank you for attending the 15th Annual LGROW Spring Forum on May 11, 2018!

Attached to this electronic newsletter, you will find an informational brochure about ways to prevent pollution during the summer. There are also newsletter articles that highlight general watershed awareness. Please post and/or distribute to your employees and community as you see fit.

MS4 PERMITS

All communities have received their updated Stormwater Standards Manuals. These manuals outline design standards to comply with new Post Construction Controls under the next MS4 permit. This is one of many documents that will make up the entire MS4 program for your community.

Timely review is necessary. Please work with Cara to get your comments incorporated into these documents. If you need extra explanation or desire further clarification, please do not hesitate to contact GVMC for help.

Once review is complete, the permit application will be submitted to MDEQ. While we are waiting for MDEQ's Permits Section to issue new MS4 permits, the LGROW Design Spreadsheet will be finalized in order to aid developers with compliance to the new permit requirements.

IDEP OUTFALL SCREENING

This summer, GVMC will be completing dry-weather screening of MS4 outfalls in accordance with the Illicit Discharge Elimination Plan (IDEP). The last time outfall screening occurred was in 2013 and 2014. GVMC will let you know when we will be in your community to complete this work. Screening is weather dependent, so we appreciate your willingness to be flexible.

GVMC provided IDEP training in May. Many thanks to those who attended- this will be documented in your annual progress report to MDEQ.

The training is available for you to share with those who were not able to attend. You can find the slides here: **www.lgrow.org/ms4information**
Please record the date and the names of DPW employees who view the training. We will report them to MDEQ in your progress report.

More information can be found on the LGROW website

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 sampling events can be viewed as follows: https://grandrapids.maps.arcgis.com/apps/Embed/index.html?webmap=b58bd9f6cda949599b15753b888a7048&extent=-85.8676,42.8116,-85.4244,43.0326&zoom=true&scale=true&search=true&searchextent=false&legend=true&disable_scroll=false&theme=light

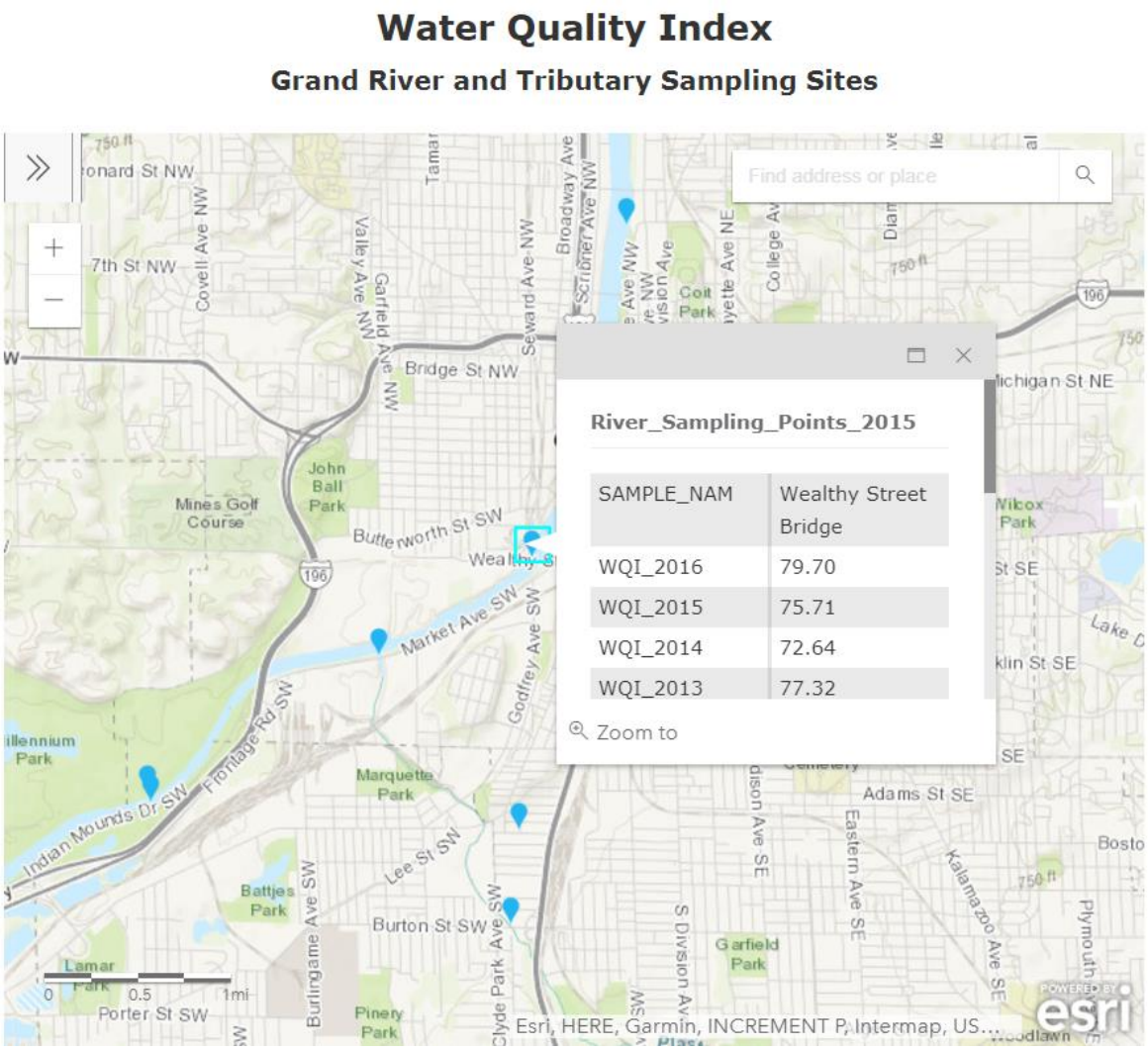


Figure 1 Grand Rapids Water Quality Index Web Interface

Data Repository

The LGROW Technical Committee continued working on the design for a watershed-wide data repository with the help of GVMC's Regional Geographic Information System (REGIS) department. Using data collected by the Friends of Buck Creek as part of their 319 monitoring grant, and Indian Mill Creek, as part of GVSU Graduate Students' research, 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: https://www.lgrow.org/data-repository/. Some students and teachers in local school districts have already begun to use the repository to aid classroom learning.

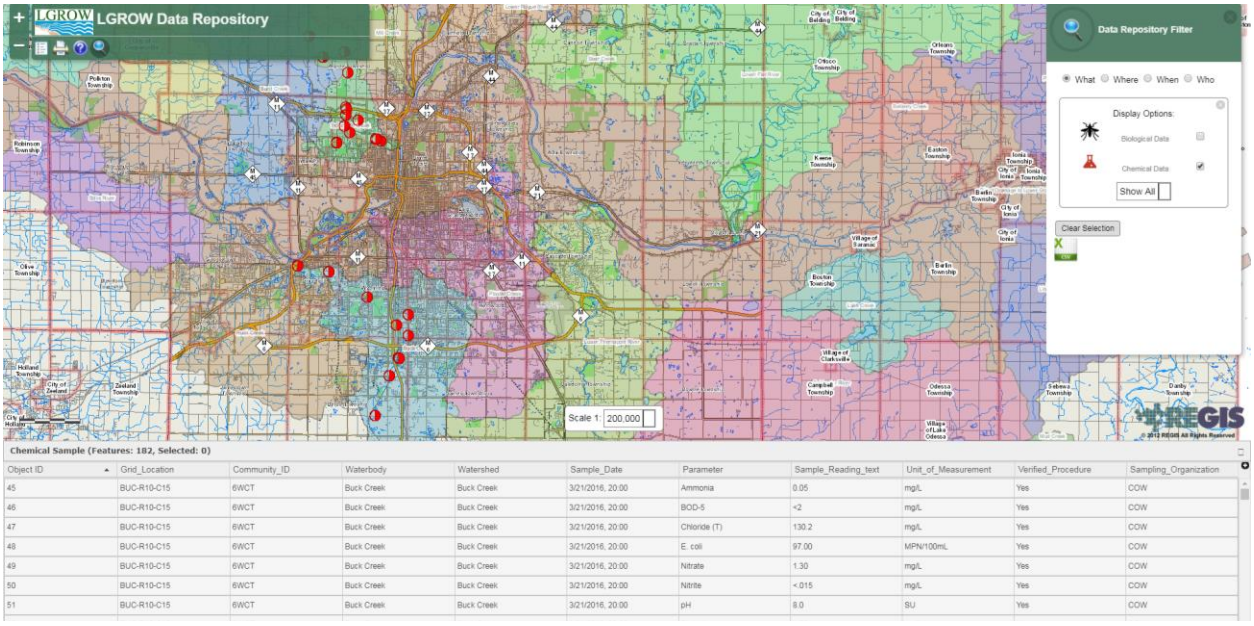


Figure 2 LGROW Data Repository

MDEQ Program Audits

GVMC assists communities in preparing for audits, and in addressing any deficiencies identified by MDEQ. During this reporting period, MDEQ performed audits on site for the following communities in the Lower Grand River Watershed:

City of Wyoming, August 29, 2017

City of Grandville, January 18, 2018

Kent County Road Commission, January 24, 2018

Supplemental documentation for these audits will be included in this report for each of the communities listed above. All communities that were audited during this reporting period were found to be in compliance and are implementing effective MS4 programs.

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 this 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 this progress report.
The US EPA hosts SepticSmart Week once a year, and LGROW uses the materials provided to encourage of proper septic system care. SepticSmart Week 2017 was held on September 18-22, and focused on educating homeowners and communities on the proper care and maintenance of their septic systems.

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 Part 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. All of the MS4 LGROW community members have procedures to inspect and maintain their sanitary sewer systems, which are independent of their MS4 systems. Information related to the maintenance and upgrades of sewer infrastructure is included in Part 2B of the report.

Implement Low Impact Development Practices

Low Impact Development (LID) and Green Infrastructure (GI) are critical components in both the SWPPI and the PEP. Detailed information on the training related to LID practices and implementation is detailed in Part 2D. Tracking of the installation and consideration of LID practices by Permittees is tracked in Part 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.

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 model stormwater ordinance for the next MS4 permit, 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.

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 a 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 field demonstrations on BMPs and new technologies in this field.

Table 2. LGRW Part 91 Administration Authority as of July 31, 2018							
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	616-336-3688					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 Part 2C and perform regular training as referenced in Part 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 Part 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 Part 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
August 1, 2017 to July 31, 2018

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	608 hours cleaning (Code #102: Basin Cleaning) 221.5 hours repair (Code #117: Catch Basin Repair) Catch basin cleaning logs and location map in DPW break room. 249.6 tons contaminated soils removed: Total from Ottawa County Landfill	Effective: Large increase in catch basin cleaning hours from 2016-17 reporting year due to increase in DPW staff.
Storm Sewer	Every 5 years	Every 5 years	465.5 hours repair (Code #123: Cave-In Repairs) 1,591.5 hours maintenance (Code #101: Sewer & Ditches)	Effective: Critical repairs, such as cave-ins are prioritized while year to year maintenance is consistent.
Grassy Swales	Yearly	Yearly	1,591.5 hours maintenance (Code #101: Sewer & Ditches)	Effective: Yearly maintenance is consistent from year to year based on system needs.
Vegetated Swales	Yearly	Yearly	1,591.5 hours maintenance (Code #101: Sewer & Ditches)	Effective: Yearly maintenance is consistent from year to year based on system needs.
Curb & Gutter	Yearly	Yearly	480 hours street sweeping (Code #103: Street Sweeping) 285.71 tons removed: total from Ottawa County Landfill	Effective: this reporting period and last had similar hours spent and amount of material removed.
Detention Pond	Yearly	Yearly	All inspections completed in October 2017.	Effective: ponds are in good condition.

			Inspection logs located in DPW break room.	Any excess vegetation is removed.
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: ponds are inspected regularly and excessive vegetation is removed upon observation. Major cleanout planned for City Hall park detention ponds still pending.
Grit & Oil / Water Separator	Yearly	Yearly	Inspections completed periodically but log not completed this reporting period. Inspection logs located in DPW break room.	Recurring appointment created to complete inspection and inspection form in October.
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	No inspections completed-garden eliminated.	Garden was not receiving significant runoff. Library roof continues to drain into pervious stone/lawn.

Appendix 2-Bi – *Kenowa Hills Public Schools* Storm Water Controls
Inspection, Maintenance and Effectiveness
August 1, 2017 to July 31, 2018

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	Yearly	Yearly	Catch basins inspected July 10, 2018.	Effective: structural controls are functioning as designed.
Grassy Swales	Yearly	Yearly	Grassy swale maintenance is ongoing.	
Vegetated Swales	Yearly	Yearly	Vegetated swales were maintained throughout the reporting period and inspected July 10, 2018.	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 completed on July 10, 2018.	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 August 15, 2017.	Effective: structural controls are functioning as designed.

Part 2C - Procedures Status
August 1, 2017 to July 31, 2018

The following Pollution Prevention and Good Housekeeping procedures were adopted by the City. Dates of revised procedures are listed and revisions attached.

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 made during this reporting period.

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:	KHPS Staff	4/11/2018	Review of new construction on schools (underground detention inspection and maintenance), stormwater activity review. Agenda and underground detention inspection form attached.
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:	DPW Staff	10/20/2017	SAW Grant activities and MS4 Asset Management: Live Presentation. Outline and sign in sheet attached.
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 – Walker has one .3 mile gravel road.
LID	Engineering Dept City Planner	Every 5 years Every 5 years	**BMP Tour of GVSU Campuses – Walking Tour**
Training completed:	No training completed during this period.	N/A	N/A

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 Engineering Department Intern	Ongoing 5/23/2018	Copies of "How You as an Employee Can Help Reduce Pollution Entering the Grand River" posted in employee break rooms throughout the reporting period. Attached. Engineering Dept. intern Jacob Gardner completed IDEP training for 5 year stormwater outfall screening.
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:	No training completed during this period.	N/A	N/A

Part 2E - Post Construction Controls Activities

August 1, 2017 to July 31, 2018

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.

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

12

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

Yes—of the 12 stormwater permits issued, 10 stormwater maintenance agreements have been signed. Of the remaining two projects, one was a public project and exempt, and the other had an existing maintenance agreement from a past stormwater permit.

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, 13 asbuilts were submitted to the City of Walker. The purpose of the asbuilt is to certify the development complies with Chapter 67 of the Walker City Code and onsite stormwater utilities were built in accordance with the 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 storwmater, 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 and encourages innovative design, such as regional detention, underground detention, and infiltration basins.

Part 3 - PEP

Regional PEP

The updated Public Education Plan (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, 2017, and July 31, 2018.

Public Engagement Committee

LGRW Public Engagement 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 and the LGR Watershed Management Plan. In addition to MS4 communities, the 2017-2018 Public Engagement Committee consisted of the following community partners:

Table 3. Non-MS4 Partner Organizations

Agency	Representative
MDEQ	Amanda St. Amour
GVMC – West Michigan Clean Air Coalition	Andrea Faber
Ottawa Co. Conservation District	Benjamin Jordan
Boy Scouts of America	Bridget Knight
GVMC	Eileen Boekestein
Trout Unlimited	Jamie Vaughan
Groundswell, GVSU	Joanna Allerhand
Groundswell, GVSU	Kymberly Pawelka
Kent County Resource Recovery	Megan Kretz
MDEQ	Michelle Storey
WMEAC	Jessica VanderArk
WMEAC	Kyle Hart
GVMC/GVSU	Carlos Calderon
The Right Place	Rick Chapla
GVMC	Rachel Frantz
Grand Rapids Public Museum	Stephanie Ogren
Grand Rapids Public Museum	Erin Koren
GVMC	Wendy Ogilvie
Kent County Health Department	Brendan Earl
Kent Conservation District	Jessie Schulte
Citizen Labs	Allen Clark
GVMC	Cara Decker

During this reporting period, the Committee reorganized to set priority topics and create a functional meeting schedule. Instead of holding meetings once every two months, the committee meets in January, February and May. During the summer months, meetings are not held because communities are busy attending and hosting outreach events. The group reconvenes in September to review their summer activities, and begin to plan for the next year. Meetings are then held in October and November. Goals for each meeting are as follows:

January: Distribute PEP materials and discuss distribution

February: Pick up orders, Plan for the year's events

May: Ongoing business, Committee updates

September: Review event year, Ongoing business

October: Ongoing business, Discuss changes for next year

November: Finalize orders for next year

During the October Committee meeting, the group chooses which PEP topics to focus on for the next year. Information regarding all topics covered in the PEP may be discussed and promoted by communities throughout the year, as described in detail in the remainder of this section of the report. The committee decided that if more energy is focused on a few key topics each year, then education regarding those specific topics can be thoroughly explored. Educational materials and give-aways are then designed around the key topics. While each year focuses on a particular set of topics, all six education categories will still be addressed in detail at least once during each reporting period.

Additional information regarding the Public Education Committee is available at: https://www.lgrow.org/ms4information. Materials, training opportunities, and other resources are available via this webpage.

PEP Implementation

This section describes the public education activities implemented by the Permittees from August 1, 2017 through July 31, 2018. The following report describes activities which meet 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.

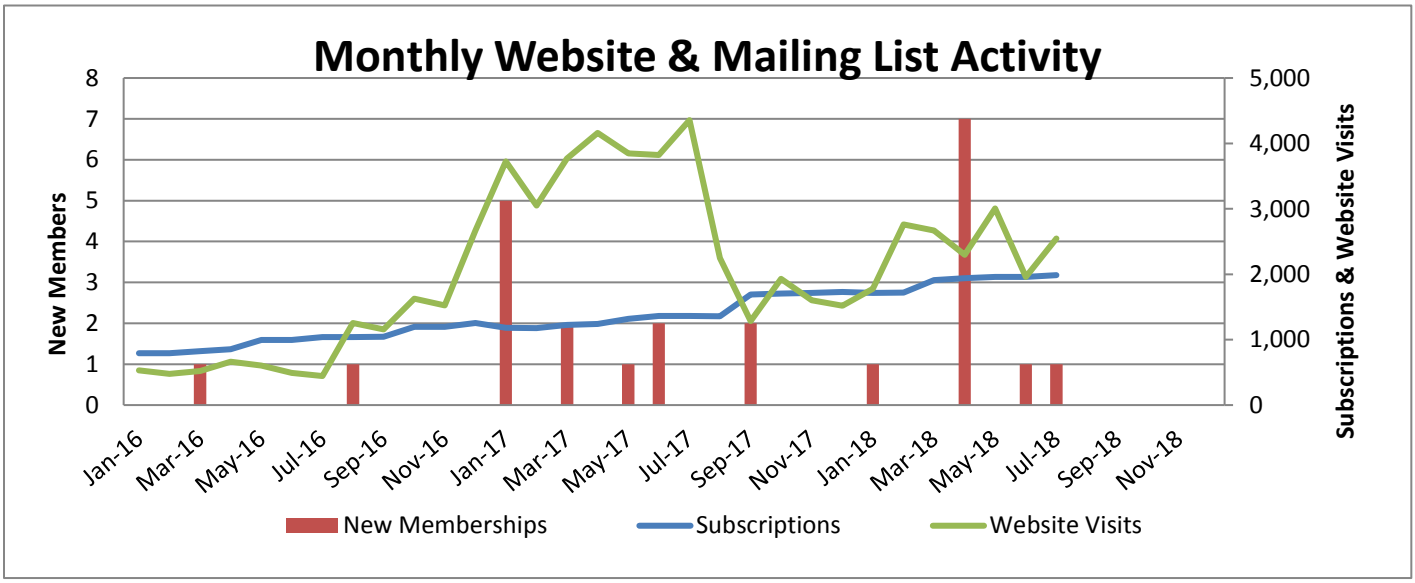
Target Audience: Residents, visitors, and public employees

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. A major website update was launched at the beginning of the 2017-2018 reporting period and was accessed by an average of 758 unique visitors each month. The website logged 9,090 unique visitors over the entire reporting period.
- LGROW also sends out a seasonal email newsletter with information about the watershed, upcoming educational events, and stormwater educational articles. Newsletter subscriptions and website traffic by month are displayed in Figure 3.

Figure 3. Page Visits to LGROW.org by Month



- LGROW worked to promote participation through its Facebook page with a regular posting schedule including watershed project highlights, upcoming events, and volunteer opportunities. Throughout the reporting period, LGROW Facebook posts have reached 107,622 people. As of the end of the reporting period, the Facebook page reached 935 Likes (this number has increased from the last reporting period). Facebook user engagement has shown consistent growth over the reporting period with the average number of Likes, Shares, and Comments. LGROW promoted its Facebook page three times during the reporting period using paid promotions, which increased its audience significantly. Facebook activity is displayed by month in Figure 4.

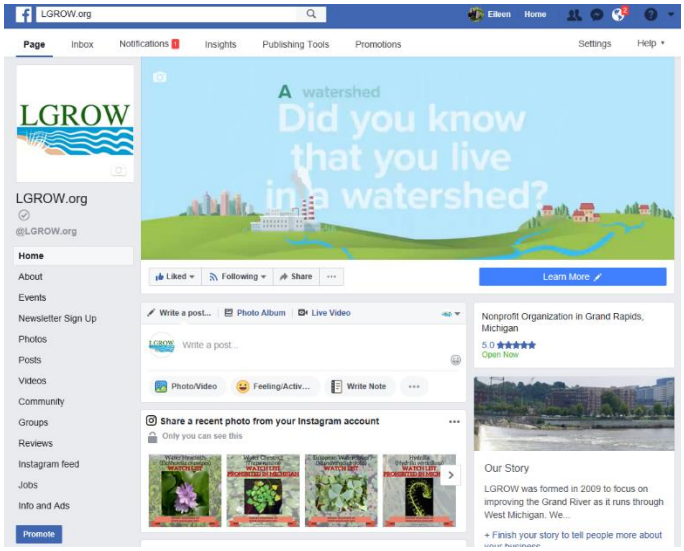
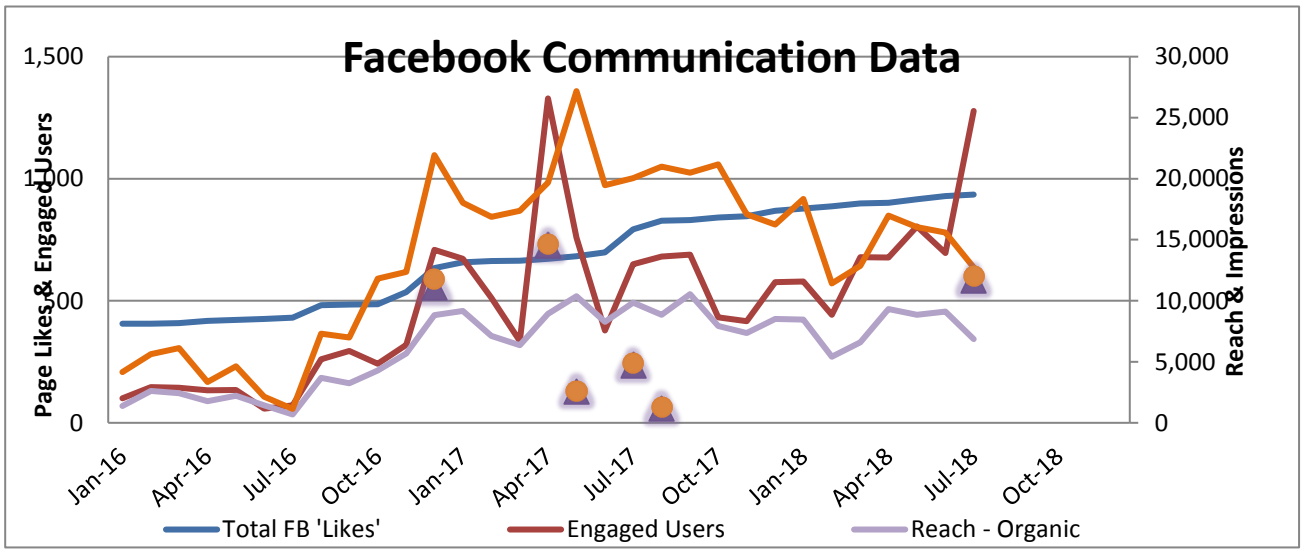


Figure 4 Facebook Communication Data by Month



- Permittees distributed 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. Listed below are the number and type of educational materials ordered by permittees to distribute throughout the reporting period:

- 2000 LGROW Lip Balms
- 1500 "Report Illicit Discharge" fridge magnets
- 1000 Rainbow Trout "Only rain in the drain" stress balls
- 1500 "Keep your Lakes Great and your River Grand" dry bags
- 700 "Keep your Lakes Great and your River Grand" magic scarves
- 1200 "Report Illicit Discharge" coasters
- 500 Car Wash pledges and shammies
- 500 Pet Waste pledges and dispensers
- 1000 Paint by number Watershed Maps

Other public education materials ordered during previous permit cycles were also distributed by permittees, including:

- Keep Your Lakes Great and Your Rivers Grand Magnets
- Keep Your Lakes Great and Your Rivers Grand vinyl stickers
- Watershed Temporary Tattoos
- Troutie Coloring Books
- Reusable Water Bottles
- Reusable Tote Bags
- LGROW Brochures
- Landscaping for Water Quality booklets
- LGROW Gardening Gloves
- LGROW Pens
- LGROW Custom Baseballs

- Many Permittees displayed lamppost banners when 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." In early 2018, 4 communities ordered additional banners for display, including new banners for Buck Creek and the Thornapple River.

Banners on display in Spring Lake

- Through cooperation of staff in permitted MS4 communities, Public Engagement Committee participants, GVMC staff, and other members of LGROW, about 50 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 that were coordinated through LGROW, are discussed in the section following Table 4, and in the Delivery Method section of corresponding objectives.

Table 4 LGROW and MS4 Participant Events		
MS4 Community	**Event/ Activity**	**Date**
Cascade Charter Township	LGROW Spring Forum Host	5/11/2018
Ferrysburg, City of	LGROW Focus Group	12/18/2017
Forest Hills Public Schools	Classroom Programming through Groundswell	Ongoing
Georgetown Charter Township	Jenison Public Schools Collaboration	Ongoing
	Ottawa County Water Quality Forum	11/30/2017
Grand Haven, City of	Earth Day Festival	4/21/2018
	LGROW Focus Group	12/18/2017
	Robinson Elementary	3/21/2018
	Coast Guard Festival	7/28 - 8/5/2017
	Salmon Festival	9/16/2017
Grand Rapids, City of	Home Show	3/1-4/2018
	Mayors Grand River Cleanup	9/9/2017
	Ottawa County Water Quality Forum	11/30/2017
	Grand River Water Festival	6/23/2018
	Dia del Nino	4/28/2018
	Canoemobile	5/7-5/11/2018
	Presentation to Museum School	10/11/2017
	Water Resource Recovery Facility Tours	Ongoing
	Rainbarrel Workshop	7/29/2018
	WhiteCaps Game	7/26/2018
	Grand River Spring Forum	5/11/2018
Grand Rapids Charter Township	Partner with FHPS	Ongoing
Grandville, City of	Buck Creek Cleanup	8/5/2017
	Mayors Grand River Cleanup	9/9/2017
	Michigan Week Community Event	5/16/2018
Hudsonville, City of	Ottawa County Water Quality Forum	11/30/2017
Kent County Drain Commissioner	Grand River Spring Forum	5/11/2018
Kent County Road Commission	Facility Tours	Ongoing
Kentwood, City of	Touch A Truck/DPW Behind the Scenes (with Kent Co DPW)	5/16/2018
	Buck Creek Cleanup	8/5/2017
	LGROW Focus Group	12/18/2017
	Grand River Spring Forum	5/11/2018

Table 4 LGROW and MS4 Participant Events

MS4 Community	Event/ Activity	Date
Ottawa County Administration and Water Resources Commissioner	Ottawa County Water Quality Forum	11/30/2017
	Grand River Spring Forum	5/11/2018
Ottawa County Road Commission	Partner with Georgetown Township & Jenison Public Schools	Ongoing
Plainfield Charter Township	Grand River Spring Forum	5/11/2018
Sparta, Village of	Nash Creek Cleanup-Planting	4/18//2018
	Village Hazardous Waste Collection	4/19/2018
	Partnership with Sparta Schools	Ongoing
Spring Lake, Village of	Mill Point Park River Cleanup	5/12/2018
	LGROW Focus Group	12/18/2017
Walker, City of	Grand River Spring Forum	5/11/2018
	Indian Mill Creek Cleanup	6/2/2018
	KDL Reading Carnival	6/12/2018
Wyoming, City of	Buck Creek Cleanup	8/5/2017
	Partnership with Godwin and Wyoming Schools	Ongoing
	City Cleanup	4/21/2018
	Facility Tours	Ongoing
	Grand River Spring Forum	5/11/2018

- The Quiet Water Symposium promotes non-motorized outdoor recreation and a shared concern for our Great Lakes environment. The 23rd Annual Symposium was held on March 3rd, 2018. LGROW hosted a booth with several watershed displays and distributed information and giveaways focused on watershed awareness and the development of a Water Trail throughout the Grand River. 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.

- LGROW hosted a table at the Blandford Nature Center Earth Day event on April 21, 2018. 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, the LGROW Rainscaping program pilot in Indian Mill Creek Watershed, and stormwater educational materials focusing on pet waste and car wash pledges.

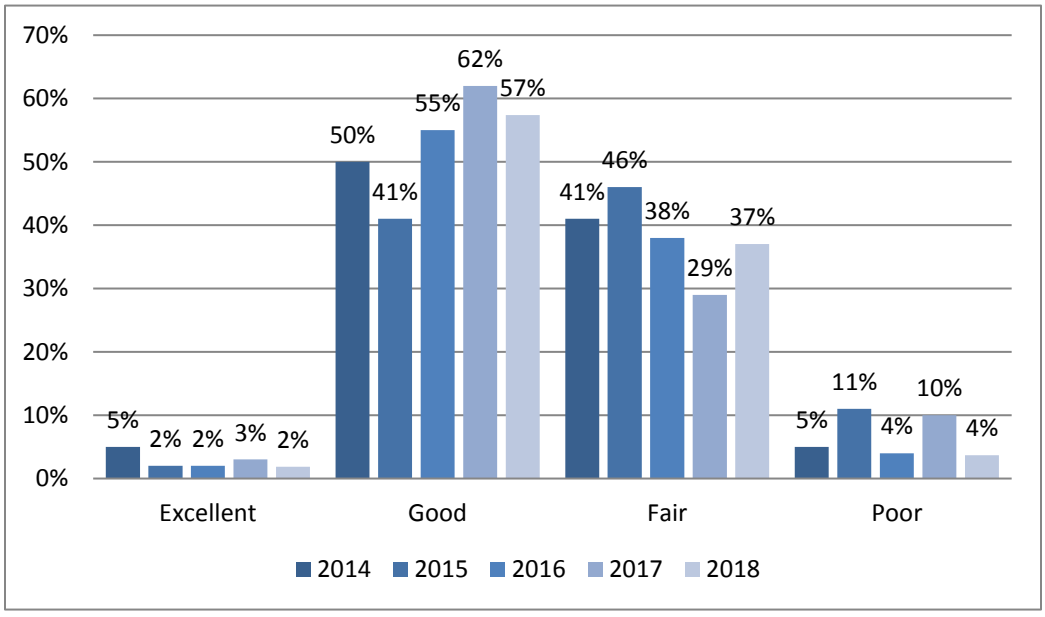
- The 15th Annual Grand River Forum on May 11, 2018, was put on by LGROW at the Wisner Center in Cascade Township. The event offered 111 attendees a regional perspective on emerging issues and accomplishments from around the Watershed. This year's keynote speaker, Al Steinman, from GVSU's Annis Water Resources Institute, spoke about Integrated Water Management. Next, Scott Conners (City of Walker Engineer and LGROW Board Chair) moderated a Panel Discussion that focused on the new post-construction control stormwater requirements. Panelists included Carrie Rivette, Wastewater/Stormwater Superintendent of the City of Grand Rapids, Teresa Siedel, Director of the Water Resources Division of MDEQ, and Jeff Gritter, Project Manager at Vriesman and Korhorn Civil Engineers. The LGROW Chair, who was previously Scott Conners from the City of Walker, changed hands to Carrie Rivette from the City of Grand Rapids. This change was commemorated with a 'Passing of the Paddle' ceremony.

The remainder of the forum focused on emerging watershed issues. Presentations were given by Jessie Schulte (Kent County Conservation District) and Rob Petit

(ECT) on the Regional Conservation Partnership Program; Brenda Perry (Facilitator, Kent Innovation High School), Joe Phillips (Design Lab Instructor, Kent Career Tech Center) and their students on place-based environmental education curriculum they used in their classrooms; Wes Landon (Native Edge, LLC.) and Julie Parks (Executive Director of Workforce Training, Grand Rapids Community College) on the Rainscaping Program; Natalie Henley (West Michigan Environmental Action Council) on the Grand River Water Trail; LGROW Committee Chairs gave updates for each committee; and LGROW Staff discussed the pre-forum survey results.

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 5 shows an increase in respondents identifying water quality in the Grand River as "Fair" rather than "Poor" from 2017 to 2018.

Figure 4. 2017 Survey Results: How would you rate the water quality in the Grand River?



- LGROW sponsored the Grand River Water Festival on June 23, 2018, at Riverside Park, which was attended by approximately 3,000 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. Visitors to the LGROW booth identified their location in the watershed by referencing maps, and Major Runoff, the Stormwater Mascot, engaged with children and adults. Volunteers at the LGROW booth helped children of all ages create paintings of nature scenes using native soils to the watershed, similar to artists who create field drawings using natural materials they find in the environment. The LGROW booth's educational materials focused on how homeowners can reduce stormwater runoff from their properties by installing green infrastructure practices through the LGROW Rainscaping program.

- LGROW hosted a concourse table at a WhiteCaps game on Thursday, June 26, 2018. GVMC staff and volunteers from the City of Grand Rapids (a MS4 permitted community) helped run a booth. Volunteers handed out LGROW baseballs, LGROW brochures, Pet Waste Pledges with pet waste bag dispensers, and Car Wash Pledges with shammies. Volunteers discussed the importance of watershed protection with attendees of the game.

- LGROW worked with students from schools throughout the watershed to educate about the connections between land use and water quality. LGROW led activities for 465 students from the City of Grand Rapids and Plainfield Township focused on macroinvertebrate sampling and runoff vs. infiltration at the annual Canoemobile event at Riverside Park in Grand Rapids. LGROW also worked directly with Jenison

Public Schools and Forest Hills Public Schools to teach 99 students at Bauerwood Elementary and 90 at Northern Trails 5/6 about the Grand River Watershed and the ultimate discharge location of stormwater systems, as well as personal actions that can protect water quality. These activities resulted in students marking 50 catch basins on Northern Trails' campus and 100 catch basins in the neighborhood surrounding Bauerwood. LGROW also assisted schools with their existing educational activities surrounding watersheds and nonpoint source pollution. LGROW led an activity connecting land use and habitat with macroinvertebrates and water quality at a Water Field Day for 525 students in Godfrey Lee schools in Wyoming, helped 25 students stencil 9 catch basins and complete rain garden/riparian maintenance near Buck Creek in Grandville, and assisted a teacher at Pinewood Elementary in Kentwood Public Schools with her annual Buck Creek education day for 120 students. Additionally, 40 students from Kenowa Hills High School participated in the spring Indian Mill Creek Cleanup. LGROW also participates as a member of the Groundswell advisory council, which supports schools in the Lower Grand River Watershed as they implement place-based education and stewardship projects in the watershed. Groundswell reaches approximately 500 students annually through its programs focused on the Lower Grand River Watershed, including supporting projects at 3 schools in the nested jurisdiction of Kentwood Public Schools and at 5 schools in the permitted district of Forest Hills Public Schools.

Students marking catch basins at Northern Trails 5/6 in Forest Hills

- The 'Find My Watershed Tool' was improved during this reporting period and can be accessed via LGROW's homepage, or at: https://www.google.com/maps/d/u/0/viewer?mid=1WuQZRA612p4X1t_9i4qNYlP_830_ZIi-&ll=42.99923233465322%2C-85.46882900000003&z=9 . An advertisement was created through National CineMedia, LLC regarding this tool. The 30-second advertisement is also available for viewing on LGROW's website. The advertisement ran for 8 weeks as a digital media campaign, targeted online to people who were in the Lower Grand River Watershed. About 79% of people that the advertisement was delivered to watched the entire commercial. Industry average is around 60%. The commercial was shown 120,419 times.

Fall Seasonal Tips Flier

- Seasonal Watershed 'Tip' fliers were distributed to communities. These fliers focused on positive actions that Department of Public Works employees and citizens alike could take to improve the water quality in the watershed. Tips focused on different actions that were relevant to that respective season.

Storm drain markers

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 water treatment plant. 2) Prevent pollution from entering your storm drains and protect the health of your family, your community, and the Grand River. 3) Education on the impacts of stormwater pollutants. 4) Education on the stormwater system and receiving water bodies in a person's or company's neighborhood.

This topic was chosen as one of two key topics by the Public Education Committee to focus on during this reporting period.

Delivery Method:

- Permittees installed the plastic storm drain markers designed by the Public Engagement Committee. The drain markers carry the messages "Keep your Lakes Great and your Rivers Grand." Some 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, 150 drain markers were installed and 9 storm drains stenciled with the message "No Dumping: Drains to Waterway" in 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, Car Wash and Pet Waste Pledge posters, and the "Grand River Yours To Protect" informational poster board at a variety of events and locations throughout the Watershed. The PEP Questionnaire included in this report details when and where these displays were used by individual Permittees.

- An advertisement explaining that storm drains lead directly to rivers, lakes and streams was printed on the back of all household hazardous waste collection flyers printed for Kent County MS4 communities.

Household Hazardous Waste flyer advertisement

- Troutie Stress Balls were provided for communities to distribute. The fish shaped stress balls had the message: 'Only rain in the drain, it leads directly to my home!' This give-away allowed people to easily make the connection between storm drains and water quality as it relates to aquatic habitat.

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.

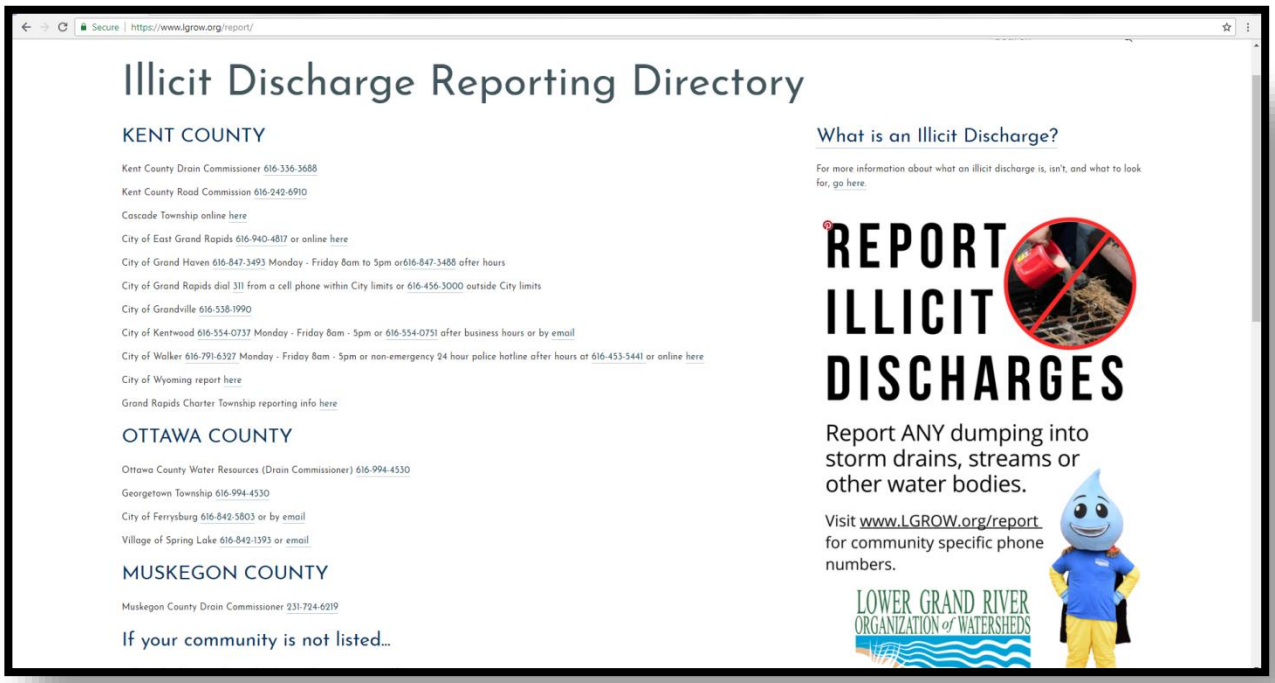
Target Audience: Residents, public employees, businesses, construction activities, industries, and septic system owners/haulers.

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.

The Public Reporting of Illicit Discharges was selected by the Public Education Committee as one of two key topics to focus on for this reporting period. It was important that communities focused on this topic because IDEP outfall screening occurred for many municipalities in the watershed during the summer of 2018.

Delivery Method:

- A reporting website for MS4 communities across the Lower Grand River Watershed was created in order to offer a Reporting Directory for DPW employees or citizens seeking information about how to report illicit discharges. This website can be found at: https://www.lgrow.org/report/. Communities were encouraged to share this information on their municipal webpages, and on social media. Information was also added to the LGROW website to inform the public about what an illicit discharge is.



- Illicit discharge magnets and coasters were created in conjunction with the reporting website to promote use of the website and to raise awareness for DPW employees and citizens, encouraging them to report illicit discharges.

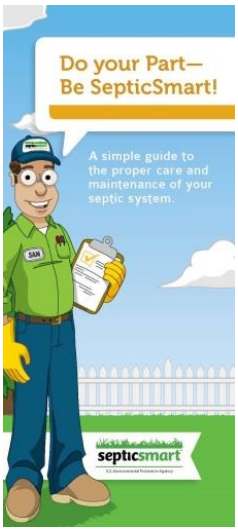
Coasters

- A newsletter article titled, 'Reduce and Report Pollution Entering the Grand River' was published for all MS4s to distribute to their employees or citizens. This article highlighted the reporting webpage, and gave advice on how to reduce stormwater pollution.

- Permittees made information about how to report illicit discharges available to residents and staff through a variety of channels. Some communities promote the Citizens Reporting form developed previously by LGROW, while others use an online reporting form. The method each community used to distribute this information is detailed in PEP Questionnaires.

- 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. LGROW participated in SepticSmart week September 18-22, 2017 by publishing a blog post and daily social media posts about proper septic maintenance.



<u>Public Education Topic 4 - Personal Actions that can Impact the Watershed</u>

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*". The Public Engagement Committee contracted with the Hispanic Center of West Michigan to produce a Spanish translation of this brochure for communities as well.

- Several communities hosted rain barrel events or rain garden work days 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. In this reporting period, 127 new pet waste pledges were collected from around the watershed.

- 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. In this reporting period, 52 new car wash pledges were collected from around the watershed.

- LGROW developed a flyer describing proper procedure for draining residential swimming pools in the fall. This was distributed publicly online via www.lgrow.org and made available for customization by MS4 communities. The flyer can be downloaded at https://www.lgrow.org/ms4information.

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:

- Permittees and LGROW.org shared the newsletter articles *"How You Can Help Reduce Pollution Entering the Grand River"* and *"What Can You Do to Help Protect Your Watershed?"* These articles explain the watershed concept and encourage 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"* in both English and Spanish, 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. Kent County's expanded household hazardous waste collection hours to allowed 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.

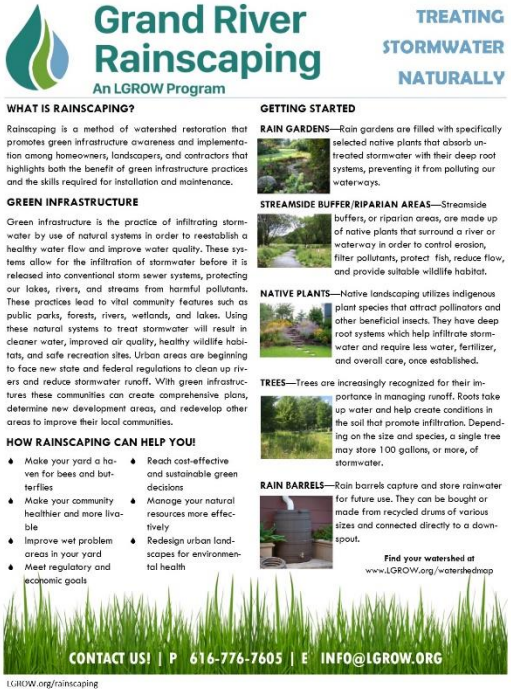
Target Audience: Riparian landowners, construction activities, landscapers

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 buggers, 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.

- LGROW launched and promoted its Grand River Rainscaping: Treating Stormwater Naturally program. This program aims to promote installation of green infrastructure and native landscaping practices to reduce stormwater runoff from residential properties and improve water quality. Residential site assessments were performed on 28 properties, 19 of which were in MS4 communities, and a 600 square foot demonstration rain garden was installed at West Catholic High School. Residents who have a site assessment completed receive a customized report of what green infrastructure practices are best suited to their site as well as resources for implementing those practices. The Rainscaping program is aimed at both shoreline and non-shoreline properties.

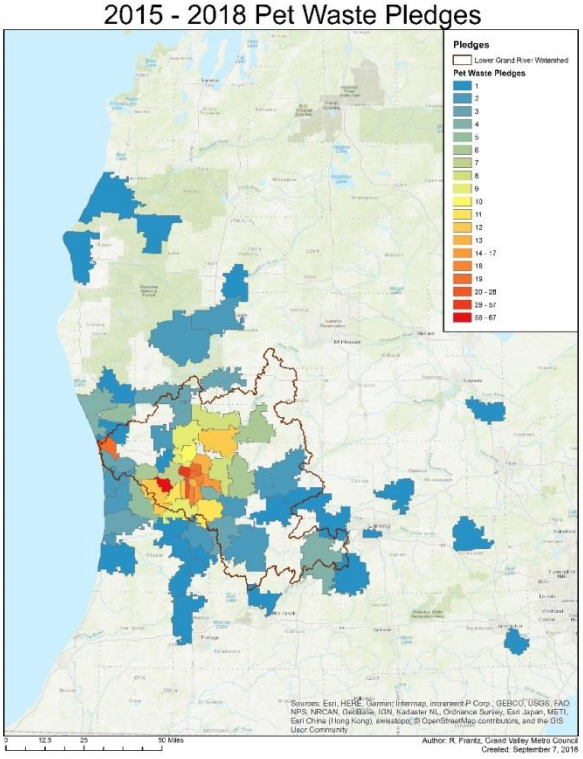


Evaluation Measures

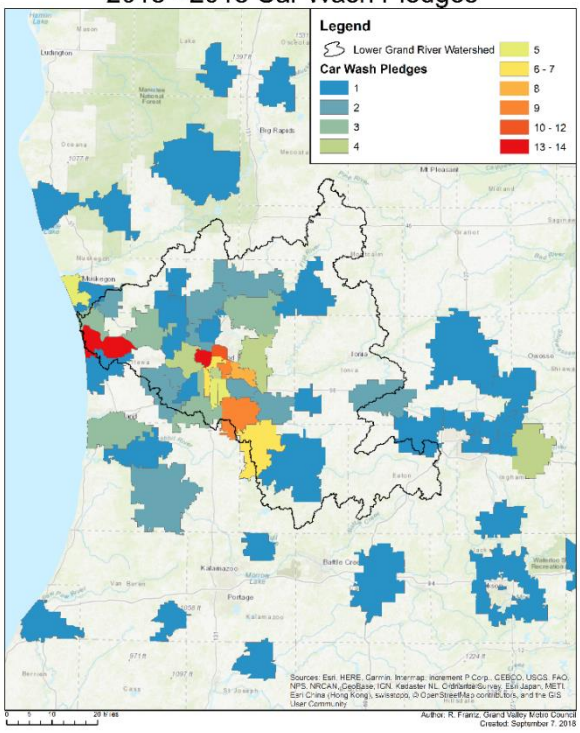
This section includes a description of the quantitative and qualitative evaluation measures of PEP effectiveness implemented between August 1, 2017, and July 31, 2018. During this reporting period, LGROW also contracted with Petersen Research Consultants, LLC to create updated robust evaluation measures for the PEP. An updated evaluation plan will be completed during the next permit cycle as part of LGROW's ongoing PEP update process.

During this permit cycle, permittees completed PEP Questionnaires to provide a quantitative and qualitative evaluation of their individual stormwater education efforts. In total, materials were distributed at over 50 events (Table 4) and at various locations throughout the watershed. The car wash and pet waste pledges represent more than an educational outreach effort; these are a commitment to a behavioral change which has an important impact on water quality. The majority of responses for both pledges were from residents within the watershed. This program was very popular, with a total of 551 pet waste and 211 car wash pledges collected since the start of the 2015-16 reporting period to the end of the 2017-2018 reporting period. Of those totals, 127 pet waste and 52 car wash pledges were collected during the 2017-2018 reporting period from across the watershed.

2015 - 2018 Pet Waste Pledges



2015 - 2018 Car Wash Pledges



2017 Public Education Focus Group

A focus group was held on December 18, 2017 at the offices of GVMC with the purpose to determine changes in the awareness, education, and behavior of the public as a result of stormwater education efforts. The last focus group held to evaluate the PEP was in 2009 at Fishbeck, Thompson, Carr & Huber (FTC&H) in Grand Rapids to determine changes in the awareness, education, and behavior of the public as a result of stormwater education efforts in 2008 and 2009.

The 2017 focus group was held with the purpose to determine changes in the awareness, education, and behavior of the public as a result of stormwater education efforts since 2009. Using the information provided from the focus group, the PEP for the LGRW communities can be edited in the future to better serve the public. The challenges, successes, and recommendations communicated in this report will be evaluated to modify the PEP as needed. The updated PEP will result in a more effective public outreach campaign to reduce stormwater pollution and raise MS4 awareness during the next permit cycle.

Focus group participants were nominated by local units of government that maintain MS4 permits. Each participating local unit of government was asked to submit two potential participants that meet the following criteria:

1. The nominees must live in Kent or Ottawa Counties, specifically in the Lower Grand River Watershed, preferably in the community they are representing
2. The individuals do not manage or have direct involvement with your community's MS4 Permit
3. The nominees have had the potential to encounter LGROW deliverables (examples: events, educational outreach, brochures or fliers, LGROW website or Facebook page)

GVMC staff administered the 1.5 hour long focus group session on December 18, 2017. Twelve invited individuals were present, representing Kent and Ottawa Counties. Eleven of the 23 municipalities that GVMC

works with regarding MS4 permits were represented. There was a diverse demographic represented among the group.

Discussion began with introductions of everyone present and an ice breaker question. The conversation followed six dialogue questions led by GVMC. The dialogue questions were as follows:

2017 LGROW Focus Group Dialogue Questions
1. What do you know about LGROW?
2. What LGROW information have you seen, heard, or read?
3. Did the message (that you have seen, heard, or read) influence you? If so, how?
4. Have you seen any stormwater or pollution prevention messaging at your workplace? Who was the message from? (LGROW, employer, other org.)
5. How could LGROW project deliverables be improved?
6. Where and how do you get information on community activities?

This focus group ended up being a very educational experience for its participants while providing valuable feedback on LGROW outreach activities. The mixed demographic of participants and the number of MS4 communities participating provided a fairly diverse view of LGROW's reach into the watershed, and participants shared many ideas to improve LGROW messaging.

Key take-aways for LGROW from the focus group are summarized in the following table:

How LGROW messages can be improved	
New Target Audiences	• *Municipal employees* • *Adults through schoolchildren* • *People living in apartment complexes* • *LEED certified building owners* • *Farmers*
Reworking Messages	• *Translating materials in to the language of the neighborhood* • *Address 'why' citizens need to know the message presented* • *Simplify messages*
Delivery Mechanisms	• *Placement of watershed information (placement of 'Entering the Watershed' signs, more signs for GI)* • *Tours of municipalities and events at breweries* • *Word of mouth*

	• *Presence at festivals* • *Advertising in churches in the watershed*

The full 2017 Focus Group Report is attached to this Progress Report. Please reference it for further details.

2018 Stormwater Public Education Plan (PEP) Questionnaire

Reporting period of August 1, 2017 to July 31, 2018

Please complete this questionnaire to provide an evaluation of the stormwater education activities you have implemented between **August 1, 2017 and July 31, 2018**. GVMC will include this information, along with watershed-wide measures of effectiveness, in your 2017 Progress Report to MDEQ. **Please return this form to GVMC by September 7, 2018.**

Community Name: City of Walker

Brochures, Flyers, and Giveaways:

1. Which of the following general stormwater awareness/LGROW materials (brochure, flyers, giveaways) did you order/distribute from GVMC this year:

☒ LGROW Brochures
☐ Grand River Infographic
☒ "Make your home the Solution to Stormwater Pollution" brochure
☒ "Do your part – be SepticSmart! brochure
☒ Household hazardous waste disposal guidelines from Kent County DPW
☒ Seasonal Tip Sheets (Fall, Winter, Spring, Summer)
☒ LGROW Water Bottles
☒ LGROW Chapstick
☒ "Keep your Lakes Great and your River Grand" dry bags
☒ LGROW "magic scarf"
☐ LGROW Totebags
☒ "Keep your lakes Great and your River Grand" sticker
☒ Troutie coloring book
☐ Paint by number watershed map
☐ Watershed hand stamp
☒ "Report Illicit Discharges" magnet
☒ Trout stress ball with "Only rain in the drain – it leads directly to my home"
☒ Report Illicit Discharges beverage coaster
☐ Other:

2. Have you given away all the materials (brochures, flyers, giveaways) you ordered from GVMC this year?
☐ Yes ☒ No

3. Where did you distribute your materials?
☒ Government office ☒ Library ☒ Community event ☐ Other

4. Approximately how many people did you interact with during distribution of materials? **60**

5. What was the most popular giveaway from the materials distributed in your community? **Trout stress fish**

6. What topics are of 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 septic system maintenance
☒ Household hazardous waste management

Illicit Discharge Reporting

7. Did you distribute illicit discharge reporting materials to your residents?

☐ Hard copies of "Citizens Reporting Brochures" from the IDEP – Number distributed:
☒ Link to LGROW's reporting page posted to your website https://www.lgrow.org/report/
☒ Report Illicit Discharge magnets – Number distributed: **20**

Please describe any interest, comments, or discussion generated from the brochure, magnet or website https://www.lgrow.org/report/:
A couple Walker residents were excited to learn that there is a way to report illicit discharges and that it will be cleaned up.
How many complaints were received from the general public regarding illicit discharges? **0**

Newsletters, Banners, and Displays

8. Did you order and display new lamppost banners during this permit cycle?
   ☐ Ordered and displayed new lamppost banners at (streets):
   ☒ Displayed lamppost banners provided in 2009-2013 at (streets): **North Park Bridge**
   ☐ Did not order or display lamppost banners

9. Did you distribute stormwater focused newsletter articles to your residents? ☒Yes ☐No
   a. Please describe any interest, comments, or discussion generated from the articles **None**
   b. If applicable, list the newsletter name or webpage address used to distribute stormwater information to the public: **City of Walker electronic newsletter and Facebook page**
   c. If applicable, how many residents received your community newsletter? **There are 966 subscribers to our electronic newsletter.**
   d. If applicable, how many total website hits did you receive for your online newsletter articles or stormwater information website? **Unknown.**

10. Did you use any of the following materials or activities at events during the reporting period?

Stormwater poster board display	☐Yes, Date:	☒No
EnviroScape interactive stormwater model	☐Yes, Date:	☒No
Watershed map with pushpins	☒Yes, Date: 6/11/2018	☐No
Stormwater mural banner and scavenger hunt	☐Yes, Date:	☒No
Major Runoff stormwater mascot	☐Yes, Date:	☒No
Interactive Corn Hole Board	☐Yes, Date:	☒No
Interactive catch basin demos	☐Yes, Date:	☒No

Events and Pledges

11. Did you host a seed bomb or native plant workshop? ☐ Yes, on: ☒No

12. Did you distribute any additional educational materials on native plants?
    ☐ Yes (Describe): ☒No

13. Please describe any interest, comments, or discussion generated from native plant workshops or giveaways: **N/A**

14. Did your community collect pet waste pledges distributed with the public education materials?
    ☒Yes, Number: **16** ☐No

15. Did your community collect car wash pledges distributed with the public education materials?
    ☐Yes, Number: ☒No

    Please describe any interest, comments, or discussion generated from either of the pledges and associated giveaways. **None**

16. Did you implement a storm drain awareness activity between August 1, 2017 and July 31, 2018?

☐ Yes: (streets) on (dates)
☐ Yes, we held a storm drain stenciling event on (dates) and stenciled (streets)
☒ Yes, we have approximately **Large amount** of pre-marked catch basin backs/grates with the message "No dumping, drains to waterway" in our streets.
☐ Yes, we hung door knob flyers on (streets) on (dates)

Please describe any interest, comments, or discussion generated from the activities above: **None**
Have you noticed a reduction in storm drain dumping? ☐Yes ☒No Describe:

17. Please describe any interest, comments, or discussion generated from these materials/activities: **N/A**

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

☐ Rain barrel workshop Date: Number of Attendees:
☐ Rain garden/Green Infrastructure Workday Date: Number of attendees:
☒ River clean up (location): Indian Mill Creek/Grand River Date: 9/9/17
Number of Attendees: 1,300 in overall cleanup, 25 signed up for IMC portion.
☒ Ottawa County Water Quality Forum – November 30, 2017
☐ MWEA Watershed & Stormwater Seminar – December 5, 2017
☐ MWEA Watershed Summit – March 28, 2018
☐ Earth Day at Blandford Nature Center – April 21, 2018
☒ 15th Annual Grand River Spring Forum – May 11, 2018
☐ Grand River Water Festival – June 24, 2018
☐ MWEA Annual Conference – June 25-27, 2018
☐ West Michigan WhiteCaps Concourse Table – July 26, 2018
☒ Other: **Walker KDL Carnival** Date: 6/12/2018 Number of Attendees: 200

19. Describe any materials distributed, number of attendees, messages used at these events: At the Walker Carnival event, attendees were given Troutie the stress ball, LGROW magic scarf, or dry bag for their cell phone if they were able to mark where they live in the watershed. Other standard giveaways were also distributed.

20. If applicable, please describe any other stormwater public education activities your community implemented beyond the events described above (This includes education with school groups, other community events, etc.) and submit any relevant documentation.

N/A

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. Illicit discharges that were identified either by public reporting or staff identification during this reporting period are detailed in each community's IDEP. Descriptions of the other IDEP activities undertaken on an individual basis are included below. 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.

Dry-weather screening was completed by the Kent County Drain Commissioner during this reporting period for the Drain Commissioner's MS4. Other communities in the watershed began outfall sampling in the summer of 2018, and that work had not been completed at the time this report was written. A full report on IDEP outfall screening will be included in next year's report.

Community IDEP Activities

Please describe any dry-weather screening conducted during the reporting period and the findings of that screening.
Outfall sampling for the City of Walker started in May 2018 and will be completed in August 2018. Follow-up sampling will be completed through the end of 2018. A full report will be provided in the 2018-2019 Progress Report.
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.
6-28-18: A sanitary force main broke in 3 Mile at Fruit Ridge Ave and overflowed into storm sewer/Nolan Drain/Sand Creek. This main had a 1,700 gal/min capacity but the actual rate at the time of the spill was unknown. Spill occurred for ~7 hours until emergency diversion and eventual repair was successful. See attached Spill Report for more information. 7-19-18: A semi-truck driver drove through Walker before realizing there was a leak in the diesel tank. The spill began around Lake Michigan Drive, up Wilson to the roundabout at Remembrance, then down Remembrance to Richmond Ave. The fire department applied soak-up to all areas where the truck stopped and diesel fuel pooled. This was swept up and a catch basin was vacuumed out. See attached Spill Report for more information.
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.
During our IDEP screening, an illicit connection was identified into our storm sewer in Walkent Ct NW on 7-26-18. The property owners have been sent a Notice of Violation/Order to abate on 8-9-18. Enforcement is ongoing. There are no other ongoing illicit discharges.

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 dischargers receive a letter and are required to purchase a stencil to mark all catch basins in the area of the discharge. If the discharge occurs at a business, we also require all staff watch an informational video on stormwater pollution prevention. A sign-in sheet is provided to the City after the training to document who attended. Failing septic system discharges are referred to the Kent County Health Department for enforcement and follow-up. Any large scale or repeat discharger is handled through ordinance enforcement. Chapter 67 Article IV of the Walker City Code details prohibited discharges. Article VI details enforcement procedures for ordinance violations which include municipal civil infractions 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)*.
• 2 discharges eliminated, both were accidental. • Unknown amount of wastewater, 25-75 gallons of diesel

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 systems were reported during this 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 staff and resident training, has provided a mechanism whereby dischargers are quickly reported and addressed. We have enjoyed a high degree of cooperation from dischargers in the past to ensure that discharges 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: New outfall map and list is in progress. A review of our previous 2016 outfall map found several outfalls that are privately owned/not connected to the City's MS4. Furthermore, several outfalls were discovered that were not included in the 2016 outfall list. A new map and outfall list will be provided in the 2018-19 Progress Report. Previously, our map and list were submitted to MDEQ as Appendix 2 in Illicit Discharge Elimination Plan revision, July 30, 2013. The 2016 map and list was 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
Comments: The agreement between the City of Walker and KHPS will be rewritten upon issuance of a new MS4 permit.		

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**:
The City of Walker has dedicated both cash and in-kind support toward a Regional Conservation Partnership Program titled the "Lower Grand River Watershed Habitat Restoration and Farmland Conservation Project". This grant aims to improve water quality in the Lower Grand watershed, specifically in the Indian Mill Creek and Rogue River sub watersheds. Walker will continue providing staff hours and support throughout the 5-year grant.
Please list any other actions your community has conducted to reduce stormwater pollution
The City of Walker hosts clean up days in the fall and spring. During this time, residents can drop off leaves and other debris at City Hall during business hours. This is a wildly popular service: in the fall, approximately 800 tons of leaves were dropped off to City Hall and hauled away and roughly 40 tons of leaves, tires, and other items were dropped off in the spring. On top of making appliance disposal accessible, this service 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

Indian Mill Creek Clean Ups

Mayor's Clean Up Sept. 9, 2017

Friends of Indian Mill Creek Cleanup June 2, 2018

2017 Focus Group Report for the NPDES MS4 Public Education Plan in the Lower Grand River Watershed

December 2017

Grand Valley Metropolitan Council

Introduction

A focus group was held on December 18, 2017 as part of the compliance activities associated with the National Pollution Discharge Elimination System (NPDES) Stormwater Regulations watershed-based permit for communities in the Lower Grand River Watershed (LGRW). The focus group served as an evaluation tool for the LGRW Public Education Plan (PEP), an integral part of the NPDES Municipal Separate Storm Sewer System (MS4) permit. In 2003, twenty three entities made up of county, city, village, township, university, and local school districts collaborated under the guidance of Grand Valley Metropolitan Council (GVMC) to apply for a watershed-based stormwater permits. The Lower Grand River Organization of Watersheds (LGROW) was officially formed as an agency of GVMC in 2009 to coordinate the implementation of the permits and provide basin-wide oversight, conduct watershed-wide initiatives, and prioritize water quality concerns.

The PEP was created for the participating communities in Kent, Ottawa, and Muskegon Counties and is intended to educate the public on stormwater pollution reduction. Successful implementation of the PEP will form partnerships with agencies and organizations that have existing programs and use educational materials and strategies familiar and relevant to the area residents. LGROW is the mechanism used to promote PEP programs and materials.

The unique purpose of the public education portion of the NPDES MS4 Stormwater Regulations is to increase the awareness of watershed residents that their everyday activities can contribute pollutants to their community's water resources. Most citizens recognize the recreational and aesthetic benefits they receive from water, and also recognize that water quality degradation is a serious concern in the Great Lakes Region. Most people, however, have not made the connection that significant pollution is generated from their normal everyday actions, and not simply from large commercial and industrial sources.

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

The last focus group held to evaluate the PEP was in 2009 at Fishbeck, Thompson, Carr & Huber (FTC&H) in Grand Rapids. The purpose of the focus group was to determine changes in the awareness, education, and behavior of the public as a result of stormwater education efforts in 2008 and 2009. Results of that session were used by GVMC and the LGROW Public Engagement Committee to further enhance the goals, objectives, and deliverables of the MS4 program.

The 2017 focus group was held at the offices of GVMC with the purpose to determine changes in the awareness, education, and behavior of the public as a result of stormwater education efforts since 2009.

In this report the results of the focus group will be evaluated, and recommendations given by participants will be used to edit and update the current LGRW MS4 PEP.

Methods

Focus group participants were nominated by local units of government that maintain MS4 permits. Each participating local unit of government was asked to submit two potential participants that meet the following criteria:

1. The nominees must live in Kent or Ottawa Counties, specifically in the Lower Grand River Watershed, preferably in the community they are representing
2. The individuals do not manage or have direct involvement with your community's MS4 Permit
3. The nominees have had the potential to encounter LGROW deliverables (examples: events, educational outreach, brochures or fliers, LGROW website or Facebook page)

GVMC staff administered the 1.5 hour long focus group session on December 18, 2017. Twelve invited individuals were present, representing Kent and Ottawa Counties. Eleven of the 23 municipalities that GVMC works with regarding MS4 permits were represented. There was a diverse demographic represented among the group.

Focus Group Dialogue

All participants were asked to fill out the following questionnaire before discussion began:

Table 1 – Questionnaire
1. Name?
2. Affiliation or workplace?
3. What community (city, township, or village) do you live in?
4. What local parks do you most often go to?
5. What community do you work in?
6. What is the zip code where you live?

The results of this questionnaire indicated that all twelve participants live in the Lower Grand River Watershed and subwatersheds of the Lower Grand (Plaster Creek, Lower Rogue, Indian Mill Creek, and Spring Lake). Half of the participants worked for the municipality that they were representing for the focus group, although only one of those six work directly to manage their municipality's MS4 permit.

Discussion began with introductions of everyone present and an ice breaker question. The conversation followed six dialogue questions led by GVMC. The dialogue questions were as follows:

Table 2 – 2017 Dialogue Questions
1. What do you know about LGROW?
2. What LGROW information have you seen, heard, or read?
3. Did the message (that you have seen, heard, or read) influence you? If so, how?
4. Have you seen any stormwater or pollution prevention messaging at your workplace? Who was the message from? (LGROW, employer, other org.)
5. How could LGROW project deliverables be improved?
6. Where and how do you get information on community activities?

Question #1: What do you know about LGROW?

In all correspondence with participants prior to the focus group, the words 'Lower Grand River Organization of Watersheds' were not used. This was in order to determine the reach of the organization. When asked what they knew about LGROW, participants could not specifically spell out what LGROW stands for, but did display knowledge of watershed concepts and understand that the organization had something to do with watershed protection. One participant identified LGROW as the Lower Grand River Association of Watersheds and correctly described it as "a watershed partner for the larger area." Once told what LGROW stood for, participants were able to identify events and projects that LGROW partners and participates in, such as the Mayor's Grand River Cleanup (led by the West Michigan Environmental Action Council, WMEAC), Basin Buddy program and Stormwater Oversight Commission (City of Grand Rapids), MS4 permit management (GVMC/LGROW) and pet waste pledges (LGROW).

After topics for Question #1 were exhausted, GVMC staff explained the purpose of this focus group as it relates to the MS4 permitting process and explained the history of LGROW.

Question #2: What LGROW information have you seen, heard, or read?

The purpose of this question was to learn which materials LGROW had successfully administered to the communities. Some participants mentioned school activities, rain barrel workshops, and tours/events at breweries. Others described activities that their individual communities completed as part of MS4 compliance, including displays at city hall, e-newsletters, no dumping signs on catch basins, and touch-a-truck events where the DPW conducts outreach. Representatives from Grand Haven discussed their community's work with schools focusing on source water protection and recognized materials with LGROW's older "Keep it Pure: Yours to Protect" messaging. One participant was familiar with the LGROW Spring Forum and encouraged others to attend.

Participants wondered if LGROW ran a Master Rain Gardener program and asked about LGROW's connection to WMEAC and to Plaster Creek Stewards. The only LGROW-specific information that participants were able to relay was storm drain markers and pet waste signs.

Discussion for this question also raised participant concerns regarding combined sewer overflow (CSO) that reaches the Lower Grand River from upstream communities and its local effects. Participants also questioned if there would be opportunity for LGROW to do outreach concerning PFAS drinking water contamination.

All participants received re-usable LGROW tote bags that contained LGROW promotional and public outreach materials. GVMC staff also presented a power point presentation that contained pictures of other LGROW materials that were used in the past, materials that could not fit into the tote bags (ex: storm drain stencils), and pictures from events or festivals that LGROW has been present at.

Question #3: Did the message (that you have seen, heard, or read) influence you? If so, how?

The discussion regarding Question #3 didn't focus on how the stormwater messages changed behavior in participants, but instead focused on the content of messages. Participants did indicate that they had seen 'Entering the [Lower Grand River] Watershed' signs, but discussion did not cover how that information affected their behavior. Most participants agreed that placing these signs at watershed boundaries is better than only along the stream, but one participant thought the signs were not useful because people ignore them on busy streets.

Storm drain markings were discussed at length, and the general group consensus was that storm drain markers are good to have. However, the way that the storm drains are marked can affect the purpose of the marking. For example, the group seemed to be in agreement that the circular LGROW drain markers are hard to read, and therefore the message they are trying to convey (no dumping, drains to local waterway), gets lost. Also, if all drain markers are in English, and they are used in a neighborhood that isn't predominately native English speakers, the message gets lost. Excellent points were made by focus group participants asking about LGROW's outreach in different languages, and approaching citizen perspectives from different cultural point of views. If someone is from a culture where it is common practice to dump things down the storm drain, they may need different educational messages than those who understand how local stormwater infrastructure works.

Question #4: Have you seen any stormwater or pollution prevention messaging at your workplace? Who was the message from (LGROW, employer, other org.)?

One participant shared that unless you are working for a DPW directly with the stormwater permit, one would not receive official stormwater training. However, in that community, there is stormwater education provided to employees, especially if their daily job encounters stormwater management best management practices (BMPs). The general consensus from the focus group was that participants hadn't seen much information about stormwater in their workplace, or couldn't specifically recall any stormwater messaging at work.

Question #5: How could LGROW project deliverables be improved?

Participants offered helpful and realistic ways for deliverables to be achieved, how to improve messaging and improved methods of outreach. One suggestion was to connect watershed education with drinking water quality. Citizens are often more concerned with the quality of drinking water than surface water and stormwater runoff. If a connection between stormwater and drinking water can be made, citizens may become more invested in stormwater messaging.

There were many ideas about the methods used to reach people. The general consensus was that LGROW needs a broader reach and more people need to be aware of stormwater messaging. Participants mentioned that they would like to see messages on billboards, on physical print materials such as newspapers or magazines, and/or in promotional videos that offer watershed education messaging.

New audiences and topics for outreach were also suggested, including educating residents of apartment complexes on their current impacts as well as how they can manage future properties, and educating owners of LEED buildings on maintenance of their green infrastructure.

One participant mentioned that communication with local governments is crucial. For example, LGROW has been encouraging people to wash their car on their grass (or at a commercial car wash) in order to avoid runoff polluted with soap and automobile fluids entering the storm sewer system through storm drains. However, it was mentioned that it is against some city codes to park your vehicle on the lawn and residents can get ticketed.

Question #6: Where and how do you get information on community activities?

Many participants received community information from the internet. Internet and social media sites mentioned included: Facebook, Instagram, Nextdoor, municipal websites, Experience Grand Rapids website, and Eventbrite.

Other sources include community newsletter and mailers, water bill mailers, and word of mouth. It was mentioned that word of mouth is extremely important in communities where people do not have access to the internet or smart phones. Also, participants expressed that it isn't enough to tell people about the watershed or stormwater pollution prevention, you also need to tell them why they should care about information you are presenting.

Other Discussion

GVMC staff asked for other suggestions for new LGROW promotional materials and giveaways that would help promote stormwater messaging. New ideas from the focus group participants included: phone accessories such as PopSockets, water bottle stickers to get free water refills (similar to a program Art Prize has used in Grand Rapids), conducting storm drain marking events with private neighborhood associations who would not otherwise have their drains marked by a municipality, pencils for kids at schools, politicians spreading the word when they go door-to-door during campaign season, and attending farmers markets to partner with farmers who could hand out information on LGROW's behalf.

Results

This focus group ended up being a very educational experience for its participants while providing valuable feedback on LGROW outreach activities. The mixed demographic of participants and the number of MS4 communities participating provided a fairly diverse view of LGROW's reach into the watershed, and participants shared many ideas to improve LGROW messaging.

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New Target Audiences

- *Municipal employees*
- *Adults through schoolchildren*
- *People living in apartment complexes*
- *LEED certified building owners*
- *Farmers*

Much of the focus group time was spent explaining to participants what LGROW does and why, instead of gaining insight on how to improve specific LGROW messages and materials. The fact that many of the participants were employees of municipalities participating in the MS4 program suggests that LGROW may need to emphasize improvement of outreach to these communities in order to extend our reach into the wider watershed community. Since these communities are meant to be assisting in spreading LGROW's stormwater messaging and materials, it is important that their employees understand LGROW's work. More stormwater messaging needs to be available to municipality employees regarding that municipality's stormwater permit and program. Focus group participants were not opposed to learning more about their municipality's program, instead they seemed genuinely interested to know more about it and seemed willing to share that information with others. LGROW needs to find a more effective way for municipalities to share stormwater program information with municipality employees.

Frequently, LGROW focuses its attention on educating school children. It was suggested that information could be given to children at school for them to take home to their parents. Adults may become more invested in the messaging if it comes to them from their children. One participant suggested that LGROW spends a lot of time educating children, and should focus on targeting its messages to adults. An effective way to reach many adults at one time would be to expand messaging to apartment complexes. After this comment was made, other participants agreed, and suggested that private home associations, or subdivisions be brought into the loop in order to reach many adults who have a vested interest in the watershed, but aren't receiving messaging from another source. Other target audiences suggested were the owners of local LEED certified buildings. It is a good idea to reach out to these owners because they may need education on how to maintain their green infrastructure (GI).

Reworking Messages

- *Translating materials in to the language of the neighborhood*
- *Address 'why' citizens need to know the message presented*
- *Simplify messages*

Participants stressed the importance of materials being available in the language of citizens that LGROW is wishing to serve. There is a large Hispanic population in West Michigan, and in order to reach those people, materials in Spanish should be available. It is also important to take into consideration cultural values because many people may not understand how their local stormwater infrastructure works. While educating people on how the storm sewer works, focus group participants also mentioned that it

is important to explain to people why LGROW messages are important and how stormwater affects their everyday life. Messages should also be simple, in order to ensure understanding and avoid confusion.

Delivery Mechanisms

- *Placement of watershed information (placement of 'Entering the Watershed' signs, more signs for GI)*
- *Tours of municipalities and events at breweries*
- *Word of mouth*
- *Presence at festivals*
- *Advertising in churches in the watershed*

There was excellent discussion by the group about ways that they would like to receive more information regarding stormwater messaging, and the places where they thought that messaging would be well received in the watershed.

'You are now entering the [Lower Grand River] Watershed' signs were deemed helpful by participants. Only one participant expressed that these signs are not helpful to citizens, because if you drive past them frequently in your neighborhood, you quickly become immune and ignore them. There was discussion about the placement of the watershed signs, and the group seemed to agree that it is helpful to have the signs placed at watershed boundaries, not directly at river or stream crossings. However, it was suggested that if signs were placed along bike or walking trails, there would be an opportunity for people to stop and read the sign and any other information provided with it. It is not practical for a driver of a car or passenger to read the whole sign while driving by. It was suggested that LGROW consider placing more signs in parks with watershed information, where interested parties will stop and read. Participants also noted that you might reach more people if you have a sign on a roadside versus a trail based on how busy that road or trail is.

Participants noticed that stormwater education is often given during facilities tours at municipalities, and that is a good place to get information to a captive audience. Also, many people have an interest in local breweries, so events or messaging promoted at breweries would also be successful.

Word of mouth is extremely helpful in communities for people who do not have internet access or smartphones. It was suggested that LGROW find a community leader and use them to spread educational messages.

Attending festivals is another mechanism that was suggested during the focus group, and advertising events or stormwater messaging in churches was also mentioned. Festivals and churches usually contain many local leaders, and this would be a great way to get active community members involved.

Key take-aways for LGROW from the focus group are summarized in the following table:

How LGROW messages can be improved	
New Target Audiences	• *Municipal employees* • *Adults through schoolchildren* • *People living in apartment complexes* • *LEED certified building owners* • *Farmers*
Reworking Messages	• *Translating materials in to the language of the neighborhood* • *Address 'why' citizens need to know the message presented* • *Simplify messages*
Delivery Mechanisms	• *Placement of watershed information (placement of 'Entering the Watershed' signs, more signs for GI)* • *Tours of municipalities and events at breweries* • *Word of mouth* • *Presence at festivals* • *Advertising in churches in the watershed*

Future Action Steps

Using the information provided from the focus group, the PEP for the LGRW communities can be edited to better serve the public. The challenges, successes, and recommendations communicated in this report will be evaluated to modify the PEP as needed. The updated PEP will result in a more effective public outreach campaign to reduce stormwater pollution and raise MS4 awareness during the next permit cycle.

Photos


LGROW Stormwater
Outreach Materials
LOWER GRAND RIVER
ORGANIZATION OF WATERSHEDS


Drain Markers & Door Hangers

City of Walker

Reporting Dates 08/01/2017 07/31/2018

Cost Summary By Task

Task	Activities	Labor Hours	Labor Cost	Eqp Cost	Mat Cost	Con Cost	Overhead	Total Cost
102-Basin Cleaning	112	608.00	$13,017.28	$21,411.48	$0.00	$0.00	$0.00	$34,428.76
103-Street Sweeping	83	480.00	$11,845.76	$39,629.41	$0.00	$0.00	$0.00	$51,475.17
104-Sewer/Street Sweeping Disposal	41	56.00	$1,164.25	$2,758.07	$0.00	$0.00	$0.00	$3,922.32
116-Curb Replacement/Sidewalk Repl	50	232.00	$5,120.88	$12,342.67	$0.00	$0.00	$0.00	$17,463.55
117-Catch Basin Repair	41	221.50	$5,160.33	$9,705.00	$0.00	$0.00	$0.00	$14,865.32
123-Cave-In	96	465.50	$9,897.90	$19,040.84	$0.00	$0.00	$0.00	$28,938.74
206-Sidewalks-Summer Maint.	100	493.00	$11,305.85	$23,895.19	$0.00	$0.00	$0.00	$35,201.04
Tasks: 7	**523**	**2,556.00**		**$128,782.66**		**$0.00**		**$186,294.90**
			$57,512.24		**$0.00**		**$0.00**	

Summary Customer Activity Report

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

July 01, 2017 to June 30, 2018
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	1.10	0.00 TN	0.00	0.00 YD	0.00	0.00	1.10 TN	$80.20	$2.24	$82.44	2	
C&D	38.33	0.00 TN	0.00	0.00 YD	0.00	0.00	38.33 TN	$623.79	$78.20	$701.99	15	
SW-CONT SOIL	249.60	0.00 TN	0.00	0.00 YD	0.00	0.00	249.60 TN	$3,752.62	$509.18	$4,261.80	25	
SW-STREET SWEEPINGS	285.71	0.00 TN	0.00	0.00 YD	0.00	0.00	285.71 TN	$5,103.50	$582.85	$5,686.35	38	
Customer Totals:	574.74	0.00 TN	0.00	0.00 YD	0.00	0.00	574.74 TN	$9,560.11	$1,172.47	$10,732.58	80	80
	574.74	0.00 TN	0.00	0.00 YD	0.00	0.00	574.74 TN	$9,560.11	$1,172.47	$10,732.58	80	80

City of Walker

Reporting Dates 07/01/2017 06/30/2018

Cost Summary By Task

Task	Activities	Labor Hours	Labor Cost	Eqp Cost	Mat Cost	Con Cost	Overhead	Total Cost
101-Sewer & Ditches	372	1,591.50	$37,549.60	$67,164.95	$0.00	$0.00	$0.00	$104,714.54
Tasks: 1	**372**	**1,591.50**	**$37,549.60**	**$67,164.95**	**$0.00**	**$0.00**	**$0.00**	**$104,714.54**

Kerkstra
Environmental Services INC.

7240 Evanston Ave.
Muskegon, MI 49442

Invoice

Date	Invoice #
8/15/2017	15280

Bill To	Site Address
Kenowa Hills Public Schools 2325 4 Road NW Grand Rapids, MI 49544	Bus Garage 4473 Remembrance Rd. Walker, MI

P.O. No.	Service Date	Due Date	Terms	US EPA ID Number
	8/9/2017	8/30/2017	Net 15	MIK 366415610

Item Code	Quantity	Description	Rate	Amount
HR	2	Truck Time - Hourly Service	130.00	260.00
G	1,200	Gallons Pumped	0.30	360.00
		Vac 2 Shop Drains & Pump Pit Vac and Power Wash Oil/Water Separator Jetted Line from Separator to Building		
		Manifest# 007948948FLE		
		Sam B.		
		Sam B. 111-241-4110-09047-261600		

RECEIVED AUG 17 2017

Total	$620.00
Balance Due	$620.00

Phone #	Fax #	E-mail	Web Site
6168362252	2317679716	kerkstrawaste@yahoo.com	www.kerkstraservices.com

City of Walker NPDES Training

Signature(s) below are acknowledgement that on Friday, October 20, 2017 these individuals participated in a training session at the City of Walker, 4243 Remembrance Rd., NW Grand Rapids, MI 49534. Training was overseen by Rachell Nagorsen, Engineering Programs Coordinator. During this session, a presentation was given regarding SAW grant activities as they relate to MS4 asset management, including best management practices contained in the City's SWPPI. An outline is attached.

The signature below affirms staff members were present during the presentation.

	Name (please print):	Signature:
1	Pat Pags	
2	Mark Koning	
3	Alex Jansheski	
4	Dan Huizenga	
5	GERONIMO VALDEZ	
6	FREDERICK M HOST	
7	Jacob Dennis	
8	David Hoekzema	
9	Steve Witkoski	
10	Gary Postema	
11	Kyle Bidsley	
12	JASON DEBOER	
13	TOM KLEIN	
14	DALE SCHUILING	
15	TRAVIS MARSH	
16	Del Fend	
17	Scott Conners	
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October 20, 2017: SAW DPW Training Outline

Power point presentation notes

1. What is SAW? (**S**tormwater, **A**sset Management, and **W**astewater Grants)
2. What is 'asset management'?
    a. "Proactively manages system assets"
        i. root cutting, cleaning catch basins, street sweeping, ditch cleanout, etc.)
3. What is asset management?:
    a. Inventory
    b. Condition assessment/failure risk
    c. Failure consequence (if a pipe fails in 3 Mile vs. a neighborhood street)
    d. Criticality determination
    e. Level of Service Standards
        i. How much water can a pipe carry?
        ii. Ensuring downstream can catch up during a significant rain event.
    f. Asset Management Plan (as it relates to system maintenance)
    g. Financial Management Plan
        i. Ensure there is money in the budget to complete storm system improvement projects.
4. Inventory
    a. This is useful in the case of a spill. We know where the pipes are going and are better equipped to prevent a discharge into waters of the state/Grand River
    b. If there is a failure or localized flooding, we have better information on which pipes to analyze and possibly replace.
5. Inventory map
6. Inventory Statistics
    a. Catch basins are inspected on a 5 year rotating basis. That means ~600 basins a year!
    b. Catch basin and pond inspection forms are important for both our SWPPI and asset management.
7. Condition Assessment/Risk of Failure
    a. Inspected via zoom camera
    b. Rate condition (1-5 rating scale)
    c. Develop cost to fix/replace
    d. Assign life expectancy
8. Pipe condition ratings overview
9. Video and supplemental material
10. Capital Improvement Plan (CIP)
    a. Show map of projects throughout the City
    b. Indian Mill Creek drain example: obtaining easements will allow us to improve this drainage ditch. This will help reduce the frequency of Walker Ave box culvert cleanout as well as significantly improve water quality in Indian Mill Creek

How You as an Employee Can Help Reduce Pollution Entering the Grand River

The City of Walker is working to better manage stormwater runoff. As an employee of the City of Walker, you have the opportunity to help reduce the amount of pollution entering the storm sewer and ultimately the Grand River and Lake Michigan.

What is Stormwater Pollution?

When it rains, stormwater flows over lawns, streets, and parking lots, carrying with it road dirt, fertilizers, oil, and grease into storm drains, which are often located alongside streets and parking lots.

Where to Storm Drains Lead?

Storm drains lead directly into nearby streams and lakes, usually without any type of treatment. Stormwater entering storm drains in Walker ultimately leads to the Grand River and Lake Michigan.

How Can I Help Reduce Stormwater Pollution at Work?

- Report dumping to **Rachell Nagorsen**, the stormwater coordinator, at **791-6327** or **rnagorsen@ci.walker.mi.us.**
- Make sure that wash water and other wastes do not enter a storm drain.
- Recycle waste as much as possible.
- Remember to close the lids on dumpsters and outdoor trash cans.
- Help build awareness of stormwater pollution by sharing this information.

How Can I Help Reduce Stormwater Pollution at Home?

- Never dump grass clippings, vehicle fluids, or anything else down a storm drain.
- Dispose of pet waste in a trash can.
- Take used motor oil to a quick lube or auto shop.
- Avoid fertilizing your lawn before a rain storm.
- Wash your car at a commercial car wash or on your lawn to prevent dirt and soap from entering a storm drain.

City of WALKER

LOWER GRAND RIVER ORGANIZATION of WATERSHEDS

KHPS Nested Drainage Progress Meeting

April 11, 2018

1. Nested jurisdiction stormwater activity review
2. New construction discussion
    a. Updated maps and inspection responsibilities
    b. Underground detention inspection procedure
        i. Inspection checklist
        ii. Stadia rod
    c. Asbuilt and detail sheet-follow-up required
3. 2018 DEQ MS4 invoice

Underground Detention System Inspection and Maintenance Checklist

Facility: Zinser Elementary			
Location/Address: 1234 Kinney Ave NW			
Date:	**Time:**	**Weather Conditions:**	**Date of Last Inspection:**
Inspector: Sam Wiltheiss		**Title:** Superintendent of Buildings and Grounds	
Rain in Last 48 Hours □ **Yes** □ **No**		**If yes, list amount and timing:**	
Pretreatment: □ **vegetated filter strip** □ **swale** □ **turf grass** □ **forebay** □ **other, specify:**			■ **none**
Site Plan or As-Built Plan Available: ■ **Yes** □ **No**			

*Do not enter underground detention chambers to inspect system unless Occupational Safety & Health Administration (OSHA) regulations for confined space entry are followed.
*Follow inspection and maintenance instructions and schedules provided by system manufacturer and installer.
* Properly dispose of all wastes.

Inspection Item		Comment	Action Needed
1. PRETREATMENT			
Sediment has accumulated.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Trash and debris have accumulated.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
2. INLETS			
Inlets are in poor structural condition.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Sediment, trash, or debris have accumulated and/or is blocking the inlets.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
3. CHAMBERS			
3" or more sediment accumulation.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Trash and debris have accumulated in chambers.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
4. OTHER SYSTEM COMPONENTS			
Structural deterioration is evident.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
5. OUTLETS			
Outlets in poor structural condition.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Sediment, trash or debris are blocking outlets.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Erosion is occurring around outlets.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
6. OTHER			
Evidence of ponding water on area draining to system.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Evidence that water is not being conveyed through the system.	☐**Yes** ☐**No** ☐**N/A**		☐**Yes** ☐**No**
Maintenance Actions Taken:			
Wet weather inspection needed □ **Yes** □ **No**			

SPILL REPORT

Spill Date: 6/28/2018
Spill Time: 12:00 AM

Location of Spill: 3 Mile WB lane at Fruit Ridge Ave
(Provide address, nearest cross-street or detailed location)
Quantity Spilled: 1,700 gal/minute capacity sanitary force main, but actual gal/min unknown. Spilled for ~7 hours before flow diversion of most material via tanker trucks while repair was being made.
Material Spilled: Sanitary wastewater
☐ Attach MSDS Sheet (if applicable)
Staff Member: Rachell Nagorsen
☒ Responding to Spill
☐ Responsible for Spill

Cause of Spill: Sanitary forcemain failure under road.

Was the spill discharged to a:
(Check all that apply)

Catch Basin:	Yes ☒	No ☐
Storm Sewer:	Yes ☒	No ☐
Drainage Ditch:	Yes ☒	No ☐
Stream/ River:	Yes ☒	No ☐
Pond:	Yes ☐	No ☒

If Yes to any discharge listed above:
☐ **Notify Rachell Nagorsen Immediately**
(616) 791-6327 – Office
(248) 200-8815 – Cell
☒ Backup Contact: Scott Conners
(616) 791-6792 - Office
(616) 292-5991 - Cell
Date: 6/28/2018 Time: 3:00 AM
Staff Member Providing Notification: Mark Koning, DPW Director. Scott Conners reported to Rachell Nagorsen for follow-up at 7:00 AM

Illicit Discharge Reporting

MDEQ Notified: *Date: 6/28/2018 Time: 6:30 AM (via local news report)*
Clean up began: *Date: 6/28/2018 Time: 5:00 AM*
Clean up completed: *Date: 6/28/2018 Time: 3:00 PM*

Clean up action taken:
Between 11 PM and 12 AM on 6/27 and 6/28, a resident noticed the pavement in 3 Mile Rd buckling. It was first noted as a water main break, but the City of Grand Rapids discovered at 1:00 AM it was a sanitary forcemain break. Plummers Environmental was called to the site to start pumping raw sewage out of a manhole. The flow was very fast so a lot of water was entering a catch basin that eventually ended up in Nolan Drain, which flows to Sand Creek-East Fork. After generator, pump, and capacity issues, Plummer's eventually set up a large diversion operation at the pumping station at ~9:00 AM upstream of the break, involving 5 tankers with ~9-13k gallon capacity. This significantly reduced the amount of wastewater flow at the break. While this was occurring, Nolan drain was observed to have sewage/strong odor. This was unable to be observed at Sand Creek due to unrelated sediment load in the water. Once

excavation began in the road around 10:00 AM, remaining sewage at the site was removed with a vac truck. Observations of Nolan Drain after 11:00 AM by Walker Engineering staff were greatly improved but sewage remained in areas with low flow. Grand Rapids installed an inlet plug at the catch basin receiving flow during the road excavation and pipe installation. By 3:00 PM, the road was excavated and new sanitary pipe installed. Nolan drain was observed again on 6/29 around 9:30 AM and appeared clear.

A map, photos, and DEQ report are included and attached to this spill report.

☒ Photos Attached ☒ Maps Attached ☒ Additional Info Attached

6/28/2018: 3 Mile SSO

Legend

- Rivers & Streams
- Wetlands
- City Storm Mains
- City Culverts
- Kent County Drain Commission
- City Outfalls
- Storm Inlet
- City Storm Manholes

SAND CREEK (EAST FORK)

Ditch leads to Sand Creek (East Fork). Sand Creek flows west.

Storm sewer daylights into ditch with consistent water flow

96

96

Exit 26

Wastewater flow direction to storm sewer

Sanitary forcemain break location

Storm sewer empties into culvert that carries Nolan Drain. This section is not a part of the County drain.

Design: RN | Date: 07-02-18 | Source: GVMC_REGIS

N

1 inch = 183 feet

June 28, 2018 SSO Event: Walker, MI

Photos taken by Rachell Nagorsen and are in chronological order.

6/28, 8:15 AM: Sweeper truck removing lime from roadway

This was applied earlier by CGR to kill bacteria associated with SSO. Removed to prevent lime from entering area waterways.

6/28, 8:45 AM: Nolan Drain outlet

Strong sewage smell and water turbid/greyish.

6/28, 9:00 AM: Sand Creek at Wilson Dr NW Bridge

Water has high sediment load-unable to observe SSO. No sewage smell.

6/28, 9:20 AM: 3 Mile at force main break

Wastewater continues to overflow into catch basin in 3 Mile.

6/28, 10:15 AM: 4730 3 Mile NW Pump Station

Sanitary diversion operation underway upstream of 3 Mile force main break.

6/28, 11:00 AM: Nolan Drain/Sand Creek Intersection

Difficult to observe water-this area is a wetland so water has low flow.

6/28, 11:15 AM: 3 Mile at force main break

SSO has been successfully diverted. Road excavation beginning with vac truck on site to remove any additional wastewater.

6/28, 2:30 PM: <u>Rogue River</u> (<u>Not</u> 3 Mile SSO)

Rachell Nagorsen went to Rogue River for an unrelated watershed meeting. This photo is included to show high sediment load in area waterways on June 28.

6/29, 10:40 AM: Nolan Drain

Day after SSO event. Water is clear, no sewage smell.

6/29, 10:45 AM: Sand Creek at Wilson Dr NW Bridge

Less sediment load, no sewage smell.

SPILL REPORT

Spill Date: 7/19/2018
Spill Time: 11:00 AM

Location of Spill: NB Wilson between M45/Roundabout, SB Remembrance to Richmond, EB Richmond at Awixa.
(Provide address, nearest cross-street or detailed location)
Quantity Spilled: 25-75 gallons
Material Spilled: Diesel fuel
☐ Attach MSDS Sheet (if applicable)

Staff Member: Rachell Nagorsen

☒ Responding to Spill
☐ Responsible for Spill

Cause of Spill: Leak in semi diesel tank

Was the spill discharged to a:
(Check all that apply)

Catch Basin:	Yes ☒	No ☐
Storm Sewer:	Yes ☐	No ☒
Drainage Ditch:	Yes ☐	No ☒
Stream/ River:	Yes ☐	No ☒
Pond:	Yes ☐	No ☒

If Yes to any discharge listed above:
☒ **Notify Rachell Nagorsen Immediately**
(616) 791-6327 – Office
(248) 200-8815 – Cell
☐ Backup Contact: Scott Conners
(616) 791-6792 - Office
(616) 292-5991 - Cell

Date: 7/19/2018 Time: 11:20 AM
Staff Member Providing Notification:
Bob Walker, Fire Chief

Illicit Discharge Reporting

MDEQ Notified: *Date: 7/19/2018 Time: 1:00 PM*
Clean up began: *Date: 7/19/2018 Time: 11:15 AM*
Clean up completed: *Date: 7/19/2018 Time: 3:00 PM*

Clean up action taken:
A semi driver drove through the City of Walker before realizing there was a leak in one of his fuel tanks. This route took him from Wilson at Lake Michigan Drive (M45), up to Remembrance, south on Remembrance to Richmond where he ran out of fuel. A road resurfacing project was his destination. Diesel leak was slow and caused minor staining on most of the route, but pooled where semi slowed down or stopped (Wilson, Roundabout, Richmond). Soak up was applied in these locations and removed with a street sweeper. A catch basin at the corner of Awixa and Richmond was also vacuumed out.

☒ Photos Attached ☒ Maps Attached ☒ Additional Info Attached

07-19-2018 Diesel Spill

Catch basin location that was vacuumed out.

Trucked parked. Any remaining fuel put into other tank.

Legend

- Truck Route
- Soak-Up Application
- Walker Boundary
- Wetlands
- City Storm Mains
- City Culverts
- Kent County Drain Commission
- Private Storm Mains

Design: RN | Date: 07-23-18 | Source: GVMC_REGIS

The City of Walker makes no warranty, expressed or implied, regarding the accuracy, completeness, or usefulness of the information presented. Users of this information assume all liability of its fitness for a particular use.

1 inch = 833 feet

7-19-2018 Diesel Spill in Walker, MI

(Left) NB Wilson: dark black line in road is diesel fuel. It was first observed at 4365 Lake MI Drive.
(Right) NB Wilson, semi had slowed down and diesel was able to pool. Soak up applied and later swept.

(Left) Evidence of diesel continues up Wilson. (Right) Diesel and soak up where semi slowed down at Wilson/Remembrance roundabout.


(Left) Soak up applied at Richmond and Awixa where semi stopped.
(Right) Soak up along gutter in Richmond at same location.

Awixa/Richmond on 7-20-18. All soak up was swept up. Some staining remained in gutter.

Walker PD -- (616) 453-5441
4343 Remembrance NW, Walker, MI 49534

Incident No: **18-006842**
Status: **CLOSED**

Date Reported:	**Thu 07/19/2018 10:51:00**	Occurred Between:	**Thu 07/19/2018 10:51:00**		
Dispatch Time:	**10:52:00**	Arrival Time:	**10:58:00**	Clear Time:	**11:12:00**
CFS Number:	**WKP1800007231**				
Officers:	**LICHTI, SCOTT**			Detective:	
Classification:	**ASSISTS TO OTHER AGENCIES -- (9900-8)**				
Area:	**CENTRAL BEAT**				
Location:	**3560 RICHMOND ST NW, WALKER**			Section / Nbh:	/
Description:	**ASSIST WALKER FIRE DEPT**			Entered:	**CADIMPORT**

OTHER: (9900-8 ASSISTS TO OTHER AGENCIES)

WALKER FIRE DEPT
4343 REMEMBRANCE RD NW
WALKER, MI 49534

REGISTERED OWNER: (9900-8 ASSISTS TO OTHER AGENCIES)

Vehicle Unit: 1

[redacted] DOB: [redacted]
Cell:

Race: [redacted] Sex: [redacted] Hair: [redacted] Eyes: [redacted]
Height: [redacted] Weight: [redacted]

Vehicles:

RED 1993 PETERBILT TRACTOR SEMI TRACTOR Tag: [redacted] MI Unit: 1
VIN: [redacted]

INITIAL INCIDENT **Reporting Officer: LICHTI, SCOTT**

Dispatched to Richmond St NW in front of the listed address, just west of Awixa, to assist WKFD on a diesel spill.

Upon arrival, I made contact with WKFD personnel as well as the driver/registered owner of the listed Peterbilt truck. He was ID with his MI Ops as [redacted] Fire personnel were cleaning up diesel fuel which had leaked from the truck's passenger-side tank. The truck appeared otherwise undamaged and did not appear to have struck anything. Once the leaking fuel tank was empty, Taylor and the truck were released. See WKFD report #18-336 for further.

CFS SUPPLEMENT - 07/19/2018-10:51:19 **Reporting Officer: CADIMPORT**
(Supplement 1)

2018-07-19 10:50:52 REQ PD 3560 RICHMOND

2018-07-19 10:50:56 FOR REPORT

2018-07-19 10:51:44 DIESEL SPILL VEHICLE LOCATED HERE

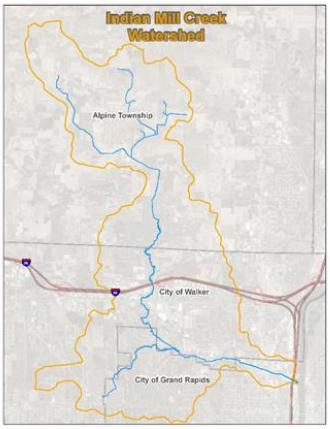
Reported By: _____

Reviewed By: POWELL, SAM
Reviewed Date: 07/19/2018

Date Printed: 07/24/2018

May 2018 Electronic Newsletter:

Special Funding for Farmers and Forest Landowners



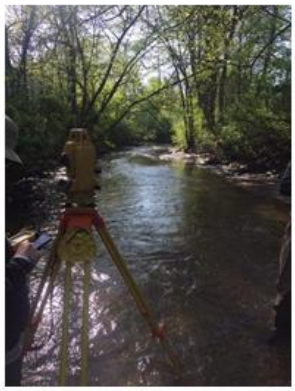
Attention Walker residents in the Indian Mill Creek watershed! There is new funding for you made available through the U.S. Department of Agriculture's (USDA) Regional Conservation Partnership Program. The USDA awarded the Grand Valley Metro Council (GVMC) $2.8 million in federal funding to address resource concerns in both the Indian Mill Creek and Rogue River watersheds of the Lower Grand River. These important watersheds are targeted because of the vital role they play in supporting cold and warm water fish such as trout, salmon, and steelhead.

Agricultural and forest landowners can use this funding to implement conservation practices like cover crops, grassed waterways, forested stream buffers, erosional control structures, and forest stand improvement. By focusing these practices within these two watersheds, GVMC and the project's 22 partners hope to see improved water quality, reduced sediment pollution, and increased fish habitat.
For more information on how to take advantage of this funding, go to www.lgrow.org/rcpp or contact your local USDA NRCS field office for a free site visit.

NRCS Grand Rapids Field Office: (616) 942-4111 (x3)

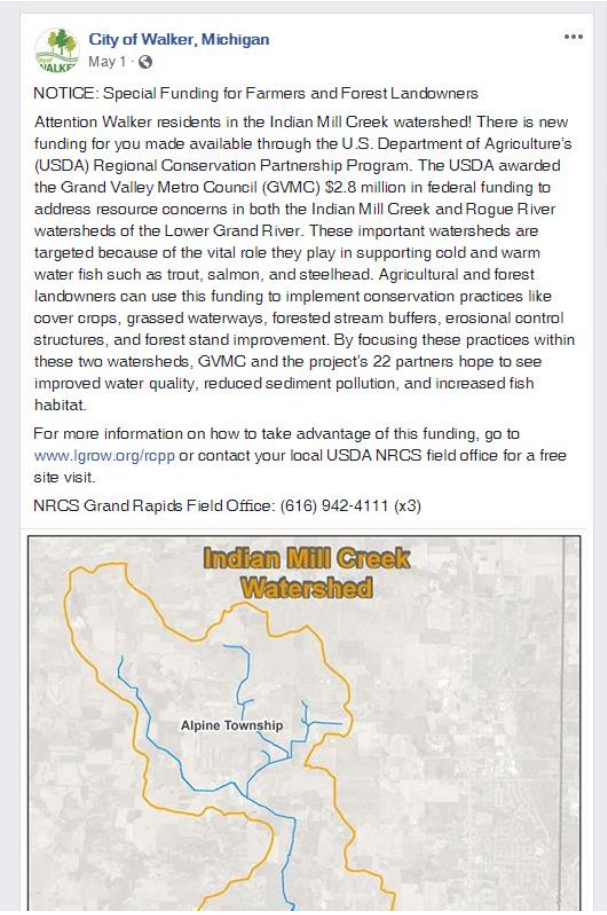
June 2018 Electronic Newsletter:

Indian Mill Creek Steambank Study



Do you know what watershed you live in? If you live in the central or northeast part of the city, chances are you live in the Indian Mill Creek Watershed. If you own property along the creek, you may have recently seen some GVSU Students conducting research. This field crew of four are on a mission to study soil erosion, sediment pollution, and streambed substrate issues within the creek. The study began in the spring of 2017 and has continued into 2018. So far, researchers have determined that sediment pollution and soil erosion have had negative effects on fish (especially trout) and other aquatic species. So how severe are these problems and what can be done to solve them? Using a combination of technology and equipment the field crew can survey the streambanks to collect data that will determine the rate of soil erosion and study the effects of sediment pollution. These results will then show overall effects on stream habitat. Researchers hope the results will help towards restoring the trout habitat that the creek once had. As of May 18th final streambank erosion measurements along Indian Mill Creek were completed. Within the next couple months, the crew will be processing data to hopefully find information that will help watershed managers restore order in Indian Mill Creek. The City of Walker along with the GVSU research team would like to thank the friends of Indian Mill Creek for their cooperative efforts towards restoring the creek.
To find out more about the study go to https://indianmillstudy.wordpress.com and follow their blog!
If you want to learn more about the watershed in your area please visit https://www.lgrow.org/

May 1, 2018 City of Walker Facebook Post:



May 30, 2018 City of Walker Facebook Post:

February 12 City of Walker Facebook Post:

February 7, 2018 City of Walker Facebook Post:

December 6, 2018 City of Walker Facebook Post:

City of Walker, Michigan
December 6, 2017 ·

It's finally feeling like winter! Here are some practical winter tips from LGROW, learn more on their website: https://www.lgrow.org/