

2019 – 2020 Lower Grand River Watershed Public Education Plan Evaluation Measures

This table describes how LGROW and the Public Engagement Committee implemented the PEP from August 1, 2019 through December 31, 2020. A new PEP was approved during this reporting period, and metrics that are new to the PEP are indicated with **. Virtual activities were substituted for physical activities in some cases due to the COVID-19 pandemic. Activities that were unable to be completed due to the timeline of the new PEP or the pandemic are indicated in the table and will be completed in 2021. Unless specifically noted as annual, each activity has a permit cycle goal. Public Education Categories, Key Messages and Target Audiences can be found in Table 1 of the approved PEP, and detailed explanations of how each Delivery Mechanism will be implemented can be found in Table 2 of the approved PEP. Achievements are also classified as either outputs or outcomes to highlight activities aimed at changing behavior.

Delivery Mechanism Title	PEP Categories	Permit Cycle Goals	Outcome/Output	Accomplishments
LGROW Social Media	1,2,3,4,5,6	**30% increase in likes per year over previous year	Output	August 2019: 1,313 Likes/1,361 Followers ; Jan 1, 2021: 1,549 Likes/1,595 Followers → 21% increase over 17-month reporting period
		**15,000 Average monthly post reach/1,000 Average monthly engaged users	Output	Average Monthly Post Reach: 9,137 Average Monthly Engaged Users: 676
		**Conduct 3 contests annually	Output	Contest 1: November 2020 – Adopt a Drain Facebook contest <i>*New PEP adopted during this permit cycle – Additional contests scheduled to be completed in 2021</i>
LGROW Website	1,2,3,4,5,6	**10% increase in unique visitors per year over previous year	Output	19,000 visits; 17,000 unique visitors – 7% overall increase year over year; 2% increase in unique visitors
		**2,000 unique page views	Output	38,000 Page Views; 17,000 Unique Visitors
		Permittee websites (23) link to LGROW website	Output	Complete ; See Permittee supporting documents
		**20% increase in views of LGROW Disposal and Reporting websites over previous year	Outcome	Disposal and Reporting pages of website were created in this reporting period. Baseline views as of 12/31/2020: <ul style="list-style-type: none"> Disposal: 228 views Reporting: 65 views
Newsletters	1,2,3,4,5,6	LGROW publish 4 articles annually in Quarterly Newsletter	Output	<ul style="list-style-type: none"> 9/2019: Adopt a Drain; Septic Smart Week 12/2019: Winter Tips; Rainscaping 3/2020: Spring Tips; Rainscaping 6/2020: Summer Tips; Adopt a Drain; Rainscaping 9/2020: Fall Tips; HHW dropoff events; Stream Clean-ups

				<ul style="list-style-type: none"> • 12/2020: Winter Tips <p>*All newsletters archived at https://www.lgrow.org/lgrow-newsletter-archive</p>
		**Permittees publish 1 article annually in community newsletter or news outlet	Output	<p>See Permittee supporting documents; New PEP adopted during this permit cycle – will be completed in 2021 if not complete at the time of this report</p>
Events	1,2,3,4,5,6	LGROW present at 3 community events annually	Output	<ul style="list-style-type: none"> • 9/14/2019 – LGROW hosted Adopt a Drain table at Mayors' Grand River Cleanup • 9/19/2019 – LGROW Watershed Jamboree (100 attendees) • 10/12/2019 – Tree Planting in City of Grandville • 11/2/2019 – Tree Planting in City of Hudsonville • 11/21/2019 – Ottawa County Water Quality Forum • 12/3/2019 – MWEA Watershed & Stormwater Seminar • 2/2020 – Valent-ICE watershed display in Grand Rapids during World of Winter festival • 2/29/2020 – Booth at Quiet Waters Symposium • 4/20-4/42/2020 – Virtual Earth Week Presentations on Facebook (544 total views) • 5/8/2020 – Virtual LGROW Spring Forum (997 video views) • 11/17/2020 – Tree Planting at Grandville East Elementary (47 volunteers) • 11/2/2020 – Homeowner Resources for Water Quality presentation at virtual Ottawa County Water Quality Forum
		**Community presence or stormwater display at 1 community event or location annually	Output	<p>See Permittee supporting documents; New PEP adopted during this permit cycle; COVID-19 pandemic also restricted ability to meet this metric – Will be completed in 2021 if not complete at the time of this report.</p>
Educational Signage	1,3,5	LGROW Complete current watershed signage assessment once	Output	Signage assessment completed in 2018 ; Scheduled for completion again in 2022
		**Permittee post 1 new educational sign	Output	<p>See Permittee supporting documents; New PEP adopted during this permit cycle – will be completed in 2021 if not complete at the time of this report</p>
LID/GI Workshops & Tours	5	LGROW deliver 2 workshops in partnership with permittees	Outcome	<ul style="list-style-type: none"> • 3/31/2020 – Plainfield Avenue WQ Island Cleanup & Planting + GI Presentation to neighborhood • 8/5/2020 – GI and Tree Maintenance workshop for Kent ISD facilities staff • 8/27/2020 – Virtual GI Seminar in partnership with Macatawa Area



				<p>Coordinating Council</p> <p>See Also Rainscaping Workshops + Permittee supporting documents; <i>New PEP adopted during this permit cycle; COVID-19 pandemic also restricted ability to meet this metric – Will be completed in 2021 if not complete at the time of this report.</i></p> <p>LGROW GI Maintenance Days:</p> <ul style="list-style-type: none"> • 6/18/2020 – North Park Montessori Bioswale Cleanup • 6/25/2020 – Blandford Nature Center Bioswale Cleanup • 7/2/2020 – West Catholic High School Rain Garden Cleanup 7/16/2020; 7/23/2020; 8/11/2020; 8/25/2020 – Calvin Avenue Basin Native Planting
		LGROW host 2 LID/GI tours	Outcome	<p><i>New PEP adopted during this permit cycle; COVID-19 pandemic also restricted ability to meet this metric – Multiple GI tours scheduled for summer 2021.</i></p> <ul style="list-style-type: none"> • 8/1/2019 – Tour of Green Infrastructure on GVSU campus at Ravines • LGROW published the Natural Connections Story Map online highlighting green infrastructure in the Lower Grand River Watershed: https://www.lgrow.org/green-infrastructure - To date this map has been viewed 1,197 times.
Clean Up Efforts	1,3,5	LGROW host or participate in 1 stream clean-up effort annually	Outcome	<ul style="list-style-type: none"> • 9/14/2019 – LGROW hosted Adopt a Drain table and coordinated Indian Mill Creek cleanup at WMEAC Mayors' Grand River Cleanup. Trash Collected = Grand Rapids: 7656 lbs; Wyoming: 95 lbs; Walker: 1000 lbs; Grandville: 490 lbs; Plainfield: 2440 lbs • 9/12-9/19-2020 – LGROW coordinated Indian Mill Creek and Coldbrook Creek cleanups in partnership with WMEAC Mayors' Grand River Cleanup • 10/10/2020 – LGROW organized Indian Mill Creek cleanup with Steepletown Ministry volunteers
		LGROW host 2 storm drain cleaning events annually in the watershed	Outcome	<ul style="list-style-type: none"> • 8/20/2019 – Backyard Collective Storm Drain Cleaning + Marking in downtown Grand Rapids • 9/14/2019 – Teams of Mayors' Grand River Cleanup volunteers cleaned storm drains in Grand Rapids • Spring through Winter 2020 – LGROW promoted Adopt a Drain program to watershed residents as an "activity safe for social distancing" via virtual outreach.



Giveaway Items	1,2,3,4,5,6	Permittees distribute giveaway items for each PEP Category	Output	See Permittee supporting documents; New PEP adopted during this permit cycle; COVID-19 pandemic also restricted ability to meet this metric – Will be completed in 2021 if not complete at the time of this report
Storm Drain Marking	2,3,5	LGROW or Permittee host or provide materials for 2 drain marking events	Outcome	<ul style="list-style-type: none"> • 8/20/2019 – Backyard Collective Storm Drain Cleaning + Marking downtown Grand Rapids • 9/12-9/19-2020 – LGROW provided materials for Coldbrook Creek Community group to mark drains in Eastown neighborhood, Grand Rapids, during Mayors' Grand River Cleanup <p>See Also Permittee supporting documents; New PEP adopted during this permit cycle; COVID-19 pandemic also restricted ability to meet this metric – Will be completed in 2021 if not complete at the time of this report</p>
Adopt A Drain Grand River Program	2,3,5	**Increase adoption by 100 basins annually	Outcome	Adopt a Drain program was rolled out in 2019. It began with 335 basins adopted through the Grand Rapids Basin Buddy program. By December 31, 2020 there were 880 basins adopted for an increase of 545 basins during the reporting period.
		**LGROW Promote program at 2 events annually	Output	<ul style="list-style-type: none"> • 8/23/2019 – Adopt a Drain Table and Advertisements at Movies on Monroe hosted by Downtown Grand Rapids, Inc. • 9/14/2019 – LGROW hosted Adopt a Drain table at Mayors' Grand River Cleanup • October-December 2019 – 70 Johnny Advertisements posted monthly for Adopt a Drain program in restaurants, bars and entertainment venues • 10/23/2020 – LGROW published Adopt a Drain program article on blog • Ongoing – LGROW promoted Adopt a Drain on website and social media regularly as part of existing advertising plan



Outreach to Commercial, industrial, and institutional entities likely to contribute pollutants to stormwater runoff	2,3,4,5,6	<p>**Permittees distribute information/materials to at least 2 targeted businesses/groups from the following categories:</p> <ul style="list-style-type: none"> • Commercial Car Washes • Landscaping Companies • Snowplow Companies • Paving Companies • Power Washing Companies • Commercial Cleaners • Pool Companies • School Facilities Staff • Home Builders' Association • Real Estate Agents 	Output	<p>LGROW created 9 targeted outreach flyers for businesses focusing on Chemical Storage, Construction Sites, Gas Stations, Lawn care, Parking Lots, Good Housekeeping, Dumpster Management, Soil Erosion Prevention, and Salt Usage. Flyers will be available at https://www.lgrow.org/ms4information and will be distributed to Permittees for use during 2021 permit cycle.</p> <p>See Also Permittee Supporting Documents; <i>New PEP adopted during this permit cycle – will be completed in 2021 if not complete at the time of this report</i></p>
Presentations in Schools	1,2,3,4,5,6	**LGROW or Permittee provide 4 presentations on PEP topics in schools	Output	LGROW provided watershed and stormwater education to 1,493 youth and teachers from 18 schools during the permit cycle; See attached Youth Outreach Metrics and Permittee supporting documents
		**LGROW distribute curriculum packet to 20 teachers	Output	LGROW assisted in a professional development workshop sponsored by GVSU-Groundswell on 2/6/2020 , which distributed full instructional units around the Grand River, its primary pollutants, and stewardship actions to 24 teachers . The <i>Communities for Clean Water</i> lessons are also available and promoted online at https://www.gvsu.edu/groundswell/lesson-plans-54.htm
		**LGROW provide 1 professional development session for teachers	Outcome	<ul style="list-style-type: none"> • 9/19/2019 – LGROW presented watershed education materials and activities to 15 teachers and after-school programming providers through the Our Community's Children STEAM Professional Learning Community • 3/6/2020 – LGROW presented on water quality monitoring techniques to



				25 teachers at the Michigan Science Teachers Association annual conference
Outreach on How to Report Illicit Discharges	3	Update LGROW Reporting website annually to include up-to-date reporting information	Output	Complete ; See www.lgrow.org/report
		**LGROW or Permittee post 5 social media, website, or newsletter posts on illicit discharge reporting	Output	LGROW posts information on all PEP topics regularly on social media, website, and newsletter outlets and provides the same information to Permittees for them to post. See available social media and newsletter content at https://www.dropbox.com/sh/87butz10gwm9y21/AAAy85o28ofu0agcuCIC1J-Sa?dl=0 See Also Permittee supporting documents ; <i>New PEP adopted during this permit cycle – will be completed in 2021 if not complete at the time of this report</i>
EPA Septic Smart Program	4	LGROW or Permittee participate in EPA SepticSmart week annually using EPA's social media guide	Output	LGROW followed EPA's Septic Smart Week Social Media Guide and Outreach Toolkit for 2019 (9/16/19-9/20/19) and 2020 (9/14/20-9/18-20) by posting on Facebook, Instagram, and Twitter as well as LGROW's blog. Posts reached 18,100+ people on Facebook and were clicked on 277 times and Liked, Commented, or Shared 61 times . Between 8/1/2019 and 12/31/2020, the Kent County Health Department issued 140 septic system repair permits within MS4 areas. These repairs led to the elimination of 84,000 gallons per day or 30,660,000 gallons per year of untreated or partially treated sewage discharged with the potential to negatively affect groundwater, and/or surface water. (<i>Based on an average 4-bedroom house in Kent County with 150 gallons/day per bedroom with double occupancy per the Sewage Regulations of Kent County, MI. Data not available for Ottawa County at this time</i>) See also Permittee supporting documents ; <i>New PEP adopted during this permit cycle – will be completed in 2021 if not complete at the time of this report.</i>
Outreach to Residents regarding home car	3, 5	**LGROW or Permittee post 5 social media, website, or newsletter posts on BMPs for home	Output	LGROW posts information on all PEP topics regularly on social media, website, and newsletter outlets and provides the same information to Permittees for them to post. See available social media and newsletter content at



washes		car washing		https://www.dropbox.com/sh/87butz10gwm9y21/AAAy85o28ofu0agcuCIC1J-Sa?dl=0 See also Permittee supporting documents; <i>New PEP adopted during this permit cycle – will be completed in 2021 if not complete at the time of this report.</i>
Promotion of Municipal HHW Programs	5, 6	**LGROW or Permittee post 5 social media, website, or newsletter posts on Municipal HHW Programs	Output	LGROW posts information on all PEP topics regularly on social media, website, and newsletter outlets and provides the same information to Permittees for them to post. See available social media and newsletter content at https://www.dropbox.com/sh/87butz10gwm9y21/AAAy85o28ofu0agcuCIC1J-Sa?dl=0 See also Permittee supporting documents; <i>New PEP adopted during this permit cycle – will be completed in 2021 if not complete at the time of this report.</i>
		Increase the number of residents utilizing HHW drop-off programs by 10% as compared to 2018	Outcome	5,700 residents utilized Kent County's HHW drop-off sites in 2020, a 13% increase since the last time the county tracked program users in 2015. <u>HHW management remains a targeted message for the 2021 reporting period.</u>
		Increase the poundage of HHW dropped off by residents by 10% as compared to 2018	Outcome	274,945 pounds of HHW collected by Kent County in 2020; This is a 0.3% increase from 2018 but a 169% increase since the program began in 2014 . Data from Ottawa County HHW not available. <u>HHW management remains a targeted message for the 2021 reporting period.</u>
Grand River Rainscaping Program	1,5	**LGROW perform 10 site assessments on residential properties in MS4 communities	Outcome	LGROW completed 23 Rainscaping site assessments within MS4 community boundaries.
		**LGROW holds 2 Rainscaping workshops	Outcome	LGROW held 4 Rainscaping workshops in partnership with National Wildlife Federation's Sacred Grounds program with a total of 291 participants . Each participant received a \$50 voucher to purchase native plants after attending. <u>In person workshops:</u> <ul style="list-style-type: none"> • 8/20/2019 at Trinity CRC: 27 attendees • 2/4/2020 at Holy Spirit Episcopal Church: 29 attendees



				<p>Virtual workshops:</p> <ul style="list-style-type: none"> • 5/14/2020: 185 attendees • 8/12/2020: 50 attendees
Outreach to Pet Owners	5	**LGROW or Permittee post 5 social media, website, or newsletter posts on BMPs for pet waste management	Output	<p>LGROW posts information on all PEP topics regularly on social media, website, and newsletter outlets and provides the same information to Permittees for them to post. See available social media and newsletter content at https://www.dropbox.com/sh/87butz10gwm9y21/AAy85o28ofu0agcuCIC1J-Sa?dl=0</p> <p>See also Permittee supporting documents; <i>New PEP adopted during this permit cycle – will be completed in 2021 if not complete at the time of this report</i></p>
		LGROW or Permittee distribute pet waste bag dispensers	Output	<p>See Permittee supporting documents; <i>New PEP adopted during this permit cycle; COVID-19 pandemic also restricted ability to meet this metric – Will be completed in 2021 if not complete at the time of this report</i></p>
Michigan Natural Shoreline Partnership (MNSP)	5	LGROW provide information or presentations on the MNSP to 10 lake or watershed associations	Output	<ul style="list-style-type: none"> • LGROW shared natural shoreline information to members of LGROW Subwatershed Committee (16 groups/organizations) • Targeted mailing on natural shorelines sent to 2,949 residents living within 100 feet of a stream shoreline; 50 residents contacted LGROW to request native seed packets after the mailing
Outreach to Lake and River Associations	1,2,3,4,5,6	**LGROW provide presentations or information on PEP topics to 10 lake or watershed associations	Output	<ul style="list-style-type: none"> • LGROW presented about educational programming at 2020 Michigan Inland Lakes Conference – Agenda Here
		**LGROW facilitate development of 1 new subwatershed group	Outcome	<p>LGROW supported formation of new subwatershed groups for Coldbrook Creek and Crockery Creek.</p>
Printed or Electronic Materials	1,2,3,4,5,6	LGROW create 1 new printed or electronic material for each PEP category	Output	<p>Seasonal Tips flyers and social media posts for each PEP category created quarterly (Winter, Spring, Summer, Fall); Video Tips in progress for all PEP categories – Available at https://www.lgrow.org/ms4information and https://www.dropbox.com/sh/87butz10gwm9y21/AAy85o28ofu0agcuCIC1J-Sa?dl=0</p>



2019-2020 Youth Outreach & Education Metrics (8/1/2019-12/31/2020)

Date	Event	Location/School	Subwatershed	Youth Reached	MS4 Community
8/1/2019	STREAM Girls @ Blandford Watershed Presentation + Modeling	Blandford Nature Center	Indian Mill Creek	17	Grand Rapids
09/04/2019	Activity Watershed Presentation + Modeling + Chutes and Ladders Stormwater	West Side Christian School	Indian Mill Creek	30	Grand Rapids
09/18/2019	Game Sustainable Agriculture & Watershed Health Field Days (9/19-20 and 11/5-	Grandville Christian School	Buck Creek	50	Grandville
09/19/2019	6)	E. Rockford Middle School	Rogue	110	Rockford
09/20/2019	STEAM PLC Professional Development Rain Garden Design Thinking	ELO Network Providers	Lower Grand	15	Various
09/24/2019	Challenge Kickoff	Northern Trails 5/6 Building	Plaster Creek	75	FHPS
10/01/2019	Monitoring & Watershed Field Day NPS Pollution & Watershed Project	Grandville Christian School	Buck Creek	50	Grandville
10/02/2019	Intro STEM Greenhouse LOOP Program;	GR Public Museum School	Lower Grand	50	Grand Rapids
10/08/2019	Stormwater Intro + Water Cycle STEM Greenhouse LOOP Program;	MLK Leadership Academy (GRPS)	Lower Grand	15	Grand Rapids
10/9/2019	Stormwater Intro + Water Cycle	Dickinson Elementary (GRPS)	Lower Grand	18	Grand Rapids
	STEM Greenhouse LOOP Program;			16	Grand Rapids
10/15/2019	Chutes & Ladders Stormwater Game	MLK Leadership Academy (GRPS)	Plaster Creek		
	STEM Greenhouse LOOP Program;			20	Grand Rapids
10/16/2019	Chutes & Ladders Stormwater Game	Dickinson Elementary (GRPS)	Plaster Creek		
10/18/2019	Water Quality Monitoring Sustainable Agriculture & Watershed	KCTC Design Lab	Lamberton Creek	34	Various
10/24/2019	Health Field Day	Sparta Middle School	Rogue	102	Sparta
10/3/2019	Grand River Riverwalk Tour	Kent Innovation High	Lower Grand	69	Various
11/12/2019	Rainscaping assessment	GR Public Museum School	Lower Grand	6	Grand Rapids
11/22/2019	Healthy Forests & Stormwater	Central Middle School (FHPS)	Lower Grand	30	FHPS

11/22/2019	High School STEM Class	Forest Hills Northern High	Lower Grand	20	FHPS
12/12/2019	Macroinvertebrate Sampling	Forest Hills Northern Middle	Lower Grand	85	FHPS
12/17/2019	Rain Garden Design Challenge Judging & Project Selection	Northern Trails 5/6 Building	Plaster Creek	75	FHPS
1/9/2020	Green Infrastructure + Watersheds Presentation	Crossroads Middle School (Northview	Lower Grand	60	Plainfield Twp
1/15/2020	Trees for Stormwater Management Project Introduction	Grand Valley State University	Lower Grand	20	GVSU
01/15/2020	Water Quality Monitoring Training Session (1/15, 1/20, 1/23, 1/28)	Northern Hills Middle	Lower Grand	20	FHPS
1/22/2020	Macroinvertebrate Sampling Introduction	West Catholic High School	Lower Grand	30	Grand Rapids
2/6/2020	Groundswell Professional Development - Nonpoint Source Pollution	Groundswell Teachers	Lower Grand	24	Various
02/14/2020	Grand River Riverwalk Tour	Godfrey Lee Elementary	Plaster Creek	14	Wyoming
03/04/2020	Agricultural Conservation Practices for Water Quality Presentation	Sparta Middle School	Rogue	98	Sparta
03/12/2020	Water Quality Sampling	Northern Hills Middle	Lower Grand	26	FHPS
10/1/2020	Site Assessment for Potential Tree Planting and NPS pollution reduction projects	Central Woodlands 5/6	Lower Grand	75	FHPS
10/17/2020	Volunteer Tree Planting	Grandville East Elementary	Buck Creek	40	Grandville
10/20/2020	Tree Planting	KCTC (Sustainable Agriscience)	Lamberton Creek	40	Various
10/21/2020	Native Plant swale planting	KCTC (Design Lab + Sustainable Agris	Lamberton Creek	75	Various
10/06/2020	Watershed Field Day	Blue Bridge School - Richmond Park	Indian Mill Creek	20	Grand Rapids
10/26/2020	Watershed Field Day	Blue Bridge School - Millennium Park	Lower Grand	20	Grand Rapids
11/05/2020	Professional Development for GRPS Teachers	Virtual PD for GRPS teachers	Lower Grand	44	Grand Rapids
			TOTAL REACHED	1493	