MS4 Community Annual PEP Checklist

This document outlines your community's required activities for the 2021 Reporting Period. Check the box for each action as you complete it and provide supporting documentation where indicated. The 2021 PEP Focus Areas are: Personal watershed stewardship, Personal actions that can affect the watershed, Waste disposal assistance

Community Name: City of Grand Rapids

Priority Activities:

☐ 1. Ensure Community website links to the LGROW website (www.LGROW.org)
https://www.grandrapidsmi.gov/Government/Departments/Environmental-Services/Stormwater-Management

☒ 2. Publish at least 1 article on PEP topics in Community newsletter or news outlet
Name of newsletter/news outlet: GRConnected
Distribution/Reach of newsletter/news outlet: ~12,000 residents
PEP Topic(s) addressed: ☐ General Watershed Awareness ☐ Stormwater Discharge Location/Impacts\☐ Illicit Discharge Reporting ☐ Septic System Management ☒ Personal Actions ☐ Waste Management Assistance
Link: *https://us16.campaign-archive.com/?u=181cb0b9192edd05ab2beaa2c&id=006be58e54*

☒ 3. Community presence or Stormwater Display at 1 event or location
Event Date: Digester Tour as part of LGROW Spring Forum
Event Location: June 14, 2021 at Water Resources Recovery Facility
Photos Attached.

☐ 4. Distribute pollution prevention information to at least 2 targeted businesses/groups listed in PEP

Names of Businesses	*Title(s) of Material(s) Distributed*
Business 1	Material Name
Business 2	Material Name
Business 3	Material Name

☒ 5. Share household hazardous waste reduction information with residents via Community's social media, newsletter, or website *(You may attach a separate social media report for #'s 2 & 5 if you have additional posts to report)*
Date shared: See social Media Report
Location shared: Choose an item.
Social Media Post Reach: #
Social Media Post Engagement: #

☒ 6. Distribute giveaway items for selected PEP categories
All chapstick, shopping bags, stress balls, pens, magnest paint by numbers and stress balls allocated to us were distributed at our February 2020 home show booth. Items below were distributed during this reporting year.

Item	**# Distributed**	**Item**	**# Distributed**
LGROW Chapstick	#	*Pet Waste Bag Dispenser*	#
LGROW Shopping Bag	#	*Troutie Coloring Book*	#
Trout Stress Ball	#	*WMEAC Coloring Book*	# 13

LGROW Pen	#	*Paint by Number*	#
Only Rain Snap Bracelet	#6	*Watershed Brochure*	#
Reusable Straw	6	*EPA Stormwater Solution Brochure*	#
HHW Magnet	#	*Landscapting for Water Quality*	2

Other Activities

☐ 7. Cohost a LID/Green Infrastructure workshop for Community members with LGROW

Workshop Date: Click or tap to enter a date.
Workshop Location: Click or tap here to enter text.
# of Attendees: Click or tap here to enter text.
Attach a copy of workshop sign-in sheets or photos

☒ 8. Host, participate in, or support a stream cleanup effort

Sponsored 2020 Mayors' Grand River Cleanup
Cleanup Dat 9/12/2019 through 9/17/2020:
Cleanup Location: Throughout watershed
# of Volunteers: >700
Estimate from WMEAC, not all volunteers registered in the system developed to spread out volunteers due to coved. Over 6,500 punds of trash wer collected.

☒ 9. Mark storm drains or host/support storm drain marking events

Storm Drain Marking Event Date: Click or tap to enter a date.
# of Participants in Event: #
# of Storm Drains Marked: #
# of Pre-Marked or Stamped Drains already existing in Community: Unless in an historic area, all new basin grates are marked.

☒ 10. Join or Promote Adopt a Drain Program

Date(s) of program promotion: 10/2/2020, 11/11/2020, 7/12/2021, 7/16/2021
Method of program promotion: Facebook
Social Media Metrics (Post Reach, Post Engagement): See attached Social Media Report
LGROW will create a report of the number of drains adopted in your Community

☐ 11. Provide presentation on PEP topics to a school in your Community

Date of presentation: Click or tap to enter a date.
Location of presentation: Click or tap here to enter text.
# of Students Reached: #

☒ 12. Implement EPA SepticSmart Social Media Guide during SepticSmart Week

Provide Social Media Metrics (Post Reach, Post Engagement): See attached Social Media report

Other Public Engagement Activities Completed

Use this space to provide additional detail on Public Engagement Activities described above or to describe other Public Engagement Activities completed in your Community during the reporting period.
Click or tap here to enter text.

Appendix 2-A - Summary of Municipal Commitments Completed August 1, 2020 to July 31, 2021

LGRW Prioritized Objectives for Permittees from 2011 WMP	Commitment	Timeline	Measures of Effectiveness
Encourage proper septic tank management.	Provide educational brochures to all homeowners with septic systems. Currently there are approximately 257 within the City limits, none of which have storm sewers in the area.	December 2012.	Document that all brochures were sent. Report number of septic tank failures reported.
Actions completed:	All identified septic system owners have been notified. Additional notifications will be performed if additional septic systems are identified.		
Encourage septage ordinance.	Continue to work with the County or the Committee on septic tank issues.	Ongoing.	Number of failed septic systems connected to public sewer. Number of failed septic systems reported to Health Department and number of repairs and permits issued.
Actions completed:	There were no known septic system failures in the City during this reporting period. See attached septic data from the Kent County Health Department.		
Implement vegetative buffering practices. Restore and protect the stream buffer and canopy.	Continue to enforce environmental features ordinance passed in 2012 requiring a 75-foot buffer protecting rivers, wetlands, streams, water bodies and sensitive environmental receptors. Prepare and adopt tree ordinance for the protection and restoration of the City's canopy.	Continue to implement environmental features buffer. Implement tree ordinance by June 30, 2013.	Report number of sites where buffer ordinance was applied. Adoption of tree ordinance.

LGRW Prioritized Objectives for Permittees from 2011 WMP	Commitment	Timeline	Measures of Effectiveness
Actions completed:	Of the 109 private development projects permitted during the reporting year, two (2) projects encroached into the 75' wetland features buffer. Both of those projects maintained a 50' buffer which allowed for the projects to be reviewed and approved administratively by staff.		
Implement MDNR wildlife population management practices.	Continue to install "Don't feed the wildlife signs" where needed. Provide online training for staff.	Ongoing. Provide training by June 2013.	Number of signs – less feeding observed. Number of staff attending training.
Actions completed:	The City's only problematic areas of feeding wildlife are Riverside and Richmond Parks. Signage is installed at these locations. 111 people were trained online this year.		
Implement sanitary sewer maintenance practices.	Maintain compliance with CMOM (Capacity, Management, Operation & Maintenance) for sanitary sewers in order to prevent seepage to storm sewers.	Ongoing.	Refer to cmom.net. Maintenance items are tracked in an enterprise asset management system.
Actions completed:	CMOM compliance has been maintained.		
Implement Low Impact Development practices.	Continue implementing commitment to LID, as detailed in Green Grand Rapids, a 2012 addendum to our Master Plan.	Ongoing.	Number and type of LID practices utilized at City properties.
Actions completed:	There were a total of 9 projects with LID practices permitted and under construction this reporting period. The main focus of these projects included 8 park facilities, where a citizen passed millage allowed for overall park improvements. The main practices used were leaching basins and rain gardens. Various work continues at the Water Resource Recovery Facility, and the expansion of a storage building allowed for installation of on-site leaching basins.		

LGRW Prioritized Objectives for Permittees from 2011 WMP	Commitment	Timeline	Measures of Effectiveness
Implement watershed focused land-use planning.	Continue enforcement of the City's current floodplain ordinance to protect flood plains not regulated by MDEQ. Continue enforcement of the city's current pet waste ordinance. Continue implementing commitment to LID, as detailed in Green Grand Rapids, a 2012 addendum to our Master Plan.	Ongoing.	Number of plans reviewed. Number of offsite LID practices implemented.
Actions completed:	This reporting period, 109 permits were issued for City and private projects. Of the permits issued, 43 were private projects that incorporated LID. Typically, LID is only implemented when impervious surfaces at a site are increased. The LID improvements included a combination of: 16 Detention / Retention Basins, 11 sites with infiltration practices, 6 Vegetated Swales, and 6 Water Quality Devices. There were also 24 right-of-way infrastructure projects that incorporated LID practices into the design of the public storm sewer system and street design. These projects included infiltration basins, expanded tree planting systems, infiltration trenches, vegetative bulb outs, and porous pavement.		
Implement proper soil erosion and sedimentation control techniques.	Continue to enforce regulations as a Municipal Enforcing Agency. Train City field staff in SESC. Maintain certifications of Construction Stormwater Operators.	As projects are reviewed. Train a majority of field staff by June 30, 2013. Continue certifications.	Maintain MEA status. Percent of field employees trained. Number of Construction Stormwater Operators.
Actions completed:	Currently, 25 of the 41 required personnel (61%) are trained in construction stormwater operator training. Hile this did not incres over the last year as anticipated, we do have 20 staff that are trained and not inpositions where it is required. We will continue training staff that are required to have this certification. Our goal for next reporting year is to have 75% of the 41 required personnel to receive this training.		

LGRW Prioritized Objectives for Permittees from 2011 WMP	Commitment	Timeline	Measures of Effectiveness
Implement channel streambank stabilization, bio engineering and erosion control techniques.	Compliance with DEQ permit conditions for any work that occurs within a stream. Flow restriction ordinance for all streams and reduced flow for impaired streams.	Continue to obtain DEQ permits for construction in a stream or channel. Continue to implement flow controls per stormwater ordinance.	Number of projects needing permits and permits obtained. Number of sites limited to reduced discharge.
Actions completed:	The City has three (3) project that required an EGLE permit for stream or channel construction this year. Alger Ravine and Glen Echo have been approved and permitted in the 2021 reporting year. Alger is scheduled ot start construction in September of 2021 and Glen WEcho is slated for construction to start in early 2022. The third project, Acacia, is still awaiting its permit. It is to do bank stabilization and debris removal after debris on an aierial sanitary crossing caused erosion that washed away a manhole bottom. Of the LUDS permits issued by the City this reporting year, 16 had flow restrictions to protect all waterways and five (5) had flow restrictions for impaired waterways (Plaster Creek).		

LGRW Prioritized Objectives for Permittees from 2011 WMP	Commitment	Timeline	Measures of Effectiveness
Implement turf management and proper fertilizer application practices.	Continue to be in compliance with the State of Michigan Public Act 299 of 2010. Staff is trained in proper use of pesticides, herbicides and fertilizers. Contracts for these services contain language requiring proper usage. a. "No clippings of grass or weeds may be left in the street, on the curb, parkways, or sidewalk, but must be properly disposed of by the contractor." b. "All chemicals and materials which are spilled or misapplied to areas other than turf shall be cleaned up immediately. The contractor shall not allow chemicals & other materials to enter storm sewers, catch basins and/or water ways." c. "No chemical of any kind may be discharged into the gutters or sewer system. If granular(s) are used they must be swept or blown clean off all impermeable surfaces."	Ongoing.	Number of staff trained. Number of contracts issued.
Actions completed:	Four City staff members are certified in pesticide application by the state. This certification requires ongoing training, including fertilizer and herbicide application. These employees are responsible for application of pesticides, herbicides, and fertilizers. There were eight landscape maintenance contracts issued this year.		

Appendix 2-B - Storm Water Controls
Inspection, Maintenance and Effectiveness
August 1, 2020 to July 31, 2021

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**
Stormwater Manholes	Complaint Based	N/A	2275 Cleaned 29 Repaired	Identified problems were fixed and pollutants were removed.
Stormwater Catch basins	Complaint Based	Clean 2,500 annually	3034 Cleaned	746 tons of solids were removed from the stormwater system and kept from the waterways.
Discharge Points	Complaint Based	N/A	252 Inspected discharge points and backflow preventers were inspected	In 2014, backflow preventers were in installed in Grand Rapids and Walker. All backflow preventers are now inspected annually.
Stormwater Laterals	Complaint Based	N/A	56 ft. Cleaned 12 Repaired	Identified problems were fixed.
Stormwater Pressurized Mains	Complaint Based	Bi-weekly Inspection visit	Inspections occur once every 3 weeks from May through October and once every 4 weeks from November through April.	No failures of a stormwater pumping station during a rain event.
Stormwater Lift Stations	Complaint Based	Bi-weekly Inspection visit	8 wet wells were cleaned as needed based on inspections.	Annual cleanings appear to be sufficient.
Stormwater Gravity Mains	Complaint Based	N/A	421,026 ft. Cleaned 22 Repaired 556 ft. Rootsawed	Identified problems were fixed and pollutants removed.
Infiltration Basins (underground)	Complaint Based	10 yr. Inspection cycle	Joe Taylor Park was inspected and determined to be good through 2022 Mary Waters due in 2026	The basins appear to function well.
Detention Basins	Complaint Based	Maintain & Inspect three times annually	The one pond that is operated by the City was inspected once every 2-8 weeks.	The basin appears to function well.

Hydro Separators	Complaint Based	Clean twice year	8 Cleaned	We have found that most separators are functioning fine with 1 cleaning annually. 1 unit will require 2 cleanings annually.
Siphons	Complaint Based	Clean annually	1 (286 ft.) Cleaned	Annual cleanings appear to be appropriate. As construction projects take place, we continue to remove as many siphons as possible.
Creek gates	Complaint Based	Clean annually	48 Cleaned 12 inspected	Responding to complaints ensures that the worst areas are addressed more often.
Open Ditches	Complaint Based	N/A	3 ditches were excavated and cleaned. 5.9 miles of ditches were inspected.	We have been performing ditch inspections per our asset management plan since 2016.

Appendix 2-C - Procedures Status by Type of Property– Part 1
August 1, 2020 to July 31, 2021

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

Types of Properties	O&M Procedure	Location on http://mygrcity.us/collaboration/swppp
PW, W, WW	Concrete Waste Management	BMP Concrete Waste Management.pdf
A, C, D, F, G, L, M, Pk, Po, PW, R, T, V, W, WD, WW	Dumpster Management	BMP Dumpster Management.pdf
Pk, PW, W	Erosion and Sediment Control	BMP Erosion and Sediment Control.pdf
F, G, Po, PW	Fueling Areas	BMP Fueling Areas.pdf
A, F, G, L, M, Pk, Po, PW, T, W, WD, WW	Garbage Storage	BMP Garbage Storage.pdf
D, Pk, PW, W, WD, WW	Material Covering	BMP Material Covering.pdf
D, Pk, PW, W, WD, WW	Outdoor Storage Areas	BMP Outdoor Storage Areas.pdf
Pk, PW, W, WD, WW	Outdoor Storage, Raw Materials	BMP Outdoor Storage, Raw Materials.pdf
PW	Paving and Grinding Operations	BMP Paving and Grinding Operations.pdf
F, M, PW, W, WW	Petroleum and Chemical Storage, Small Quantities	BMP Petroleum and Chemical Storage, Small Q.pdf
F, M, PW, W, WW	Petroleum and Chemical Disposal	BMP Petroleum and Chemical Disposal.pdf

Types of Properties	O&M Procedure	Location on http://mygrcity.us/collaboration/swppp
F, M, W, WW	Petroleum and Chemical Handling	BMP Petroleum and Chemical Handling.pdf
F, W, WW	Petroleum and Chemical storage bulk	BMP Petroleum and Chemical Storage, Bulk.pdf
F, L, M, Pk, Po, PW, W, WW	Salt Application	BMP Salt Application.pdf
PW	Sand and Salt Storage	BMP Sand and Salt Storage.pdf
A, D, F, G, L, M, Pk, Po, PW, W	Solid Waste Management	BMP Solid Waste Management.pdf
A, F, M, Pk, PW, W, WD, WW	Spill Cleanup	BMP Spill Cleanup.pdf
A, F, M, Pk, PW, W, WD, WW	Spill Prevention Control and Cleanup	BMP Spill Prevent_Control.pdf
PW, W	Dust Control	deq-wb-nps-dc_250612_7.pdf
A, D, F, G, M, Pk, PW, W, WD, WW	Equipment Storage and Maintenance Areas	deq-wb-nps-ems_250618_7.pdf
F, L, Pk, Po, PW, R, V, W, WD, WW	Fertilizer Management	deq-wb-nps-fm_250620_7.pdf
F, L, Pk, Po, PW, R, V, W, WD, WW	Lawn Maintenance	deq-wb-nps-lm_250884_7.pdf
D, F, L, Pk, Po, PW, W, WD, WW	Organic Debris Disposal	deq-wb-nps-odd_250887_7.pdf
F, L, Pk, Po, PW, W, WD, WW	Pesticide Management	deq-wb-nps-pm_250893_7.pdf

Types of Properties	O&M Procedure	Location on http://mygrcity.us/collaboration/swppp
WW	Stream Bank Stabilization	deq-wb-nps-sbs_250898_7.pdf
PW, W, WW	Soil Management	deq-wb-nps-sm_250902_7.pdf
WW	Slope, Shoreline, Stabilization	deq-wb-nps-sss_250907_7.pdf
Pk, PW	Street Sweeping	deq-wb-nps-sw_250908_7.pdf
F, L, M, Pk, R, V, WD, WW	Trees, Shrubs and Ground Covers	deq-wb-nps-tsg_250910_7.pdf
PW	Winter Road Management	deq-wb-nps-wrm_250914_7.pdf
Pk	Golf Course Manual	ess-nps-Golf-Course-Manual_209682_7.pdf
Pk, PW	Road Salt Storage	Road Salt Application and Storage.doc

Appendix 2-C – Procedures - Good Housekeeping and Pollution Prevention by Property Type – Part 2

General operations and maintenance items for Transportation, Parking , Maintenance Garages and O&M Waste Disposal.

(1) controls for reducing or eliminating the discharges of pollutants from streets, roads, highways, parking lots, and maintenance garages;

(a) Streets, roads, highways
   a. Street Sweeping – goal is once every 70-90 days (weather dependent). This reporting year, major streets were swept 5 times and local streets were swept 3 times.
   b. Salt Application – Drivers are trained with new equipment to utilize salt most cost effectively which minimizes the amount used on the roadways.
   c. SESC Program – tracking and construction is controlled via ordinance
   d. Vehicle Accident Spills – Fire Department has a policy for cleanup and control in place as submitted with the 2011-2012 annual report.
   e. Dust Control - See BMP sheet
   f. Snow Removal – See BMP sheet
   g. Gravel Road – See BMP sheet
   h. Roadside Vegetation – See BMP sheet

(b) Parking lots
   a. Every surface parking lot has check sheet has cleaning the curb lines as a daily activity (5 days per week). Larger pieces of trash or debris are removed daily from the lot. Finer materials of grit and gravel are allowed to accumulate until there is a sufficient volume to warrant sweeping. Sweeping the curb lines is done weekly, monthly, or bi-monthly, depending on the inspection, season or activity in the lot.
   b. During the winter months curb line cleaning activity is reduced due to snow accumulation. However, when the snow melts in the spring the curb lines are cleaned as they become accessible. During the fall, falling and blowing leaves require more attention and result in an increased frequency of cleaning curb lines.
   c. Parking lots associated with City own buildings are cleaned on an as needed basis. The department responsible for the lot inspects and schedules cleaning.

(c) Maintenance garages
   a. The maintenance garage and public works yard including salt storage has trained staff. Work has been ongoing to formalize the activities in this area.

(2) procedures for the proper disposal of operation and maintenance waste from the separate storm water drainage system (dredge spoil, accumulated sediments, floatables, and other debris);

(a) dredge spoil, accumulated sediments, floatables, and other debris from the use of City staff and equipment for these activities are dumped on a concrete slab located at the wastewater treatment plant (WWTP). The liquid is discharged to the WWTP and solids disposed of in a type II landfill. The DEQ staff was shown the facility during a June 3, 2011 MS4 Inspection.

(b) Contractors are required as part of their contract to properly dispose of dredge spoil, accumulated sediments, floatables, and other debris in a type II landfill.

(3) ways to ensure that flood management projects assess the impacts on the water quality of the receiving waters and, whenever possible, examine existing water quantity structures for incorporation of additional water quality protection devices or practices.

(a) Green Master Plan Update establishes the baseline for these requirements and is complemented by Zoning and Planning Ordinances.
(b) The Strategic Plan and Green Infrastructure Portfolio Standards includes goal and targets to address water quality.
(c) Vital Streets Guidelines require Low Impact Design to be the default, unless there are engineering reasons precluding it.
(d) Use of Green Infrastructure and Low Impact Design is reviewed and incorporated into all public projects when affordable and appropriate.

Permittee: **City of Grand Rapids**

Appendix 2-D - Staff and Contractors Training on Pollution Prevention and Good Housekeeping Completed August 1, 2020 to July 31, 2021

Where a meeting was attended for training, attached are sign in sheets listing the training topic, date of the training and the number of attendees. Also attached are a copy of the handouts (if any) that were distributed at the training meeting.

Training Topic Area	**Employee Group to Receive Training**	**Training Frequency Goal**	**Potential Training Type**
SWPPI Requirements			
Maintenance activities, maintenance schedules, and inspection procedures	Collection System Maintenance Group	Ongoing First 6 months of hire	**Written O&M Procedures** **Office of Water Programs, California State University, Sacramento Operation and Maintenance of Wastewater Collection Systems, Volumes I & 2**
Training completed:	There are 12 Collection System Asset Technicians, 2 crew leaders and a Utility Aide working in sewer maintanence. All 12 of them have taken and passed the CALIFORNIA STATE UNIVERSITY, SACREMENTO Operation and Maintenance of Wastewater Collection Systems, Volume I and II.		
Controls on streets, parking lots, maintenance garages, and storage yards	Public Services, Facilities and Fleet Management, Field Staff and Parking Services	Hire in 2 year cycle	**Online training which may include Powerpoints and/or the following videos** **Storm Watch - Municipal Storm Water Pollution Prevention - DVD from Excal Visual, LLC** **Spills & Skills - Non-Emergency HazMat Spill Response - DVD from Excal Visual, LLC** **Keep An Eye On It! - Environmental Awareness for Gravel Road Maintenance - DVD from SEMCOG & Road Commission for Oakland County**

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Training Topic Area	**Employee Group to Receive Training**	**Training Frequency Goal**	**Potential Training Type**
Training completed:	Training is performed on hire. If deficiencies are noted during the quarterly inspections, responsible parties are trained on the proper techniques.		
Disposal of O&M waste	Collection System Maintenance Group Contractors	Ongoing Contract	**Written O&M Procedures** **Written contract requirements**
Training completed:	The Operation and Maintenance of Wastewater Collection Service training noted above includes managing a collection system O&M program, supervising a sewer cleaning program, and complying with the NPDES permit and applicable rules and regulations.		
Water quality protection in flood control projects (detention basins, dams)	Stormwater Management Personnel, Field Staff & Design Personnel	Ongoing	**Training consistent with LID and other training/conferences as they become available**
Training completed:	All stormwater management, design, and field staff have passed the comprehensive soil erosion and sedimentation control exam through EGLE. In addition, several field and design staff are trained as industrial stormwater operators. Training was limited this year due to Covid. Stormwater management led activities for LGROW's Spring Forum in June and Ottawa County's virtual forum in November. The Green Infrastructure Leadership Exchange (May) was also attended by a member of management and another member of management achieved their National Green Infrastruture Certification Program certification.		

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Training Topic Area	Employee Group to Receive Training	Training Frequency Goal	Potential Training Type
Controls to reduce discharge of pesticides, herbicides, and fertilizers	Contractors	Ongoing	**Compliance with the State of Michigan Public Act 299 of 2010** **Staff is trained in proper use of pesticides, herbicides and fertilizers** **Contracts for these services contain language requiring proper usage** **a. "No clippings of grass or weeds may be left in the street, on the curb, parkways, or sidewalk, but must be properly disposed of by the contractor."** **b. "All chemicals and materials which are spilled or misapplied to areas other than turf shall be cleaned up immediately. The contractor shall not allow chemicals & other materials to enter storm sewers, catch basins and/or water ways."** **c. "No chemical of any kind may be discharged into the gutters or sewer system. If granular(s) are used they must be swept or blown clean off all impermeable surfaces."**
Training completed:	All contractors involved in landscaping must agree to abide by the requirements above. As noted in Appendix 2-A, staff in charge of pesticide, herbicide and fertilizer application are certified by the State for pesticide application and their training includes herbicide and fertilizer application practices.		
Other Topics			
Construction site stormwater runoff	Field Staff Contractors	Preconstruction meeting	**Training may include one or both of the following;** **Ground Control - Storm Water Pollution Prevention for Construction Sites - DVD from Excal Visual, LLC** **LGRW_ContractorTrainingBrochure_2011-09-16.pub**

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Training Topic Area	**Employee Group to Receive Training**	**Training Frequency Goal**	**Potential Training Type**
Training completed:	Due to Covid 19 protocols, in-person pre-construction meetings and trainings were not held. Virtual pre-construction meetings were held, and local and state SESC permitting and construction best practices were reviewed with contractor staff. Bids and specifications were reviewed and ensured that certified construction stormwater operators were to be completing field inspections.		
LID	Stormwater Management Personnel, Field Staff & Design Personnel	Ongoing	**Provide copies of the SEMCOG Low Impact Design manual. Provide opportunities for training and attendance of webinars and other conferences. The following videos are also available for their use;** **Reduce Runoff: Slow It Down, Spread It Out, Soak It In - DVD from USEPA** **RiverSmart Homes: Getting Smart about Runoff - DVD from USEPA** **Building Green: A Success Story in Philadelphia - DVD from USEPA** **After the Storm - DVD from USEPA** **BMP Tour of GVSU Campuses – Walking Tour**
Training completed:	LID training was mentioned above. In addition, a new staff member was given several green infrastructure tours and trained on calculating infiltration rates.		
IDEP	All Employees	Ongoing	**Items will be maintained on City intranet and periodic announcements made. These items will include various brochures and include;** **WaterPollutionReportForm.doc** **Article_City_Employees.doc**
Training completed:	112 new staff were trained this year.		
General Storm Water Education	Top Management	Annually	**"Back to Basics" Storm Water Training – Live Presentations (in 2011 the Six Minimum Control Measures were highlighted)**

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Training Topic Area	**Employee Group to Receive Training**	**Training Frequency Goal**	**Potential Training Type**
Training completed:	Top Managementa and ity Commissions wer trained on general stormwater during the Stormwater Oversight Commission's Annual Report to City Commission on May 11, 2021.		

Permittee: **City of Grand Rapids**

Appendix 2E - Post Construction Controls Activities Completed August 1, 2020 to July 31, 2021

Implementation

The City of Grand Rapids Ordinances Ord. No. 2001-26, § 1 of 2001 and Ord. No. 2007-13, § 1 are the Stormwater Ordinances for the City. Post-construction controls for new development contained in the ordinance include:

- Limiting discharge rates to 0.13 cfs/acre for a 25-yr 24-hr storm.
- Limiting discharges to sensitive downstream receptors, including open channel banks susceptible to erosion, to 0.05 cubic feet per second per acre up to the two (2) year rain event.
- Treatment of the first ½" of rain for water quality.

The City of Grand Rapids Ordinances Ord. No. 2012-01, § 1 of 2012 is a zoning ordinance establishing setbacks for rivers, wetlands, streams, water bodies, or other sensitive environmental areas. Incentives for using Low Impact Development are also included in the zoning ordinances.

In addition, the Green Grand Rapids Master Plan Update depicts Grand Rapids' commitment to using Low Impact Development, conserving green space and protecting our waterways.

Operation and Maintenance

In 2010, the City had a draft stormwater ordinance that included long term operation and maintenance of post-construction controls. However, when the MS4 permit was withdrawn, the ordinance was not finalized for adoption. The use of operation and maintenance agreements are outlined in the draft permit submittals. The draft ordinance corresponding to the permit submittal will be submitted by December 1, 2020.

Currently, all post construction controls are inspected, to the extent they can be, from public rights of way. In addition, the City's nuisance ordinance can be utilized to inspect controls if a complaint is received by Code Enforcement.

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

No enforcement was needed for post-construction controls after construction was completed.

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

No. See above.

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 buffer ordinance noted above protects sensitive areas. The requirement for stormwater storage only when impervious has expanded, along with the presence of existing infrastructure, direct people to infill.

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2021 Progress Report
PART 4 - IDEP

Regional IDEP Activities

A detailed description of the IDEP activities undertaken on an individual basis is included below. The IDEP activities include dry-weather screening of discharge points, locating possible sources of contamination, responding to reported incidents, correcting the problems, and preventing new illicit connections.

The Technical Committee worked with MDEQ on IDEP revisions throughout the reporting period and submitted the final draft for review and approval on July 31, 2013.

Please describe any dry-weather screening conducted during the reporting period and the findings of that screening.
Screening was conducted in Summer 2018 and will be conducted next in 2024.
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.
US 131 North at Franklin Street On 10/29/20, the GRPD reported that a vehicle began leaking diesel on 131 North at Franklin Street. It took the off ramp and stopped and 40-60 gallons of fuel was leaking. The road was already being cleaned at that time by private response. SET was onsite at 6:45 pm and vacuumed 150 gallons out of the catch basin for disposal.

Permittee: **City of Grand Rapids**

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.
Highland Park / Coldbrook Creek / Northeast Grand Rapids On 9/23/20, at approximately 11 am, Project Engineer Daniel Taber received a message from front office staff regarding a report from a resident of cloudiness being observed within the Coldbrook Drain at Highland Park. Doug Spence, civil engineer, was dispatched to the area to investigate. Upon Mr. Spence's arrival to Highland Park at approximately noon, he was able to meet with the citizen that reported the cloudiness, Mr. Walter Taylor. Upon the start of his investigation, the cloudiness was still visible, but had dissipated from the earlier observations as reported by Mr. Taylor. Doug proceeded to contact City staff and coordinate a response to determine source of the cloudiness. Adjacent streets were driven, and a manhole upstream of the park was opened and inspected. No additional cloudiness was observed at this time, and the cloudiness had dissipated without a source being determined at approximately 3pm. No estimation was able to be made of substance(s) or volumes of what was causing cloudiness within the drain. Mr. Spence is continuing in investigation this morning, including inspecting a pond further upstream of the site along the Coldbrook Drain at 460 Fuller NE. We continue to plan on inspecting the creek regularly to determine the source, as this could be an reoccurring discharge as Mr. Taylor has indicated he has seen this cloudiness before. However, this is a very large drainage area and finding a small intermittent discharge may take time.
Please describe actions taken when indications of illicit discharges have been identified, if any.
Standard procedures are identified above. We take immediate response to stopping the discharge and then identify the source and responsible party.

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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)*.
One illicit discharges was eliminated, which prevented approximately 150 galons of diesel from entering the river.
Identify any specific coordination with the health department in response to illicit discharge elimination for failed or failing septic fields.
No potentially failing septic fields were identified during this reporting period, so coordination with the health department was not required. We are in frequent contact with the health department, though, and they have been responsive when needed in the past.
Describe the effectiveness of the program to prevent illicit discharges and the method used to assess effectiveness.
While IDEP outfall sampling has identified some illicit discharges in the past, we get a greater quantity reported by educated staff and citizens who are keeping an eye out along with our River Run sampling.

Permittee: **City of Grand Rapids**

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: List and map provided as a part of the MS4 permit application.

Permittee: **City of Grand Rapids**

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**
N/A	☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No	☐ Yes ☐ No
Comments: The City of Grand Rapids does not have any nested jurisdictions.		

Permittee: **City of Grand Rapids**

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**:
Along with the items listed under public education and in Appendix 2-A, the City partners with the following organizations regularly: Plaster Creek Stewards, WMEAC and Trout Unlimited to install green practices, perform river cleanups and increase public awareness.
Please list any other actions your community has conducted to reduce stormwater pollution
City staff is on the boards and/or committees of the Lower Grand River Organization of Watersheds, West Michigan Soil Erosion Control Network, Great Lakes Stormwater Collaborative, Michigan Water Asset Management Council and the Green Infrastructure Leadership Exchange. In addition, we spent over $900,000 on green infrastructure as part of our Vital Streets program in 2020.

Permittee: **City of Grand Rapids**

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

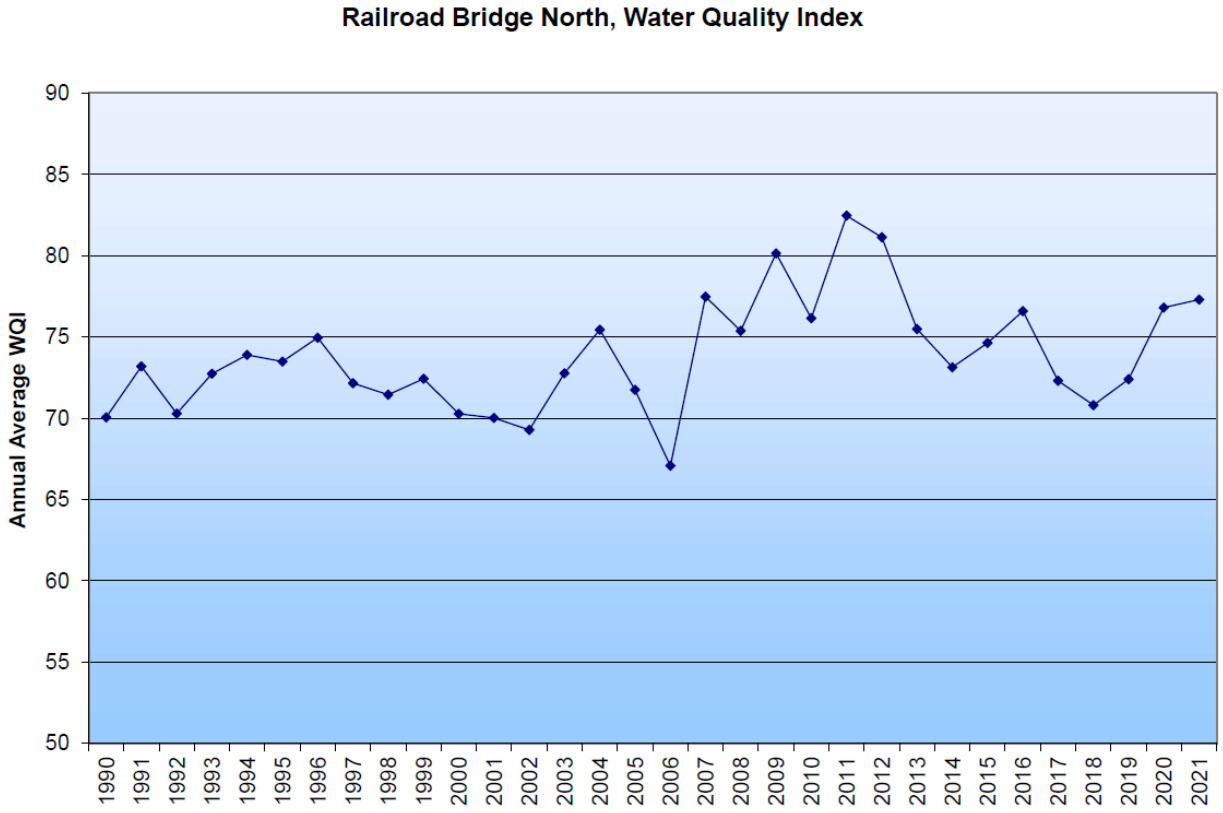
☐ The following revisions to the SWPPI could be considered:

Original SWPPI Section / Subsection	**Revision**

Permittee: **City of Grand Rapids**

Part 9 – 2020 Stormwater Special Reporting

a. Environmental Impacts [40 CFR 122.42(c)(7)]
    a. A Grand River Water Quality Index (WQI) of 71-90 indicates good water quality with high diversity of aquatic life and very few limits for recreational use. The WQI graph shows that the Grand River water quality continues to be good downstream of Grand Rapids. Extreme rain events in 2013 and 2014 and sampling within the first 48 hours of a rain event are likely why the WQI has decreased in 2013 and 2014. Grand Rapids has been monitoring the Grand River for forty years and the data is made available to those which request it.



Permittee: **City of Grand Rapids**

QUARTERLY RIVER SURVEY REPORT — August 19, 2020 — CITY OF GRAND RAPIDS EPSD

Grand River	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2020-1502-01 Northland Drive Bridge (250120)	09:30	22.1	7.52	8.18	<4	6.7	25	29	46	631	0.06	<0.2	0.032	0.95
2020-1502-02 Wealthy Street Bridge (250090)	10:20	22.8	8.83	8.27	<4	<5.0	66	78	55	643	0.06	<0.2	0.029	0.94
2020-1502-03 Railroad Bridge South (250070)	09:43	22.3	7.65	8.08	<4	<5.0	172		64	699	0.07	<0.2	0.05	1.1
2020-1502-04 Railroad Bridge North (250071)	09:40	22.4	7.68	8.11	<4	<5.0	228	238	62	696	0.12	<0.2	0.112	1.47
2020-1502-05 M-11, Wilson Avenue (250062)	09:14	22.0	7.72	8.13	<4	5.0	145	194	62	701	0.10	<0.2	0.087	1.43
2020-1502-06 Eastmanville (250040)	08:25	22.8	8.70	8.25	<4	8.7	22	36	75	726	0.09	<0.2	0.093	1.69

Streams	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2020-1502-07 Rogue River at West River Drive	09:05	16.7	8.85	8.38	<4	<5.0	145		46	603	<0.05	<0.2	<0.015	1.34
2020-1502-08 Mill Creek at West River Drive	08:30	14.1	9.78	8.42	<4	<5.0	121		56	704	<0.05	<0.2	0.02	1.54
2020-1502-09 Indian Mill Creek at Turner Avenue	08:00	13.6	9.47	8.03	<4	<5.0	488		116	912	<0.05	<0.2	0.016	1.79
2020-1502-10 Silver Creek at Croften/Roy	07:18	17.4	9.11	8.29	<4	<5.0	>2419.6		194	1190	<0.05	<0.2	0.021	2.92
2020-1502-11 Plaster 1 at Burton	07:30	16.9	7.79	8.04	<4	5.7	326		287	1150	<0.05	<0.2	0.027	1.29
2020-1502-12 Plaster 2 at Market	10:40	17.9	9.81	8.18	2.4	<5.0	>2419.6		190	1210	<0.05	<0.2	0.023	1.45
2020-1502-13 Buck Creek at Chicago Drive	07:55	16.7	8.46	8.18	<4	<5.0	488		179	1210	<0.05	<0.2	0.015	0.85
2020-1502-14 Deer Creek	08:40	19.0	6.59	8.14	<4	12	285		39	604	0.19	<0.2	0.055	1.1
2020-1502-15 Coldbrook Storm Drain	07:24	16.2	9.55	7.92	<4	<5.0	488		216	1320	<0.05	<0.2	<0.015	1.23

Grand River	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2020-1502-01 Northland Drive Bridge (250120)	<0.0020	<0.0020	0.16	<0.000	<0.0020	<0.0010	<0.020	340	78.1
2020-1502-02 Wealthy Street Bridge (250090)	<0.0020	<0.0020	0.13	<0.000	<0.0020	<0.0010	<0.020	330	75.4
2020-1502-03 Railroad Bridge South (250070)	<0.0020	<0.0020	0.14	<0.000	<0.0020	<0.0010	<0.020	340	71.4
2020-1502-04 Railroad Bridge North (250071)	<0.0020	<0.0020	0.18	<0.000	0.0084	<0.0010	<0.020	410	70.3
2020-1502-05 M-11, Wilson Avenue (250062)	<0.0020	<0.0020	0.20	<0.000	<0.0020	<0.0010	<0.020	320	71.9
2020-1502-06 Eastmanville (250040)	<0.0020	<0.0020	0.21	<0.000	<0.0020	<0.0010	<0.020	330	76.8

Streams	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2020-1502-07 Rogue River at West River Drive	<0.0020	<0.0020	0.14	<0.000	<0.0020	<0.0010	<0.020	330	69.8
2020-1502-08 Mill Creek at West River Drive	<0.0020	<0.0020	0.15	<0.000	<0.0020	<0.0010	<0.020	400	69.1
2020-1502-09 Indian Mill Creek at Turner Avenue	<0.0020	<0.0020	0.24	<0.000	<0.0020	<0.0010	<0.020	410	64.2
2020-1502-10 Silver Creek at Croften/Roy	0.0034	<0.0020	0.11	<0.000	0.0035	<0.0010	0.022	370	57.0
2020-1502-11 Plaster 1 at Burton	<0.0020	<0.0020	0.30	<0.000	<0.0020	<0.0010	<0.020	390	62.8
2020-1502-12 Plaster 2 at Market	<0.0020	<0.0020	0.16	<0.000	<0.0020	<0.0010	<0.020	350	60.7
2020-1502-13 Buck Creek at Chicago Drive	<0.0020	<0.0020	0.36	<0.000	<0.0020	<0.0010	<0.020	400	65.4
2020-1502-14 Deer Creek	<0.0020	0.0027	0.48	<0.000	<0.0020	<0.0010	<0.020	310	65.7
2020-1502-15 Coldbrook Storm Drain	<0.0020	<0.0020	0.23	<0.000	<0.0020	<0.0010	<0.020	390	65.1

_____ Miscellaneous Information _____

Weather Conditions:
Field Technicians:

_____ Test Descriptions _____

Time (hh:mm)
Temperature (°C)
DO: Dissolved Oxygen (mg/L)
pH (pH units)
BOD: 5-day Biochemical Oxygen Demand (mg/L)
TSS: Total Suspended Solids (mg/L)
FC: Fecal Coliform (#FC/100ml)
EC: E.coli (#EC/100ml)
Chloride (mg/L)
Conductivity (S/cm)
TP: Total Phosphorous (mg/L)
NH3-N: Ammonia as nitrogen (mg/L)
NO2-N: Nitrite as nitrogen (mg/L)
NO3-N: Nitrate as nitrogen (mg/L)
Cr: Total Chromium (g/L)
Cu: Total Copper (g/L)
Fe: Total Iron (g/L)
Hg: Total Mercury (g/L)
Ni: Total Nickel (g/L)
Ag: Total Silver (g/L)
Zn: Total Zinc (g/L)
Hardness (mg/L as $CaCO_3$)
WQI: Water Quality Index (percent)

River Survey Report

Permittee: **City of Grand Rapids**

QUARTERLY RIVER SURVEY REPORT — September 16, 2020 — CITY OF GRAND RAPIDS EPSD

Grand River	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2020-1672-01 Northland Drive Bridge (250120)	08:20	17.3	8.59	8.14	<2	6.6	25	31	37	574	0.07	<0.2	0.037	1.28
2020-1672-02 Wealthy Street Bridge (250090)	09:18	17.5	9.03	8.21	<2	6.5	65	58	40	578	0.08	<0.2	0.024	1.22
2020-1672-03 Railroad Bridge South (250070)	10:24	17.5	8.8	8.2	<2	7	86		50	622	0.07	<0.2	0.032	1.32
2020-1672-04 Railroad Bridge North (250071)	10:20	17.5	9.0	8.1	<2	6.4	83	80	46	605	0.07	<0.2	0.047	1.53
2020-1672-05 M-11, Wilson Avenue (250062)	09:55	17.5	8.9	8.2	<2	5.4	108	128	47	604	0.05	<0.2	0.043	1.45
2020-1672-06 Eastmanville (250040)	08:58	17.4	8.8	8.2	<2	10.5	142	166	51	619	0.10	<0.2	0.061	1.75

Streams	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2020-1672-07 Rogue River at West River Drive	08:08	14.4	9.01	8.30	<2	6.2	186		39	595	0.05	<0.2	0.021	1.42
2020-1672-08 Mill Creek at West River Drive	07:48	13.5	9.44	8.36	<2	8.8	210		53	706	<0.05	<0.2	0.018	1.49
2020-1672-09 Indian Mill Creek at Turner Avenue	07:35	13.3	9.04	8.11	<2	2	727		114	954	<0.05	<0.2	0.026	1.7
2020-1672-10 Silver Creek at Croften/Roy	07:12	17.0	9.1	8.1	<2	2.4	1414		169	1110	0.06	<0.2	<0.015	2.58
2020-1672-11 Plaster 1 at Burton	07:34	15.4	8.2	8.0	<2	4.8	649		175	1120	0.06	<0.2	0.029	1.02
2020-1672-12 Plaster 2 at Market	09:34	15.7	8.89	8.06	<2	<2.0	308		182	1200	<0.05	<0.2	0.025	1.1
2020-1672-13 Buck Creek at Chicago Drive	08:05	15.1	8.7	8.2	<2	2.9	285		170	1170	<0.05	<0.2	0.019	0.81
2020-1672-14 Deer Creek	09:18	15.7	7.9	8.1	<2	8.1	248		44	616	0.13	<0.2	0.048	1.64
2020-1672-15 Coldbrook Storm Drain	07:20	15.4	9.23	8.18	<2	2.2	461		214	1290	0.05	<0.2	0.032	1.11

Grand River	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2020-1672-01 Northland Drive Bridge (250120)	<0.0020	<0.0020	0.25	<0.000	<0.0020	<0.0010	<0.020	310	81.1
2020-1672-02 Wealthy Street Bridge (250090)	<0.0020	<0.0020	0.26	<0.000	<0.0020	<0.0010	<0.020	280	78.4
2020-1672-03 Railroad Bridge South (250070)	<0.0020	<0.0020	0.29	<0.000	<0.0020	<0.0010	<0.020	330	77.1
2020-1672-04 Railroad Bridge North (250071)	<0.0020	<0.0020	0.26	<0.000	<0.0020	<0.0010	<0.020	320	77.5
2020-1672-05 M-11, Wilson Avenue (250062)	<0.0020	<0.0020	0.26	<0.000	<0.0020	<0.0010	<0.020	300	76.3
2020-1672-06 Eastmanville (250040)	<0.0020	<0.0020	0.39	<0.000	<0.0020	<0.0010	<0.020	300	74.6

Streams	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2020-1672-07 Rogue River at West River Drive	<0.0020	<0.0020	0.25	<0.000	<0.0020	<0.0010	<0.020	330	72.8
2020-1672-08 Mill Creek at West River Drive	<0.0020	<0.0020	0.27	<0.000	<0.0020	<0.0010	<0.020	380	71.8
2020-1672-09 Indian Mill Creek at Turner Avenue	<0.0020	<0.0020	0.25	<0.000	<0.0020	<0.0010	<0.020	370	66.6
2020-1672-10 Silver Creek at Croften/Roy	0.0027	<0.0020	0.11	<0.000	0.0025	<0.0010	<0.020	400	63.9
2020-1672-11 Plaster 1 at Burton	<0.0020	<0.0020	0.32	<0.000	<0.0020	<0.0010	<0.020	370	67.4
2020-1672-12 Plaster 2 at Market	<0.0020	<0.0020	0.17	<0.000	<0.0020	<0.0010	<0.020	330	70.2
2020-1672-13 Buck Creek at Chicago Drive	<0.0020	<0.0020	0.29	<0.000	<0.0020	<0.0010	<0.020	350	71.3
2020-1672-14 Deer Creek	<0.0020	<0.0020	0.43	<0.000	<0.0020	<0.0010	<0.020	290	71.2
2020-1672-15 Coldbrook Storm Drain	<0.0020	<0.0020	0.27	<0.000	<0.0020	<0.0010	<0.020	350	67.8

Miscellaneous Information

Weather Conditions:
Field Technicians:

Test Descriptions

Time (hh:mm)
Temperature (°C)
DO: Dissolved Oxygen (mg/L)
pH (pH units)
BOD: 5-day Biochemical Oxygen Demand (mg/L)
TSS: Total Suspended Solids (mg/L)
FC: Fecal Coliform (#FC/100ml)
EC: E.coli (#EC/100ml)
Chloride (mg/L)
Conductivity (S/cm)
TP: Total Phosphorous (mg/L)
NH3-N: Ammonia as nitrogen (mg/L)
NO2-N: Nitrite as nitrogen (mg/L)
NO3-N: Nitrate as nitrogen (mg/L)
Cr: Total Chromium (g/L)
Cu: Total Copper (g/L)
Fe: Total Iron (g/L)
Hg: Total Mercury (g/L)
Ni: Total Nickel (g/L)
Ag: Total Silver (g/L)
Zn: Total Zinc (g/L)
Hardness (mg/L as CaCO3)
WQI: Water Quality Index (percent)

River Survey Report

Permittee: **City of Grand Rapids**

QUARTERLY RIVER SURVEY REPORT — October 14, 2020 — CITY OF GRAND RAPIDS EPSD

River Survey Report

Grand River	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2020-1828-01 Northland Drive Bridge (250120)	08:52	12.8	10.1	8.44	<2.0		23	52	54	653	<0.05	<0.2	<0.10	0.95
2020-1828-02 Wealthy Street Bridge (250090)	09:45	13.0	10.5	8.31	<2.0	<2.0	142	43	54	666	<0.05	<0.2	<0.10	0.93
2020-1828-03 Railroad Bridge South (250070)	09:45	12.9	9.83	8.27	<2.0	<2.0	548		66	697	<0.05	<0.2	<0.10	1.0
2020-1828-04 Railroad Bridge North (250071)	09:35	13.1	9.85	8.17	<2.0	<2.0	261	46	65	698	<0.05	<0.5	<0.10	1.4
2020-1828-05 M-11, Wilson Avenue (250062)	09:10	13.2	9.78	8.30	<2.0	<2.0	387	47	65	698	<0.05	<0.2	<0.10	1.3
2020-1828-06 Eastmanville (250040)	08:30	13.6	8.94	8.16	<2.0	3	1203	8	62	688	<0.05	<0.2	<0.10	1.4

Streams	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2020-1828-07 Rogue River at West River Drive	08:37	10.1	9.80	8.17	<2.0	3.3	166		40	602	<0.05	<0.2	<0.10	0.99
2020-1828-08 Mill Creek at West River Drive	08:13	9.9	10.2	8.32	<2.0	4.1	167		54	713	<0.05	<0.2	<0.10	0.89
2020-1828-09 Indian Mill Creek at Turner Avenue	07:37	10.3	9.52	8.10	<2.0	<2.0	579		94	919	<0.05	<0.2	<0.10	1.2
2020-1828-10 Silver Creek at Croften/Roy	07:10	16.1	9.20	8.19	<2.0	<2.0	1986		192	1170	0.06	<0.2	<0.10	2.7
2020-1828-11 Plaster 1 at Burton	07:30	12.4	8.28	7.90	2.8	6.8	1733		136	915	0.05	<0.2	<0.10	0.45
2020-1828-12 Plaster 2 at Market	10:15	12.4	9.52	7.99	<2.0	3.5	>2419.6		149	955	<0.05	<0.2	<0.10	0.59
2020-1828-13 Buck Creek at Chicago Drive	07:49	12.0	8.70	8.01	<2.0	2.5	2420		127	922	<0.05	<0.2	<0.10	0.51
2020-1828-14 Deer Creek	08:40	11.5	5.95	7.88	<2.0	3.8	548		41	698	0.09	<0.2	<0.10	1.1
2020-1828-15 Coldbrook Storm Drain	07:12	13.2	9.89	7.99	< 2	<2.0	26		172	1090	0.05	<0.2	<0.10	0.73

Grand River	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2020-1828-01 Northland Drive Bridge (250120)	<0.0020	<0.0020	0.12	<0.000	<0.0020	<0.0010	<0.020	420	81.2
2020-1828-02 Wealthy Street Bridge (250090)	<0.0020	<0.0020	0.10	<0.000	<0.0020	<0.0010	<0.020	370	76.0
2020-1828-03 Railroad Bridge South (250070)	<0.0020	0.0033	0.13	<0.000	<0.0020	<0.0010	<0.020	570	70.7
2020-1828-04 Railroad Bridge North (250071)	<0.0020	<0.0020	0.12	<0.000	<0.0020	<0.0010	<0.020	530	73.2
2020-1828-05 M-11, Wilson Avenue (250062)	<0.0020	<0.0020	0.12	<0.000	<0.0020	<0.0010	<0.020	380	71.4
2020-1828-06 Eastmanville (250040)	<0.0020	<0.0020	0.18	<0.000	<0.0020	<0.0010	<0.020	420	66.8

Streams	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2020-1828-07 Rogue River at West River Drive	<0.0020	<0.0020	0.19	<0.000	<0.0020	<0.0010	<0.020	330	74.3
2020-1828-08 Mill Creek at West River Drive	<0.0020	<0.0020	0.17	<0.000	<0.0020	<0.0010	<0.020	440	74.4
2020-1828-09 Indian Mill Creek at Turner Avenue	<0.0020	<0.0020	0.23	<0.000	<0.0020	<0.0010	<0.020	420	68.8
2020-1828-10 Silver Creek at Croften/Roy	0.0036	0.0044	<0.10	<0.000	0.0028	<0.0010	<0.020	340	61.2
2020-1828-11 Plaster 1 at Burton	0.0021	0.0020	0.39	<0.000	<0.0020	<0.0010	<0.020	240	64.3
2020-1828-12 Plaster 2 at Market	<0.0020	0.0022	0.28	<0.000	<0.0020	<0.0010	<0.020	270	65.5
2020-1828-13 Buck Creek at Chicago Drive	<0.0020	0.0080	0.29	<0.000	<0.0020	<0.0010	<0.020	300	64.9
2020-1828-14 Deer Creek	<0.0020	<0.0020	0.31	<0.000	<0.0020	<0.0010	<0.020	310	63.7
2020-1828-15 Coldbrook Storm Drain	<0.0020	0.0021	0.40	<0.000	<0.0020	<0.0010	<0.020	320	81.6

Miscellaneous Information

Weather Conditions:
Field Technicians:

Test Descriptions

Time (hh:mm)
Temperature (ºC)
DO: Dissolved Oxygen (mg/L)
pH (pH units)
BOD: 5-day Biochemical Oxygen Demand (mg/L)
TSS: Total Suspended Solids (mg/L)
FC: Fecal Coliform (#FC/100ml)
EC: E.coli (#EC/100ml)
Chloride (mg/L)
Conductivity (S/cm)
TP: Total Phosphorous (mg/L)
NH3-N: Ammonia as nitrogen (mg/L)
NO2-N: Nitrite as nitrogen (mg/L)
NO3-N: Nitrate as nitrogen (mg/L)
Cr: Total Chromium (g/L)
Cu: Total Copper (g/L)
Fe: Total Iron (g/L)
Hg: Total Mercury (g/L)
Ni: Total Nickel (g/L)
Ag: Total Silver (g/L)
Zn: Total Zinc (g/L)
Hardness (mg/L as $CaCO_3$)
WQI: Water Quality Index (percent)

Permittee: **City of Grand Rapids**

QUARTERLY RIVER SURVEY REPORT — March 9, 2021 — CITY OF GRAND RAPIDS EPSD

River Survey Report

Grand River	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2021-0375-01 Northland Drive Bridge (250120)	09:38	3.7	12.6	7.9	2.2	7.8	39	8	40	601	<0.05	<2.0	<0.10	4.3
2021-0375-02 Wealthy Street Bridge (250090)	10:17	4.0	13.2	8.0	2.2	10.1	23	10	41	589	0.06	<2.0	<0.10	4.1
2021-0375-03 Railroad Bridge South (250070)	10:33	4.2	12.8	8.2	2.3	10.5	49		50	633	0.09	<2.0	<0.10	4.2
2021-0375-04 Railroad Bridge North (250071)	10:18	4.4	12.6	8.2	2.3	10.3	37	14	43	605	0.07	<2.0	<0.10	4.1
2021-0375-05 M-11, Wilson Avenue (250062)	09:40	4.1	12.8	8.2	<2.0	9.9	37	10	45	615	0.08	<2.0	<0.10	4.1
2021-0375-06 Eastmanville (250040)	08:47	4.0	12.5	8.4	2.2	9.1	39	15	49	634	0.07	<2.0	0.11	4.2

Streams	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2021-0375-07 Rogue River at West River Drive	09:15	3.8	12.8	7.9	<2.0	5.3	56		33	595	<0.05	<2.0	<0.10	2.0
2021-0375-08 Mill Creek at West River Drive	08:10	2.6	13.0	8.2	4.9	93.6	345		18	366	0.29	<2.0	<0.10	2.5
2021-0375-09 Indian Mill Creek at Turner Avenue	07:40	4.0	11.9	7.4	2.5	10	326		64	616	0.11	<2.0	<0.10	1.5
2021-0375-10 Silver Creek at Croften/Roy	07:30	8.5	10.5	8.1	<2.0	<2.0	727		200	1190	<0.05	<2.0	<0.10	2.7
2021-0375-11 Plaster 1 at Burton	07:47	4.2	11.7	8.1	<2.0	2.8	50		260	1280	<0.05	<2.0	<0.10	1.4
2021-0375-12 Plaster 2 at Market	10:39	5.2	12.8	8.0	2.3	4.1	53		270	1310	<0.05	<2.0	<0.10	1.3
2021-0375-13 Buck Creek at Chicago Drive	08:14	6.3	11.1	8.1	<2.0	3.3	40		170	1140	<0.05	<2.0	<0.10	0.98
2021-0375-14 Deer Creek	09:00	4.0	11.7	8.2	2.0	10.8	186		33	541	0.18	<2.0	<0.10	8
2021-0375-15 Coldbrook Storm Drain	07:17	5.2	12.2	7.7	<2.0	3.9	152		230	1160	<0.05	<2.0	<0.10	0.42

_____ Miscellaneous Information _____

Weather Conditions:
Field Technicians:

Grand River	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2021-0375-01 Northland Drive Bridge (250120)	<0.0020	0.0022	0.58	<0.0000	<0.0020	<0.0010	<0.020	350	75.8
2021-0375-02 Wealthy Street Bridge (250090)	<0.0020	0.0021	0.65	<0.0000	<0.0020	<0.0010	<0.020	440	77.1
2021-0375-03 Railroad Bridge South (250070)	<0.0020	0.0021	0.57	<0.0000	<0.0020	<0.0010	<0.020	310	73.8
2021-0375-04 Railroad Bridge North (250071)	<0.0020	<0.0020	0.59	<0.0000	<0.0020	<0.0010	<0.020	280	75.0
2021-0375-05 M-11, Wilson Avenue (250062)	<0.0020	0.0021	0.55	<0.0000	<0.0020	<0.0010	<0.020	390	75.6
2021-0375-06 Eastmanville (250040)	<0.0020	0.0023	0.55	<0.0000	<0.0020	<0.0010	<0.020	280	74.0

Streams	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2021-0375-07 Rogue River at West River Drive	<0.0020	<0.0020	0.33	<0.0000	<0.0020	<0.0010	<0.020	290	79.0
2021-0375-08 Mill Creek at West River Drive	0.0047	0.0052	4.2	<0.0000	0.0039	<0.0010	<0.020	180	65.6
2021-0375-09 Indian Mill Creek at Turner Avenue	<0.0020	0.0068	1.0	<0.0000	<0.0020	<0.0010	<0.020	230	72.4
2021-0375-10 Silver Creek at Croften/Roy	0.0033	0.0030	0.12	<0.0000	0.0032	<0.0010	<0.020	340	64.0
2021-0375-11 Plaster 1 at Burton	0.0057	0.0020	0.46	<0.0000	<0.0020	<0.0010	<0.020	320	74.7
2021-0375-12 Plaster 2 at Market	0.0060	0.0020	0.41	<0.0000	<0.0020	<0.0010	<0.020	330	74.0
2021-0375-13 Buck Creek at Chicago Drive	<0.0020	<0.0020	0.42	<0.0000	<0.0020	<0.0010	<0.020	370	77.8
2021-0375-14 Deer Creek	0.0023	0.0059	1.3	<0.0000	0.0022	<0.0010	<0.020	230	64.4
2021-0375-15 Coldbrook Storm Drain	<0.0020	0.0041	0.38	<0.0000	<0.0020	<0.0010	<0.020	290	75.9

_____ Test Descriptions _____

Time (hh:mm)
Temperature (°C)
DO: Dissolved Oxygen (mg/L)
pH (pH units)
BOD: 5-day Biochemical Oxygen Demand (mg/L)
TSS: Total Suspended Solids (mg/L)
FC: Fecal Coliform (#FC/100ml)
EC: E.coli (#EC/100ml)
Chloride (mg/L)
Conductivity (S/cm)
TP: Total Phosphorous (mg/L)
NH3-N: Ammonia as nitrogen (mg/L)
NO2-N: Nitrite as nitrogen (mg/L)
NO3-N: Nitrate as nitrogen (mg/L)
Cr: Total Chromium (g/L)
Cu: Total Copper (g/L)
Fe: Total Iron (g/L)
Hg: Total Mercury (g/L)
Ni: Total Nickel (g/L)
Ag: Total Silver (g/L)
Zn: Total Zinc (g/L)
Hardness (mg/L as $CaCO_3$)
WQI: Water Quality Index (percent)

Permittee: **City of Grand Rapids**

QUARTERLY RIVER SURVEY REPORT — April 6, 2021 — CITY OF GRAND RAPIDS EPSD

River Survey Report

Grand River	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2021-0514-01 Northland Drive Bridge (250120)	08:34	11.2	11.5	8.4	<2.0	11.3	28	517	42	637	<0.05	<2.0	< 0.10	2
2021-0514-02 Wealthy Street Bridge (250090)	09:32	11.3	11.7	8.3	2.1	10.2	28	461	44	644	<0.05	<2.0	< 0.10	2.0
2021-0514-03 Railroad Bridge South (250070)	10:45	11.9	10.6	8.3	2.1	10.7	36		54	671	0.07	<2.0	< 0.10	2.0
2021-0514-04 Railroad Bridge North (250071)	10:55	11.4	10.6	8.2	2.0	9.9	28	816	47	653	0.08	<2.0	< 0.10	2.1
2021-0514-05 M-11, Wilson Avenue (250062)	10:10	11.6	10.5	8.3	<2.0	10.9	36	579	50	665	0.07	<2.0	< 0.10	2.1
2021-0514-06 Eastmanville (250040)	09:24	11.5	10.5	8.3	2.4	15	46	727	54	681	0.10	<2.0	< 0.10	2.3

Streams	Time	Temp	DO	pH	BOD	TSS	FC	EC	Chloride	Cond	TP	NH3-N	NO2-N	NO3-N
2021-0514-07 Rogue River at West River Drive	08:15	11.0	10.5	8.2	<2.0	8.8	84		34	579	<0.05	<2.0	< 0.10	1.2
2021-0514-08 Mill Creek at West River Drive	07:54	10.3	10.8	8.2	<2.0	6.8	222		36	612	<0.05	<2.0	< 0.10	1.2
2021-0514-09 Indian Mill Creek at Turner Avenue	07:38	10.3	10.0	8.0	<2.0	5	146		76	747	0.05	<2.0	< 0.10	1.3
2021-0514-10 Silver Creek at Croften/Roy	07:20	11.0	8.83	8.0	< 2	13.5	38		180	1130	<0.05	<2.0	< 0.10	2.8
2021-0514-11 Plaster 1 at Burton	07:38	11.0	8.79	8.0	<2.0	4.8	138		230	1220	<0.05	<2.0	< 0.10	0.57
2021-0514-12 Plaster 2 at Market	09:54	11.5	10.1	7.9	2.2	6.1	228		220	1200	<0.05	<2.0	< 0.10	0.71
2021-0514-13 Buck Creek at Chicago Drive	08:26	11.4	8.69	7.9	<2.0	3.6	99		150	1070	<0.05	<2.0	< 0.10	0.86
2021-0514-14 Deer Creek	09:31	11.5	8.84	8.1	<2.0	5.6	124		47	692	0.06	<2.0	< 0.10	3.4
2021-0514-15 Coldbrook Storm Drain	07:23	11.6	10.7	8.2	<2.0	4	118		200	1110	<0.05	<2.0	< 0.10	0.61

Miscellaneous Information

Weather Conditions:
Field Technicians:

Grand River	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2021-0514-01 Northland Drive Bridge (250120)	<0.0020	<0.0020	0.36	<0.000	<0.0020	<0.0010	<0.020	310	78.5
2021-0514-02 Wealthy Street Bridge (250090)	<0.0020	<0.0020	0.50	<0.000	<0.0020	<0.0010	<0.020	290	78.6
2021-0514-03 Railroad Bridge South (250070)	<0.0020	<0.0020	0.46	<0.000	<0.0020	<0.0010	<0.020	310	78.2
2021-0514-04 Railroad Bridge North (250071)	<0.0020	<0.0020	0.43	<0.000	<0.0020	<0.0010	<0.020	290	79.7
2021-0514-05 M-11, Wilson Avenue (250062)	<0.0020	<0.0020	0.47	<0.000	<0.0020	<0.0010	<0.020	290	78.5
2021-0514-06 Eastmanville (250040)	<0.0020	0.0020	0.57	<0.000	<0.0020	<0.0010	<0.020	290	76.2

Streams	Cr	Cu	Fe	Hg	Ni	Ag	Zn	Hard	WQI
2021-0514-07 Rogue River at West River Drive	<0.0020	<0.0020	0.33	<0.000	<0.0020	<0.0010	<0.020	280	77.7
2021-0514-08 Mill Creek at West River Drive	<0.0020	<0.0020	0.42	<0.000	<0.0020	<0.0010	<0.020	320	74.2
2021-0514-09 Indian Mill Creek at Turner Avenue	<0.0020	0.0022	0.52	<0.000	<0.0020	<0.0010	<0.020	300	75.2
2021-0514-10 Silver Creek at Croften/Roy	0.0036	0.0020	0.18	<0.000	0.0031	<0.0010	<0.020	350	74.3
2021-0514-11 Plaster 1 at Burton	0.0051	0.0021	0.43	<0.000	<0.0020	<0.0010	<0.020	400	73.6
2021-0514-12 Plaster 2 at Market	0.0045	0.0027	0.47	<0.000	<0.0020	<0.0010	<0.020	720	73.2
2021-0514-13 Buck Creek at Chicago Drive	<0.0020	<0.0020	0.45	<0.000	<0.0020	<0.0010	<0.020	650	75.8
2021-0514-14 Deer Creek	<0.0020	0.0024	0.56	<0.000	<0.0020	<0.0010	<0.020	600	71.9
2021-0514-15 Coldbrook Storm Drain	<0.0020	0.0028	0.43	<0.000	<0.0020	<0.0010	<0.020	450	75.8

Test Descriptions

Time (hh:mm)
Temperature (°C)
DO: Dissolved Oxygen (mg/L)
pH (pH units)
BOD: 5-day Biochemical Oxygen Demand (mg/L)
TSS: Total Suspended Solids (mg/L)
FC: Fecal Coliform (#FC/100ml)
EC: E.coli (#EC/100ml)
Chloride (mg/L)
Conductivity (S/cm)
TP: Total Phosphorous (mg/L)
NH3-N: Ammonia as nitrogen (mg/L)
NO2-N: Nitrite as nitrogen (mg/L)
NO3-N: Nitrate as nitrogen (mg/L)
Cr: Total Chromium (g/L)
Cu: Total Copper (g/L)
Fe: Total Iron (g/L)
Hg: Total Mercury (g/L)
Ni: Total Nickel (g/L)
Ag: Total Silver (g/L)
Zn: Total Zinc (g/L)
Hardness (mg/L as CaCO3)
WQI: Water Quality Index (percent)

   b. All CSO and SSO occurrences are reported to the DEQ as required in NPDES Permit #MI0026069 when they occur.
   c. Illicit Discharges can be found in Part 4 of the Report.

b. Data and Results [40 CFR 122.42(c)(4)] – see above

c. BMP Changes [40 CFR 122.42(c)(2)]
   a. None.
   b. We have a Stormwater Standards Manual that emphasizes green infrastructure and will be implemented upon revising our City ordinance. A draft ordinance will be submitted by March 1, 2021.

d. Revised Financial Analysis [40 CFR 122.42(c)(3)]
   a. The stormwater program continues to be funded from the City General Fund, Local and Major Streets, Refuse, and Vital Streets Funds. Funding levels have been steadily increasing due to low impact development funding through the streets income tax extension. Funds for asset management have also increased. A fiscal analysis of City of Grand Rapids is included as an attachment. The one attached is the most current from September 2021.

e. Annual Budget [40 CFR 122.42(c)(5)]

Activity	FY21 Expenditures	FY22 Budget

Permittee: **City of Grand Rapids**

Stormwater Management (General Fund)	$850,901	$1,354,816
Stormwater Maintenance (Local and Major Streets Funds)	$1,386,071	$1,414,881
Street Sweeping (Refuse and Vital Streets Funds)	$1,170,498	$1,136,092

Capital Improvement Plan

Kent County Drain Commissioner Special Assessments	$45,000.00
Drainage Improvements and Emergency Repairs	$150,000.00
Pumping Station Capital Improvements	$100,000.00
Oakleigh Ave in Hogadone District	$20,000.00
Indian Mill Creek Dredging FY2021	$50,000.00
Daylighting at The Highlands	$405,029.00
Coldbrook Drain Rehabilitation - Michigan and Fuller	$37,500.00
Burton-Breton Branch of Plaster Creek	$177,900.00
Glen Echo Drain Improvements	$144,000.00

Summary of Enforcement Actions and Inspections

Activity	2020-2021 Reporting Cycle
Stormwater Inspections	2818
Notices of Violations	45
Corrective Action Orders	18

Summary of Street Sweeping

The City disposed of 6,435 cubic yards of waste from street sweeping from August of 2020 through July 2021. This number is inflated compared to the normal numbers. As reported last year, due to contractor issues, street sweeping waste had been stockpiled since November of 2019. The stockpile was in an area that does not drain to the City stormwater system and EGLE personnel regulating the storage site are fully aware of the issues that we had.