CITY OF OMAHA
NPDES PERMIT FOR THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
NE0133698
2021 ANNUAL REPORT

Submitted by:
Environmental Quality Control Division
5600 S. 10 St.
Omaha, NE 68107

3/31/2022

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Report of Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations. See 18 U.S.C. 1001 and 33 U.S.C 1319, and Neb. Rev. Stat. 81-1508 thru 81-1508.02."

James P Kee

Signature of Authorized Representative or Cognizant Official

3/31/2022

Date

James Kee

Printed Name

EQCD Manager

Title

Introduction

The third Omaha Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (NE0133698/PCS 999428) was issued by the Nebraska Department of Environment and Energy (NDEE) and became effective on April 1, 2018. The MS4 permit authorizes the City of Omaha to discharge stormwater from all existing City of Omaha owned or operated MS4 outfalls to the Elkhorn River, the Papillion Creek, the Missouri River, and their tributaries subject to the identified limitations and the Storm Water Management Plan (SWMP) as modified. The City's Environmental Quality Control Division (EQCD) oversees the administration of the permit and ensures that the City is in compliance with the permit requirements.

The MS4 permit was issued for a five-year period and expires on March 31, 2023. The MS4 permit identifies the current City of Omaha SWMP. The SWMP requires the City to submit an annual report. In addition, reports will be made available to the public on the Omaha Stormwater Program (www.omahastormwater.org) and Papillion Creek Watershed Partnership web sites (www.papiopartnership.org).

The City of Omaha Departments that participates in meeting the MS4 permit requirements include:

- Public Works Department
  - Environmental Quality Control Division
  - Street Maintenance Division
  - Sewer Maintenance Division
  - Construction Division
  - Design Division
- Parks, Recreation and Public Property Department
  - Park Maintenance
  - Golf Operations
- Fire Department
- Law Department
- Planning Department

The City is committed to partnering with several organizations to meet the MS4 requirements in the most efficient manner possible. The major partners are listed below. The City intends to continue developing additional partnerships throughout the permit cycle to meet the permit requirements.

- Keep Omaha Beautiful (KOB)
- Papillion Creek Watershed Partnership (PCWP)
- Douglas-Sarpy County Extension Office
- Papio-Missouri River Natural Resource District (P-MRNRD)
- University of Nebraska at Omaha

This report satisfies the annual reporting requirement and covers the calendar year from January 1, 2021 through December 31, 2021. The report is laid out as follows: the program minimum control measures (MCMs) are shaded, the permit requirements are underlined, and the City's description of permit compliance is in plain text.

A. Public Education & Outreach

1. BMPs 1, 3, and 4: Develop a plan for outreach that defines the goals, objectives, target audience and distribution process of materials for the public education and outreach program.

Target Goals & Implementation Schedule: *Year 1 – Develop a 5-year education and outreach plan. Years 2-5 – Review and update the plan each permit year and include the revised plan in the Annual Report.*

The City of Omaha developed in 2019 a 5-year education and outreach plan. The plan outlines the program goals, target audiences, distribution methods and strategies, tracking, and assessment. The plan was submitted with the 2019 MS4 Annual Report and is available upon request. There were no updates to the plan in 2021. Education and outreach efforts have continued throughout 2021. Below is a summary of those efforts.

Outreach Events and Material Distribution

In 2021, The City of Omaha Stormwater Program conducted 20 outreach events with the public, schools, commercial companies, and community organizations with 3,692 attendees. In addition, there were 42 distributions of outreach materials to various construction sites and the general public. Total physical outreach materials distributed by the Omaha Stormwater Program in 2021 was 2,217. These outreach materials are also available on OmahaStormwater.org and in 2021 they were downloaded a total of 677 times.

The City continued to contract with Keep Omaha Beautiful, Inc. (KOB) in 2021 for stormwater education and outreach and to distribute educational information. KOB conducted 134 outreach events with 5,506 attendees. KOB provide online opportunities to access and download outreach materials as a standalone resource or in conjunction with an event such as World O! Water. These resources were accessed or downloaded a total of 2,978 times. Outreach materials distributed covered topics concerning stormwater pollution, litter reduction, household hazardous waste, and more. An inventory of public education and outreach materials is provided in Attachment F.

KOB events also included training and certification for teachers on environmental education, including stormwater runoff. Teachers who attended these events provided the number of students they would apply their training to, helping to better understand the full impact this training can have in the community. The total students reached from these teachers is 5,441. The table below summarizes these totals, except for student reach since that would represent potential attendees and not actual ones.

Outreach Events & Materials			
	Events	Attendees	Materials
Omaha Stormwater	20	3,692	2,217
OmahaStormwater.org downloads			677
KOB	134	5,506	1,995
KOB webpage access/downloads			2,978
Total	**154**	**9,198**	**7,867**

Covid-19 continued to have a significant impact on education and outreach in 2021. Overall comfort and utilization of online resources continues to improve across all interactions with the public and has been a

positive impact on the Program. It is expected that virtual education and outreach opportunities will continue to expand and improve into the future.

Topics at these events ranged from general stormwater education to rain harvesting workshops to information on green infrastructure. A summary table of these education and outreach events can be found in Attachment E. Two specific events, the Sediment and Erosion Control Seminar and World O! Water, as well as other Education and Outreach efforts are described in further detail below.

The City of Omaha Stormwater Program worked with the Papillion Creek Watershed Partnership (PCWP), Papio-Missouri River Natural Resource District (PMRNRD), Douglas County Environmental Services, and the Nebraska Department of Environment and Energy (NDEE) to present the annual Sediment and Erosion Control Seminar on February 4th, 2021. Due to Covid-19, the event was held virtually, which allowed many more people to participate than just the in-person seminars previously. There were 391 people that attended the seminar, an increase of 81 over the 310 in 2020. Presentations at the event included:

- Papillion Creek Watershed Partnership Proposed Stream Setback Policy – Lori Laster, Papio-Missouri River NRD
- Stabilization & Hydromulches – Adam Popenhagen, Profile Products LLC
- 404 Permits & Construction Sites – Emily Holtzclaw & Tiffany McEachen, Jacobs
- NDEE Updates – Reuel Anderson, NDEE
- Putting Post-Construction First: A PCSMP Refresher – Selma Kessler, City of Omaha & Lori Laster, Papio-Missouri River NRD
- Keep it Simple – Successful SECs, Successful Project – Alex Zimmerman, ECBVerdyol

The World O! Water Festival in-person event was cancelled in 2021 due to Covid-19. Instead, activities geared to getting families out of the house and exploring their neighborhoods were created and made available on the World O! Water website. Activities included a litter walk, an ecosystem scavenger hunt, a green infrastructure self-guided tour, and water-themed geocaching. The Omaha Public Libraries provided water-themed story times. Displays with complementary information were also present at the Omaha Public Library locations during the month of September. For the period starting September 10, 2021 to September 27, 2021, participants could be registered for prize drawings upon completion of each activity. A social media campaign promoted the event. The event website received 1,731 visitors. The activities continue to remain accessible on the World O! Water website. This was the 17th successful year the event was held.

In addition to the distribution of educational brochures and public outreach events, Keep Omaha Beautiful, Inc. coordinated several public service announcements (PSAs) and other information regarding stormwater pollution through radio, television, social media, and other means such as e-newsletters in 2021. In total there were 188 PSA's with the breakdown by type provided in the table below. Topics and events addressed by these spots included stormwater pollution prevention, proper firework disposal, World O! Water, and storm drain marking.

PSA's	
Radio spots	1
Print ads	1
Television spots	14
E-News	9
Social media	163
Total	**188**

Website

The City of Omaha Stormwater Program website is OmahaStormwater.org. The website provides many resources for stormwater management and is organized generally by target audience: residential, commercial, construction, and industrial. From the website homeowners can learn of what they can do at their home to manage stormwater runoff. Industrial facilities can learn how to apply for a permit as well as resources to help them maintain compliance. Developers and engineers can access the necessary documents to apply for Grading Permits and Post-Construction Stormwater Management Plans (PCSMP). The Program has two additional websites, OmahaPlants.org and WorldOWater.org. OmahaPlants.org provides plant information for use in green infrastructure practices. WorldOWater.org focuses on the annual World O! Water family event and provides additional resources to support it.

On the website, the public can access the City's current MS4 permit, past and current annual reports, and submit complaints or comments through an online form. The Stormwater Program also maintains a Facebook Page and provides additional communication with the public. Regular status updates sharing facts on stormwater, demonstration projects, and other related information were posted and helped to connect the public to the Omaha Stormwater website.

In 2021, the three websites had a total of 12,151 visitors with 24,208 total page views. The Omaha Stormwater Program Facebook page had a total reach of 16,833. Tables compiling the monthly breakdown for OmahaStormwater.org and the Omaha Stormwater Program Facebook Page can be found in Attachment E. Below is a summary of website traffic for the three websites in 2021.

2021 Website Summary

	Users	Page Views	Sessions
OmahaStormwater.org	6,436	13,667	8,293
OmahaPlants.org	1,223	2,666	1,344
WorldOWater.org	2,184	7,875	2,514
Total	9,843	24,208	12,151

Signage

On-site, educational signage has been placed at many of the City's demonstration projects over the years, including at the UnderTheSink Facility, Orchard Park, Saddlebrook Joint Use Facility, Metropolitan Community College (MCC) Fort Omaha Campus, Creighton Prep, the University of Nebraska Omaha Welcome Center, Benson East Entrance at 58th & Maple, and Dundee Elementary School. No new signs were installed in 2021. Smaller, non-site-specific signs for rain gardens and permeable pavement have been developed and can be placed at other City green infrastructure (GI) project sites.

As part of a virtual Earth Day event, the City of Omaha Stormwater program created a Green Infrastructure Investigator activity. Educational signs were placed at Orchard Park, Adams Park, Saddlebrook Community Center, Saddle Hills Park, Zorinsky Aquatic Center, Prairie Lane Park, and Spring Lake Park. The activity encouraged participants to explore green infrastructure installations that they may not have even realized were green infrastructure measures located near them.

In addition to signage at demonstration projects, fact sheets for City of Omaha GI projects have been developed to share basic information on each project with the community. There are 26 project fact sheets,

and these are shared with participants on tours and other outreach events. These GI fact sheets have also been uploaded to the Omaha Stormwater Program's website, OmahaStormwater.org, for public access and linked to their respective projects. Information provided includes photos, background information, and other project details. No new project fact sheets were developed in 2021.

Pet Waste Campaign

The City of Omaha Stormwater Program developed and implemented a pet waste campaign in 2009. Advertisements were developed and published in several publications and locations across the city. We continue to use these materials today as part of our education and outreach program. It was a very successful campaign and won the Silver Award in the Total Advertising Campaign category from the Eighth Annual Service Industry Advertising Awards. In 2021, 450 pet waste dispensers and 441 pet waste brochures were distributed at outreach events. Pet waste bags are also supplied to two dog parks through Omaha Dog Park Advocates. In 2021, 38,400 bags were distributed to those parks.

This permit requirement continues to be met.

2. BMP 2: Maintain and update appropriate messages for targeted residential, construction, and commercial issues.

Target Goals & Implementation Schedule: *Year 1 – Inventory current outreach materials in each of these targeted areas and develop new materials as needed. Years 2-5 – Provide copies of new outreach materials in the annual report.*

The City of Omaha Environmental Quality Control Division has developed many outreach materials over the years. As reported in the 2019 Annual report these materials have been inventoried and categorized into the following target areas: residential, construction, commercial, and industrial. In 2021, there were no new outreach materials created. All materials are available online at OmahaStormwater.org

This permit requirement continues to be met.

B. Public Participation & Involvement

1. BMP 1: Provide opportunities for citizens to comment on new rules, ordinances, and regulations regarding the MS4

Target Goals & Implementation Schedule: *On-Going All Years – Post on the City Stormwater Website proposed changes to rules, ordinances, and regulations. Provide information in the annual report on approved changes and input received from the public.*

There were no changes to rules, ordinances, or regulations in 2021.

This permit requirement continues to be met.

2. BMP 2: Create opportunities for citizens to participate in the implementation of stormwater controls.

Target Goals & Implementation Schedule: *On-Going All Years – Post on the City Stormwater Website opportunities for public involvement in stormwater control related activities.*

The City of Omaha Stormwater Program's website is regularly updated throughout the year with information on opportunities for citizens to participate. Events and information include the Sediment & Erosion Control conference, World O! Water festival, proper handling of fireworks debris, and various outreach events. Social media, including the Omaha Stormwater Facebook Page, the City of Omaha's Public Works Twitter account, and Keep Omaha Beautiful's Facebook Page and Twitter account is used to further educate and engage with the public on stormwater-related topics.

The public is also encouraged to attend the Papillion Creek Watershed Partnership's meetings held regularly throughout the year, to discuss watershed and water quality policies. There were seven meetings held in the 2021 calendar year. The following table summarizes the times and attendance for the meetings.

Date	Count	Target Market	Comments
1/7/2021	30	Partnership Members	Partnership Meeting
1/28/2021	30	Partnership Members	Partnership Meeting
2/25/2021	51	Partnership Members	Partnership Meeting
3/25/2021	31	Partnership Members	Partnership Meeting
4/22/2021	19	Partnership Members	Partnership Meeting
5/27/2021	23	Partnership Members	Partnership Meeting
11/17/2021	28	Partnership Members	Partnership Meeting

Storm Drain Marking

KOB coordinated neighborhood groups and scout troops in 2020 to mark and clean storm sewer inlets. In total, 1,627 inlets were marked with disks. Inlets were also cleaned during these events, 155 bags of trash and recyclables were collected. There were 436 inlets cleaned that were already marked. Through KOB's coordination, 532 youth and adult volunteers participated in inlet marking, totaling 929.5 hours of community service hours. Bilingual "Only Rain Down the Storm Drain" educational door hangers (which highlights HHW and Under the Sink) are distributed to individuals living near storm drains that were marked. A total

of 1,808 of these educational door hangers were distributed. KOB also provides inlet marking discs to contractors installing storm sewers in the Omaha area. In 2021, 53 discs were sold to contractors.

Dog Parks
The City of Omaha has partnered with the Omaha Dog Park Advocates by supplying Pet Waste Bag Stations and Pet Waste Bags for the two dog parks in Omaha. The Advocates keep the dispensers supplied with bags and submit a count to EQCD. A total of 38,400 bags were used during 2021.

This permit requirement continues to be met.

3. BMP 3: Provide access to information about the City's SWMP

Target Goals & Implementation Schedule: *On-going All Years – Maintain current City SWMP and MS4 annual reports on the Omaha Stormwater website.*

The Omaha Stormwater website is current with the 2020 Annual Report and current version of the SWMP. The website will be updated with the 2021 Annual Report upon its completion.

This permit requirement continues to be met.

C. Illicit Discharge Detection & Elimination

1. BMP 1a: Maintain a compliance plan or mechanism to follow up on illicit discharges.

Target Goals & Implementation Schedule: *On-going All Years – Maintain the compliance procedures per the permit requirements.*

The City of Omaha's compliance plan is titled the Omaha Environmental Enforcement Manual and was submitted with the 2019 MS4 Annual Report and is available upon request. This manual describes the City's enforcement goals, process and mechanisms, program priorities, and civil penalty policy. No updates were made in 2021.

This permit requirement continues to be met.

2. BMP 1b: Maintain a map showing all known MS4 outfalls and the location of all state-designated waters receiving direct discharges from MS4 outfalls.

Target Goals & Implementation Schedule: *On-Going All Years – Maintain a continually updated storm sewer system map per the permit requirements.*

The City of Omaha's Sewer Maintenance Division is responsible for maintaining and updating the separate storm sewer system map, in addition to sanitary and combination sewers. EQCD utilizes this information to catalogue outfalls and support outfall screening efforts. The mapping of State-designated waters is maintained by the City's GIS department. They utilize USGS data and LiDAR flown periodically for the City to identify waterbodies and maintain the map layer. GIS map layers of impaired waters are obtained from the Nebraska Department of Environment & Energy (NDEE), http://deq.ne.gov/Publica.nsf/Pages/WAT251. These layers are reviewed and updated as needed. The strategy for maintaining the storm sewer map was drafted after the EPA lead program audit in 2020 and is provided in Attachment J.

This permit requirement continues to be met.

3. BMP 1c: Conduct field screening activities per the permit requirements (set forth in 40 CFR Part 122.26(d)(1)(iv)(D)) specifically geared to local TMDL pollutants of concern such as *E. coli* and to eliminate illicit discharges.

Target Goals & Implementation Schedule: *Year 1 – Develop dry-weather screening, sampling, and quality control plan to address pollutants of concern. Conduct screening under current plan during Year 1. On-Going All Years – Annually conduct dry-weather monitoring according to screening and sampling plan.*

There were 268 potential outfalls identified by EQCD using GIS information collected by Sewer Maintenance in 2009. In 2019, the GIS information was reviewed to ensure all applicable outfalls are being screened.

When potential outfalls are identified through an annual review of sewer GIS data, they are classified as new to the outfall inventory for screening. Once screened, the outfalls are then classified as priority outfalls if they are 72" or greater or had a documented illicit discharge, regardless of size. Priority outfalls are screened annually. Outfalls that are documented with an illicit discharge are updated to priority status and screened

annually for the next three years. If no illicit discharge is observed in those three years and it is less than 72", its status is updated to non-priority. Annexations of Sanitary & Improvement Districts (S&IDs) can occur periodically. When this occurs, all annexed outfalls are added as new to the outfall inventory for field screening. Based on the field screening, they are then classified as being a priority outfall or not. CityWorks asset management software is used to document outfall screening efforts.

All outfall screenings are conducted after 48 hours of dry weather. An outfall reconnaissance inspection form is completed and a Physical Characteristics Examination is completed, if flow is present. If an illicit discharge is encountered EQCD Inspectors are to call supervisory staff immediately. The supervisor reviews the findings with the inspectors, allocates additional resources needed to assist, and an investigation begins to determine the source of the illicit discharge. If the source of an illicit discharge or connection is found, they will be notified to cease the discharge immediately. They will then be issued a written request, warning, or violation and be required to eliminate the discharge to prevent reoccurrence. Photographs are taken of outfalls to be kept as a record of outfall conditions during the inspection.

Field screening in 2021 has been consistent with previous years. Any outfall with an obvious or suspicious discharge was to be reported immediately to EQCD. In total, there were 160 outfall screenings in 2021. They were entered into the City of Omaha's CityWorks asset management system. City of Omaha EQCD staff screened all 89 outfalls identified the previous year as priority outfalls. There were 10 outfall screenings of new outfalls from the 2019 GIS information review and annexation areas. There were 61 outfall screenings of non-priority outfalls.

No illicit discharges were found in 2021 that would require an outfall to be moved to priority status. There were 3 S&ID annexations in 2021, there were three outfalls identified after a desktop and GIS evaluation was done for those areas. These outfalls are planned to have their initial screening in 2022.

The screenings were reviewed and the outfall priority list is updated as needed. Of the 10 new outfalls that were screened in 2021, 5 will be updated to priority and 5 will be updated to non-priority. There are 34 new outfalls from the 2019 sewer node review remaining to be screened. There are 10 new outfalls from previous annexations to be screened in 2022.

This permit requirement is being met.

4. BMP 1d: Implement procedures to investigate and trace sources of identified illicit discharges to the MS4.

Target Goals & Implementation Schedule: *On-Going All Years – Document investigations and include date observed, result of investigation(s), and date closed.*

The Omaha Stormwater Program operates a hotline, 402-444-3908, and a reporting form at OmahaStormwater.org to receive complaints from the public regarding stormwater issues, including illicit discharges. An Illicit Discharge Detection and Elimination (IDDE) Standard Operating Procedure (SOP) has been developed and is used to investigate and eliminate sources of illicit discharges. Inspections and supporting information for each complaint is tracked in CityWorks. A total of 227 complaints were received in 2021 with 137 resulting in being inspected, and 24 having an illicit discharge associated with it. A summary of 2021 complaint investigations that involved illicit discharges is provided in the table below.

Date Initiated	Actual Finish	Address	Material Discharged	Resolution
3/4/2021	5/11/2021	4333 S 24th St	Food truck wash water	RVC - Written
3/15/2021	4/14/2021	14810 M St, Omaha, NE, 68137	Sediment	RVC - Verbal
3/22/2021	3/30/2021	9775 Frederick St, NE, 68124	Suds (unknown)	Forwarded to Sewers
4/14/2021	4/26/2021	10717 Grand Ave	Food truck wash water	RVC - Verbal
4/20/2021	8/19/2021	15005 Grover St	Concrete washout	Investigated-Unable to locate responsible party
5/7/2021	7/30/2021	3624 N 45th St	Sediment	RVC - Verbal
5/11/2021	5/12/2021	2901 Cuming St	Vehicle/equipment wash water	RVC - Verbal
5/14/2021	5/28/2021	20209 Park Rd	Concrete Curing Compound	RVC - Verbal
5/18/2021	5/24/2021	3914 Miami St	Sediment	RVC - Verbal
7/1/2021	9/8/2021	1417 N 127th Cir	Sediment and concrete wash out	RVC - Verbal
7/14/2021	7/15/2021	604 S 37th St	Dawn dish soap from mopping floors	RVC - Verbal
7/23/2021	8/5/2021	6202 Orchard Ave	Sediment	RVC - Verbal
8/9/2021	8/27/2021	11765 Fowler Ave	White unknown	RVC - Verbal
8/10/2021	8/12/2021	8914 N 52nd Ave	Aggregate	RVC - Verbal
8/20/2021		4506 S 52nd St	Sediment	LOW
9/3/2021	11/30/2021	16757 Spaulding St	Sediment	RVC - Verbal
9/13/2021	12/9/2021	2400 Z St	Fats from animal waste	RVC - Verbal
10/6/2021	11/18/2021	3298 Bedford Ave	Concrete washout	RVC - Written
10/7/2021	10/15/2021	1305 S 118th St	Concrete residue and slurry	RVC - Verbal
10/13/2021	10/29/2021	4021 N 212th St	Sediment	RVC - Verbal
11/30/2021	12/3/2021	1220 N 53rd St	Swimming pool water	RVC - Written
12/21/2021	1/27/2022	7437 N 144th Ave	Vehicle fluids	RVC - Written
12/30/2021	1/3/2022	5914 Center ST	Food hood cleaning wastewater	RVC - Verbal
12/30/2021	12/30/2021	1440 S 190th Plz	pool water	Forwarded to Plumbing

This permit requirement is being met.

5. BMP 1e: Implement procedures to remove illicit discharges to the MS4. Document all interactions with potentially responsible parties.

Target Goals & Implementation Schedule: *On-Going All Years – Use the code enforcement procedures to eliminate unauthorized non-stormwater discharges identified during an investigation.*

Chapter 32 of the Omaha Municipal Code is the Stormwater Management Ordinance for the City of Omaha. Article II specifically addresses illicit discharges. Additionally EQCD works with the Planning Department's Plumbing Division to remove illicit connections when encountered. The Omaha Environmental Enforcement Manual, included in Attachment B, describes the City's process and mechanisms to obtaining compliance. A summary of all complaints is included in Attachment C. Of the 137 complaints that were investigated, the nature of the complaint was validated for 103 of them. A summary of the inspections and their resolutions in 2021 is provided in the table below.

Resolution Summary	
No responsible party found	1
RVC - Verbal	64
RVC - Written	13
LOW	2
NOV	0
Forwarded to Adjacent MS4	0
Forwarded to Other	18
Other resolution	5

This permit requirement is being met.

6. BMP 1f: Identify and address allowable non-stormwater discharges determined to be significant contributors to pollutants. Identify any additional non-stormwater discharges that will not be addressed as illicit discharges.

Target Goals & Implementation Schedule: *On-Going All Years – Report on any local controls or conditions placed upon exempt non-stormwater discharges and additional identified exempted non-stormwater discharges.*

No additional local controls or conditions were placed on allowable non-stormwater discharges in 2021. There were no additional allowable non-stormwater discharges identified as non-illicit discharges in 2021.

This permit requirement is being met.

7. BMPs 2 & 3: Coordinate with adjacent permitted MS4s to report illicit discharges to the appropriate authority having jurisdiction and respond to reports from other MS4s.

Target Goals & Implementation Schedule: *Year 1 – Develop procedures for coordination with adjacent permitted MS4s. On-Going All Years – Include in the annual report any known illicit discharge reports to and from adjacent MS4s.*

The Omaha Stormwater Program operates a hotline, 402-444-3908, and a reporting form at OmahaStormwater.org to receive complaints from the public regarding stormwater issues. These options for

reporting complaints and illicit discharges are promoted through the Papillion Creek Watershed Partnership (PCWP). Complaints received by the Omaha Stormwater Program located in adjacent MS4s are forwarded immediately to the Authority Having Jurisdiction (AHJ) for investigating. Complaints received by adjacent MS4s that are in the City of Omaha limits or it's Extra Territorial Jurisdiction (ETJ), are immediately forwarded over to EQCD. The City of Omaha has a Memorandum of Understanding with Douglas County's Department of Environmental Quality and the Nebraska Department of Transportation (NDOT) to coordinate and cooperate on illicit discharge investigations and other stormwater permit-related activities. Through the inter-local agreement with the PCWP, IDDE is identified as a program area of cooperation between members.

There were no complaints forwarded to adjacent MS4s in 2021.

This permit requirement is being met.

8. BMP 4: Maintain written procedures for the IDDE component of the MS4 permit.

Target Goals & Implementation Schedule: *On-Going All Years – Make available upon request the standard operating procedures developed under this program component.*

The City is maintaining written procedures for the IDDE component of the MS4 permit and will provide a copy of the standard operating procedures developed under this program element upon request.

In 2020, an EPA audit of the City of Omaha's MS4 Permit took place and one of the initial findings from that audit indicated that the IDDE procedures lacked detail on "how to respond, enforce and eliminate, non-stormwater discharges". In 2021, the City of Omaha reviewed existing SOPs, guidance, and also reviewed other municipalities' IDDE programs as part of updating the IDDE procedures. The Center for Watershed Protection's IDDE Guidance Manual has continued to be a resource for the program during this time of review and updates. The final draft of the updated IDDE SOPs should be completed in 2022.

This permit requirement is being met.

9. BMP 5: Receive reports and complaints, internally and from the public, of illicit discharges and illegal dumping into the MS4. Respond to and investigate complaints about spills, dumping, or disposal of materials other than stormwater to the MS4.

Target Goals & Implementation Schedule: *On-Going All Years – Coordinate with others in the City to resolve complaints. Develop a system to generate reports and track the number of calls per year in regard to spills, dumping or improper disposal of materials to the MS4. Include a count of complaints received and investigations completed in the annual report.*

The Omaha Stormwater Program operates a hotline, 402-444-3908, and an online reporting form at OmahaStormwater.org to receive complaints from the public regarding stormwater issues, including illicit discharges. In addition to these options, the City of Omaha also operates the Mayor's Hotline, 402-444-5555 and the OmahaHotline.com website for citizen reporting of issues. CityWorks is an asset management system that the Omaha Stormwater Program and other City departments utilized to track complaints received. Notification of complaints relating to stormwater runoff are sent by service requests (SR). Once received, they are reviewed to ensure they are applicable to the Stormwater Program. Complaints not applicable are forwarded to the appropriate City department or outside agency. If applicable, a work order (WO) is created and assigned to an Environmental Inspector who will investigate the complaint and determine if the reported

issue is valid. If the issue is validated the inspector will, work to correct the issue(s) as needed, determine responsible party, and resolve the identified issues.

A total of 227 complaints were received in 2021 with 137 resulting in an inspection by the Omaha Stormwater Program. Out of the 137 complaints inspected, the nature of the complaint was validated for 103 of them. A summary of the complaints inspected is included in Attachment C.

This permit requirement is being met.

10. BMP 6: Develop, implement, and maintain a training program for municipal field staff with respect to the IDDE.

Target Goals & Implementation Schedule: *Year 1 – Develop a strategy which identifies field staff and appropriate levels of training. Years 2-5 – Provide a count of employees which have received training in the annual report.*

The City of Omaha Stormwater Program has developed an IDDE Training Strategy and is available for review. In 2021, there were 25 training events that discussed IDDE conducted by the Omaha Stormwater Program with a total attendance of 423 municipal field staff. Besides general stormwater pollution prevention awareness topics, IDDE has been included in the training provided as part of the FRCP program. At training events, resources about IDDE are made available to staff to learn more and to use at their work locations. A summary table of these events is included below.

Date	Topic	Attendance #
2/6/2021	2021 Annual Sediment & Erosion Control Seminar	58
3/18/2021	FRCP Training - Park Maintenance D6	6
3/19/2021	FRCP Training - Street Maintenance Graffiti	3
4/9/2021	FRCP Training - Fleet Management	28
6/16/2021	FRCP Training - Missouri River WRRF	20
6/22/2021	Dry Weather Screening Preparation & Review	8
10/5/2021	FRCP Training - Park Maintenance D4	13
10/6/2021	FRCP Training - Park Maintenance D10	4
10/6/2021	FRCP Training - Forestry	9
10/20/2021	FRCP Training - Vehicle Impound Lot	8
10/21/2021	FRCP Training - Traffic	43
10/29/2021	FRCP Training - Park Maintenance D1	10
11/22/2021	FRCP Training - Park Maintenance D3	10
12/16/2021	FRCP Training - Street Maintenance D3	20
12/17/2021	FRCP Training - Facilities Management	14
12/17/2021	FRCP Training - Street Maintenance D1	22
12/20/2021	FRCP Training - Sewer Maintenance Construction	18
12/22/2021	FRCP Training - Construction	17
12/23/2021	FRCP Training - Street Maintenance D4	32
12/24/2021	FRCP Training - EQCD	32
12/29/2021	FRCP Training - Street Maintenance D5	15
12/29/2021	FRCP Training - Sewer Maintenance Levee	11
12/30/2021	FRCP Training - Sewer Maintenance	22

This permit requirement is being met.

D. Construction Site Program

1. BMP 1: Maintain the established program requiring operators of public or private construction activities to comply with local erosion and sediment control requirements.

Target Goals & Implementation Schedule: *On-Going All Years – Include any updates to City Code or Permit requirements in the annual report.*

The City of Omaha's Environmental Quality Control Division continued to implement the Grading Permit Program in 2021. There were no changes to them in 2021. The Grading Permit Terms and Conditions were updated early 2018 and were rolled out February 1st, 2018 as part of the annual 2018 Sediment & Erosion Control conference sponsored by the City of Omaha. The updates were made to stay consistent with the NDEE's Construction Stormwater Permit NER160000 that was issued November 1, 2016. The Grading Permit Terms and Conditions are available at OmahaPermix.com and OmahaStormwater.org.

This permit requirement is being met.

2. BMP 2: Maintain a compliance plan or mechanism to follow up on construction site non-compliance.

Target Goals & Implementation Schedule: *On-Going All Years – Maintain the compliance procedures per the permit requirements.*

The City of Omaha's compliance plan is titled the Omaha Environmental Enforcement Manual and is included in Attachment B. This manual describes the City's enforcement goals, process, program priorities, enforcement and civil penalty policy. There were no updates to the manual in 2021.

This permit requirement is being met.

3. BMP 3: Review grading permit applications and maintain a continually updated inventory of all private and public construction sites.

Target Goals & Implementation Schedule: *On-Going All Years – Include in the annual report the number and type of grading permits reviewed.*

The Public Works Department, Environmental Quality Control Division, reviews the grading permit applications and the associated Storm Water Pollution Prevention Plans (SWPPP). The SWPPP must meet the requirements specified in the Omaha Regional Storm Water Design Manual for a grading permit to be issued. Sites with 5 acres or greater of land disturbance are given priority over sites less that have 1 to 5 acres of land disturbing activity.

The City of Omaha issued a total of 102 permits in 2021 with 35 permits for sites greater than or equal to 5 acres and 67 permits issued for sites greater than or equal to 1 acre but less than 5 acres in size. During 2021, there were a total of 536 active permits. The Omaha Municipal Code Section 32-101 (Grading Permit Required) requires a project to obtain a grading permit on sites sufficiently large enough to require a general NPDES construction stormwater discharge permit.

This permit requirement is being met.

4. BMP 4: Maintain the electronic records for inspection of construction sites and enforcement of erosion and sediment control measures.

Target Goals & Implementation Schedule: *Year 1 – Develop a strategy for site inspections by municipal staff and include in the annual report. On-Going All Years – Inspect construction sites on a regular basis and on a complaint basis. Track the number of sites inspected annually in a database. Initiate enforcement proceedings as appropriate to address violations. Include a summary of inspections completed and enforcement actions taken in the annual report.*

The City of Omaha Stormwater Program updated their strategy for site inspections by municipal staff in 2019 and was included in the 2019 City of Omaha MS4 Permit Annual Report. EQCD administers the inspection program for Erosion Control, both within the City of Omaha's jurisdiction as well as the Papillion Creek Watershed Partnership's (PCWP) individual members' jurisdiction. The City's Grading Permit Program requires that the owners of active sites assign a Project Inspector to do inspections weekly and after 0.5 inches of rain. In the 2021 calendar year, reports were submitted to an online permitting and reporting website, Permix, by City Inspectors and Project Inspectors for construction. The table below accounts for the reports submitted for sites within the City of Omaha's jurisdiction.

	City Inspection Reports	**Private Inspection Reports**
Phase I Sites (>5 acres)	654	7,025
Phase II Sites (<5 acres)	381	4,327
Total	1,035	11,352

The first step, as outlined in the City of Omaha's Enforcement Manual, is a Request for Voluntary Compliance (RVC). If the permit holder does not bring the site into compliance, a Letter of Warning is sent, regarding the issue(s) and establishes a timeline for compliance. If the permit holder fails to bring the site into compliance by the established timeline, a Notice of Violation is issued and may include a penalty. In 2021, there were 173 Requests for Voluntary Compliance (RVC) during City inspections. When EQCD receives a complaint regarding a permitted grading site, the City Inspector visits the site and files a complaint inspection. There were 61 complaint inspections conducted on 44 permitted grading sites, with 27 of those inspections including an RVC. A summary table of Letters of Warning and Notices of Violation, is summarized in the table below.

Permit Number	**Status**	**Date Submitted**	**Action Taken**
OMA-20190829-4546-GP1	Resolved	1/11/2021	NOV w/penalty
OMA-20171222-4395-GP1	Resolved	1/20/2021	LOW
OMA-20140703-2626-GP1	Resolved	1/22/2021	LOW
OMA-20190424-4637-GP1	Resolved	1/27/2021	NOV w/penalty
OMA-20140813-2724-GP1	Resolved	4/9/2021	LOW
OMA-20200214-5342-GP1	Resolved	8/24/2021	NOV w/penalty
OMA-20201015-5644-GP1	Resolved	10/12/2021	LOW
OMA-20170330-4048-GP1	Resolved	10/25/2021	LOW

Permit Number	Status	Date Submitted	Action Taken
OMA-20180321-4454-GP1	Resolved	11/19/2021	LOW
OMA-20180307-4419-GP2	Resolved	6/18/21	LOW
OMA-20180307-4419-GP2	Resolved	8/18/21	NOV w/penalty collected
OMA-20181024-4747-GP1	Resolved	6/8/21	LOW
OMA-20181024-4747-GP1	Resolved	9/8/21	NOV w/penalty collected

This permit requirement is being met.

5. BMP 5: Provide training for municipal staff with respect to their assigned duties as it relates to sediment and erosion control from construction activity. One formal training course for inspection staff during their employment with the City and internal training on an as-needed basis to maintain consistent reporting among all inspectors.

Target Goals & Implementation Schedule: *On-Going All Years – Include in the annual report the number of staff and their sediment and erosion control training.*

City of Omaha's Environmental Quality Control Division of the Public Works Department's, Environmental Inspectors who conduct inspections for sediment and erosion control must enroll and pass the Nebraska Local Technical Assistance Program's (LTAP) Erosion and Sediment Control for Inspectors. The training is a full-day course and includes a test at the end that if passed, the inspector becomes certified. This certification is valid for 5 years. When the certification expires, inspectors enroll for an online course to renew their certification. There are 13 active certified inspectors in the City of Omaha's Environmental Quality Control Division (EQCD).

In 2021, EQCD continued to incorporate sediment and erosion control training into the regular monthly safety toolbox meetings. Topics that are covered include review of inspection processes, enforcements, and open discussion to discuss current issues among staff. A summary of 2021 these sediment and erosion control trainings is provided in the table below.

Date	Topic	Attendance
2/2/2021	EI Training & Safety Toolbox	9
2/23/2022	EI Training & Safety Toolbox	9
3/23/2021	EI Training & Safety Toolbox	10
4/27/2021	EI Training & Safety Toolbox	7
5/25/2021	EI Training & Safety Toolbox	9
6/22/2021	EI Training & Safety Toolbox	13
8/24/2021	EI Training & Safety Toolbox	14
9/28/2021	EI Training & Safety Toolbox	10
10/26/2021	EI Training & Safety Toolbox	13

This permit requirement is being met.

6. BMP 6: Communicate with the regulated community and other groups affected by the Construction Site Runoff program and provide a mechanism to receive complaints from the public.

Target Goals & Implementation Schedule: *On-Going All Years – Conduct workshops for developers, builders, site designers, contractors, and/or City staff as determined necessary (i.e., a rule or regulation is changed). Track reports from the public regarding construction sites. Include the number of reports received in the annual report and the permittees response.*

Communication

The City of Omaha held multiple outreach events with the regulated community, including the events listed in the table below. Outreach materials are handed out at these events and participants are encouraged to visit OmahaStormwater.org for additional information and resources. Phone calls, emails, and many other types of communications happen as part of regular job duties where City staff provide information and resources to support sediment and erosion control efforts in the community.

Date	Event Name	Activity Type	# of Attendees/ Reach	Location:	Details/Comments
2/4/2021	Sediment and Erosion Control Seminar	Workshop	391	Virtual	Annual seminar to construction industry
3/5/2021	Nebraska Virtual Green Infrastructure Tour	Tour	55	Virtual	Virtual tour of 6 GI sites across Nebraska, including 2 in Omaha
3/26/2021	SEC Flipbook Distribution	Distribution	1	Pacific Springs - Lund Ross	Distribution to grading permit sites
4/5/2021	SEC Flipbook Distribution	Distribution	8	156th & Ida OPS HS Site	Distribution to grading permit sites
4/14/2021	SEC Flipbook Distribution	Distribution	2	Flanagan Point - 180th & Fort	Distribution to grading permit sites
4/22/2021	TD2 Inspector Training	Presentation	4	Virtual	Grading Permit and Permix Training for TD2 inspectors
4/28/2021	SEC Flipbook Distribution	Distribution	4	Immanuel Retirement - Lund Ross	Distribution to grading permit sites
4/28/2021	SEC Flipbook Distribution	Distribution	4	IBEW	Distribution to grading permit sites
5/1/2021	EI supplies - Shane	Distribution	9	Various	Distribution to grading permit sites
6/8/2021	SEC Flipbook Distribution	Distribution	2	Hy-Vee Site - 204th & George B Lake	Distribution to grading permit sites
6/10/2021	SEC Flipbook Distribution	Distribution	6	Pioneer View site	Distribution to grading permit sites
6/15/2021	SEC Flipbook Distribution	Distribution	10	Pioneer View site	Distribution to grading permit sites
6/16/2021	SEC Flipbook Distribution	Distribution	2	Lake Living site	Distribution to grading permit sites

Date	Event Name	Activity Type	# of Attendees/ Reach	Location:	Details/Comments
6/23/2021	SEC Flipbook Distribution	Distribution	2	Coventry/Harrison 210	Distribution to grading permit sites
7/9/2021	SEC Flipbook Distribution	Distribution	2	Nebraska Medicine - Village Point	Distribution to grading permit sites
7/14/2021	SEC Flipbook Distribution	Distribution	2	Lake Living site	Distribution to grading permit sites
8/11/2021	SEC Flipbook Distribution	Distribution	1	Nebraska Medicine - Village Point	Distribution to grading permit sites
8/17/2021	SEC Flipbook Distribution	Distribution	1	State Street widening project	Distribution to grading permit sites
8/25/2021	SEC Flipbook Distribution	Distribution	20	Offutt AFB	Distributed to Offutt AFB MS4
8/26/2021	SEC Flipbook Distribution	Distribution	2	Kensington Park	Distribution to grading permit sites
9/7/2021	SEC Flipbook Distribution	Distribution	4	Coventry strip center site	Distribution to grading permit sites
9/28/2021	SEC Flipbook Distribution	Distribution	2	Summit Meadow	Distribution to grading permit sites
9/28/2021	Stormwater Brochure Distribution	Distribution	1	Harrison 210	Distribution to grading permit sites
10/18/2021	SEC Flipbook Distribution	Distribution	4	State Street widening project	Distribution to grading permit sites
10/29/2021	SEC Flipbook Distribution	Distribution	4	Nebraska Multi Sport Complex	Distribution to grading permit sites
11/5/2021	NWEA Fall Conference	Presentation	30	Kearney, NE	City of Omaha Stormwater Program update - Construction Stormwater & Post-Construction
11/17/2021	SEC Flipbook Distribution	Distribution	2	Nebraska Multi Sport Complex	Distribution to grading permit sites
12/2/2021	SEC Flipbook Distribution	Distribution	1	Coventry strip center site	Distribution to grading permit sites
12/20/2021	SEC Flipbook Distribution	Distribution	2	Sterling Ridge	Distribution to grading permit sites
12/20/2021	SEC Flipbook Distribution	Distribution	1	Coventry strip center site	Distribution to grading permit sites

Complaints/Reports

When EQCD receives a complaint regarding a permitted grading site, the City Inspector assigned to the site is notified, then visits the site, and files a complaint inspection to document findings. There were 61 complaint inspections conducted on 44 grading permit sites, with 27 of those inspections including a RVC.

This permit requirement is being met.

E. Post Construction Runoff Control

1. BMP 1: Continue to implement the Post Construction program as stipulated in the Omaha Municipal Code (OMC). Periodically update guidance material and develop divergent standards for difficult sites such as linear projects. Update as need the Omaha Regional Stormwater Design Manual (ORSDM)

Target Goals & Implementation Schedule: *Year 1 – Develop divergent standards for guidance document and update guidance as needed. Submit standards with the annual report. On-Going All Years – Revise as necessary. Include a summary of revisions in the annual report.*

The City of Omaha's guidance document for post-construction is titled *City of Omaha Post Construction Stormwater Management Planning Guidance* and was developed in July 2009, updated in August 2015, and updated again after soliciting feedback from the design community and the Papillion Creek Watershed Partners reviewers in June 2019.

The document is available on the City's website OmahaStormwater.org and OmahaPermix.com. There were no divergent standards developed for difficult sites in 2021.

This permit requirement is being met.

2. BMP 2: Review and update, if needed, the standards outlined in the OMC and ORSDM for consistency with required performance standards as they relate to post-construction management plans.

Target Goals & Implementation Schedule: *On-Going All Years – Report on any updates to the OMC or ORSDM.*

The City of Omaha periodically reviews the ORSDM and guidance based upon feedback from the regulated community. There were no updates made to the OMC or the ORSDM in 2021.

This permit requirement is being met.

3. BMP 3: Maintain an online submittal and review process for site plans, easement and maintenance agreements, as-built drawings, deed recordings, and drainage studies.

Target Goals & Implementation Schedule: *On-Going All Years – Report number of PCSMP projects and the status of their progress in the annual report.*

The City of Omaha reviews proposed post-construction stormwater management plants (PCSMP) for code compliance, functionality, and manageability. The City's online permitting and reporting website, Permix, is used for PCSMP review and approval. Documents that are included in the PCSMP include a drainage study, proposed plan sheets, applicant certification, maintenance agreement, as-built drawings, BMP certification statement, certification cover sheet, and a certificate of occupancy letter (as-needed). Upon physical completion of the post-construction BMP(s), the PCSMP is recorded with the property deed to ensure long term compliance.

The table provided below summarizes PCSMP projects from 2021. Active projects refer to those projects that are in the document review process or waiting for the construction documents to be submitted.

2021 Omaha PCSMP Projects	
Applications	**4**
Active Projects	**533**
Document Review	370
Construction Document	163
Projects Certified	**85**

This permit requirement is being met.

4. BMP 4: Develop SOP's for responding to complaints regarding Post Construction BMPs and a strategy for verifying BMPs are being installed and maintained in perpetuity.

Target Goals & Implementation Schedule: *Year 1 – Submit SOPs with the annual report. On-Going All Years – Report on any complaints and/or BMPs which have been certified as complete.*

The City of Omaha Stormwater Program has developed a strategy for responding to complaints regarding post-construction BMPs, this was included in the 2019 City of Omaha MS4 Permit Annual Report. In 2021, there were no complaints received regarding certified post-construction BMPs.

The strategy for verifying BMPs are being installed and maintained properly is as follows, excerpted from the *City of Omaha Post Construction Stormwater Management Planning Guidance* document.

Installed
Upon construction completion, all stormwater BMPs that are part of the Final Post-Construction Stormwater Management Plan shall be certified by a licensed professional civil engineer registered in the State of Nebraska or other professional approved by the City of Omaha Public Works Department, the Designer.
For BMP Certification, the Designer shall submit the following elements to the City of Omaha Public Works Department.

- Record Drawings of the Final Post-Construction Stormwater Management Plan Sheets
- BMP Certification Document

Maintained
Section 32-124 of the City of Omaha Municipal Code states, "the applicant or owner is required to execute an inspection and maintenance agreement, to be filed on record, binding on all subsequent owners of land served by a private stormwater management facility. Such agreements shall provide for access to the facility, at reasonable times, for inspections by the City or its authorized representative to ensure that the facility is maintained in proper working condition to meet design standards."

Such agreements shall document the responsibilities of the owner, the Home Owner's Association or other responsible party (for Sanitary and Improvement Districts), and the City of Omaha. The maintenance agreement shall be approved by the Public Works Department as part of the Final PCSMP and recorded with the Register of Deeds. A sample copy of the Maintenance Agreement can be downloaded at OmahaStormwater.org.

Maintenance Agreement exhibits shall include the following as exhibits in their PCSMP:

- Real Property Depiction – Provide lot certificate or platted subdivision with legal description, or PCSMP plan sheet if that information is contained on the sheet already (11"x17")

- BMP Maintenance Requirements

This permit requirement is being met.

5. BMP 5: Maintain a database that stores information on approved PCSMPs.

Target Goals & Implementation Schedule: *On-Going All Years – Provide an inventory of certified stormwater control measures installed as part of the PCSMP requirements. Include a count of BMP types as well as any known changes to BMPs in the annual report.*

In 2021, there were 87 projects with a total of 108 individual BMPs certified in Omaha. These BMPs are summarized by BMP type in the table below. At the end of 2021, there were a total of 1,208 certified BMPs in Omaha's jurisdiction. No known changes to BMPs occurred beyond minor edits to the latitude and longitude as the result of those values being mistyped by the project representatives submitting PCSMP documentation.

2021 Certified BMP by Type	Count
Bioretention System	292
Constructed Wetland	9
Disconnected Impervious Cover	10
Extended Dry Detention Basin	104
Filter Strip	12
Grassed Swale	44
Green Roof	4
Infiltration Trench	4
Level Spreader	1
Manufactured System	218
Other (flow-based)	71
Other (volume-based)	30
Permeable Pavement	19
Permeable Pavers	4
Rain Barrel/Cistern	2
Rain Garden	61
Retention Wet Ponds	23
Roof Drain Filters	58
Sand Filter	4
Soil Conditioning	56
Subsurface Storage	159
Vegetated Bioswale	23
Total	1208

This permit requirement is being met.

6. BMP 6: Inspect sites that are certified by the engineer of record and all sites identified as deficient on a complaint basis. Develop a protocol to bring sites into compliance.

Target Goals & Implementation Schedule: *Year 1 – Develop protocol for compliance assistance and inspection strategy. On-Going All Years – Document and maintain inspection records of the certified PCSMP projects as identified in the strategy developed. Document any enforcement actions taken. Summarize activities in the annual report.*

The City of Omaha Stormwater Program has developed a strategy for compliance assistance and inspection of post-construction BMPs, this was included in the 2019 annual report.

There were no complaints or enforcement actions against a project's PCSMP BMPs in 2021.

In 2020, an EPA audit of the City of Omaha's MS4 Permit took place and one of the initial findings from that audit indicated that inspecting private BMPs on a complaint basis is not adequate and "must develop procedures, such as inspecting all BMPs at least once during the Permit term or requiring the submission of maintenance documentation by the BMP owner to ensure that private BMPs are functional and that maintenance is being conducted when necessary." The City currently utilizes a complaint-based strategy to inspect certified private post-construction BMPs that was developed at the beginning of the current MS4 permit cycle. This strategy is currently being reviewed and will be updated accordingly. In 2022, the Program will continue working with projects to incorporate their PCSMPs earlier into their planning process. Also, the Program will finalize and then implement any updates to the strategy to inspect certified projects to ensure that long-term maintenance is being conducted.

This permit requirement is being met.

F. Pollution Prevention/Good Housekeeping

1. BMP 1: Maintain an inventory and map of municipal facilities. Review annually and update if needed.

Target Goals & Implementation Schedule: *On-Going All Years – Maintain an inventory and map of all municipal facilities.*

The City of Omaha Facilities Management Division maintains an inventory of municipal facilities. The Sewer Maintenance Division maintains an inventory of municipal stormwater controls associated with the storm sewer system. The Omaha Stormwater Program maintains an inventory of municipal storm controls associated with stormwater basins and green infrastructure practices. These facilities have been included in the City's GIS system and are readily available for viewing. A new detention basin located at 26th and Taylor Streets will begin inspections in 2022.

This permit requirement is being met.

2. BMP 2: Conduct assessments of municipal maintenance facilities and review their municipal runoff control plans as applicable. Revise plans as needed if facilities expand or reduce activities and implement recommendations based on annual inspections.

Target Goals & Implementation Schedule: *Year 1 – Develop a strategy to assess municipal facilities and prioritize them based upon a defined set of criteria. Include strategy in the annual report. Years 2-5 – Track the number of assessments for municipal facilities based upon the strategy developed in year 1. Include the number of assessments completed, a description of the assessment procedure and any changes in facilities ranking in the annual report.*

The strategy for assessing municipal facilities was included in the 2019 annual report as Attachment M. The City of Omaha employed the services of Felsburg Holt & Ullevig (FHU) in 2009 to develop the current program to assess facilities and assign a score according to the types of daily activities associated with each facility that have potential for stormwater exposure. The score is based on a 30-point scale with a score greater than 20 indicating a "Hot Spot", greater than 10 indicating a "Potential Hot Spot", and less than 10 "Not a Hot Spot". Facilities with municipal activities that present little to no exposure of pollutants to stormwater, such as office buildings and libraries, were removed from the list of sites requiring further evaluation. From the initial evaluation and an ongoing basis, high priority facilities have been prioritized as "Hot Spots", and are audited annually. Facilities classified as "Potential Hot Spots" are audited every two years, and remaining facilities are audited every three years.

Facilities qualifying as "Hot Spots" have a Facility Runoff Control Plan (FRCP) implemented. FRCPs include provisions for general good housekeeping practices, storage of de-icing materials, fueling operations, vehicle maintenance, and equipment and vehicle washing. The Municipal Hot Spot Evaluation Form was included in the 2019 annual report.

The City of Omaha conducted compliance inspections at City Maintenance Facilities where FRCP's had been implemented. The inspections are given an overall score of Outstanding, Satisfactory, or Needs Improvement. The scores were based upon a records and site review. The inspector not only looked to see that facility inspections were being conducted but that any corrective actions that were noted had been addressed in a

timely manner. In 2021, the City of Omaha coordinated a total of 26 municipal facility compliance inspections, 15 inspections were at 11 "Hot Spot" facilities with associated Facility Runoff Control Plans. The other 11 inspections were at facilities with hot spot scores less than 20, primarily public parks/golf courses. In 2021, 3 facilities received a Needs Improvement, 18 facilities received a Satisfactory, and 5 received an Outstanding rating. Copies of EQCD findings were forwarded to the facility and department supervisors.

This permit requirement is being met.

3. BMP 3: Continue to implement Omaha's Good Housekeeping Program for municipal facilities that addresses "high-priority" facilities (hot spot score of 20-30 out of 30) and site specific SOPs.

Target Goals & Implementation Schedule: *On-Going All Years – Annually report new, removed, or significantly-updated municipal facilities.*

In 2021, Cunningham Lake caretaker facility was inactive with park upgrades occurring and was not inspected. It will likely be inspected in 2022 when construction is complete. The complete list of municipal facilities was reviewed in 2021 to ensure all applicable facilities are included into the program. 19 facilities were identified that could have municipal operations where pollutants are exposed to stormwater. These include fire and police stations and park facilities where their exposure to stormwater is low. These facilities will have a hot spot evaluation conducted in 2022 or 2023.

This permit requirement is being met.

4. BMP 4: Implement practices for maintaining the storm sewer system that includes catch basin maintenance, open channels and other drainage structures, street sweeping, and structural stormwater controls. All maintenance procedures are to be performed such that waste water and waste materials do not enter the MS4.

Target Goals & Implementation Schedule: *Year 1 – Provide a description of the maintenance programs in the annual report. On-Going All Years – Annually report on Sewer maintenance activities related to maintaining the storm sewer system and changes to any of the maintenance practices.*

Descriptions for City maintenance programs have been compiled and was included in the 2019 City of Omaha MS4 Permit Annual Report. The document is laid out by maintenance activity type with a description of who is involved, the maintenance activity, monitoring, waste disposal, documentation, and training. In 2021, this document was reviewed by the Stormwater Program and the Sewer Maintenance Division and then updated to include a preventative maintenance strategy for stormwater catch basin and inlet cleaning. The updated strategy is included in Attachment G.

Storm Sewer System Maintenance

The Sewer Maintenance Division is responsible for the inspecting, cleaning, repairing and maintaining of the storm sewer system. The Street Maintenance Division is responsible for certain types of creek maintenance cleaning or clearing. They use the same work order tracking system to account for their activities. The table below represents both Divisions' storm sewer system activity for the permit year of 2021.

Work Order Type (Description of Work)	Storm
Clean Inlet	260
Clean MH	4
Clean Storm Struct	3
Dye Test	185
I-Clean	2
I-New	1
Inlet Blown Off	1
Inlet Broken	21
Insp Structure	659
I-Repair	166
I-Replace	3
L/S Locate	88
MH Blown Off	1
MH Broken	3
MH Locate	10
MH Stolen	2
Notified Utility	6
Odor-Outside	1
Private	12
P-Storm Repair	36
P-Storm Replace	3
Street Flooding	5
Test Hole	1
TV Assessment	72
TV Inspection	5
Unscheduled Jet	10
Unscheduled Jet Vac	123
ROW Vegetation Repair	138
ROW Cleanup/Signs	236
ROW Erosion Repair	109
ROW Drainage Mtce	54
Total	**2,237**

Street Sweeping

There are approximately 4,877 lane miles within the City of Omaha. In 2021, the City mechanically swept a total of 8,494 curb miles. The table below gives a more detailed accounting of the City's street sweeping.

Area of City	Curb Miles Swept	Tons of Debris Removed
Business District & Major Streets	2,169	1,328
Residential Areas	6,325	2,460
Totals	8,494	3,788

Additionally the City of Omaha's Public Works Department's Parking Divisions mechanically sweeps municipally owned parking structures and lots twice a year, in the Spring and Fall. Municipally owned parking structures are also washed twice per year in conjunction with sweeping, practices are used to capture the solids from the wash down which are then disposed of at the landfill.

Inlet Marking

The City of Omaha's standard plate for storm inlets includes a stamp to indicate it drains to the creek. To mark inlets without that stamp and increase stormwater awareness, the City of Omaha coordinated with Keep Omaha Beautiful to continue to organize groups to mark and clean storm sewer inlets in 2021. In total, an additional 1,627 inlets were labeled with disks, and an additional 53 discs were distributed to contractors to install them as part of storm sewer infrastructure projects. In total, 532 youth and adult volunteers participated, totaling 929.5 hours of community service hours. There were 155 bags of trash and recyclables collected as part of this effort. Bilingual "Only Rain Down the Storm Drain" educational door hanger (which highlights HHW and Under the Sink) were distributed to individuals living near storm drains that were marked. A total of 1,808 of these educational door hangers were distributed. Inlet markings are summarized below, the full spreadsheet of inlet marking activities is included in Attachment D.

Month of Service	Location Description [Starting Address/Area]	# of Drains Marked	# of Drains Cleaned (already marked)	Litter Bags (Trash & Recycling) Collected #	# of Door Hangers Distributed
March	42nd & Center St	38	30	7	0
April	192nd & Blondo St	57	0	1	0
April	211th & Pacific St	63	6	2	0
May	52nd & Bedford Ave	41	0	0	0
June	35th & Oak St	6	0	0	0
June	50th & Ames St	30	0	8	165
June	50th & Ames St	43	0	12	95
June	72nd & Western St	35	21	3	116
June	84th & Hascall St	37	22	3	80
June	95th & Pacific St	51	16	3	92
June	108th & Fort St	40	17	3	120
June-August	132nd & Harrison St, 132nd & Z St, 156th & Q St, 168th & L St	200	0	4	100
June-August	156th & State St	14	36	1	0
June-August	52nd & Sorensen Pkwy & 56th & Sorensen Pkwy	58	2	8	94
June-August	79th & Lake St	10	2	2	11
July	42nd & California St	12	9	4	40
July	48th & Dodge St	28	8	3	58
July	50th & Ames St	27	0	10	65
July	Around Miller Park	60	6	4	95

Month of Service	Location Description [Starting Address/Area]	# of Drains Marked	# of Drains Cleaned (already marked)	Litter Bags (Trash & Recycling) Collected #	# of Door Hangers Distributed
August	108th & Q St & 90th & Q St	41	19	6	110
August	110th & Harrison St	40	5	3	20
August	132nd & West Center Rd & 156th & Pacific St	20	17	3	60
August	180th & Y St + 168th & Harrison St	35	45	2	40
August	18th & O St	23	0	3	35
August	22nd & Pierce Street	30	1	6	20
August	58th & Charles St	78	0	3	50
September	105th & West Center Rd	33	0	4	32
September	163rd & Oak St	13	24	3	35
September	168th & Pacific St	0	30	2	50
September	192nd & West Center Rd	27	0	3	26
September	50th & Valley St & 60th & Grover St	41	41	4	0
September	6th & Pierce St	29	11	6	25
October	105th & Pacific St	7	16	3	26
October	156th & Harrison St	17	0	2	20
October	168th & Fort St	106	5	5	114
October	204th & West Maple Rd	15	0	8	14
October	27th & Fort St	12	15	5	0
October	56th & Blondo St	4	0	1	0
October	60th & Hickory St	6	34	3	0
October	Around/on UNO Campus	200	0	2	0
	Totals	**1,627**	**438**	**155**	**1,808**

Stormwater Structure Maintenance

EQCD inspects City-owned stormwater basins at least once a year with most being inspected twice for any major maintenance issues in early spring and in early winter. A physical characteristics examination form is completed during the inspection for structures that had flow or were wet.

Maintenance is performed by various City Departments based upon the type of activity required. There were five sites that had maintenance contracted out, these included Adams Park, Fontenelle Park, Hitchcock Park, Albright Park, and Sarpy Avenue Basin. Most of the City Departments are using CityWorks to track their maintenance activities. Additionally, EQCD employed staff members, one full-time and one part-time employee, who are dedicated to maintaining a number of City owned stormwater BMP structures throughout the year. The table below indicates when the inspection occurred as well as any maintenance issues noted at that time.

Site	Inspection Dates	Sediment Removal	Trash Removal	Tree Removal	Mowing	Erosion Repairs
Storz Expressway (E)	5/13/2021	Yes	Yes	No	No	No
	12/1/2021	Yes	Yes	No	No	No
Storz Expressway (W)	5/13/2021	Yes	Yes	No	No	No
	12/1/2021	Yes	Yes	Yes	No	No
Adams Park	5/5/2021	No	Yes	No	No	Yes
	12/13/2021	No	Yes	No	No	No
Lake James Park	5/5/2021	No	No	No	No	No
	12/13/2021	No	No	No	No	No
Fontenelle Park Lagoon	5/5/2021	No	Yes	No	No	No
	12/13/2021	No	Yes	No	No	No
John J Pershing Drive 1.5	5/4/2021	Yes	No	Yes	Yes	No
	12/1/2021	No	No	Yes	Yes	No
Miller Park	5/6/2021	No	Yes	No	No	No
	12/13/2021	No	Yes	No	No	No
10th & Nicholas	4/22/2021	No	No	No	No	No
	12/1/2021	No	No	No	No	No
13th & Carter Blvd	4/22/2021	No	Yes	Yes	No	No
	12/1/2021	No	Yes	Yes	No	No
13 & Fowler	4/22/2021	No	Yes	Yes	No	No
	12/1/2021	No	Yes	Yes	No	No
Carter Lake	5/26/2021	Yes	Yes	No	No	No
	12/1/2021	Yes	Yes	No	No	No
19 & Carter Blvd	4/22/2021	Yes	Yes	Yes	No	No
	12/1/2021	Yes	Yes	Yes	No	No
18th Street E & Ave H	5/4/2021	No	Yes	Yes	No	No
	12/14/2021	Yes	Yes	No	No	No
14th & Ida St	5/4/2021	No	Yes	No	No	No
	12/14/2021	Yes	No	No	Yes	No
John J. Pershing No. 1	5/4/2021	No	Yes	No	No	No
	12/1/2021	Yes	Yes	No	Yes	No
John J. Pershing No. 2	5/4/2021	Yes	Yes	Yes	No	No
	12/1/2021	Yes	Yes	Yes	No	No
Gifford Dr. No 1	4/22/2021	No	No	No	No	No
	12/1/2021	No	No	No	No	No
9th & Storz	5/13/2021	No	Yes	No	No	No
	12/1/2021	No	Yes	No	Yes	No
Westlawn Cementary	5/13/2021	Yes	Yes	Yes	No	No
	12/13/2021	Yes	Yes	Yes	No	No
64th Street Channel	4/22/2021	No	Yes	Yes	No	No
	12/13/2021	No	Yes	Yes	No	No
Elmwood Park	5/13/2021	Yes	Yes	No	No	Yes
	12/14/2021	Yes	Yes	No	No	Yes

Site	Inspection Dates	Sediment Removal	Trash Removal	Tree Removal	Mowing	Erosion Repairs
Spring Lake Park	5/14/2021	Yes	Yes	Yes	No	No
	12/20/2021	Yes	Yes	Yes	No	No
Vinton Street subsurface storage	4/22/2021	Yes	Yes	No	No	No
	12/13/2021	No	No	No	No	No
Gilmore - Sarpy Ave basin	5/6/2021	No	Yes	No	No	No
	12/13/2021	Yes	No	No	No	No
Gilmore - Albright Park*	12/13/2021	Yes	No	No	No	No
Hitchcock Park	5/13/2021	Yes	Yes	No	No	No
	12/14/2021	No	No	No	No	No

EQCD also inspects City-owned green infrastructure (GI) practices throughout the city. The GI practices were reviewed to ensure they are functioning property and identify maintenance needs. There were five sites that had maintenance contracted out, these included Hell Creek and Rockbrook Tributary. The table below indicates when the inspection occurred as well as an overall condition assessment for the site.

GI Site	Inspection Date	Notes	Type(s)
Country Club	3/17/2021	Maintenance Needed	Bioretention System
Leavenworth Lift Station	3/17/2021	Light Maintenance Needed	Bioretention System
Orchard Park	3/17/2021	Light Maintenance Needed	Bioretention System
Prairie Lane Park	3/18/2021	Light Maintenance Needed	Bioretention System, Stream Restoration
Sewer Maintenance	3/18/2021	Light Maintenance Needed	Bioretention System, Permeable Pavement
SOIA LS	3/17/2021	Light Maintenance Needed	Bioretention System
The Colonies	3/18/2021	Light Maintenance Needed	Bioswale
108th St Q to Harrison	6/21/2021	No Maintenance Needed	Soil Conditioning
24th Streetscape	6/21/2021	No Maintenance Needed	Soil Conditioning
Douglas Streetscape	3/22/2021	Maintenance needed	Rain Garden
Florence Streetscape	6/8/2021	Light Maintenance Needed	Bioretention System
Saddle Hills	3/22/2021	Light Maintenance Needed	Rain Garden
58th & Maple	3/22/2021	Light Maintenance Needed	Bioretention System
Fire & Police Training	6/8/2021	Maintenance needed	Dry Detention, Permeable Pavement, Baffle Box
St Phillip Neri	6/8/2021	Maintenance needed	Underground Storage
N 144th Street	3/22/2021	Light Maintenance Needed	Bioretention System
132nd & Center	6/21/2021	No Maintenance	Soil Conditioning
50th & Pine	5/12/2021	Light Maintenance Needed	Bioretention System, Permeable Pavement

GI Site	Inspection Date	Notes	Type(s)
SE Police Precinct	6/9/2021	Maintenance Needed	Permeable Pavement
UTS	5/25/2021	Light Maintenance Needed	Bioretention System
Vehicle Impound Lot	10/8/2021	Maintenance Needed	Bioswale, Hydrodynamic Seperator
Zorinsky Water Park	5/12/2021	Maintenance Needed	Bioretention System, Bioswale, Permeable Pavement
24th St Bioretention	5/25/2021	Maintenance Needed	Bioretention System

This permit requirement is being met.

5. BMP 5: Provide training for municipal employees in pollution prevention and good housekeeping.

Target Goals & Implementation Schedule: *Year 1 – Develop a strategy for municipal employee training in pollution prevention and good housekeeping. Include strategy in annual report. On-Going All Years – Conduct training events for municipal staff. Include number of employees trained, based on strategy developed in Year 1, in annual report.*

The City of Omaha Stormwater Program has developed a training strategy for municipal employees involved in implementing pollution prevention and good housekeeping practices, this was included in the City of Omaha's 2019 MS4 Permit Annual Report.

In 2021, training was provided to municipal employees in various departments and divisions including Sewer Maintenance, Street Maintenance, Fleet Maintenance, and Parks. Due to continued COVID precautions, staff were primarily provided training through virtual means instead of in-person training. EQCD staff, including Environmental Inspectors, receive additional training throughout the year on various SWMP-related topics. In 2021, staff attended or participated in 5 workshops or in-house training sessions. In addition to these events, staff are encouraged to seek out webinars, conferences, and other training opportunity of interest that is stormwater and MS4 related. These opportunities continue to further our municipal employee knowledge and experience on water quality and stormwater management. The following table is a summary of 2021 workshops and in-house trainings for City staff.

Date	Associated Programs	Topic	Attendees
1/8/2021	General	Confined Space Training	8
1/21/2021	General	HAZWOPER 8 Hour Refresher	6
1/22/2021	General	Qualitative Fit Test	1
2/2/2021	Good Housekeeping, Construction	EI Training & Safety Toolbox	9
2/6/2021	Construction, Combination	2021 Annual Sediment & Erosion Control Seminar	58
2/18/2021	Industrial	EPA's New 2021 Multi-Sector General Permit Webinar	3
2/27/2021	General	Forklift Certification	8

Date	Associated Programs	Topic	Attendees
3/18/2021	Good Housekeeping, IDDE	FRCP Training - Park Maintenance D6	6
3/19/2021	Good Housekeeping, IDDE	FRCP Training - Street Maintenance Graffiti	3
3/23/2021	Good Housekeeping, Construction	EI Training & Safety Toolbox	10
4/8/2021	Combination	Great Plains Conference	3
4/9/2021	Good Housekeeping, IDDE	FRCP Training - Fleet Management	28
4/27/2021	Good Housekeeping, Construction	EI Training & Safety Toolbox	7
5/19/2021	General	Drone Refresher Course	4
5/25/2021	Good Housekeeping, Construction	EI Training & Safety Toolbox	9
5/26/2021	General	E. coli analysis review	5
6/16/2021	Good Housekeeping, IDDE	FRCP Training - Missouri River WRRF	20
6/17/2021	General	Confined Space Training	12
6/22/2021	Good Housekeeping, Construction	EI Training & Safety Toolbox	13
6/22/2021	IDDE	Dry Weather Screening Preparation & Review	8
7/6/2021	General	HAZWOPER 8 Hour Refresher	11
7/30/2021	General	CPR/AED/First Aid Training	47
8/24/2021	Good Housekeeping, Construction	EI Training & Safety Toolbox	14
9/15/2021	General	ACEC Conference	20
9/28/2021	Good Housekeeping, Construction	EI Training & Safety Toolbox	10
10/5/2021	Good Housekeeping, IDDE	FRCP Training - Park Maintenance D4	13
10/6/2021	Good Housekeeping, IDDE	FRCP Training - Park Maintenance D10	4
10/6/2021	Good Housekeeping, IDDE	FRCP Training - Forestry	9
10/15/2021	General	Drone Pilot Training Course	1
10/20/2021	Good Housekeeping, IDDE	FRCP Training - Vehicle Impound Lot	8
10/21/2021	Good Housekeeping, IDDE	FRCP Training - Traffic	43
10/26/2021	Good Housekeeping, Construction	EI Training & Safety Toolbox	13
10/27/2021	General	Procurement/Purchasing Training	15

Date	Associated Programs	Topic	Attendees
10/29/2021	Good Housekeeping, IDDE	FRCP Training - Park Maintenance D1	10
10/29/2021	Good Housekeeping, IDDE	FRCP Training - Park Maintenance D2	8
11/4/2021	General	ArcGIS Pro Quick-Start for the GIS Professional	12
11/9/2021	General	Confined Space Training	
11/17/2021	General	Retrieval Equipment Review	12
11/19/2021	General	Reasonable Suspicion Course	16
11/22/2021	Good Housekeeping, IDDE	FRCP Training - Park Maintenance D3	10
12/7/2021	General	NDEE Title 119 - Proposed Changes	3
12/13/2021	General	Smoke School	2
12/16/2021	Good Housekeeping, IDDE	FRCP Training - Street Maintenance D3	20
12/17/2021	Good Housekeeping, IDDE	FRCP Training - Facilities Management	14
12/17/2021	Good Housekeeping, IDDE	FRCP Training - Street Maintenance D1	22
12/20/2021	Good Housekeeping, IDDE	FRCP Training - Sewer Maintenance Construction Section	18
12/22/2021	Good Housekeeping, IDDE	FRCP Training - Construction	17
12/23/2021	Good Housekeeping, IDDE	FRCP Training - Street Maintenance D4	32
12/24/2021	Good Housekeeping, IDDE	FRCP Training - EQCD	32
12/29/2021	General	Retrieval Equipment Review	4
12/29/2021	Good Housekeeping, IDDE	FRCP Training - Street Maintenance D5	15
12/29/2021	Good Housekeeping, IDDE	FRCP Training - Sewer Maintenance Levee	11
12/30/2021	Good Housekeeping, IDDE	FRCP Training - Sewer Maintenance Maintenance Section	22
12/30/2021	Good Housekeeping, IDDE	FRCP Training - Code Enforcement	7

The City's Environmental Quality Control Division, Levee Division, and the Parks and Recreation Department have applicators that are FIFRA certified. There are currently 55 certified applicators. All certifications are up to date and are obtained from the Douglas–Sarpy County Extension Office.

This permit requirement is being met.

6. BMP 6: Provide educational material to contractors hired to perform maintenance activities on the MS4.

Target Goals & Implementation Schedule: *Year 1 – Develop materials to provide to contractors and include in the annual report. Years 2-5 – Include in the annual report any new materials or updates to existing materials.*

In 2021, there were no new outreach materials or updates to existing materials. City of Omaha personnel conduct most of the maintenance activities on the MS4. If an outside party is hired to complete maintenance activities, educational materials are available to share with the contractors to educate them on stormwater controls, good housekeeping practices, and maintaining compliance with applicable permits.

This permit requirement is being met.

G. Industrial Facilities

A. BMP 1: Maintain a program that identifies industries within the MS4 area that fall into sectors identified in the ISW- NPDES permit.

Target Goals & Implementation Schedule: *Year 1 – Develop a strategy that will identify industries and their compliance with NPDES permits. On-Going All Years – Review and update strategy developed in Year 1 and report on any changes in the annual report.*

The City of Omaha Stormwater Program has developed a strategy to identify industries and their compliance with NPDES permits, this was included in the City of Omaha's 2019 MS4 Permit Annual Report. There were no updates to the strategy in 2021.

This permit requirement is being met.

2. BMP 2: Request a list of permitted facilities and the NOI from NDEQ in January of each permit year.

Target Goals & Implementation Schedule: *On-Going All Years – Maintain a database to track NPDES permitted facilities.*

In January 2020, Omaha requested and received from the NDEE a list of industries in Omaha permitted under the NER910000 ISW-GP. One hundred forty-nine facilities were included on this list, 16 of the sites were no longer active, 12 of them submitting their NOT, 2 were duplicate due to a facility name change, 1 transferred ownership, and 1 was a duplicate due to name change and change of permit type from NEC to a full ISW Permit. Total active ISW permitted facilities is 133. The GIS database was updated with this list of facilities.

This permit requirement is being met.

3. BMP 3: Inform industries about the NPDES ISW permit and notify the state when industries are not in compliance with the state regulations.

Target Goals & Implementation Schedule: *On-Going All Years – Develop industry-specific publications regarding NPDES regulations and distribute to inspected facilities.*

The City of Omaha Stormwater Program has 22 sector-specific information sheets, brochures, and additional information regarding industrial stormwater on the Industry pages of OmahaStormwater.org. The website also has the ISW-GP NER910000 permit and FAQs to help industries with maintaining compliance.

Outreach to Omaha industries has continued in 2021 to update industries that the City of Omaha's Industrial Stormwater Program is focused on ensuring compliance with the NDEE's ISW-GP. Industries that call or email the Omaha Stormwater Program are informed about the NDEE's ISW-GP and how to stay in compliance.

Two industries in 2021 were referred to the state for not maintaining compliance with state regulations or in need of a permit.

This permit requirement is being met.

4. BMP 4: Inspect NPDES permitted industries from a list provided by NDEE in January of each year. Maintain a tracking system for inspections and SWPPP reviews. Review SWPPP or NEC prior to completing an inspection.

Target Goals & Implementation Schedule: *On-Going All Years – Inspect 20% of the facilities on the list provided by NDEE each year so that all industries are inspected once in the permit cycle.*

In January 2021, Omaha requested and received from the NDEE a list of industries in Omaha permitted under the NER910000 ISW-GP. There were 149 facilities included on this list with 133 of them active. E&A Consulting Group (E&A) and SCS Engineers (SCS) were contracted to assist the City with inspecting industrial facilities in 2021. Inspectors from these firms have extensive experience with industrial stormwater regulations and performing inspections. The inspection form they used as part of their inspections was provided to them by the Omaha Stormwater Program and was updated in early 2020 to capture all permit requirements and streamline the inspection process. A total of 27 facilities were inspected for compliance with the NDEE ISW-GP NER910000. The 27 inspected facilities represent 20% of the 133 active NDEQ ISW-GP permitted facilities in Omaha.

This permit requirement is being met.

5. BMP 5: Ensure inspectors completing industrial stormwater inspections are competent.

Target Goals & Implementation Schedule: *On-Going All Years – Report inspection activities in the annual report.*

The City of Omaha Stormwater Program contracted with E&A Consulting Group (E&A) and SCS Engineers (SCS) to perform inspections of industrial sites. Inspectors from these firms have extensive experience with industrial stormwater regulations and performing inspections. Firms contracted to perform industrial stormwater inspections on behalf of the City of Omaha must have demonstrated knowledge, skills, and experience. Omaha Stormwater Program Environmental Inspectors review and edit as needed the reports by the firms prior to sending to the industry. Each Environmental Inspector is adequately trained on the industrial stormwater program prior to reviewing inspection reports or conducting an inspection. See table below for a summary of inspection activities in 2021.

Program ID	Facility_Name	Permit Type	Address	Inspection date	Report Sent
NER910443	Hiland Dairy Co.	Industrial Stormwater	2901 Cuming Street	5/11/2021	6/17/2021
NER910384	Eaton Omaha Power Center	Industrial Stormwater	3900 Dahlman Avenue	6/1/2021	6/22/2021
NER910804	Eaton Omaha Power Center	No Exposure	4202 Dahlman Avenue and 4118 Dahlman Avenue	6/1/2021	6/21/2021
NER910751	Multi-Color Corporation	No Exposure	4130 S. 94th St	5/26/2021	6/16/2021
NER910138	JN-International Medical Corporation (Auro Vaccines LLC)	No Exposure	2720 North 84th Street	7/7/2021	9/22/2021
NER910153	Majors Plastics Plant #2	No Exposure	10305 I Street	5/18/2021	6/22/2021

Program ID	Facility_Name	Permit Type	Address	Inspection date	Report Sent
NER910314	Flinn Paving Co., Inc.	Industrial Stormwater	6506 Grover Street	6/15/2021	8/6/2021
NER910828	Lozier Corporation - West Plant	No Exposure	4224 N. 22nd Street	6/22/2021	7/9/2021
NER910935	Flinn Plant	Industrial Stormwater	6506 Grover Street	6/16/2021	8/6/2021
NER910899	United States Cold Storage	No Exposure	4302 South 30th Street	6/9/2021	7/9/2021
NER910896	Consolidated Harm's Plant #5	Industrial Stormwater	6155 M Street	6/2/2021	9/22/2021
NER910939	Kosiski Auto Parts	Industrial Stormwater	5040 I Street	6/16/2021	6/24/2021
NER910776	Smithfield Packaged Meats Omaha	Industrial Stormwater	5015 South 33rd St	6/23/2021	7/9/2021
NER910068	Modern Equipment Company	No Exposure	6161 Abbott Drive	6/14/2021	7/26/2021
NER910897	Lyman-Richey Maintenance Facility	Industrial Stormwater	13619 Industrial Road	7/6/2021	7-26-2021
NER910541	Syngenta Omaha Plant	Industrial Stormwater	4111 Gibson Road	6/8/2021	6/17/2021
NER910144	Tyson Processing Services, Inc.	Industrial Stormwater	13076 Renfro Circle	7/14/2021	7/30/2021
NER910647	ABS Corporation	No Exposure	7031 North 16th Street	6/7/2021	6/24/2021
NER910785	MidAmerica Equipment Inc.	No Exposure	1011 Ellison Avenue	6/14/2021	12/22/2021
NER910502	Missouri River Wastewater Treatment Plant	Industrial Stormwater	5600 South 10th Street	7/21/2021	9/2/2021
NER910126	Lozier Corporation - Pershing Drive Facilities	Industrial Stormwater	6336, 6316, and 6360 John J. Pershing Drive	7/7/2021	7/30/2021
NER910316	G & G Manufacturing Company	Industrial Stormwater	4432 McKinley Street	6/23/2021	8/27/2021
NER910441	Mission Foods	Industrial Stormwater	4433 South 94th Street	7/1/2021	7/30/2021
NER910957	Enterprise Business Park	Industrial Stormwater	1410 Locust Street	5/14/2021	7/30/2021
NER910956	Majors Plastics Plant #1	No Exposure	10117 I Street	5/18/2021	6/22/2021
NER910159	Majors Plastics Plant #3	Industrial Stormwater	10558 J Street	5/18/2021	6/24/2021
NER910925	Graphic Packaging International - Omaha	No Exposure	4200 South 121st Plaza	5/27/2021	6/17/2021
NER910866	Concrete Supply Portable Batch Plant #24	Industrial Stormwater	2410 Center Street	7/20/2021	9/22/2021

This permit requirement is being met.

H. Stormwater Monitoring

1. BMP 1: Dry Weather Screening.

Target Goals & Implementation Schedule: *On-Going All Years – Implement a dry-weather screening of priority outfalls for IDDE following screening and sampling plan. Keep a record of outfalls observed and a record of the field screen results. Follow strategy in SWMP program Component C- IDDE for outfalls showing presence of an illicit discharge. Update priority list based on observations.*

There were 268 potential outfalls identified by EQCD using GIS information collected by Sewer Maintenance in 2009. In 2019, the GIS information was reviewed to ensure all applicable outfalls are being screened.

When potential outfalls are identified, they are classified as new to the outfall inventory for screening. Once screened, the outfalls are then classified as priority outfalls if they are 72" or greater, or had a documented illicit discharge, regardless of size. Priority outfalls are screened annually. Outfalls that are documented with an illicit discharge are updated to priority status and screened annually for the next three years. If no illicit discharge is observed in those three years and it is less than 72", its status is updated to non-priority. Annexations of Sanitary & Improvement Districts (S&IDs) can occur periodically. When this occurs, qualifying annexed outfalls are added as new to the outfall inventory for screening. Based on the screening, they are then classified as being a priority outfall or not. CityWorks asset management software is used to document outfall screening efforts.

All outfall screenings are conducted after 48 hours of dry weather. An outfall reconnaissance inspection form is completed and a Physical Characteristics Examination is completed, if flow is present. If an illicit discharge is encountered EQCD Inspectors are to call supervisory staff immediately. The supervisor reviews the findings with the inspectors, allocates additional resources needed to assist, and an investigation begins to determine the source of the illicit discharge. If the source of an illicit discharge or connection is found, they will be notified to cease the discharge immediately. They will then be issued a written request, warning, or violation and be required to eliminate the discharge to prevent reoccurrence. Photographs are taken of outfalls to be kept as a record of outfall conditions during the inspection.

Field screening in 2021 has been consistent with previous years. Any outfall with an obvious or suspicious discharge was to be reported immediately to EQCD. In total, there were 160 outfall screenings in 2021. They were entered into the City of Omaha's CityWorks asset management system. City of Omaha EQCD staff screened all 89 outfalls identified the previous year as priority outfalls. There were 10 outfall screenings of new outfalls from the 2019 GIS information review and annexation areas. There were 61 outfall screenings of non-priority outfalls.

No illicit discharges were found in 2021 that would require an outfall to be moved to priority status. There were 3 S&ID annexations in 2021, there were three outfalls identified after a desktop and GIS evaluation was done for those areas. These outfalls are planned to have their initial screening in 2022.

The screenings were reviewed and the outfall priority list is updated as needed. Of the 10 new outfalls that were screened in 2021, 5 will be updated to priority and 5 will be updated to non-priority. There are 34 new outfalls from the 2019 sewer node review remaining to be screened. There are 10 new outfalls from previous annexations to be screened in 2022.

This permit requirement is being met.

2. BMP 2: Develop a wet weather BMP assessment monitoring plan for demonstration BMPs to facilitate future SWMP planning. Evaluate the effectiveness of the selected BMPs. BMP assessment may include flow-based monitoring or water quality sampling. Biological systems may include plant assessments and visual observations. Construct structural BMPs and implement non-structural BMPs to evaluate the effectiveness of their ability to address pollutants of concern. Include in the BMP assessment program in applicable

Target Goals & Implementation Schedule: *Year 1 – Revise the BMP assessment monitoring plan and submit to NDEQ for approval. Amend as necessary when new demonstration projects have been constructed. On-Going All Years – Implement monitoring plan in demonstration projects. Report the following in the annual report: (1) The location of the monitoring site, (2) the intensity and duration of the storm event monitored, (3) the time of sampling in comparison to the occurrence of the storm event and to the discharge of peak stormwater flows, and (4) the monitoring data and a summary of the findings.*

The City of Omaha Stormwater Program updated their BMP Assessment Monitoring Plan in 2019 and was included in the 2019 City of Omaha MS4 Permit Annual Report. There were no updates to the plan in 2021.

The City of Omaha continued to implement the BMP Monitoring Plan in 2021 to assess the performance of existing green infrastructure demonstration projects' benefits on water quantity and quality. The monitoring for 2021 is summarized by site later in this section with the full site summaries provided in Attachment H.

In the 2020 MS4 annual report, it was reported that The University of Nebraska at Omaha (UNO) Hayden House would be reviewed and its status updated in 2021. Connectivity issues and limited staffing did not allow for this site to be included in monitoring efforts in 2021 and therefore not included in this annual report. Efforts will be made in 2022 to bring this site back into the monitoring program, but confidence is low this will take place.

Additional monitoring occurred during 2021 to assess the performance of BMPs at City demonstration project sites. The Program again worked with USGS to assess the peak flow and water volume benefits of the Sewer Maintenance bioretention system. The USGS's monitoring summary is included in Attachment H.

Saddlebrook

The Saddlebrook green roof and bioretention system continue to perform very well in reducing the volume and peak flows of runoff from the site. During the wet 2021 monitoring season, the "green" systems effectively delayed and reduced water volume in comparison to their "grey" counterparts, even during the intense storms received. The City will continue to assess the performance of the green roof and bioretention system in 2022 with no change in what data is being collected.

Orchard Park

Orchard Park continues to function very well in a variety of storm events. Bioretention valves were properly set during deployment of monitoring equipment so the benefits were fully realized. The system effectively managed runoff and decreased discharge to the creek. Monitoring will continue for Orchard Park in 2022.

Creighton Prep
Creighton Prep's bioretention system continues to function very well in reducing peak flows. Although the slide gate valve is fully open on the underdrain system, leading to drawdown within a few hours, the system successfully delays peak discharge flows. Monitoring of Creighton Prep will continue in 2022.

Sewer Maintenance
The Sewer Maintenance bioretention system continues to function very well, and is showing ongoing effectiveness in treating runoff pollutants, particularly solids.
Water quality samples taken indicate an increase in concentration of nutrients for the outflow when compared to the inflow from the parking lot, but a significant decrease in solids. Monitoring by the United States Geological Survey (USGS) continued, and this was the first full season with the new equipment and layout.

Adams Park
The Adams Park wetlands continues to perform as designed and is providing a wonderful amenity for the community and local environment. Monitoring of water levels have continued in 2021. Data continues to show the system's effectiveness in detaining flow and reducing peak discharge rates with drawdown times lasting for several days. Maintenance of the site in 2021 continued to be contracted out and was effective at keeping weeds and volunteer weeds down as well as capturing trash that was able to make it past the screening structure. Repairs were made at the storm sewer outfall into the park in late 2021 to repair damage from a previous storm that caused significant erosion on the side walls and modify the screening structure to prevent future back-ups. The vegetation across the wetlands and natural grass areas continued to become more established in 2021. Cattails continue to be prevalent but flow through the site is performing as intended.

Albright Park
The Albright Park bioretention system is performing very well overall. The gap in the stop logs that was identified in 2019 was addressed prior to monitoring equipment deployment in 2020, allowing the full water quantity benefit of the system to be realized. Improvement in water detention was observed during the 2021 monitoring. Monitoring of the water level will continue in 2022.

This permit requirement is being met.

3. BMP 3: Utilize data collected by others to help assess the effectiveness of BMPs.

Target Goals & Implementation Schedule: *On-Going All Years – Gather data from others and include in the annual report with a summary of the findings.*

In March of 2020, stream data from previous Program monitoring efforts were shared with Assistant Professor David Manning at the University of Nebraska at Omaha (UNO) to compliment his work on characterizing the Papillion Creek system. In August 2021, he indicated he is in the early stages of analysis and will continue to reach out and coordinate with the Program. No other data was collected from others in 2021.

This permit requirement is being met.

I. Additional Permit Reporting Requirements

1. Status of MCMs and Associated BMPs

This report satisfies the annual reporting requirement and covers the calendar year from January 1, 2021 through December 31, 2021. The permit was issued April 1st, 2018.

The City of Omaha continues to implement each of the eight minimum control measures (MCM), maintain associated BMPs of the SWMP, and maintain compliance with the MS4 Permit. Significant efforts were made in 2019 by the City of Omaha Stormwater Program to create and update strategies required in the MS4 permit. These efforts have had a positive effect on reducing stormwater pollution by ensuring consistent education and outreach with multiple target audiences, improving internal workflows, and adaptively managing stormwater controls. See the Evaluation Assessment below for more detailed information on each of the eight MCMs.

2. Proposed SWMP Changes and Revisions

The third Omaha Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit (NE0133698/PCS 999428) was issued by the Nebraska Department of Environmental Quality (NDEQ) and became effective on April 1, 2018. There were no SWMP changes in 2021.

The City annexed the following unincorporated areas in 2021 and would now be considered part of the MS4 Permit coverage area.

Area Name	SID #	Area Description	Pop.	Sq Miles	Acres	Annexation Date
Whispering Ridge West	549	SE of 177th and West Maple Rd	141	0.07	47.54	7/28/2021
156th and Fort	NA	NW and SW of 156th and Butler Sts	107	0.06	38.36	7/28/2021
Northridge with portion of The Grove/Village Pointe Lodging	560	NE of 167th and Pacific Sts	0	0.03	18.04	7/28/2021

3. Additional Monitoring Data and Land Use

A land use map was created defining land use based on zoning for the City of Omaha; this has been included in Attachment I. Land use patterns were based on current zoning procedures/practices and used to map areas within the City Limits and within the Extra Territorial Jurisdiction (ETJ). Areas that are not defined with a zoning code, i.e. public roads, are not included in the values provided. Four classifications were used to document current land use patterns including Agricultural, Commercial (including Mixed-Use), Industrial, and Residential areas. There is approximately 85.34 mi^2 within the MS4 and 174.45 mi^2 within Omaha's ETJ covered by the four different classifications, as shown in the table below.

Land Use by Square Mile – MS4 Limits & ETJ

Land Use	Omaha MS4	Omaha MS4 % Cover	ETJ	ETJ % Cover	Total	MS4 % to Total
Agricultural	5.00	5.82%	53.25	33.39%	58.25	9%
Commercial	27.06	31.48%	19.63	26.76%	46.68	58%
Industrial	7.17	8.34%	1.11	4.75%	8.28	87%
Residential	46.73	54.37%	14.52	35.10%	61.24	76%
Total	85.95		88.51		174.45	49%

This permit requirement is being met.

Zoning by Square Mile – MS4 Limits & ETJ

Omaha Only		ETJ Only		Omaha and ETJ	
Zone	**Sq Mi**	**Zone**	**Sq Mi**	**Zone**	**Sq Mi**
AG	5.00	AG	53.25	AG	58.25
AV	4.11	AV	0.05	AV	4.16
CC	4.54	CC	0.25	CC	4.79
CH	0.02			CH	0.02
DR	11.63	DR	17.77	DR	29.40
DS	0.02			DS	0.02
GC	0.55	GC	0.03	GC	0.58
GI	6.43	GI	1.05	GI	7.48
GO	1.02	GO	0.02	GO	1.04
HI	0.40			HI	0.40
LC	0.18	LC	0.01	LC	0.19
LI	0.35	LI	0.06	LI	0.40
LO	0.27	LO	0.00	LO	0.27
MH	0.19	MH	0.21	MH	0.40
MU	3.85	MU	1.27	MU	5.12
NBD	0.06			NBD	0.06
R1	2.66	R1	1.00	R1	3.66
R2	9.30	R2	0.96	R2	10.26
R3	9.51	R3	0.72	R3	10.23
R4	10.83	R4	9.87	R4	20.70
R4(35)	6.54	R4(35)	0.00	R4(35)	6.54
R5	2.51	R5	1.09	R5	3.60
R5(35)	0.38			R5(35)	0.38
R6	3.00	R6	0.48	R6	3.48
R7	1.37	R7	0.19	R7	1.56
R8	0.42			R8	0.42
RR	0.81	RR	0.23	RR	1.04
Total	85.95		88.51		174.45

A literature review of pollutant loads by land use type was conducted in 2017. There were a wide range of values found for several stormwater pollutants including total nitrogen, total phosphorus, total suspended solids, and E. coli. Pollutant load values were reported as either pollutant export coefficients or event mean concentrations. Pollutant export coefficients represent the average total amount of a pollutant loaded into a system annually from a defined area (kg/ha/yr), whereas event mean concentrations estimate the mass of pollutant per unit of volume (mg/L) based on data generated from local stormwater monitoring. In order to calculate total pollutant loads from event mean concentrations knowledge of surface imperviousness for a given land use type and precipitation data for the area must be used. These literature values, while not specific to Omaha, provide a basic assessment of the range of pollutant loading concentrations within the Omaha area based on current land use patterns.

Pollutant Export Coefficients for total nitrogen and total phosphorus and total nitrogen and phosphorus load based on land use type area. The highest and lowest estimates are shown.

		Total Nitrogen *(kg/ha/yr)*		**Total Phosphorus *(kg/ha/yr)***		**Total Nitrogen Load *(kg/yr)***		**Total Phosphorus *Load (kg/yr)***	
	Area *(ha)*	Low	High	Low	High	Low	High	Low	High
Agricultural	1,294.45	2.10	79.60	0.26	18.60	2,718.35	103,038.53	336.56	24,076.84
Commercial	7,007.39	1.90	13.80	0.10	7.60	13,314.04	96,701.96	13,314.04	53,256.15
Industrial	1,856.65	1.90	14.00	0.40	4.10	3,527.63	25,993.10	3,527.63	7,612.26
Residential	12,101.90	5.00	7.50	0.77	2.20	60,509.52	90,764.27	60,509.52	26,624.19

Event Mean Concentrations for total nitrogen, total phosphorus, and total suspended solids with the highest and lowest estimates shown.

	Total Nitrogen *(mg/L)*		**Total Phosphorus (*mg/L)***		**Total Suspended Solids (*mg/L)***	
	Low	**High**	**Low**	**High**	**Low**	**High**
Agricultural	0.23	41.49	0.08	2.29	19	582
Commercial	0.96	1.8	0.18	0.28	49.6	284
Industrial	0.86	2.9	0.27	0.36	92.2	231
Residential	1.5	5.92	0.38	75	73	299

4. Evaluation Assessment

Environmental Indicators
The City of Omaha has continued its efforts to promote and implement green infrastructure practices as an effective means to manage stormwater runoff in 2021. BMP assessment monitoring remains a significant part of our stormwater program. The monitoring program work is primarily conducted with internal staff. We continue to update BMP assessment monitoring to better understand how BMPs can be used to improve water quality in Omaha. Monitoring in 2021 again indicated that green infrastructure effectively reduces peak flows and total volume of stormwater and improves water quality, particularly for the reduction of solids. See Attachment H for the summary of 2021 monitoring efforts.

Administrative Indicators – by MCM
Public Education & Outreach:

BMPs in this MCM continue to be effective in increasing the public awareness of stormwater issues and what can be done to address them in 2021. The Covid-19 pandemic continued to have an impact on efforts in 2021 but not as significant as 2020. In-person education and outreach events did resume but were limited and virtual events were often utilized in lieu of or in conjunction with in-person events. The Program continued its collaboration with Conservation Nebraska on stormwater awareness and green infrastructure practices and put on two virtual workshops in 2021. Collaboration with Keep Omaha Beautiful (KOB) continued in 2021 with in-person events resuming but also taking precautions and utilizing virtual opportunities for outreach. KOB able to continue their strong outreach programs. Together with KOB we reached over 9,000 people in 2021, an increase of over 4,000 from 2020. KOB, as part of their environmental education training workshops, trained teachers on stormwater topics to take forward to teach in their classrooms. Based on surveys from those teachers, they will incorporate what they learned into their classrooms and reach over 5,400 students. In 2021, social media presence increased over 2020 total reach by over 6,000. The annual, World O! Water family event was again held as a virtual event with interactive activities and resources shared by numerous organizations and companies. These resources remain on the World O! Water website. In 2022, efforts will continue to improve and promote the Omaha Stormwater Facebook page, OmahaStormwater.org, OmahaPlants.org, WorldOWater.com, and to coordinate with KOB. Virtual events will continue to be a part of the outreach programs as it allows flexibility and accessibility to many citizens that may not otherwise be able to participate.

Public Participation and Involvement:
BMPs in this MCM have been effective in engaging the public in the implementation of stormwater controls and providing access to information about the City's SWMP and annual reports in 2021. Collaboration with KOB continued to be excellent in 2021 as they began holding in-person events and continued with their prominent online presence and resources. In 2021, the inlet marking program saw a significant increase in total adult and youth participants and total volunteer hours, but a decline in total inlets marked and/or cleaned. There were 532 participants that marked and cleaned 2,065 inlets, compared to 138 participants and 4,017 in 2020. A total of 1,808 door hangers were placed on nearby residences of these marked inlets for awareness and how they can reach out to be a part of the program. The Program in 2022 will continue to increase exposure of participation opportunities for the public on websites and social media.

Illicit Discharge Detection and Elimination:
BMPs in this MCM have been effective in eliminating illicit discharges in the MS4 service area in 2021. In the 2020 EPA audit of Omaha's MS4 permit, one of the findings from the contractor's report indicated the program "lacked direction on how to distinguish "potential" and "suspect" illicit discharges and did not identify clear criteria for when further investigation and sampling is appropriate". The current SOP is based on the Center for Watershed Protection's (CSW) IDDE Guidance Manual and utilizes the forms and strategies presented in it, a commonly utilized resource for MS4 entities. This manual's resources continue to be referenced and is being reviewed to update the SOP. In addition to that, the City reviewed four other city's MS4 IDDE program documents to review their programs and see if there were resources or other strategies that that could be considered into the city's program. These included the City of Lincoln and Kearney in Nebraska, who have had recent EPA audits themselves. Kansas City, MO was reviewed as another large MS4 program within the EPA Region 7 footprint and Charleston, NC was reviewed as a comparable city in a different EPA region. The outfall screening SOP as of this annual report has not been finalized, but training was provided to inspectors in 2021 to review and utilize the resources in the CSW Manual and guidance from the reviewed cities to ensure they had clear guidance while conducting outfall screenings. GIS information maintained by the Sewer Maintenance Division continued to be reviewed in 2021to ensure all applicable outfalls were accounted for and screened.

Complaints received by the Program continues to utilize the CityWorks asset management software and has been very beneficial in streamlining documentation and tracking of all complaints, including those that involve an illicit discharge. The majority of complaints that are received are able to be resolved simply by requesting voluntary compliance and educating the responsible party, resulting in less stormwater pollution. The complainants and the responsible parties from these complaints are generally understanding and want to do the right thing in keeping stormwater pollution low.

Construction:
BMPs in this MCM have been effective in reducing construction site runoff and erosion issues in 2021. Construction stormwater training continues to be incorporated into the existing monthly safety toolbox meetings for City EQCD Environmental Inspectors and has helped improve overall understanding of the program and addressing any issues that may arise in the previous month. By providing training to municipal staff, mechanisms for complaints, and education to developers and contractors, the Program continues to promote construction site compliance. Emphasis on compliance and education continues to have positive results for public and private construction activity. Public input and transparency prompts the Program to best serve the needs of the regulated community, the public, and the City. Improving communication between grading permit applicants, inspecting firms, and contractors has also continued to be an emphasis in 2021. Improving the flow of communication between these parties is essential in order to have timely response to issues to minimize stormwater pollution. In 2022, the task of grading permit issuance and management will be transferred from the Public Works Environmental Quality Control Division (EQCD) to the Design Division. This will allow for better coordination with other permitting efforts, including post-construction and public improvements, for an efficient review. Construction site inspections and coordination will remain with EQCD.

Post Construction:
BMPs in this MCM have been effective in achieving the goals of the Post-Construction Stormwater Program. In 2019, the City began requiring a project to submit and have approved, a post-construction application prior to the issuance of a grading permit. In 2020, the City then began requiring any permanent component of a

post-construction stormwater BMP that is also used as a component of a temporary BMP for construction stormwater be approved as part of the Post-Construction Stormwater Management Plan (PCSMP) review process before grading permit approval. This was necessary to address an increase of permanent features being installed and used as part of a temporary sediment basin system, i.e. the riser and barrel, before their PCSMP was approved. These two steps have proven to be an effective way to ensure projects are progressing forward and ensuring are adequate in meeting the requirements of the Post-Construction ordinance. In 2021, monthly meetings continued within Public Works to review projects that will be in front of the Planning Board for approval. These meetings allow for comments to be shared with the Planning Department and the project regarding their PCSMP and Grading Permit documents to be addressed early on in the process or even after construction has begun and compliance is being sought on a site that is out of compliance.

In the 2020 EPA Omaha MS4 permit audit, one of the findings from the contractor's report indicated the program "does not have a method to ensure that private BMPs are functional and that maintenance is conducted when necessary". The City currently utilizes a complaint-based strategy to inspect certified private post-construction BMPs that was developed at the beginning of the current MS4 permit cycle. This strategy is currently being reviewed and will be updated accordingly. In 2022, the Program will continue working with projects to incorporate their PCSMPs earlier into their planning process. Also, the Program will finalize and then implement any updates to the strategy to inspect certified projects to ensure that long-term maintenance is being conducted.

Pollution Prevention & Good Housekeeping:
BMPs in this MCM have been effective in managing stormwater pollution from City facilities and operations in 2021. Ensuring the Program is in compliance with its own regulations is crucial for maintaining integrity and achieving water quality goals. The City's facilities continue to be reviewed for potential pollutant exposure to stormwater, to identify vulnerabilities, and further educational needs. The Program continues to enhance training programs for City employees to provide more applicable information to more individuals. The virtual IDDE training video was utilized again in 2021 to municipal facilities managers to show their employees based upon their schedules and provide a roster back to the Program. This method of distribution has proven to be an effective and efficient means of training. Feedback from facilities has indicated these trainings are well-received and has resulted in cleaner sites and reporting of issues observed in the field. City-owned basins and green infrastructure continued to have regular inspections and maintenance in 2021 to ensure they are working to their highest potential.

Industry:
BMPs in this MCM have been effective in increasing compliance with the NDEE Industrial Stormwater Permit (ISW Permit) in 2021. The Program continues to coordinate with NDEE to maintain an updated and accurate list of industries in Omaha. This has continues to be an effective way to work with the regulated community to improve overall compliance with the industrial stormwater permit by industries. NDEE has stated they plan to develop a list of industries that should be permitted and will share that with the Program, this was not received in 2021. This will be used to provide education and outreach to those industries to obtain and maintain compliance with the NDEE industrial stormwater permit. When industries are found to not have ISW permit coverage, we provide resources to the industry and coordinate with NDEE as needed to bring the site into compliance. In 2022, the Program will continue to implement these BMPs and improve education and outreach to industries in order improve water quality and industry compliance.

BMP Assessment Monitoring:
The Program, prior to 2019, contracted out the monitoring of some BMPs to consultants in order to fully implement the BMP monitoring plan. Due to the lack of State Stormwater Grant funds in 2019, the Program took on this requirement. The BMP monitoring plan was updated in 2019 to update the sites and parameters. The locations and parameters for monitoring have remained consistent from 2020 to 2021 and data collected in 2021 continues to support that BMPs are effective at improving water quality, reducing stormwater peak flows and quantity. These consistent locations provide important short term insights on their effectiveness. As additional years of data is collected, this will provide important, long term insights on their effectiveness. Efforts will continue to be made to partner with more groups to reference and compare data. This data helps the Program make recommendations to residents, designers, and developers for types and styles of BMPs that will be most effective under specific conditions. Because of this monitoring, the Program can confidently say that BMPs being recommended are having a positive impact on water quality.

5. Expenditures for the Storm Water Program

At the time of preparation of this annual report the City Finance Department had not finalized the accounting for 2021 expenditures, so the following figures are subject to minor revisions. A copy of the complete City of Omaha budget with past expenditures can be found at http://finance.cityofomaha.org. Stormwater management activities are embedded in a variety of City programs and work groups. These activities are funded by a variety of sources including the General Fund, Sewer Revenue Funds, Stormwater Administrative Fee Fund, Street and Highway Allocations, and the Street Maintenance Fund.

As such, it is difficult to accurately compile a comprehensive financial summary of every City activity that may have impacts on stormwater. For example, the City maintains litter cans in business districts throughout the City and has a contractor scheduled to empty them on a regular basis. This activity constitutes a stormwater source control or pollution prevention program. These costs are expended from the Solid Waste budget and are not included in the figures below.

1. Administrative

The Quality Control Division of the Omaha Public Works Department has responsibility for coordinating City activities to implement the SWMP and insure that the City meets its MS4 permit requirements. The estimated MS4 administrative expenditures for 2021 and appropriated 2022 budget amounts are listed below.

Administrative	2021 Expenditures	2022 Planned
Flood Control Administration	$170,074	$522,994
Baseline/BMP Monitoring[1]	$423,460	$424,672
Sediment/Erosion Control Program	$423,460	$424,672
Industrial Program[2]	$84,692	$84,934
Public Education/Outreach	$310,537	$311,426
MS4 Planning	$169,384	$169,869
Annual Administrative Total	$1,581,606	$1,938,566

[1] Includes outfall monitoring, outfall inspections, and illicit discharge investigations

[2] Includes industrial inspections and permitting

2. Operation and Maintenance

The major MS4-related Operation and Maintenance 2021 expenditures and budgeted amounts for 2022 are listed below. These amounts were estimated by evaluating the overall activity costs in the City budget organizations and assigning a percentage for the costs attributable to stormwater related activities. There are undoubtedly additional City funded expenditures that impact storm water management, and the following is a conservative estimate of total costs for the City.

Operation and Maintenance	2021 Expenditures	2022 Budgeted
Engineering Design	$671,479	$914,304
Pavement Maintenance	$703,143	$3,698,449
Creek/Open Channel Maintenance	$348,108	$465,885
Street /Right of Way Cleaning	$3,107,032	$5,516,836
OWP (debris removal)	$9,089	$13,793
Residential Street Rehabilitation	$433,381	$1,000,000
Bridge Maintenance and Rehab	$37,992	$72,500
Sewer Maintenance	$1,470,626	$1,026,151
Annual O&M Total	$6,780,851	$12,707,917

ATTACHMENT A

City of Omaha - Storm Water Management Plan

Measurable goals listed in the Storm Water Management Plan are target goals on which progress will be reported on in the annual report.

A. Public Education and Outreach		
BMP #	**SWMP Element Description**	**Target Goals & Implementation Schedule**
1, 3, & 4.	Develop a plan for outreach that defines the goals, objectives, target audience and distribution process of materials for the public education and outreach program.	**Year 1 –** Develop a 5-year education and outreach plan. Submit the plan to NDEQ with the Annual Report. **Years 2-5** – Review and update the plan each permit year and include the revised plan in the Annual Report.
2.	Maintain and update appropriate messages for targeted residential, construction, and commercial issues.	**Year 1 –** Inventory current outreach materials in each of these targeted areas and develop new materials as needed. **Years 2-5 –** Provide copies of new outreach materials in the annual report.

B. Public Participation and Involvement		
BMP #	**SWMP Element Description**	**Target Goals & Implementation Schedule**
1.	Provide opportunities for citizens to comment on new rules, ordinances, and regulations regarding the MS4.	**On-Going All Years –** Post on the City Stormwater Website proposed changes to rules, ordinances, and regulations. Provide information in the annual report on approved changes and input received from the public.
2.	Create opportunities for citizens to participate in the implementation of stormwater controls.	**On-Going All Years –** Post on the City Stormwater Website opportunities for public involvement in stormwater control related activities.
3.	Provide access to information about the City's SWMP.	**On-Going All Years –** Maintain current City SWMP and MS4 annual reports on the Omaha Stormwater website.

C. **Illicit Discharge Detection and Elimination**			
BMP #		**SWMP Element Description**	**Target Goals & Implementation Schedule**
1.	a	Maintain a compliance plan or mechanism to follow up on illicit discharges.	**On-Going All Years** – Maintain the compliance procedures per the permit requirements.
1.	b	Maintain a map showing all known MS4 outfalls and the location of all state-designated waters receiving direct discharges from MS4 outfalls.	**On-Going All Years** – Maintain a continually updated storm sewer system map per the permit requirements.
1.	c	Conduct field screening activities per the permit requirements (set forth in 40 CFR Part 122.26(d)(1)(iv)(D))specifically geared to local TMDL pollutants of concern such as *E. Coli* and to eliminate illicit discharges,	**Year 1 –** Develop dry weather screening, sampling, and quality control plan to address pollutants of concern. Conduct screening under current plan during Year 1. **On-Going All Years –** Annually conduct dry weather monitoring according to screening and sampling plan.
1.	d	Implement procedures to investigate and trace sources of identified illicit discharges to the MS4.	**On-Going All Years** – Document investigations include date observed, result of investigation(s) and date closed.
1.	e	Implement procedures to remove illicit discharges to the MS4. Document all interactions with potentially responsible parties.	**On-Going All Years** – Use the code enforcement procedures to eliminate unauthorized non-stormwater discharges identified during an investigation
1.	f	Identify and address allowable non-stormwater discharges determined to be significant contributors to pollutants. Identify any additional non-stormwater discharges that will not be addressed as illicit discharges.	**On-Going All Years –** Report on any local controls or conditions placed upon exempt non-stormwater discharges and additional identified exempted non-stormwater discharges.
2 & 3.		Coordinate with adjacent permitted MS4s to report illicit discharges to the appropriate authority having jurisdiction and respond to reports from other MS4s.	**Year 1 –** Develop procedures for coordination with adjacent permitted MS4's. **On-Going All Years –** Include in the annual report any known illicit discharge reports to and from adjacent MS4s.
4.		Maintain written procedures for the IDDE component of the MS4 permit.	**On-Going All Years –** Make available upon request the standard operating procedures developed under this program component.
5.		Receive reports and complaints, internally and from the public, of illicit discharges and illegal dumping into the MS4. Respond to and investigate complaints about spills, dumping, or disposal of materials other than stormwater to the MS4.	**On-Going All Years** – Coordinate with others in the City to resolve complaints. Develop a system to generate reports and track the number of calls per year in regard to spills, dumping or improper disposal of material to the MS4. Include a count of complaints received and investigations completed in the annual report.
6.		Develop, implement and maintain a training program for municipal field staff with respect to IDDE.	**Year 1 –** Develop a strategy which identifies field staff and appropriate levels of training. **Years 2 - 5** – Provide a count of employees which have received training in the annual report.

D. Construction Site Runoff Control		
BMP #	**SWMP Element Description**	**Target Goals & Implementation Schedule**
1.	Maintain the established program requiring operators of public or private construction activities to comply with local erosion and sediment control requirements.	**On-Going All Years –** Include any updates to City Code or Permit requirements in the annual report.
2.	Maintain a compliance plan or mechanism to follow up on construction site non-compliance.	**On-Going All Years** – Maintain the compliance procedures per the permit requirements.
3.	Review grading permit applications and maintain a continually updated inventory of all private and public construction sites.	**On-Going All Years** – Include in the annual report the number and type of grading permits reviewed.
4.	Maintain the electronic records for inspection of construction sites and enforcement of erosion and sediment control measures.	**Year 1 –** Develop a strategy for site inspections by municipal staff, and include in the annual report. **On-Going All Years** – Inspect construction sites on a regular basis and on a complaint basis. Track the number of sites inspected annually in a database. Initiate enforcement proceedings as appropriate to address violations. Include a summary of inspections completed and enforcement actions taken in the annual report.
5.	Provide training for municipal staff with respect to their assigned duties as it relates to sediment and erosion control from construction activity. One formal training course for inspection staff during their employment with the City and internal training on an as needed basis to maintain consistent reporting among all inspectors.	**On-Going All Years –** Include in the annual report the number of staff and their sediment and erosion control training completed.
6.	Communicate with the regulated community and other groups affected by the Construction Site Runoff program and provide a mechanism to receive complaints from the public.	**On-Going All Years** – Conduct workshops for developers, builders, site designers, contractors, and/or City staff as determined necessary (i.e., a rule or regulation is changed). Track reports from the public regarding construction sites. Include the number of reports received in the annual report and the permittees response.

E. Post Construction Runoff Control		
BMP #	**SWMP Element Description**	**Measurable Commitments & Implementation Schedule**
1.	Continue to implement the Post Construction Program as stipulated in the OMC. Periodically update guidance material and develop divergent standards for difficult sites such as linear projects. Update as needed the Omaha Regional Stormwater Design Manual (ORSDM).	**Year 1 –** Develop divergent standards for guidance document and update guidance as needed. Submit standards with the annual report. **On-going All Years –** Revise as necessary. Include a summary of revisions in the annual report.
2.	Review and update, if needed, the standards outlined in the OMC and ORSDM for consistency with required performance standards as they relate to post-construction stormwater management plans.	**On-going All Years –** Report on any updates to the OMC or ORSDM.
3.	Maintain an online submittal and review process for site plans, easement and maintenance agreements, as built drawings, deed recordings and drainage studies.	**On-going All Years –** Report number of PCSMP projects and the status of their progress in the annual report.
4.	Develop SOP's for responding to complaints regarding Post Construction BMPs and a strategy for verifying BMPs are being installed & maintained in perpetuity.	**Year 1 –** Submit SOP's with the annual report. **On-going All Years –** Report on any complaints and/or BMP's which have been certified as complete.
5.	Maintain a database that stores information on approved PCSMPs.	**On-going All Years –** Provide an inventory of certified stormwater control measures installed as part of the PCSMP requirements. Include a count of BMP types as well as any known changes to BMPs in the annual report.
6.	Inspect sites that are certified by the engineer of record and all sites identified as deficient on a complaint basis. Develop a protocol to bring sites in to compliance.	**Year 1 –** Develop protocol for compliance assistance, and inspection strategy **On-going All Years –** Document and maintain inspection records of the certified PCSMP projects as identified in the strategy developed. Document any enforcement actions taken. Summarize activities in annual report.

F. Pollution Prevention and Good Housekeeping		
BMP #	**SWMP Element Description**	**Target Goals & Implementation Schedule**
1.	Maintain an inventory and map of municipal facilities. Review annually and update if needed.	**On-Going All Years** – Maintain an inventory and map of all municipal facilities.
2.	Conduct assessments of municipal maintenance facilities and review their municipal runoff control plans as applicable. Revise plans as needed if facilities expand or reduce activities and implement recommendations based on annual inspections.	**Year 1 –** Develop a strategy to assess municipal facilities and prioritize them based upon a defined set of criteria, include strategy in the annual report. **Years 2 - 5 –** Track the number of assessments for municipal facilities based upon the strategy developed in year 1. Include the number of assessments completed, a description of the assessment procedure and any changes in facilities ranking in the annual report.
3.	Continue to implement Omaha's Good Housekeeping Program for municipal facilities that addresses "high-priority" facilities (hot spot score of 20-30 out of 30) and site specific SOPs.	**On-Going All Years** – Annually report new, removed, or significantly updated municipal facilities
4.	Implement practices for maintaining the storm sewer system that includes catch basin maintenance, open channels and other drainage structures, street sweeping, and structural stormwater controls. All maintenance procedures are to be performed such that waste water and waste materials do not enter the MS4.	**Year 1 –** Provide a description of the maintenance programs in the annual report. **On-Going All Years –** Annually report on Sewer Maintenance activities related to maintaining the storm sewer system and changes to any of the maintenance practices.
5.	Provide training for municipal employees in pollution prevention and good housekeeping.	**Year 1 – Develop** a strategy for municipal employee training in pollution prevention and good housekeeping, include strategy in annual report. **On-Going All Years** – Conduct training events for municipal staff include number of employees trained, based on strategy developed in year 1, in annual report.
6.	Provide educational material to contractors hired to perform maintenance activities on the MS4.	**Year 1 –** Develop materials to provide to contractors and include in the annual report**.** **Years 2 - 5 –** Include in the annual report any new materials or updates to existing materials.

G. Industrial and Related Facilities		
BMP #	**SWMP Element Description**	**Target Goals & Implementation Schedule**
1.	Maintain a program that identifies Industries within the MS4 area which fall into sectors identified in the ISW- NPDES permit.	**Year 1 –** Develop strategy that will identify industries and their compliance with NPDES permits. **On-going All Years –** Review and update strategy developed in year on and report on any changes in the annual report.
2.	Request a list of permitted facilities and the NOI from NDEQ in January of each permit year.	**On-going All Years –** Maintain a database to track NPDES permitted facilities.
3.	Inform industries about the NPDES ISW Permit and notify the state when industries are not in compliance with the state regulations.	**On-going All Years –** Develop industry specific publications regarding the NPDES regulations and distribute to inspected facilities.
4.	Inspect NPDES permitted industries from a list provided by NDEQ in January of each year. Maintain a tracking system for inspections and SWPPP reviews. Review the SWPPP or NEC prior to completing an inspection.	**On-going All Years –** Inspect 20% of the facilities on the list provided by NDEQ each year so that all industries are inspected once in the permit cycle.
5.	Ensure inspectors completing industrial stormwater inspections are competent.	**On-going All Years –** Report inspection activities in the annual report.

H. Monitoring Program		
BMP #	**SWMP Element Description**	**Measurable Commitments & Implementation Schedule**
1.	Dry Weather Screening	**On-going All Years –** Implement a dry weather screening of priority outfalls for IDDE following screening and sampling plan. Keep a record of outfalls observed and a record of the field screening results. Follow strategy in SWMP Program Component C - IDDE for outfalls showing presence of an illicit discharge. Update priority list based on observations.
2.	Develop a wet weather BMP assessment monitoring plan for demonstration BMPs to facilitate future SWMP planning. Evaluate the effectiveness of the selected BMPs. BMP assessment may include flow based monitoring, or water quality sampling. Biological systems may include plant assessments and visual observations. Construct structural BMPs and implement non-structural BMPs to evaluate the effectiveness of their ability to address pollutants of concern. Include in the BMP assessment program if appropriate.	**Year 1 –** Revise the BMP assessment monitoring plan and submit to NDEQ for approval. Amend as necessary when new demonstration projects have been constructed. **On-going All Years –** Implement monitoring plan in demonstration projects. Report findings in the Annual Report. The following information shall be included in the Annual Activity Report: 1) the location of the monitoring site 2) the intensity and duration of the storm event monitored; 3) the timing of sampling in comparison to the occurrence of the storm event and to the discharge of peak storm water flows; 4) the monitoring data; and a summary of the findings.
3.	Utilize data collected by others to help assess the effectiveness of BMPs.	**On-going All Years -–** Gather data from others and include in the annual report with a summary of findings.

ATTACHMENT B

Environmental Enforcement Manual

Environmental Quality Control
City of Omaha

May, 2019

Table of Contents

Section I: Omaha EQC Enforcement Guidelines

ENFORCEMENT GOALS & PROCEDURES

The City's environmental enforcement goals are to:

- Reduce the risk to human health and the environment
- Correct existing violations and deter future violations
- Prevent or have cleaned up pollution and minimize waste
- Preserve the integrity of the regulatory structure

To accomplish this the City will assure a high level of compliance, and strive for timely discovery and correction of significant compliance problems. This manual was written in order to maximize resources and ensure the effective and consistent enforcement of the various regulations.

It is very important in enforcement to understand that every enforcement action the City takes must have supportive power set out in the Federal State and/or City statutes. To carry out the policies of the administrative branch of Government, the Legislature has granted numerous powers and responsibilities to the City.

> The Nebraska Statute # 84-901 et seq… governs various aspects of administrative Environmental Law, such as the adjudication of cases and judicial review of the City actions. *Agencies in their decision-making and enforcement cannot be arbitrary or capricious or disregard the law that applies to their actions.*

The City can exercise its enforcement powers in administrative, civil and / or criminal proceedings, or can refer cases to the NDEQ or EPA. The exercise of this authority is discretionary. The City also has informal and indirect enforcement options available. These include seeking voluntary compliance through warning communications (Faxes, e-mails, etc…) and compliance assistance to provide a violator an opportunity to return to compliance. It is important to keep in mind that the City's statutes and regulations are part of a larger system of environmental law that includes federal and state court decisions, policies, and guidance. The City has the power to enact and enforce laws and regulations that meet minimum federal criteria. In many cases the City has become the primary permitting and enforcement authority.

The EPA and NDEQ negotiate with the City through permits, work-plans and delegation Memorandums on how the agencies will work together. The EPA and NDEQ retain the right to take enforcement actions independently of the City, but defer to the City in most cases if the City's action has been timely and appropriate.

Process and Mechanisms

The primary goal of enforcement is compliance. A strong enforcement program establishes credibility that when violations are identified, a return to compliance is achieved and, if appropriate, penalties are obtained. The enforcement strategy and priorities developed by the City are implemented through regular inspections and complaint investigation activities. The enforcement program strives for compliance, prosecuting violators in as systematic and uniform manner as possible, while retaining enough flexibility to make adjustments based on the particular case.

The various program managers make the final decisions on the issuance of administrative orders, referrals to the Law Department, and settlement. The City staff in recommending enforcement action should consider the same factors that affect the managers' ultimate decision. This requires the exercise of professional judgment and discretion in determining the most appropriate response. Some considerations during the review are:

- ☐ The severity of the violation in terms of its environmental impact; the degree of variance from the standards; the impact of the violation upon the integrity of the program under consideration.
- ☐ The enforcement history of the entity involved in terms of past violations and demonstration of good faith.
- ☐ Whether the violation can be corrected through improved operation and maintenance and, if so, will correction be lengthy? Has the problem already been corrected?
- ☐ Consideration of "Fairness and Equity." Is the requirement reasonable? Was it imposed with complete information? Is the City treating facilities with similar violations in the same manner? Have events occurred beyond the control of the violator, which have resulted in the violation?

Program Priorities

Violations are classified in terms of their importance to the regulatory schemes and whether pollution is likely to result. Other factual considerations, such as whether the violations are chronic, the violator is cooperative or recalcitrant, or the extent of the deviation must be evaluated on a case-by-case basis.

Prompt and timely communication is the key to an effective enforcement program. Timeliness equates to importance in the eyes of the violator, regulatory community, public, and courts. Prompt communication ensures that evidence is gathered and presented while fresh and improves agency credibility.

Situations involving an emergency or imminent and substantial endangerment to public health and welfare or the environment should be given highest priority and the enforcement accelerated.

DISCOVERY OF VIOLATIONS

The City discovers violations in a variety of ways, including but not limited to, report reviews, compliance inspections, complaint investigations, and referrals from other agencies. Once a violation has been determined, they should be documented in an inspection report or memorandum as soon as possible, and filed in the company or complaint file.

Inspections

Typically most site inspections occur as a result of routine, program-specific compliance inspections. When the City receives a complaint of a possible violation, the City staff should document all of the

information on a complaint form. The name of the complainant is confidential, but may be disclosed in an enforcement proceeding or if compelled by a court.

Entry / Access

An inspector, upon arriving at a facility, source, or site should attempt to locate the owner, operator, or agent in charge, and identify him or herself, show his or her credentials, and explain the reason for the inspection. Nebraska Statute authorizes the inspector "to enter and inspect, during reasonable hours, any building or place, except a building designed for and used exclusively for a private residence." Statute also allows a representative of the Director to enter and inspect any contaminant source with the consent of the person or persons in control.

An inspector may sign a login sheet, but cannot sign a sheet, which purports to hold the source harmless in the event of injury to the inspector regardless of the facility's negligence. It is the facility's right to refuse entry or access to records for that or other reasons, but if this should occur the inspector should inform the source that that is a violation, and leave the facility. The inspector should contact their supervisor. The supervisor should contact the Law Department to obtain an inspection and search warrant. Nothing prohibits an inspector from viewing the property from a location where the public has access, such as a roadway or adjacent property, with permission of the owner.

Evidence

As a general rule, photographs should begin with the general area and then move in on the area that portrays the violation itself. At hearing or trial, photographs are most often used to illustrate the inspector's or another's testimony. Photographs are usually admissible as a form of non-verbal testimony. The photograph should be a good, fair, and accurate depiction of the object or scene at the relevant time. If videotape is used, only the voice of the person taping the video should be recorded.

Field Notes/Sketches/Diagrams

The field log should contain only relevant, objective observations and remarks. The major benefit to a field log is that it may be used latter in court or administrative hearing to "refresh" the inspector's memory of events. However, the decision to retain or discard field log notes must be consistent within the program.

When asking people information about a matter under investigation or in taking written statements, the inspector should focus on the basic questions of who, what, where, when, why, and how. If a person appears to have done an illegal act under the direction or order of another person, the inspector should find out who gave the order or direction. Inspectors should avoid intimidating people since a less confrontational approach usually elicits more information.

The inspector should also be aware of the records or documents that are required to be filed with the Department, such as weekly erosion control reports, semi-annual air compliance reports, emission inventories, discharge monitoring reports, biennial hazardous waste reports and Title III reports. These documents may provide support for a determination as to the extent of harm that may result from a violation.

Samples

When samples are collected, the inspector should give a receipt to the facility representative, describing the sample(s) obtained. The sample shall be collected in a proper container, labeled with time, date, facility, sample collector, point of collection, type of sample, etc… The sample collector shall maintain a chain of custody form on the sample, which indicates when and to whom a sample is transferred. There must be no "broken link" in the chain of custody where the sample may be unknowingly tampered with. Once the results of the samples are reviewed, a copy of the results should be sent to the facility representative, unless otherwise directed by the Law Department.

Inspection Reports

The central purpose of an inspection report is to clearly, accurately, and objectively communicate the factual information gathered during the inspection to the reader. It should be written as if the reader had no knowledge of the operation, or the facts outside of the report. The inspector should avoid any opinions, erroneous conclusions, inferences, or interpretations in the report. A good inspection report strengthens the credibility of the inspector as a witness.

Inspection reports should be written as soon as possible after the inspection, and filed. This helps to assure that the facts are recorded accurately while the events are fresh in the inspectors mind. An inspection report must make clear what actions are required of the facility, the inspector, or their supervisor.

After the report is written, a letter should be sent to the facility representative with a copy of the inspection. This is a courtesy, and in keeps them clearly informed of their compliance status, and if non-compliance was found during the inspection, it is a clear record of the violation and what actions, or timeframes where established to bring the facility back into compliance.

ENFORCEMENT

If possible, all discussions with the violator should be coordinated first through the Law Department during pending enforcement action, unless otherwise instructed by the attorney. The "Date of Discovery" is important to highlight with the report, this date establishes the statutory date that the Law Department has to bring legal action, or the action is barred.

The inspector or their supervisor should prepare any "Letter of Warning" (LOW). The program manager should prepare and sign "Notices of Violation" (NOV). For civil penalty actions or actions for injunctive relief, the manager will prepare an initial contact letter, which may be signed by the attorney, to send to the violator. This letter acknowledges to the source that the matter has been referred to the Law Department with the recommendation that enforcement action be taken. It will identify the violations or reference the LOW & NOV previously sent. It will outline the civil penalties, or injunctive relief deemed appropriate by the agency to settle the matter without litigation.

Settlement agreements are considered to be confidential, and any questions on an ongoing enforcement should be referred to the Law Department.

Enforcement Mechanisms

It is important to provide the violator with the opportunity to voluntarily come into compliance prior to referring a violation to the Law Department for enforcement. The purposes of the various stages of notices are to document the violations that have been observed and alert the violator to the consequences for failing to comply.

Voluntary Compliance

The City's first course of action is to pursue correction of the violation through voluntary compliance, unless an emergency exists. Documentation of this steep is essential. This is typically done less formally, through Faxes, or e-mails. The violation should be clearly outlined, and the timeline for submitting a voluntary compliance schedule clearly stated, typically not more than 10 working days. Some cases will warrant enforcement action regardless of whether the violator voluntarily returns to compliance. The City can make the decision to forgo voluntary compliance efforts.

Letter of Warning

If voluntary compliance is not successful, or the violator has a history of non-compliance on the same issue, the City should send a "Letter of Warning". This letter should identify the specific violation(s), with citations, such as 40 CFR 61,145(b)(i), that has occurred and, when necessary, the required action to be taken to correct the violation. The "Letter of Warning" should require the violator to submit a written response with a compliance schedule within a specific number of days, generally not more than thirty (30) days. The letter should state that failure to respond, or continued violation will result in referral to the Law Department with the recommendation of enforcement action (fine). Attach a copy of the specific regulation violated to this LOW. These LOW are always sent by certified mail, establishing the date of receipt of the information.

Notice of Violation

A "Notice of Violation" is a legal document that may be issued by the Program Manager whenever he or she has reason to believe that a violation of the City laws, regulations, or permit requirements has occurred. The "NOV" is a written complaint that specifies:

1) The provisions of the law, regulations, or permit alleged to be violated.
2) The facts alleged to constitute the violation thereof, and
3) The corrective action to be taken within a reasonable time necessary to achieve compliance.

The City does not have the authority to impose penalties in a "NOV". Therefore, a "NOV" is the appropriate vehicle to impose compliance schedules for improved operation and maintenance, capital improvements, installation of pollution control equipment, remedial actions, or any other actions necessary to achieve compliance.

A "NOV" can include a penalty calculation, which if agreed to and paid by the alleged violator through a voluntary consent order, would be acceptable in lieu of the City seeking judicial action. Advantages

to accepting a "NOV" settlement over a judicial action are that a "NOV" is usually faster and therefore requires fewer resources. It also allows the Department more control of the conduct and progress of the action, rather than relying on Judicial Decisions.

Voluntary Consent Order

These are voluntary, negotiated, written legal documents between the City and the violator that regulate any matter within the City's jurisdiction. They are signed by both the Director, or his representative, and a representative of the violator and are equally binding on both. They are frequently used when a violator agrees to come into compliance and is willing to make a written commitment in good faith. These agreements may be negotiated before a NOV is issued, or as a result of a NOV.

If a compliance provision in a Voluntary Consent Order, agreement or stipulation is missed, unless otherwise agreed, this is a violation of a final order of the Director and the matter may be referred to the Law Department with a recommendation for further action.

Permit Denial, Revocation, or Modification

If a chronic violation occurs at a site, a permit may need to be denied, revoked, or modified. Nebraska Statute provides that any person who is denied a permit by the director or who has one revoked or modified shall have the opportunity for an administrative hearing. The Public Works Director usually chairs all Administrative Hearings. The request for a hearing must be filed within thirty days of the permit action. After the hearing the director shall make his decision known. The permit holder may appeal the director's final decision in court.

Civil Action

If the City has exhausted all administrative alternatives, it may seek to impose civil penalties for a violation, the director may refer the matter to the Law Department for prosecution. In order for the Law Department to determine if there is sufficient legal merit to justify a civil or criminal proceeding, the program managers must develop a Litigation Report that should include basic factual information about the violation(s) and the violator(s), a description and analysis of the legal elements necessary to prove the statutory, regulatory, order or permit violations, the documentation on the potential penalties to which the violator may be subject, injunctive relief to which the City is entitled, and any potential weakness in the case or affirmative defenses and any suggested resolution of the matter.

In practice the City and the defendant in a civil action may negotiate a settlement of the matter. Typically, this settlement is memorialized in a consent decree that is filed with the court. A consent decree may also include compliance requirements in addition to payment of civil penalties. Violation of a consent decree may be pursued in court.

Criminal Cases

State law establishes criminal liability for many of the same violations subject to civil penalties, if they are committed "knowingly and willingly". In order to prevail in a criminal action, the City must prove each element of the case "beyond a reasonable doubt", which is a higher standard of proof than a civil

action. Evidence gathering in a criminal case is more restrictive, and the Police Department or State Patrol should provide assistance with witness investigation.

PENALTIES

The assessment of penalties for violations of environmental statutes, regulations, and permits provides incentives to comply with these requirements and services as a deterrent to further violations. The City's policy in seeking penalties is to ensure that penalties are:

1. Assessed in a fair, consistent, and equitable manner.
2. Appropriate to the circumstances of the violation
3. Sufficient to remove any economic benefit or other financial incentive to non-compliance
4. Sufficient in severity to deter further non-compliance by the violator and others similarly situated
5. Resolve any outstanding environmental problems quickly.

There is EPA and NDEQ guidance documents on the assessment of penalty size. These workbooks should be used as a general guide in assessing a penalty. The factors used in the evaluation of penalties include:

- *Statutory Factors* such as degree, duration and extent of the violation and economic benefit on behalf of the violator;
- *Mitigating Factors* such as the response and compliance history of the violator and the ability to pay; and
- *Injunctive Relief* with respect to environmental costs, costs of mitigation and/or damaged infrastructure.

A complete procedure for the assessment of penalties is located in the following section of this manual.

Section II: Civil Penalty Policy

POLICY

(Copied after: EPA's CLEAN WATER ACT Civil Penalty Policy)

Before filing a Notice of Violation, the City of Omaha will use the following guidelines to determine the minimum amount the City will accept in settlement for counts based on violations of the erosion or dust regulations. This amount, along with the appropriate worksheet and a supporting rationale, should be included in the enforcement-confidential portion of the case file. After a complaint is filed, as the City receives more relevant information regarding liability and penalty issues, the City should adjust its settlement figure accordingly, documenting the rationale for the changes.

The bottom-line figure resulting from application of this civil penalty settlement policy and the specific calculation that led to it are not public. Each is privileged, enforcement-confidential information. It is work product developed for negotiation purposes and should not be shared with administrative judges, respondents or defendants, or the public.

This policy itself, however, is public and not confidential. In calculating the bottom-line settlement figure, the City should assume that all the allegations in the complaint will be successfully proven, except to the extent this policy specifically allows for the incorporation of litigation considerations into the penalty calculation. The subjective aspects of the various penalty factors should be applied conservatively in determining the settlement bottom-line because that figure represents the minimum the Agency will accept in settlement, which may be less than the penalty amount that the City considers otherwise ideally suited to the violation. The City may, of course, republish this policy to clarify the newly adjusted settlement amounts.

- The seriousness of the violation or violations;
- The degree of culpability involved;
- The nature, extent, and degree of success of any efforts of the violator to minimize or mitigate the effects of the discharge;
- Any history of prior violations.

ASSESSMENT CRITERIA

Step 1: Seriousness

The seriousness of a violation depends, in part, on the risk it poses to the public and the environment. "Risk" can encompass the coverage area of the violation, the likelihood of a spill, the sensitivity of the environment, and the duration of the violation. The coverage area of the violation, which also contributes to the severity of the violation, depends on the erodible area covered, the existence and adequacy of sediment containment, the degree and nature of the violations of relevant requirements, and the duration of the violation. The sensitivity of the environment can be characterized by considering the potential environment impact from a worst-case discharge at the site.

Step 1.a: Apply matrix. Determine an initial figure from the following table. Within each range, the City should exercise discretion, considering capacity and extent of noncompliance only, since other considerations are incorporated in later steps.

Extent of Noncompliance	Less than 1 acre	1 acre to 5 acres	5 acres to 10 acres	More than 10 acres
Minor	$50 to 100	$75 to $175	$125 to $250	$225 to $350
Moderate	$110 to $175	$175 to $275	$250 to $375	$350 to $450
Major	$175 to $225	$275 to $325	$375 to $450	$450 to $500

Use the following criteria to determine the extent of noncompliance:

Minor Noncompliance. Cumulatively, the violations have only a minor impact on the ability of the respondent to prevent or respond to worst-case erosion or dust violation through the development and implementation of a compliance plan.

> Minor noncompliance: Failure to have GR2 inspections on site in a timely manner; failure to submit required report online in a timely manner; failure of reports to reflect minor changes in BMP.

Moderate Noncompliance. Cumulatively, the violations have a significant impact on the ability of the respondent to prevent or respond to worst-case erosion or dust violation through the development and implementation of a compliance plan.

> Moderate Noncompliance: Site work inconsistent with BMP; Failure to update BMP or reflect major changes; Failure to amend plan after rainfall or work practices show the plan to be inadequate; Failure to submit information of a control measure failure.

Major Noncompliance. Cumulatively, the violations essentially undermine the ability of the respondent to prevent or respond to worst-case erosion or dust violation through the development and implementation of a compliance plan.

> Major Noncompliance: No BMP submitted; Work started prior to permit issuance; inadequate or incomplete plan resulting in major environmental or citizen harm; failure to maintain equipment and/or personnel to implement BMP/dust control measure resulting in hazardous conditions; intentional or known violations.

Step 1.b: Adjust the amount determined from the matrix to reflect the potential environmental impact of a worst-case discharge. Choose the most serious applicable category.

Major Impact. A discharge would likely have a significant on human health/safety, an actual or potential effect on a receiving lake or wildlife due to factors such as proximity or adequacy of containment. Upward adjustment of 25-50%.

Moderate Impact. A discharge would likely have a significant effect on storm sewers or receiving stream or vegetation due to factors such as proximity to water or adequacy of containment. Upward adjustment of up to 25%.

Minor Impact. No adjustment.

Step 1.c: Adjust the amount from **Step 1.b** to account for the duration of the violation. Determine the number of weeks that the violation continued. For each week, add one half of one percent to the amount from Step 1.b (e.g., if the violation continued for 32 weeks, increase the amount from the previous step by 16%) up to a 30% maximum.

Step 2: Culpability

Assess the degree to which the respondent should have been able to prevent the violation, considering the sophistication of the respondent, the resources and information available to them, and any history of regulatory staff explaining to the respondent legal obligations or notifying the respondent of violations. Depending upon the degree of culpability, the city may increase the amount from STEP 1 by as much as 75%.

Step 3: Mitigation

This policy requires that in assessing a penalty the City must consider the "nature, extent, and degree of success of any efforts of the violator to minimize or mitigate the effects of the discharge". Though a violation of the regulations increases the threat of a discharge rather than actually causing a discharge, this factor can be taken into account by considering how quickly the violator comes into compliance, thereby mitigating the threat of a discharge. The City should use the following guidelines:

> When the violator comes into compliance before being notified of violation by regulatory staff orally or in writing, reduce the amount from **STEP 2** by up to 25%.
>
> When the violator, after notification of violation, comes into compliance within a reasonable time period not exceeding six weeks: No adjustment.

This is a downward adjustment only because any failure to come into compliance promptly after being informed of the violation is accounted for in **STEP 2** (Culpability).

Step 4: History of Previous Violations

Adjust the amount from **STEP 3** if the respondent has a relevant history of violations within the past five years. Consider violations of erosion and dust regulations, the BMP or reporting requirements, and any violation of an environmental statute that relates to the respondent's ability to prevent or mitigate a violation. Related violations, for example, could include certain operation and maintenance violations that indicate a respondent's inattention to pollution control requirements. Relevant violations at any other facility under common ownership or control should be considered under this step. Violations include admitted violations (such as reports or other required self-reporting), adjudicated violations, findings of violations by the City, NDEQ, EPA or other agencies that have not been withdrawn or overturned by a reviewing authority, and cases that were settled by consent and involved the payment of a penalty (whether or not liability was admitted). If there is a history of such violations, the City may increase the **STEP 3** amount by up to 100%, depending on the frequency and severity of such past violations

Section III: Supplemental Environmental Project Policy

APPLICABILITY

In the settlement of environmental enforcement cases in Omaha, the City requires that violators resolve the violation, change standard operational procedures to avoid future non-compliance, and pay a civil penalty; in certain instances "Supplemental Environmental Projects" (SEP) and their environmental and community benefits may be part of the settlement; the primary purpose of the SEP policy is to obtain environmental and/or public benefits that may not otherwise occur, in the community impacted by the violation. SEPs are offered as an opportunity to contribute to the community in lieu of paying a penalty, and to help the defendant / respondent understand that their action has had an impact on the community as a whole, and is therefore offered to first time offenders only.

The environmental programs administered by the City have penalty assessment criteria used in determining an appropriate penalty. These policies establish an appropriate initial settlement offer to avoid the time and cost of a court hearing where appropriate. These policies have been established with consideration of the economic benefit to the violator, the seriousness of the violation, and any prior history of violations. Penalties deter violations and level the playing field, while the use of SEP²s add an additional role of securing the advantage environmental or public benefits. The penalty calculation worksheets from the appropriate program are used to determine the Initial Settlement offer, without the influence of a SEP;

The primary goal of the City's Environmental regulations is the avoidance or reduction of pollution, followed in order by the responsible recycling of pollutants, then the proper disposal of pollutants.

CRITERIA

The Environmental Quality Control Division of the City of Omaha Public Works Department reviews SEP's with the following criteria:

1. The City of Omaha evaluates the types of settlement cases where SEP's would be appropriate, the types of projects that are acceptable, and the penalty mitigation that is allowed;
2. The City of Omaha uses this SEP policy is part of that evaluation process, and is typically only considered for first time violators;
3. All else being equal, the final settlement penalty cost will be lower for a violator who agrees to perform an acceptable SEP compared to one who does not agree to perform a SEP;
4. The City of Omaha encourages the use of SEP's that are consistent with this policy, and recognizes that SEP's may not be appropriate in settlement of all cases, but they are an important part of the City's environmental enforcement program;
5. SEP's that have an educational or pollution prevention aspect are preferred, and would be given preference in consideration;

The Environmental Quality Control Division determines that a SEP is qualified only if the SEP meets the following criteria;

1. The SEP is a project that has environmental benefits, that the violator is not otherwise legally obligated to perform;
2. The SEP cannot be inconsistent with any Environmental Statutes;
   2.1. The SEP must advance an environmental objective of the statutes the enforcement action is based on.
   2.2. The SEP must reduce the likelihood of similar violations, or
      2.2.1. Reduce the consequence on the public or the environment that was impacted by the violation, or
      2.2.2. Reduce the overall risk to the public or the environment affected by the violation;
3. The SEP should affect the Public or the environment in the Omaha Metropolitan area;
4. The City retains the right to oversee a SEP and ensure that it is implemented pursuant to the provisions of the settlement offer, and retains legal recourse if the SEP is not adequately performed;
5. The City may not play any role in managing or controlling the funds that are to provide for the SEP;
6. The SEP cannot be used to satisfy a City statutory obligation, and cannot provide the City with additional resources to support activities that are covered by budgetary obligations, e.g. a SEP cannot buy a computer for City personnel use;
7. The SEP cannot be used to extend an existing City contract;

There are several broad categories of projects that qualify as SEP's; these are:

1. Environmental Restoration & Protection: a restoration project is one that enhances or restores a natural environment, or a man-made environment in the Omaha Metropolitan area;
   1.1. Help protect the environment from actual or potential damage or improve the overall condition of the ecosystem; OR
   1.2. The protection of endangered species or their habitat; OR
   1.3. Augment another environmental restoration project with recreational improvements such as hiking & bicycling trails, or information signage not already earmarked for the project;
   1.4. Remediation of pollution of man-made environments, like community centers, may include the removal of asbestos, lead paint, or contaminated soils;
2. Environmental Compliance Promotion: These projects can be contracted to experts to develop and implement the compliance promotion project and shall provide training, or outreach to other parts of the community to;
   2.1. Achieve and maintain compliance with the regulatory requirements;
   2.2. Go further than the regulations and reduce pollution beyond legal requirements;
   2.3. Promote the same environmental program as the violation;
3. Public Health: a project to provide diagnostic, preventative and /or remedial components of health care to the population potentially harmed, including but not limited to, epidemiological data, examinations, or medical treatment;

4. Pollution Prevention: a project that targets the reduction at the source so that the amount of pollution entering into the atmosphere or waste stream is reduced;
5. Pollution Reduction: is a project which results in a decrease in the amount or toxicity of any pollutant in a waste stream or released into the environment (e.g. offsite recycling of waste collected and used as raw material for another products);
6. Other projects that do not fit into one of the above categories may be considered if they have environmental merit~~,~~ and are consistent with the rest of the SEP goals

The City of Omaha uses the above criteria to determine if a SEP is qualified, and excludes the following from SEP consideration;

1. Projects done for private gain;
2. Projects that the defendant / respondent would be required to do under any rule or regulation;
3. Projects that the respondent would directly benefit from
4. Projects where the City needs to contribute significant resources to assure completion;

In a settlement where the defendant / respondent agree to a SEP, the SEP amount has to be calculated to;

1. Exceed any known economic benefit from the non-compliance activity;
2. Be at least 75% of the total agreed upon initial settlement offer

The defendant / respondent shall submit a settlement agreement that accurately describes the SEP and provides reliable and objective means to verify that the defendant / respondent completes the project, including clear benchmarks that can be tracked and reported, and can be completed in a timely manner while having community benefit.

The settlement agreement shall outline a requirement that the defendant / respondent pay a stipulated penalty of at least 75% to 150% of the initial settlement amount originally proposed, depending on the degree of completion and the monies spent, if the SEP outlined in the settlement agreement is not completed, or is only partially completed.

The defendant /respondent may only publicize his involvement in the results of the SEP if it is prominently stated that the SEP was taken as a part of a settlement of an environmental enforcement action.

ATTACHMENT C

ATTACHMENT C – Complaint and Illicit Discharge Investigations

Date Initiated	Address	Valid Complaint	Illicit Discharge	Complaint Type	Resolution
1/6/2021	3712 N 43rd St	No	No	Other	NA
1/6/2021	1691 Burt St	No	No	Construction	RVC - Written
1/7/2021	1404 Grace St	No	No	Other	NA
1/12/2021	17101 Bedford Ave	Yes	No	Construction	RVC - Verbal
1/19/2021	6202 Q St	Yes	No	Construction	RVC - Verbal
1/22/2021	7014 N 172nd St	Yes	No	Construction	RVC - Verbal
3/2/2021	5527 S 114th St	Yes	No	Other	RVC - Verbal
3/4/2021	4333 S 24th St	Yes	Yes	Illicit Discharge	RVC - Written
3/11/2021	4803 NW Radial Hwy	Yes	No	Construction	RVC - Verbal
3/15/2021	1514 Castelar St	No	No	Other	NA
3/15/2021	14810 M St	Yes	Yes	Construction	Investigated - Unable to locate responsible party
3/17/2021	10504 Decatur St	No	No	Other	NA
3/18/2021	3127 California St	Yes	No	Construction	Eliminated
3/22/2021	9775 Frederick St	Yes	Yes	Other	Forwarded to Sewers
3/23/2021	3325 Pine St	Yes	No	Construction	RVC - Verbal
3/24/2021	391 N 243rd St	Yes	No	Construction	RVC - Written
4/1/2021	4502 Q St	No	No	Other	NA
4/12/2021	7810 Blondo St	Yes	No	Illegal Dumping	Forwarded to Parks
4/12/2021	8844 Lakeview Dr	Yes	No	Other	RVC - Verbal
4/14/2021	10717 Grand Ave	Yes	Yes	Illegal Dumping	RVC - Verbal
4/16/2021	4951 Leavenworth St	No	No	Other	NA
4/19/2021	3802 N 161st Ave	Yes	No	Construction	RVC - Verbal
4/20/2021	19920 Madison St	No	No	Construction	NA
4/20/2021	1130 S 99th Cir	Yes	No	Yard Waste	RVC - Verbal
4/20/2021	15005 Grover St	Yes	Yes	Construction	RVC - Verbal
4/22/2021	14552 Industrial Frontage Rd S	Yes	No	Stormwater Runoff	Forwarded to Streets
4/23/2021	1405 Grace St	No	No	Other	NA
4/23/2021	16801 Burke St	Yes	No	Other	Forwarded to Streets
5/3/2021	1725 Avenue G	Yes	No	Other	RVC - Written
5/7/2021	1939 S 63rd St	Yes	No	Construction	RVC - Written
5/7/2021	3624 N 45th St	Yes	Yes	Construction	RVC - Verbal
5/11/2021	2901 Cuming St	Yes	Yes	Illicit Discharge	RVC - Verbal
5/12/2021	N 16th St & Ida St	Yes	No	Other	RVC - Verbal
5/14/2021	20209 Park Rd	Yes	Yes	Illicit Discharge	RVC - Verbal
5/17/2021	3262 S 102nd St	No	No	Illicit Discharge	NA

ATTACHMENT C – Complaint and Illicit Discharge Investigations

Date Initiated	Address	Valid Complaint	Illicit Discharge	Complaint Type	Resolution
5/18/2021	7925 N 39th St	Yes	No	Stormwater Runoff	RVC - Written
5/18/2021	3914 Miami St	Yes	Yes	Construction	RVC - Verbal
5/18/2021	8227 N 167th Ave	Yes	No	Construction	RVC - Verbal
5/19/2021	3421 So 58th St	Yes	No	Construction	RVC - Verbal
5/21/2021	13771 P St	Yes	No	Post-Construction Bmp	RVC - Verbal
5/24/2021	912 S 119th Ct	Yes	No	Other	Forwarded to Sewers
5/24/2021	15655 Charles St	Yes	No	Construction	RVC - Written
5/24/2021	21422 Greenbrier Dr	No	No	Stormwater Runoff	NA
5/24/2021	1803 G St	Yes	No	Other	Eliminated
5/24/2021	20490 Poplar St	Yes	No	Construction	RVC - Verbal
5/28/2021	3405 S 204th St	Yes	No	Other	RVC - Verbal
6/1/2021	3105 Dewey Ave	Yes	No	Other	Forwarded to Streets
6/2/2021	10330 I St	Yes	No	Other	RVC - Verbal
6/9/2021	2702 N 45th Ave	No	No	Other	NA
6/10/2021	20231 Harney St	No	No	Other	NA
6/11/2021	1517 Chicago St	No	No	Illegal Dumping	NA
6/14/2021	9739 Brentwood Rd	Yes	No	Construction	RVC - Verbal
6/14/2021	8608 N 30th St	Yes	No	Construction	Forwarded to Construction
6/18/2021	13906 Weber St	No	No	Yard Waste	RVC - Written
6/25/2021	3017 S 144th Ave	Yes	No	Other	RVC - Verbal
6/28/2021	4101 Woolworth Ave	No	No	Other	NA
6/28/2021	S 137th St & Kingswood Dr	No	No	Other	NA
6/28/2021	6342 N 112th Cir	No	No	Stormwater Runoff	Forwarded to Sewers & Streets
7/1/2021	1417 N 127th Cir	Yes	Yes	Construction	RVC - Verbal
7/12/2021	20373 Vinton St	Yes	No	Construction	RVC - Verbal
7/12/2021	19033 Hamilton St	Yes	No	Construction	RVC - Written
7/12/2021	5426 S 52nd St	Yes	No	Construction	RVC - Verbal
7/13/2021	391 N 243rd St	Yes	No	Construction	RVC - Verbal
7/14/2021	15005 Hillsdale Ave	Yes	No	Other	NA
7/14/2021	604 S 37th St	Yes	Yes	Illicit Discharge	RVC - Verbal
7/14/2021	5827 S 136th St	Yes	No	Other	RVC - Verbal
7/15/2021	4820 S 192nd St	No	No	Stormwater Runoff	NA
7/19/2021	4230 William St	Yes	No	Other	Eliminated
7/21/2021	330 S 84th St	Yes	No	Stormwater Runoff	Outreach Provided

ATTACHMENT C – Complaint and Illicit Discharge Investigations

Date Initiated	Address	Valid Complaint	Illicit Discharge	Complaint Type	Resolution
7/23/2021	6202 Orchard Ave	Yes	Yes	Illicit Discharge	RVC - Verbal
7/23/2021	1217 Howard St	Yes	No	Other	RVC - Verbal
7/30/2021	5698 S 41st St	Yes	No	Construction	RVC - Verbal
8/2/2021	4305 S 23rd St	Yes	No	Other	RVC - Written
8/4/2021	6509 S 31st St	Yes	No	Construction	RVC - Verbal
8/5/2021	7901 N 154th St	Yes	No	Illicit Discharge	RVC - Verbal
8/9/2021	7837 Dodge St	Yes	No	Construction	RVC - Verbal
8/9/2021	11765 Fowler Ave	Yes	Yes	Illegal Dumping	RVC - Verbal
8/10/2021	8914 N 52nd Ave	Yes	Yes	Construction	RVC - Verbal
8/12/2021	5903 N 168th Ave	No	No	Construction	NA
8/13/2021	4028 N 36th St	Yes	No	Construction	RVC - Written
8/17/2021	156th St & Pacific St	Yes	No	Construction	RVC - Verbal
8/19/2021	8312 Bedford Ave	No	No	Other	NA
8/20/2021	4506 S 52nd St	Yes	Yes	Construction	LOW
8/24/2021	9927 Harney Pkwy-N	Yes	No	Construction	LOW
8/26/2021	1829 N 93rd Ct	Yes	No	Construction	RVC - Verbal
8/31/2021	13111 N 72nd St	Yes	No	Construction	RVC - Written
9/1/2021	5636 Ohio St	Yes	No	Construction	RVC - Verbal
9/3/2021	16757 Spaulding St	Yes	Yes	Construction	RVC - Verbal
9/8/2021	19001 S Cir	Yes	No	Construction	RVC - Verbal
9/8/2021	5002 S 84th St	No	No	Construction	NA
9/9/2021	6023 Maple St	Yes	No	Other	RVC - Verbal
9/13/2021	2400 Z St	Yes	Yes	Other	RVC - Verbal
9/13/2021	4722 S 194th Ave	Yes	No	Other	Forwarded to SID
9/14/2021	12508 Read St	Yes	No	Construction	RVC - Verbal
9/17/2021	5002 S 84th St	No	No	Construction	RVC - Verbal
9/20/2021	7302 N 154th Ave	Yes	No	Construction	RVC - Verbal
9/22/2021	8817 Weir St	No	No	Construction	NA
9/23/2021	5937 Spring St	Yes	No	Other	RVC - Verbal
9/28/2021	18244 Farnam St	Yes	No	Other	Forwarded to Plumbing
9/29/2021	2912 N 50th St	No	No	Other	NA
9/29/2021	8838 Military Rd	No	No	Stormwater Runoff	NA
9/30/2021	2300 S 33rd St	Yes	No	Construction	RVC - Verbal
10/4/2021	2718 S 102nd St	Yes	No	Other	RVC - Verbal
10/6/2021	3298 Bedford Ave	Yes	Yes	Illegal Dumping	RVC - Written
10/7/2021	4436 S 18th St	No	No	Illegal Dumping	RVC - Written
10/7/2021	1305 S 118th St	Yes	Yes	Illicit Discharge	RVC - Verbal
10/7/2021	12602 Ames Plz	No	No	Illegal Dumping	RVC - Verbal

ATTACHMENT C – Complaint and Illicit Discharge Investigations

Date Initiated	Address	Valid Complaint	Illicit Discharge	Complaint Type	Resolution
10/13/2021	15408 Hamilton St	Yes	No	Construction	RVC - Verbal
10/13/2021	4021 N 212th St	Yes	Yes	Construction	RVC - Verbal
10/14/2021	3550 S 149th St	Yes	No	Construction	Eliminated
10/14/2021	7802 Military Ave	Yes	No	Construction	RVC - Verbal
10/14/2021	1738 S 13th St	Yes	No	Construction	RVC - Verbal
10/18/2021	9004 Fort St	Yes	No	Construction	RVC - Verbal
10/21/2021	4320 N 158th Ave	Yes	No	Construction	RVC - Verbal
10/26/2021	1221 S 120th Plz	Yes	No	Other	Forwarded to Planning
10/26/2021	9739 Brentwood Rd	Yes	No	Stormwater Runoff	Forwarded to Parks
10/26/2021	3708 S 16th St	Yes	No	Stormwater Runoff	RVC - Verbal
10/28/2021	2102 S 46th Ave	Yes	No	Construction	RVC - Verbal
11/3/2021	17407 Emmet St	Yes	No	Stormwater Runoff	Forwarded to Design and Parks
11/4/2021	5914 S 167th Ave	No	No	Yard Waste	NA
11/12/2021	7901 N 154th St	No	No	Illicit Discharge	RVC - Verbal
11/15/2021	4628 N 180th Avenue Cir	Yes	No	Other	RVC - Verbal
11/15/2021	12912 Harney St	Yes	No	Other	RVC - Verbal
11/16/2021	7884 Blondo St	Yes	No	Other	Forwarded to Sewers
11/17/2021	11922 N 72nd St	No	No	Construction	NA
11/17/2021	2418 N 60th St	Yes	No	Other	Forwarded to MUD
11/24/2021	12520 L St	Yes	No		RVC - Verbal
11/30/2021	1220 N 53rd St	Yes	Yes	Illegal Dumping	RVC - Written
12/3/2021	2735 N 120th Ave	No	No	Yard Waste	RVC - Written
12/3/2021	655 Jones St	Yes	No	Other	Forwarded to MUD & Sewers
12/20/2021	2734 S 90th St	No	No	Other	NA
12/21/2021	4930 S 124th St	Yes	No		RVC - Verbal
12/21/2021	17830 Pacific St	No	No	Other	NA
12/21/2021	7437 N 144th Ave	Yes	Yes	Illicit Discharge	RVC - Written
12/29/2021	2405 S 17th St	Yes	No	Other	Forwarded to MUD & Owner
12/30/2021	5914 Center St	Yes	Yes	Illicit Discharge	RVC - Verbal
12/30/2021	1440 S 190th Plz	Yes	Yes	Illicit Discharge	Forwarded to Plumbing

ATTACHMENT D

ATTACHMENT D – Inlet Marking Activities

Month of Service	Location Description [Starting Address/Area]	Organization	# of Drains Marked	# of Drains Cleaned (already marked)	Total # of Youth Volunteers	Total # of Adult Volunteers	Hours for the Event	Total Volunteer Hours	Bags of Trash & Recycling Collected	# of Door Hangers Distributed
March	42nd & Center St	Creighton Service Group	38	30	0	5	1	5	7	0
April	192nd & Blondo St	Olivia Frigyes	57	0	2	0	4	8	1	0
April	211th & Pacific St	Girl Scouts Troop 48823	63	6	6	3	2	18	2	0
May	52nd & Bedford Ave	Benson High School	41	0	22	1	1	23	0	0
June	35th & Oak St	KOB	6	0	0	3	1	3	0	0
June	50th & Ames St	Northstar Foundation & KOB	30	0	75	12	1	87	8	165
June	50th & Ames St	Northstar Foundation & KOB	43	0	80	12	1	92	12	95
June	72nd & Western St	Nebraska Methodist Upward Bound Math & Science Camp	35	21	16	2	1.5	27	3	116
June	84th & Hascall St	Nebraska Methodist Upward Bound Math & Science Camp	37	22	14	2	1.5	24	3	80
June	95th & Pacific St	Nebraska Methodist Upward Bound Math & Science Camp	51	16	17	3	1.5	30	3	92
June	108th & Fort St	Nebraska Methodist Upward Bound Math & Science Camp	40	17	16	3	1.5	28.5	3	120
June-August	132nd & Harrison St, 132nd & Z St, 156th & Q St, 168th & L St	Finley Family	200	0	1	1	11	22	4	100
June-August	156th & State St	Burkman Family	14	36	1	2	3	9	1	0
June-August	52nd & Sorensen Pkwy & 56th & Sorensen Pkwy	Evangelos Beardall	58	2	0	2	20	40	8	94
June-August	79th & Lake St	Amanda Hostert	10	2	0	1	3	3	2	11
July	42nd & California St	YP Council	12	9	0	6	1.5	9	4	40
July	48th & Dodge St	YP Council	28	8	0	6	1.5	9	3	58
July	50th & Ames St	Northstar Foundation & KOB	27	0	60	12	1	72	10	65
July	Around Miller Park	Nelson Mandela School	60	6	16	6	2	44	4	95
August	108th & Q St & 90th & Q St	Laura Krajewski	41	19	2	2	6	24	6	110
August	110th & Harrison St	College Possible Program	40	5	0	21	2	42	3	20
August	132nd & West Center Rd & 156th & Pacific St	Boy Scouts of America Troop 448	20	17	2	2	3	12	3	60
August	180th & Y St + 168th & Harrison St	Waters Edge Church - WE Serve Team	35	45	1	9	1.5	15	2	40
August	18th & O St	Athena Meneses	23	0	4	2	6	36	3	35
August	22nd & Pierce Street	Burak Ege	30	1	0	1	3	3	6	20
August	58th & Charles St	UNMC HEAL	78	0	0	2	3	6	3	50
September	105th & West Center Rd	Meredith Weitz	33	0	3	2	2	10	4	32
September	163rd & Oak St	Mindy Valleley & Family	13	24	3	2	4	20	3	35
September	168th & Pacific St	Girl Scout Troop	0	30	10	2	1	12	2	50
September	192nd & West Center Rd	Christina O'Keefe & Family	27	0	2	1	6	18	3	26
September	50th & Valley St & 60th & Grover St	Colin & Morgan Brandt	41	41	0	2	6	12	4	0
September	6th & Pierce St	Union Pacific Railroad - Day of Caring	29	11	0	5	3	15	6	25
October	105th & Pacific St	Claire Lynch	7	16	2	1	3	9	3	26
October	156th & Harrison St	Girl Scout Troop 48413	17	0	7	2	1.5	13.5	2	20
October	168th & Fort St	Boy Scouts of America Troop 99	106	5	8	9	3	51	5	114
October	204th & West Maple Rd	Bethany Newton	15	0	2	1	3	9	8	14

ATTACHMENT D – Inlet Marking Activities

Month of Service	Location Description [Starting Address/Area]	Organization	# of Drains Marked	# of Drains Cleaned (already marked)	Total # of Youth Volunteers	Total # of Adult Volunteers	Hours for the Event	Total Volunteer Hours	Bags of Trash & Recycling Collected	# of Door Hangers Distributed
October	27th & Fort St	Metro Community College	12	15	0	5	2	10	5	0
October	56th & Blondo St	Aura Sewell	4	0	2	1	0.5	1.5	1	0
October	60th & Hickory St	Carissa Velez	6	34	0	1	3	3	3	0
October	Around/on UNO Campus	UNO	200	0	0	3	18	54	2	0
			1627	**438**	**374**	**158**		**929.5**	**155**	**1808**

ATTACHMENT E

ATTACHMENT E – Education and Outreach Activities

Date	Event Name	Activity Type	# of Attendees	Target Audience(s)
5/1/2021	EI supplies - Chris	Distribution		Construction, Residential, Commercial
5/1/2021	EI supplies - Eric	Distribution		Construction, Residential, Commercial
5/1/2021	EI supplies - Shane	Distribution		Construction, Residential, Commercial
2/21/2021	2021 Omaha Home Show & Garden Expo	Education Booth	700	Construction, Residential, Commercial
2/4/2021	Sediment and Erosion Control Seminar	Workshop	391	Construction, Residential, Commercial
2/21/2021	UNO GI Glass lecture	Presentation/Demonstration	15	Commercial, Residential
2/18/2021	UNO GI Glass lecture	Presentation/Demonstration	15	Commercial, Residential
3/3/2021	UNL Urban Soils lecture	Presentation/Demonstration	8	Commercial, Residential
3/5/2021	Nebraska Virtual Green Infrastructure Tour	Tour	55	Commercial, Residential
3/26/2021	SEC Flipbook Distribution	Distribution		Construction
4/5/2021	SEC Flipbook Distribution	Distribution		Construction
4/14/2021	SEC Flipbook Distribution	Distribution		Construction
4/14/2021	Conservation Nebraska - Spring Showers & Yard Prepping	Presentation/Demonstration	21	Residential
4/14/2021	Growing Gardeners Workshop - Rainwater Harvesting	Presentation/Demonstration	52	Residential
4/15/2021	UNO GI Glass lecture	Presentation/Demonstration	16	Commercial, Residential
4/15/21 - 5/15/21	Nebraska Earth Day Passport	Tour	713	Residential
4/22/2021	TD2 Inspector Training	Presentation/Demonstration	4	Construction
4/28/2021	SEC Flipbook Distribution	Distribution		Construction
4/28/2021	SEC Flipbook Distribution	Distribution		Construction
6/8/2021	SEC Flipbook Distribution	Distribution		Construction
6/10/2021	SEC Flipbook Distribution	Distribution		Construction
6/15/2021	SEC Flipbook Distribution	Distribution		Construction
6/16/2021	SEC Flipbook Distribution	Distribution		Construction
6/23/2021	SEC Flipbook Distribution	Distribution		Construction
7/9/2021	SEC Flipbook Distribution	Distribution		Construction
7/14/2021	SEC Flipbook Distribution	Distribution		Construction
8/11/2021	SEC Flipbook Distribution	Distribution		Construction
8/17/2021	SEC Flipbook Distribution	Distribution		Construction
8/25/2021	SEC Flipbook Distribution	Distribution		Construction

Date	Event Name	Activity Type	# of Attendees	Target Audience(s)
8/26/2021	SEC Flipbook Distribution	Distribution		Construction
9/10/2021	WO!W Library Displays	Education Booth		Residential
9/7/2021	SEC Flipbook Distribution	Distribution		Construction
9/26/2021	Walk for the Animals	Education Booth	600	Residential
9/28/2021	SEC Flipbook Distribution	Distribution		Construction
9/28/2021	Stormwater Brochure Distribution	Distribution		Construction
9/28/2021	Conservation Nebraska - Prepping for Fall webinar	Presentation/Demonstration	10	Residential
9/29/2021	UNO ENVN 2010 Presentation	Presentation/Demonstration	12	Commercial, Residential
9/30/2021	Creighton University Green Games - soccer	Education Booth	75	Residential
10/5/2021	Goldenrod Festival	Presentation/Demonstration	400	Residential
10/18/2021	SEC Flipbook Distribution	Distribution		Construction
10/21/2021	Imagine A Day Without Water	Presentation/Demonstration		Residential
10/23-10/24/21	Fall Home & Garden Show	Education Booth	500	Residential
10/29/2021	SEC Flipbook Distribution	Distribution		Construction
11/5/2021	NWEA Fall Conference	Presentation/Demonstration	30	Commercial
11/17/2021	SEC Flipbook Distribution	Distribution		Construction
11/18/2021	Kennedy School STEAM Night	Presentation/Demonstration	75	Residential
12/2/2021	SEC Flipbook Distribution	Distribution		Construction
12/20/2021	SEC Flipbook Distribution	Distribution		Construction
12/20/2021	SEC Flipbook Distribution	Distribution		Construction
12/20/2021	Properly Dispose of Grass Clipping Distribution	Distribution		Residential

ATTACHMENT E – Education and Outreach Activities

Date	Event Name (if applicable)	Location:	Primary/Key Topic	MS4 Target Audience Category	# of Separate Activities/ Presentations	# of Youth Participants	# of Adult Participants	Website Activity	Student Reach (by KOB trained teachers)	Stormwater-Related Brochure or Info	World O! Water Flier/Brochure	HHW/ UTS Brochure	Litter Reduction or Recycling Brochure/Info
1/25/2021	Sustainable Steps for Little Learners	Virtual	Stormwater Pollution or Water Conservation	Community	1	0	29		550				
1/28/2021	NACEE Educator Group Meeting/Training	Virtual	Stormwater Pollution or Water Conservation	Community	1	0	8		NA				
2/1/2021	Sustainable Steps for Little Learners	Virtual	Litter-Waste Reduction or Recycling	Community	1	0	26		550				
2/9/2021	School Program (Lollipop Patch Early Childhood Center)	Virtual	Litter-Waste Reduction or Recycling	Community	1	40	1		NA				
2/17/2021	School Presentation (Millard North High School)	Virtual	Stormwater Pollution or Water Conservation	Community	2	24	1		NA				
2/18/2021	School Program (Millard)	Millard North High School (1010 S 144th St, Omaha, NE 68154)	Stormwater Pollution or Water Conservation	Community	NA	27	0		NA				
2/25/2021	Project Learning Tree (Benson Childcare Support Group)	Virtual	Litter-Waste Reduction or Recycling	Community	1	0	22		411				
3/15/2021	After School Program (Kids Can)	Kids Can Community Center (4860 Q St, Omaha, NE 68117)	Litter-Waste Reduction or Recycling	Community	NA	30	0		NA				
3/15/2021	Student Sustainability Advisory Group (Westside High School)	Virtual	Litter-Waste Reduction or Recycling	Community	1	15	10		NA				
3/24/2021	Sustainable Steps for Little Learners	Virtual	Stormwater Pollution or Water Conservation	Community	1	0	28		711				
4/5/2021	Love Your Block Litter Walk	Online Resource	Litter-Waste Reduction or Recycling	Community	NA	0	0	781	NA				
4/7/2021	Sustainable Steps for Little Learners	Virtual	Stormwater Pollution or Water Conservation	Community	1	0	10		343				
4/9/2021	School Program (Early Childhood Center)	Beginnings Preschool (15050 W Maple Rd, Omaha, NE 68116)	Litter-Waste Reduction or Recycling	Community	NA	35	0		NA				
4/13/2021	First Forward Student Organization (UNO)	Virtual	Stormwater Pollution or Water Conservation	Community	1	0	10		NA				
4/14/2021	Growing Gardeners Series	Virtual	Stormwater Pollution or Water Conservation	Community	1	0	52		NA				
4/15/2021	School Program (OPS)	Jackson Elementary (620 S 31st St, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	NA	33	0		NA				
4/17/2021	Earth Day Omaha Mini-Event	Elmwood Park (808 S 60th St, Omaha, NE 68106)	Stormwater Pollution or Water Conservation	Community	1	15	35		NA				
4/20/2021	Nature in Your Neighborhood (KidSquad)	Virtual	Litter-Waste Reduction or Recycling	Community	1	0	12		169				
4/30/2021	School Program (Ralston)	Blumfield Elementary (10310 Mockingbird Dr, Omaha, NE 68127)	Litter-Waste Reduction or Recycling	Community	NA	8	0		NA				
5/4/2021	School Program (OPS)	Pinewood Elementary (6717 N 63rd St, Omaha, NE 68152)	Stormwater Pollution or Water Conservation	Community	NA	22	0		NA				
5/5/2021	Mulhall's Community Education Event	Virtual	Litter-Waste Reduction or Recycling	Community	1	0	54		NA				
5/6/2021	School Program (OPS)	Jackson Elementary (620 S 31st St, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	NA	33	0		NA				

ATTACHMENT E – Education and Outreach Activities

Date	Event Name (if applicable)	Location:	Primary/Key Topic	MS4 Target Audience Category	# of Separate Activities/ Presentations	# of Youth Participants	# of Adult Participants	Website Activity	Student Reach (by KOB trained teachers)	Stormwater-Related Brochure or Info	World O! Water Flier/Brochure	HHW/ UTS Brochure	Litter Reduction or Recycling Brochure/Info
5/14/2021	School Program (Millard)	Wheeler Elementary (6707 S 178th St, Omaha, NE 68135)	Litter-Waste Reduction or Recycling	Community	NA	200	0		NA				
5/14/2021	School Program (Millard)	Wheeler Elementary (6707 S 178th St, Omaha, NE 68135)	Stormwater Pollution or Water Conservation	Community	NA	250	0		NA				
5/18/2021	School Program (Gretna)	Falling Waters Elementary (5909 S 200th Ave, Omaha, NE 68135)	Litter-Waste Reduction or Recycling	Community	NA	75	0		NA				
5/27/21	Growing Up Wild (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	1	0	19		341				
5/28/2021	Upcycled Rain Chains	Online Resource	Stormwater Pollution or Water Conservation	Community	NA	0	0	207	NA				
6/2/2021	School Program (Early Childhood Center)	Victoria's Early Childhood Center (2334 S. 35th St.)	Litter-Waste Reduction or Recycling	Community	1	7	2		NA				
6/3/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	2	27	5		NA				
6/4/2021	School Program (Millard)	Millard STEM Summer School (5110 South 156th St, Omaha, NE 68135)	Litter-Waste Reduction or Recycling	Community	NA	500	0		NA				
6/4/2021	School Program (Millard)	Millard STEM Summer School (5110 So. 156th St, Omaha, NE 68135)	Stormwater Pollution or Water Conservation	Community	NA	150	0		NA				
6/5/2021	Clean Environment & Healthy Habitats	Online Resource	Litter-Waste Reduction or Recycling	Community	NA	0	0	51	NA				
6/8/2021	School Program (Early Childhood Center)	Victoria's Early Childhood Center (2334 S. 35th St.)	Litter-Waste Reduction or Recycling	Community	1	10	2		NA				
6/9/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	4	100	8		NA				
6/10/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	2	41	6		NA				
6/11/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Litter-Waste Reduction or Recycling	Community	4	100	8		NA				
6/15/2021	GOC Rapid Round Table	Virtual	Litter-Waste Reduction or Recycling	Community	1	0	40		NA				
6/16/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	5	100	10		NA				
6/17/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	2	40	6		NA				
6/18/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	4	80	8		NA				

ATTACHMENT E – Education and Outreach Activities

Date	Event Name (if applicable)	Location:	Primary/Key Topic	MS4 Target Audience Category	# of Separate Activities/ Presentations	# of Youth Participants	# of Adult Participants	Website Activity	Student Reach (by KOB trained teachers)	Stormwater-Related Brochure or Info	World O! Water Flier/Brochure	HHW/ UTS Brochure	Litter Reduction or Recycling Brochure/Info
6/22/2021	Sustainable Steps for Little Learners (Kidsquad)	Virtual	Litter-Waste Reduction or Recycling	Community	1	0	12		159				
6/23/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	5	100	10		NA				
6/24/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	2	40	6		NA				
6/25/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	4	80	8		NA				
6/28/2021	International Mud Day (stormwater-focused activity)	Online Resource	Stormwater Pollution or Water Conservation	Community	NA	0	0	76	NA				
6/30/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	5	75	10		NA				
7/1/2021	Star-Spangled Litter Cleanup & Preventing Water Pollution	Online Resource	Stormwater Pollution or Water Conservation	Community	NA	0	0	74	NA				
7/1/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	2	40	6		NA				
7/2/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Litter-Waste Reduction or Recycling	Community	4	100	8		NA				
7/7/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	3	60	6		NA				
7/8/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	2	30	4		NA				
7/8/2021	Sustainable Steps for Little Learners	Virtual	Litter-Waste Reduction or Recycling	Community	1	0	13		340				
7/14/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	5	100	12		NA				
7/15/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	2	38	4		NA				
7/16/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Litter-Waste Reduction or Recycling	Community	4	80	8		NA				
7/17/2021	Mulhall's Wild Plant Event	Mulhall's (3615 N 120th St, Omaha, NE 68164)	Stormwater Pollution or Water Conservation	Community	1	10	123		NA				
7/21/21	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Stormwater Pollution or Water Conservation	Community	5	100	10		NA				
7/22/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Stormwater Pollution or Water Conservation	Community	2	35	4		NA				
7/23/2021	Summer Program (NorthStar Foundation)	NorthStar Foundation (4242 N 49th Ave, Omaha, NE 68104)	Litter-Waste Reduction or Recycling	Community	4	100	10		NA				

ATTACHMENT E – Education and Outreach Activities

Date	Event Name (if applicable)	Location:	Primary/Key Topic	MS4 Target Audience Category	# of Separate Activities/ Presentations	# of Youth Participants	# of Adult Participants	Website Activity	Student Reach (by KOB trained teachers)	Stormwater-Related Brochure or Info	World O! Water Flier/Brochure	HHW/ UTS Brochure	Litter Reduction or Recycling Brochure/Info
7/29/2021	Summer Program (Completely Kids)	Completely Kids (2566 St Marys Ave, Omaha, NE 68105)	Litter-Waste Reduction or Recycling	Community	2	39	4		NA				
8/4/2021	Nature's Recyclers (composting-focused activity)	Online Resource	Litter-Waste Reduction or Recycling	Community	NA	0	0	58	NA				
8/17/2021	NACEE Feed Your Mind Lunch & Learn	Virtual	Litter-Waste Reduction or Recycling	Community	1	0	7		NA				
8/25/2021	Sustainable Steps - Project WET	Heron Haven (11809 Old Maple Rd, Omaha, NE 68164)	Stormwater Pollution or Water Conservation	Community	1	0	11		1507	10		10	10
8/26/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	17	1		NA				
9/2/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	15	1		NA				
9/7/2021	After School Program (Girls Inc)	Girls Inc Afterschool Program (2811 North 45th St, Omaha, NE 68104	Litter-Waste Reduction or Recycling	Community	NA	25	0		NA				
9/10/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Stormwater Pollution or Water Conservation	Community	1	17	1		NA				
9/16/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	15	1		NA				
9/23/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	15	1		NA				
9/28/2021	School Program (Millard)	Millard Young Adult Program (12820 N St, Omaha, NE 68137)	Litter-Waste Reduction or Recycling	Community	2	40	10		NA			60	60
9/30/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	17	1		NA				
10/1/2021	Durham Teacher's Night	Durham Museum (801 S 10th St, Omaha, NE 68108)	Stormwater Pollution or Water Conservation	Community	1	0	149		NA	125		125	125
10/1/2021	School Program (Millard)	Millard Young Adult Program (12820 N St, Omaha, NE 68137)	Litter-Waste Reduction or Recycling	Community	NA	0	0		NA				
10/5/2021	Goldenrod Festival	Lauritzen Gardens (100 Bancroft St, Omaha, NE 68108)	Stormwater Pollution or Water Conservation	Community	1	446	32		NA	6		6	6
10/6/2021	School Program (OPS)	Miller Park Elementary (5625 N 28th Ave, Omaha, NE 68111)	Stormwater Pollution or Water Conservation	Community	3	59	4		NA				
10/6/2021	Sustainable Steps - Project WILD	Douglas Sarpy Extension Office (8015 W Center Rd, Omaha, NE 68124)	Stormwater Pollution or Water Conservation	Community	1	0	4		320	15		15	15
10/7/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	17	1		NA				

ATTACHMENT E – Education and Outreach Activities

Date	Event Name (if applicable)	Location:	Primary/Key Topic	MS4 Target Audience Category	# of Separate Activities/ Presentations	# of Youth Participants	# of Adult Participants	Website Activity	Student Reach (by KOB trained teachers)	Stormwater-Related Brochure or Info	World O! Water Flier/Brochure	HHW/ UTS Brochure	Litter Reduction or Recycling Brochure/Info
10/14/2021	School Program (OPS)	Castelar Elementary (2316 S 18th St, Omaha, NE 68108)	Litter-Waste Reduction or Recycling	Community	3	60	5		NA			60	60
10/14/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	17	1		NA				
10/15/2021	World O! Water Virtual Event	Virtual	Stormwater Pollution or Water Conservation	Community	1	0	0	1731	NA		1150		
10/15/2021	School Program (OPS)	Castelar Elementary (2316 S 18th St, Omaha, NE 68108)	Litter-Waste Reduction or Recycling	Community	2	45	3		NA			55	55
10/19/2021	School Program (OPS)	Pinewood Elementary (6717 N 63rd St, Omaha, NE 68152)	Stormwater Pollution or Water Conservation	Community	1	27	12		NA				
10/26/2021	School Program (OPS)	Miller Park Elementary (5625 N 28th Ave, Omaha, NE 68111)	Stormwater Pollution or Water Conservation	Community	3	59	6		NA				
11/1/2021	Project Learning Tree (Millard Area Providers)	St. Thomas Lutheran Church (17007 Q St, Omaha, NE 68135)	Litter-Waste Reduction or Recycling	Community	1	0	9		40	9		9	9
11/4/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Stormwater Pollution or Water Conservation	Community	1	17	1		NA				
11/11/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	17	1		NA				
11/18/2021	Mulhall's Holiday Community Event	Mulhall's (3615 N 120th St, Omaha, NE 68164)	Litter-Waste Reduction or Recycling	Community	1	20	530		NA				
11/18/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	17	1		NA				
12/2/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	14	1		NA				
12/9/2021	Rose Theater Environmental Sustainability Teen Production	The Rose (2001 Farnam St, Omaha, NE 68102)	Litter-Waste Reduction or Recycling	Community	1	10	15		NA				
12/9/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	17	1		NA				
12/11/2021	Rose Theater Environmental Sustainability Teen Production	The Rose (2001 Farnam St, Omaha, NE 68102)	Litter-Waste Reduction or Recycling	Community	1	6	10		NA				
12/16/2021	After School Program (OPS)	Spring Lake Elementary (4215 S 20th St, Omaha, NE 68107)	Litter-Waste Reduction or Recycling	Community	1	17	1		NA				
					134	**4015**	**1491**	**2978**	**5441**	**165**	**1150**	**340**	**340**

Target Markets

- Construction – Developers, contractors, owners
- Commercial – Stores, commercial property managers
- Residential – Homeowners, residential property managers
    - School – Students, teachers, administrators
    - Community – Non-profit groups, homeowner associations, etc...

Stormwater Facebook Page	
2021 Month	**Total Reach**
January	1,027
February	288
March	362
April	10,932
May	707
June	259
July	295
August	200
September	498
October	942
November	558
December	765
Totals	**16,833**

Omaha Stormwater Website			
2021 Month	**Users**	**Page Views**	**Sessions**
January	338	923	438
February	421	1,139	601
March	521	1,223	728
April	531	1,246	718
May	467	939	593
June	567	1,129	743
July	505	1,006	646
August	534	1,155	704
September	648	1,304	830
October	845	1,464	1,000
November	587	1,077	692
December	472	1,062	600
Totals	**6,436**	**13,667**	**8,293**

Omaha Plants Website			
2021 Month	**Users**	**Page Views**	**Sessions**
January	78	138	85
February	66	94	74
March	150	416	176
April	131	274	146
May	154	226	162
June	89	172	91
July	76	303	93
August	97	187	102
September	107	343	123
October	111	266	118
November	91	143	96
December	73	104	78
Totals	**1,223**	**2,666**	**1,344**

World O! Water Website			
2019 Month	**Users**	**Page Views**	**Sessions**
January	147	301	156
February	131	288	134
March	147	321	150
April	112	209	113
May	141	411	150
June	145	714	177
July	135	457	152
August	241	1,161	318
September	578	3,191	748
October	186	371	193
November	99	229	100
December	122	222	123
Totals	**2,184**	**7,875**	**2,514**

ATTACHMENT F

Official Name to Use	Title on Piece	Res	Com	Con	Ind	Developed by
Landscape Brochure	*Keep It Clean On Your Golf Course or Landscape Projects!*	X	X			OSW
Stormwater & Dust Control Brochure	*Stormwater & Dust Control*	X	X	X		OSW
Water Pollution Brochure	*Water Pollution Comes In Many Forms*	X	X	X		OSW
Rain Barrel Brochure	*Building A Rain Barrel*	X	X			OSW
Storm Drain Awareness Brochure	*Keeping Pollution Out Of Our Storm Drains*	X	X			OSW
Concrete Brochure	*Best Management Practices for Concrete Masonry and Ready Mix Professionals*				X	OSW
Pressure Washing Brochure	*Take Some Pressure Off Our Environment*				X	OSW
Metal Fabrication Brochure	*Shape Your Plans to Control Wastewater*				X	OSW
Proper Paint Disposal Brochure	*Know Your Role In Protecting The Environment*	X	X			OSW
Restaurant Brochure	*Keep It Clean At Your Restaurant!*		X			OSW
Outdoor Event Brochure	*Keep It Clean At Your Outdoor Event!*		X			OSW
LUPs Brochure	*Linear Underground Projects & Stormwater Best Management Practices*			X	X	OSW
10 Important Things Flyer	*10 Important Things To Remember On The Job Site*		X	X		OSW
Pet Waste Flyer	*Some Things Are Better Not Left Behind!*	X				OSW
Rain Garden Fact Sheet	*Rain Gardens*	X				OSW
Bioretention Garden Fact Sheet	*Bioretention Systems*		X			OSW
Bioswale Fact Sheet	*Bioswales and Filter Strips*		X			OSW
Green Roof Fact Sheet	*Green Roofs*	X				OSW
Downspout Disconnection Fact Sheet	*Downspout Disconnections*	X				OSW
Permeable Pavement Fact Sheet	*Permeable Pavement*		X	X		OSW
Rain Harvesting Fact Sheet	*Rain Harvesting*	X				OSW
Soil Conditioning Fact Sheet	*Soil Conditioning*					OSW
Storm Drain Fact Sheet	*Storm Drain*					
Bioretention Manual	*Bioretention Gardens*		X	X		OSW

Official Name to Use	Title on Piece	Res	Com	Con	Ind	Developed by
Sustainable Landscapes Manual	*Sustainable Landscapes*		X	X		OSW
OmahaPlants.com Postcard	*Omahaplants.org*	X	X	X		OSW
Grass Clipping Door Hanger	*Properly Dispose of Grass Clippings and Yardwaste*	X	X			OSW
Rain Barrel Door Hanger	*Omaha's Rain Barrel Program*	X				OSW
OSW Frisbees		X				OSW
Pet Waste Bag Dispensers		X				OSW
WOW! Activity Books	*WOW! Activity Books*	X				OSW
WOW! Crayon Boxes	*WOW! Crayon Boxes*	X				OSW
City of Omaha Environmental Field Guide	*City of Omaha Environmental Field Guide*		X	X		CSO
Automotive UTS		X		X		SW/Recycling
Guide to HHW		X				SW/Recycling
Housing Dangerous Products		X				SW/Recycling
How to Discard Your Unusued Medications		X				SW/Recycling
OmaGro		X	X	X		SW/Recycling
Used Motor Oil, Tires, etc.		X				SW/Recycling
Pollution Sources Around Your House		X				SW/Recycling
Prepare Yourself for UTS		X				SW/Recycling
Recycling Paint UTS		X				SW/Recycling
Illegal Dumping		X				SW/Recycling
Get the Point (Medical HHW)		X				SW/Recycling
UTS Drop-off Locations		X				SW/Recycling
Proper Paint Disposal		X				SW/Recycling
Clean Water Team Certificate	*Clean Water Team Certificate*	X				OSW
Little Steps. Big Impact. Brochure		X				OAQ
Little Steps. Big Impact. Index Card		X				OAQ
SEC Flip Book	*Field Guide for Stormwater Best Management Practices at Construction Sites*			X		OSW
World O! Water patches		X				OSW
Inlet Marking Door Hanger	*Only Rain Down the Storm Drain*	X				KOB
Sector A - Timber Products	Sector A - Timber Products				X	OSW
Sector AA - Fabricated Metal Products	Sector AA - Fabricated Metal Products				X	OSW

Official Name to Use	Title on Piece	Res	Com	Con	Ind	Developed by
Sector AB - Industrial Machinery and Auto Repair	Sector AB - Industrial Machinery and Auto Repair				X	OSW
Sector AC - Eletrical Photographic and Optical Goods	Sector AC - Electrical Photographic and Optical Goods				X	OSW
Sector B - Paper and Allied Products	Sector B - Paper and Allied Products				X	OSW
Sector C - Chemical and Allied Products	Sector C - Chemical and Allied Products				X	OSW
Sector D - Asphalt Paving and Roofing	Sector D - Asphalt Paving and Roofing				X	OSW
Sector E - Glass, Clay, Cement, and Gypsum	Sector E - Glass, Clay, Cement, and Gypsum				X	OSW
Sector F - Primary Metals	Sector F - Primary Metals				X	OSW
Sector J - Mineral Mining and Dressing	Sector J - Mineral Mining and Dressing				X	OSW
Sector K - Hazardous Waste Treatment, Storage, and Disposal Facilities	Sector K - Hazardous Waste Treatment, Storage, and Disposal Facilities				X	OSW
Sector M - Automotive Salvage Yards	Sector M - Automotive Salvage Yards				X	OSW
Sector N - Scrap Recycling	Sector N - Scrap Recycling				X	OSW
Sector O - Steam Electric Generating Facilities	Sector O - Steam Electric Generating Facilities				X	OSW
Sector P - Land Transportation and Warehouse	Sector P - Land Transportation and Warehouse				X	OSW
Sector R - Ship and Boat Building	Sector R - Ship and Boat Building				X	OSW
Sector S - Air Transportation Facilities	Sector S - Air Transportation Facilities				X	OSW
Sector U - Food and Kindred Products	Sector U - Food and Kindred Products				X	OSW
Sector W - Furniture and Fixtures	Sector W - Furniture and Fixtures				X	OSW
Sector X - Printing and Publishing	Sector X - Printing and Publishing				X	OSW
Sector Y - Rubber, Misc Plastics Industries	Sector Y - Rubber, Misc Plastics Industries				X	OSW
Sector Z - Leather Tanning and Finishing	Sector Z - Leather Tanning and Finishing				X	OSW
Creighton Prep Final 11-9-2017	Creighton Prep Project Fact Sheet	X	X			OSW
UNO Final 4-24-18	UNO Project Fact Sheet	X	X			OSW

Official Name to Use	Title on Piece	Res	Com	Con	Ind	Developed by
Rockbrook_Prairie Lane Park Final 4-18-18	Rockbrook_Prairie Lane Park Project Fact Sheet	X	X			OSW
Dundee Final 11-7-17	Dundee Project Fact Sheet	X	X			OSW
Saddlebrook Final 4-24-18	Saddlebrook Project Fact Sheet	X	X			OSW
Florence Streetscape Final 4-18-18	Florence Streetscape Project Fact Sheet	X	X			OSW
UTS Final 4-18-18	UTS Project Fact Sheet	X	X			OSW
Orchard Park Final 10-27-2017	Orchard Park Project Fact Sheet	X	X			OSW
58th and Maple St Final 10-27-2017	58th and Maple St Project Fact Sheet	X	X			OSW
50th & Pine Final 11-9-2017	50th & Pine Project Fact Sheet	X	X			OSW
Saddle Hills Final 10-27-2017	Saddle Hills Project Fact Sheet	X	X			OSW
Urban Waters Fact sheet Nebraska	Urban Waters Fact Project Fact Sheet	X	X			OSW
Country Club Final 10-27-2017	Country Club Project Fact Sheet	X	X			OSW
Elmwood Park Diversion Project Sheet FINAL11-28-2017	Elmwood Park Diversion Project Fact Sheet	X	X			OSW
Hillsdale Swale Final 4-24-18	Hillsdale Swale Project Fact Sheet	X	X			OSW
Adams Park Final 4-24-18	Adams Park Project Fact Sheet		X			OSW
Douglas Streetscape Final 4-18-18	Douglas Streetscape Project Fact Sheet		X			OSW
SOIA Final 4-18-18	SOIA Project Fact Sheet		X			OSW
SE Precinct Final 4-24-18	SE Precinct Project Fact Sheet		X			OSW
Zorinsky FINAL 11-30-17	Zorinsky Project Fact Sheet		X			OSW
Spring Lake Project Sheet FINAL 11-9-17	Spring Lake Project Sheet Project Fact Sheet	X	X			OSW
Fontenelle Park Final 11-7-17	Fontenelle Park Project Fact Sheet		X			OSW
24th St Bioretention Final 10-27-2017	24th St Bioretention Project Fact Sheet	X	X			OSW
VIL Final 10-27-2017	VIL Project Fact Sheet		X			OSW
OPS GI BuyIn Guide Final	Omaha Public Schools Green Infrastructure Buy-In Guide	X				OSW
GI Education Package final	Green Infrastructure Education Package	X				OSW
Middle School Standards 12-18-17	Middle School Science and Mathmatics Standards for GI	X				OSW UNL
High School Standards 12-18-17	High School Science and Mathmatics Standards for GI	X				OSW UNL
Elementary School Standards 12-18-17	Elementary School Science and Mathmatics Standards for GI	X				OSW UNL
GI Industry Fact Sheet 12-12-17	Green Infrastructure Industry Fact Sheet	X				OSW UNL
High School Lesson Plans	High School Example Lesson Plans	X				OSW UNL

Attachment F - Education and Outreach Materials

Official Name to Use	Title on Piece	Res	Com	Con	Ind	Developed by
Elementary School Lesson Plans	Elementary School Example Lesson Plans	X				OSW UNL
Middle School Lesson Plans	Middle School Example Lesson Plans	X				OSW UNL

Res – Residential
Com – Commercial
Con – Construction
Ind - Industrial

OSW - Omaha Stormwater Program
OAQ - Omaha Air Quality Program
SW/Recycling - Omaha Solid Waste & Recycling Programs
CSO - Omaha CSO Program
KOB - Keep Omaha Beautiful\
UNL – University of Nebraska - Lincoln

ATTACHMENT G

CITY OF OMAHA
MS4 MAINTENANCE ACTIVITY DESCRIPTIONS
GOOD HOUSEKEEPING & POLLUTION PREVENTION

Compiled by: City of Omaha Environmental Quality Control Division

Introduction

The City of Omaha Environmental Quality Control Division has coordinated with the City of Omaha's Public Works, and the Parks, Recreation, & Public Property Departments to describe and track MS4 maintenance activities, as part of the City of Omaha's MS4 permit. This document is laid out by maintenance activity type with a description of who is involved, the maintenance activity, monitoring, waste disposal, documentation, and training.

Stormwater Catch Basin & Inlets

- ***Who*** - City of Omaha Public Works Department, Sewer Maintenance Division
- ***Monitoring Strategy*** - As a general practice the City of Omaha Sewer Maintenance Division evaluates the storm inlets in the MS4 area of our jurisdiction as a secondary function of our annual maintenance goals. Crews will inspect inlets as assigned and clean them as needed.
- Stormwater inlets that have been identified as high priority are cleaned on a preventative maintenance schedule. Priorities are established by understanding potential public hazard due to flooding, discharge to high profile bodies of water like Lake Zorinsky and type of debris that typically causes blinding of the inlet. All other inlets are cleaned on a complaint based schedule.
- Inspection and cleaning of the inlets in a given Sewer Management Area (SMA) is assigned by the Maintenance Supervisor to a field group. The field group Foreman will assign the work to a crew, if the crew has completed all Sanitary Sewer System Maintenance.
- ***Maintenance – Preventative***
    1. Crews are given a map of the area to clean that shows the assets
    2. Crew inspects each inlet, cleans what they can and sends the fully plugged inlets to a vacuum truck
    3. The map is given to the clerks who make a City Works work order to document the inlets as cleaned or needing a vacuum truck
    4. The work order is given to a vacuum crew to clean the inlet(s) that the inspection crew did not clean
    5. Crew cleans the inlets and turns the completed work order to the clerks
    6. Clerk documents the cleaning tasks and closes the work order
- ***Maintenance - Complaint***
    1. Clerk creates a work order for the inlet issue in City Works
    2. The work order is assigned to the foreman of the specific quadrant the inlet resides
    3. Foreman will inspect the structure, determine if it can be cleaned by the foreman or needs to go to a vac or jet crew, if the inlet is causing a flooded street at the time of inspection, the foreman will call a vac or jet crew at that time
    4. Crew gets the work order and cleans it
    5. Crew gives the paper copy to a clerk
    6. Clerk adds the tasks and asset numbers of all cleaned inlets
    7. Clerk closes the work order or sends it to the next foreman if other tasks are on the work order
    8. If the foreman determines a complaint inlet needs to be cleaned more frequently by looking at the work order history (inlet has been worked on for flooding in the past) or the conditions of the area the inlet is draining (has industrial trash or a sycamore tree for instance), the foreman can request more frequent maintenance based on their observations.
- ***Documentation*** - When maintenance is performed, it is tracked in CityWorks with a work order, as described above. Total inlets inspected are logged and total inlets cleaned are logged. If illegal dumping is suspected, it will be investigated by the City of Omaha's Environmental Quality Control

Division to determine the responsible party, initiate a compliance action, and confirm it is no longer occurring. The field crews also fill out a daily production sheet (paper). Total inlets inspected are logged and total inlets cleaned is logged. A foreman or clerk enters the production into a database. No reference to the structures are kept in this database. There currently is not a data collection method for the amount of material/waste claimed from inlet structures. Planning is underway for a more robust assignment/tracking system for inlet maintenance using our Work Management System (City Works).

- ***Waste Disposal*** – Water removed during maintenance activities is decanted into the sanitary or combined collection system and materials extracted are taken to a water resource recovery facility for processing before being taken to a landfill. Manually collected debris is loaded into truck beds and disposed of at City maintenance yards into their waste piles. These piles are maintained in collection bins and regularly disposed of by taking them to a landfill.
- ***Training*** - Employees receive training periodically to ensure catch basins and inlets an inlet is on PM or based on complaints received by the public are properly cleaned using updated SOP.

City-Owned Open Channels

- ***Who*** - City of Omaha Public Works Department, Street Maintenance Division and Sewer Maintenance Division, if drainage structures are involved.
- ***Monitoring Strategy*** –
    - Street Maintenance - Channels are inspected on a complaint basis.
    - Sewer Maintenance - Monitors stormwater controls along open channels per their designed maintenance schedule.
- ***Maintenance*** - Determination is made regarding severity and extent of debris and necessary maintenance is scheduled accordingly.
- ***Documentation*** – City-owned channels and drainage structure maintenance activities are documented using the CityWorks asset management system. If illegal dumping is suspected, it will be investigated to determine the responsible party, initiate an enforcement action, and confirm it is no longer occurring, this is typically done by the Environmental Quality Control Division.
- ***Waste Disposal*** – Debris removed is disposed of properly.
- ***Training*** –
    - Street Maintenance – Periodic training is provided to the operators performing the work to ensure proper operation and processing of the appropriate issues. Foreman are trained on the proper maintenance of drainage ways and structures periodically through review with management and engineering staff. The training is conducted at least quarterly.
    - Sewer Maintenance – Staff is trained to inspect and or repair storm water outfalls on a complaint basis. Inspection of structures has been done in the past at a 5 year cycle. If defective parts of an outfall are found, a work order is created and the problem is mitigated based on priorities set by the Division Manager and Superintendent.

Street Sweeping and Cleaning

- ***Who*** – City of Omaha Public Works Department Street Maintenance Division, and Parking Division
- ***Monitoring Strategy*** – Activities are on a schedule. If conditions warrant additional sweeping and/or cleaning, it is done on a complaint basis.
- ***Maintenance*** -
    - Street Maintenance - Sweep all streets twice annually. Business Districts and major streets are swept more frequently, approximately monthly.

    - Parking - Mechanically sweep 7 parking facilities and 3 surface lots, all municipally owned parking structures. All facilities are swept down twice a year, in the spring and fall. Municipally owned parking structures are also washed twice per year in conjunction with sweeping. These services are contracted out.
- ***Documentation*** –
    - Street Maintenance - Lane miles and tonnage of collected materials is maintained by Street Maintenance Division.
    - Parking – Amounts are not tracked as they have no means to weigh the material.
- ***Waste Disposal*** –
    - Street Maintenance - For street sweeping, the street sweepers collect the material, temporarily store the material at a City municipal facility for drying, and then disposed of at the landfill. A portion of the sweepings are screened for recoverable material that can be reused, material not suitable for reuse is landfilled.
    - Parking - For parking structures and lots, the swept material is collected and disposed of at the landfill. When parking structures are washed, practices are used to capture the solids from the wash down which are then disposed of at the landfill.
- ***Training*** –
    - Street Maintenance – Periodic training is provided to the operators performing the work to ensure proper operation and processing of the appropriate issues. The training is conducted at least quarterly.
    - Parking – Services are contracted out and no training is directly provided to the contractor. It is expected that the contractor operates in accordance with local and state regulations.

Structural Stormwater Controls

- **City-Owned Stormwater Basins**
  - ***Who*** – City of Omaha Public Works Department, Sewer Maintenance and Environmental Quality Control Division. City of Omaha Parks Recreation and Public Property Department.
  - ***Monitoring Strategy*** – Inspections are conducted twice a year by the Environmental Quality Control Division, once in the Fall after vegetation has dropped and once in early Spring prior to vegetation becoming full grown. Inspections are documented in CityWorks.
  - ***Maintenance*** – Maintenance summary sheets have been created for the basins that summarizes maintenance activities, what triggers maintenance, and who is responsible for conducting the maintenance. Maintenance noted during an inspection or on a complaint-basis are forwarded over to the department or division is responsible for that maintenance activity. Maintenance that isn't clearly defined is discussed with appropriate departments and divisions to coordinate. Parks Department utilizes re-occurring Work Orders for scheduling and recording of the basins.
  - ***Documentation*** – Maintenance activities are documented in CityWorks by the respective department or division.
  - ***Waste Disposal*** – All waste materials are properly decanted, if needed, into the sanitary or combined collection system and remaining material is disposed of at a landfill.
  - ***Training*** –
    - EQCD - Training on performing inspections is provided to new employees. This includes one-on-one training of forms, workflows, etc… and field training by accompanying a current inspector on an inspection. On-going training is done as-needed to review processes.
    - Street Maintenance – Periodic training is provided to the operators performing the work to ensure proper operation and processing of the appropriate issues. The training is conducted at least quarterly.
    - Sewer Maintenance – Operators are trained to know the proper inspection and cleaning methods of each designed control system per the maintenance specifications laid out in the design engineer's maintenance plan. Operators complete a site visit with a supervisor to walk through the plan and inspect the structures to be maintained. Follow up or onboarding training of new employees is conducted periodically.
    - Parks Department – Pesticides are used by PRPP on an "only as needed" basis. Extensive efforts are taken to minimize run off into surrounding water sheds. Pesticides are handled and applied by a select number of individuals holding a NE Pesticide Applicators License. The certification and CEU process is documented annually by the PRPP Office Manager. New certifications, Training and CEU accrual are generally accomplished over the winter months via testing or conferences conducted by the Douglas County Extension Service, UNL Agriculture and NE Forest Service. All PRPP employees are required to attend annual Storm Water training administered by the EQCD.

- **City-Owned Green Infrastructure**
  - ***Who*** – City of Omaha Public Works Department, Environmental Quality Control Division
  - ***Monitoring Strategy*** – Inspections are conducted annually by the Environmental Quality Control Division. Inspections are filed on CityWorks.

- ***Maintenance*** – City-owned green infrastructure practices are maintained by the Environmental Quality Control Division. They are maintained throughout the season. If maintenance activities are identified in the annual inspection, work orders are created to track maintenance performed.
- ***Documentation*** – Maintenance activities are tracked in CityWorks.
- ***Waste Disposal*** – All waste materials are temporarily stored at City facilities where landscape wastes, i.e. plant material and sediment, can be deposited into storage areas until they are disposed of at a landfill.
- ***Training*** - Training on performing inspections is provided to new employees. This includes one-on-one training of forms, workflows, and field training by accompanying the stormwater program coordinator on an inspection. On-going training is done as-needed to review processes.

ATTACHMENT H

Site Weather Observations

Data

Daily weather history and observations were gathered from the National Weather Service (NWS) Eppley Airfield (Station ID: USW00014942) weather station. Rain data from the Papio Missouri Natural Resource District City Maintenance Shop (411701095570601), Big Papillion Creek at Q Street (06610770), and Little Papillion Creek near Irvington, Nebraska (06610750) rain gauges was used to supplement data gaps from on-site rain gauges.

Observations

Average high and low temperatures in 2021 were generally higher than average during the monitoring period, however, during the monitoring period average temperatures fell within the normal range. The Eppley Weather Station data recorded a total precipitation in 2021 of 33.21 inches, only a slight departure from the National Weather Service (NWS) Omaha/Valley Average Rainfall of 30.58 inches annually (Table 1). It is also substantially higher than 2020 when 17.65 inches fell, a difference of 15.56 inches. Cumulative precipitation was less than normal during the early part of the monitoring period, but then was above normal during the peak of summer and into the fall.

Month	NOAA 2021 Precipitation (in)	NOAA Normal Precipitation (in)	Depart from Normal (in)		2021 Average Low (°F)	2021 Average High (°F)	Omaha Normal Low (°F)	Omaha Normal High (°F)
January	1.52	0.75	0.77		21.1	36	15.2	33.6
February	1.14	0.95	0.19		7.6	25	19.3	38.6
March	4.58	1.79	2.79		34.6	57.6	30.0	52.1
April	1.21	3.17	-1.96		40.9	65.4	41.1	64.1
May	3.40	4.66	-1.26		52.4	71.9	52.7	74.6
June	3.79	4.44	-0.65		65.8	89.5	63.4	84.4
July	4.44	3.55	0.89		67.5	87.9	68.0	88.1
August	3.41	3.32	0.09		66.2	90.3	64.1	87.2
September	2.35	2.96	-0.61		58.8	83.1	56.1	79.1
October	4.75	2.32	2.43		47.4	68.5	43.2	65.5
November	0.34	1.45	-1.11		33.4	55.6	30.2	50.3
December	0.38	1.22	-0.84		24.6	47.2	19.8	37.7
TOTAL	**31.31**	**30.58**	**0.73**	**Avg:**	**43.4**	**64.8**	**41.9**	**62.9**

Table 1: Summary of NWS Omaha Weather Station 2021 and historical average precipitation and temperatures

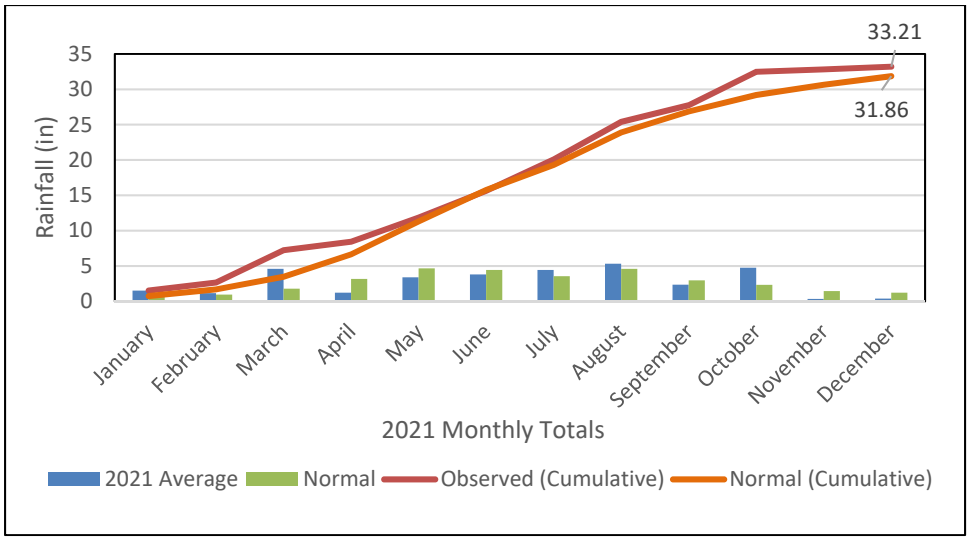


Figure 1: 2021 Comparison of Observed and Normal Rainfall

According to the NWS Eppley Rain Gauge, over 48 measurable rain events during a calendar day timeframe, from 0.01 inches to 2.64 inches, occurred between May 2021 and October 2021. During this monitoring period, 7 rain events exceeded 0.5 inches, and 8 of these precipitation events exceeded 1 inch in accumulation. A summary of the 0.5-inch and 1-inch events are included in Table 2.

Date	Rainfall
May 8	0.74
May 27	0.96
June 11	0.74
June 24	0.70
June 28	1.07
June 29	0.52
July 9	0.56
July 10	0.83
July 30-31	2.08
August 7	2.02
August 31	2.64
September 30	1.38
October 13	1.09
October 24	2.28
October 27	1.11

Table 2: Summary of 2021 rain events of 0.5 in or greater

Rain Events for BMP Assessment

Two rain events were evaluated for each monitoring site. All sites were analyzed for the same two events in 2021, with the exception of Orchard Park and Adams Park. The two events included a large, intense storm and a smaller, gentler storm. On-site rain gauges or the nearest rain gauge was utilized for each site. The rain gauge at Eppley Airfield is presented below and is used to describe why these events were selected for BMP assessment.

The first event (Event 1) was a 0.70-inch event that occurred the morning of 06/24/21 (Figure 2). The event hit hard initially, and then tapered off; a small second round of rain occurred later in the day. The average initial intensity was 0.55 in/hr (13.97 mm/hr). The precipitation later in the day was smaller and with the low intensity of 0.03 in/hr (0.80 mm/hr).

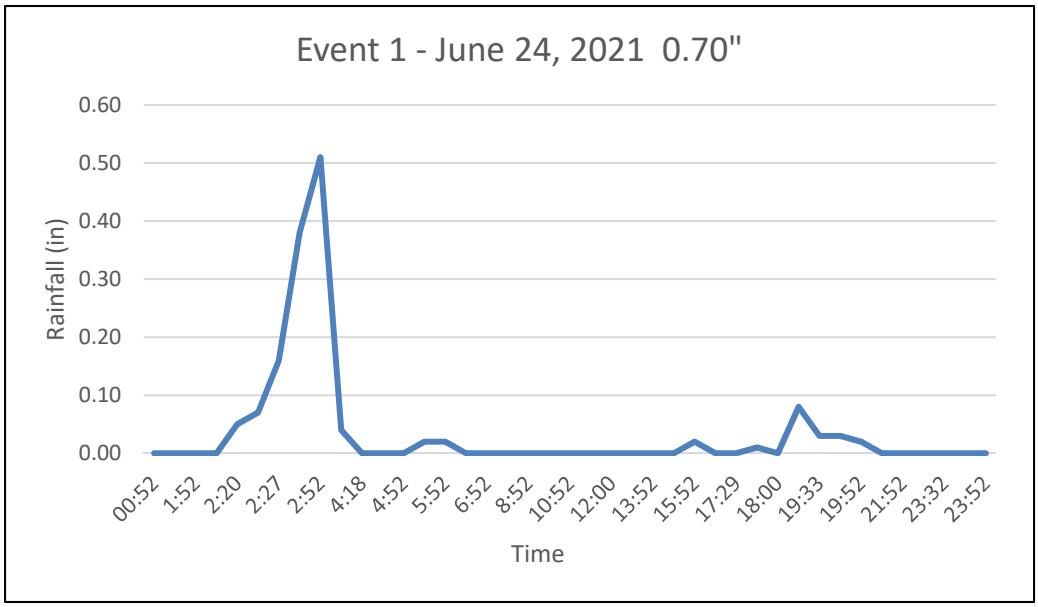


Figure 2: Event 1 Hydrograph

The second event (Event 2) was a 2.02 inch event that occurred August 7, 2021. The event was the third overall largest for the year. It started with 0.22" rainfall accumulation in an hour period in the morning. In the evening, the storm had an intense onset, causing flooding throughout the city, particularly in the eastern portion. In the first hour, 1.23" was received. The event had an average intensity of 0.57 in/hr (14.39 mm/hr) for the first three hours of the storm. Rain then tapered off the last hour with an additional 0.1" of accumulation. Event 2 was an intense but short storm. Event 2 was preceded by approximately 8 days without precipitation.

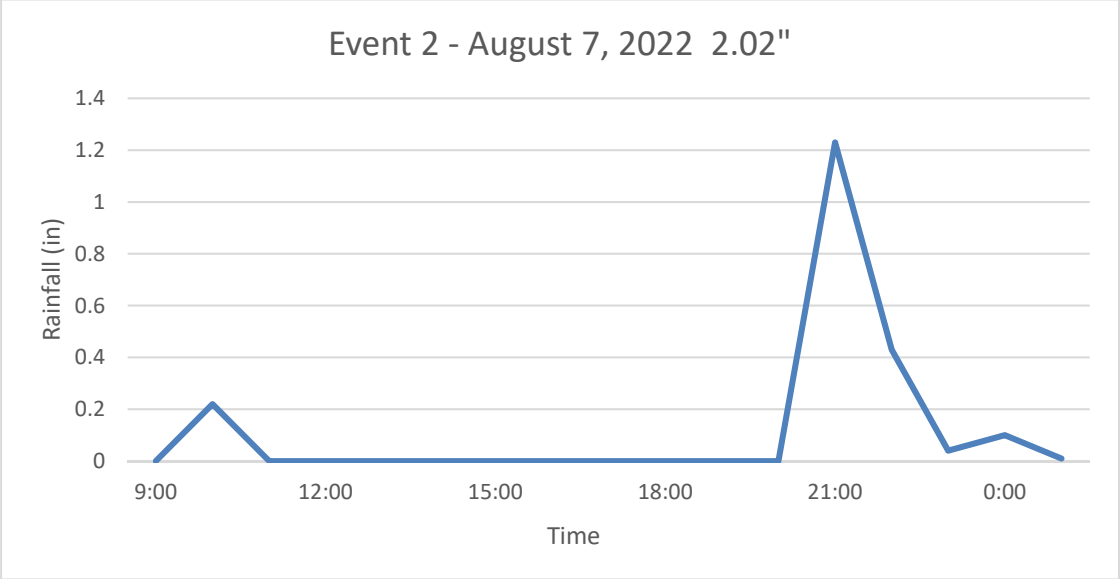


Figure 3: Event 2 Hydrograph

Saddlebrook

Data was collected with Isco 2150 Area Velocity Flow Modules and Sensors that measure quantity and velocity of stormwater runoff. Flow analysis is included for the green and grey roofs as well as the bioretention system and basin for the 2021 sampling period. This data is used to compare volume, peak flow rate, and overall efficiency between the traditional and green infrastructure practices. Outflow (discharge) data was collected from the grey and green roofs for direct comparison. Outflow data was collected from the bioretention system and inflow (runoff) data was collected from the east parking lot. Runoff to the dry detention basin from the east parking lot has not been treated by a BMP and serves as a control for the bioretention system in this study. An Isco 674 Tipping Bucket rain gauge was also installed on site for local and accurate precipitation measurements. Equipment was regularly maintained with fresh desiccant to ensure the continued reliability of the data.

Monitoring equipment collected data from May to November 2021. During this time 32 rain events totaling 18.28 inches were measured. For the clustered storm events with little time in between, the green infrastructures often were still dewatering and had still had flow at the onset of the next event. Also, review of data shows that equipment lost power at times unexpectedly during the monitoring period, preventing data collection.

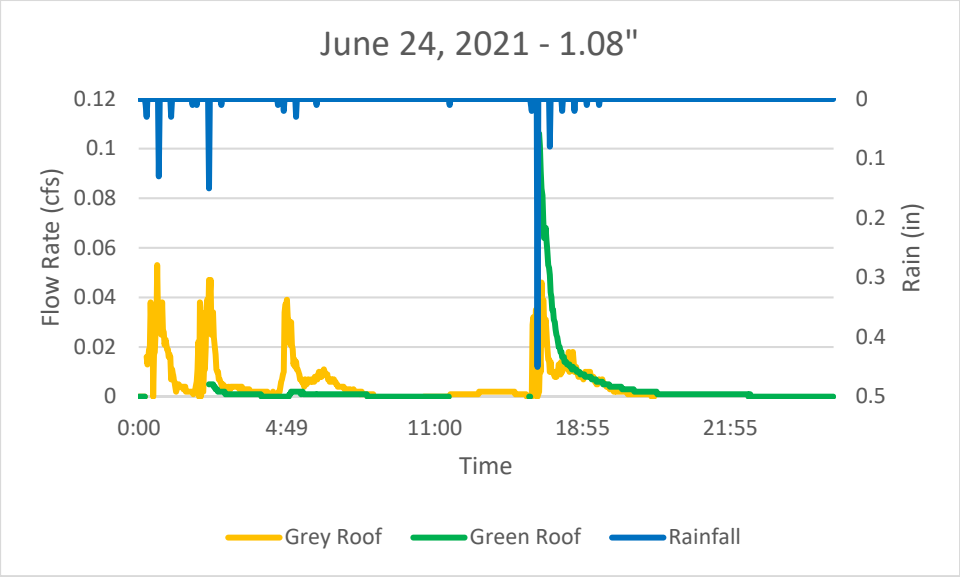
Total discharge from the green and grey roofs varied greatly, and largely depended on the amount of rainfall and intensity of the storm. During the 2021 sampling period the flow meter on the grey roof measured a total volume of 9,056.31 cubic feet (67,745.91 gallons). Monitoring equipment recorded the green roof discharged only 14 of 15 rain events shown in the table below and observed 3999.39 cubic feet (29,917.52 gallons) of total flow. The green roof had 5056.96 cubic feet (37,828.39 gallons) less total flow than the grey roof for the time period, a 55.84% reduction in volume for the monitored events. In comparison, the 2020 similarly showed 4967.13 cubic feet (37,156.69 gallons) less total flow than the grey roof.

On average, peak flow reduction through the green roof has been consistent with previous years of monitoring. In 2021the green roof generally showed delay in initial flow and a reduction in the peak flow rate in comparison to the grey roof. (Figure 4). During the storms with a heavy onset of rain, the delay was minimal. The instances where the green peak flow was greater than the grey peak flow were usually during days of consecutive rain events, when the green roof ground would have already been saturated.

Year	Date	Event Precip	Total Gray Roof Flow	Total Green Roof Flow	Peak Flow Rate Gray	Peak Flow Rate Green	Flow Rate Reduction	Initial Flow Delay
yyyy	*dd-mmm*	*in*	*cf*	*cf*	*cfs*	*cfs*	*%*	*min*
2021	19-21-May	0.69	121.99	158.88	0.07	0.05	24.29	5
2021	23-May	0.04	55.83	0.00	0.05	0.00	100.00	
2021	24-May	0.12	52.23	1.03	0.02	0.0002	99.00	150
2021	26-27-May	1.16	882.87	314.11	0.14	0.13	4.29	75
2021	11-Jun	0.61	306.78	15.30	0.08	0.004	94.81	30
2021	20-Jun	0.25	264.30	4.58	0.06	0.001	98.44	15
2021	24-Jun	1.08	249.31	238.41	0.05	0.11	-100.00	75
2021	25-Jun	0.48	94.92	168.80	0.03	0.15	-329.41	59
2021	29-Jun	0.09	84.95	0.08	0.05	0.00003	99.94	32
2021	7-Aug	0.98	523.41	267.42	0.12	0.11	9.48	15
2021	2-5-Sep	0.83	477.64	379.83	0.11	0.22	-92.92	0
2021	30-Sep-1-Oct	0.44	654.01	79.40	0.07	0.01	92.54	29
2021	13-Oct	0.71	527.71	174.07	0.12	0.05	57.85	30
2021	24-Oct	2.57	2421.86	1364.99	0.14	0.10	28.57	30
2021	27-28-Oct	1.22	2338.50	832.49	0.11	0.02	81.98	0.00
	Total Flow:		**9056.31**	**3999.39**		**Average:**	**69.72***	

* Average represents only positive values

Table 3: Summary of 2021 rain/discharge events for the Green and Grey Roofs at Saddlebrook



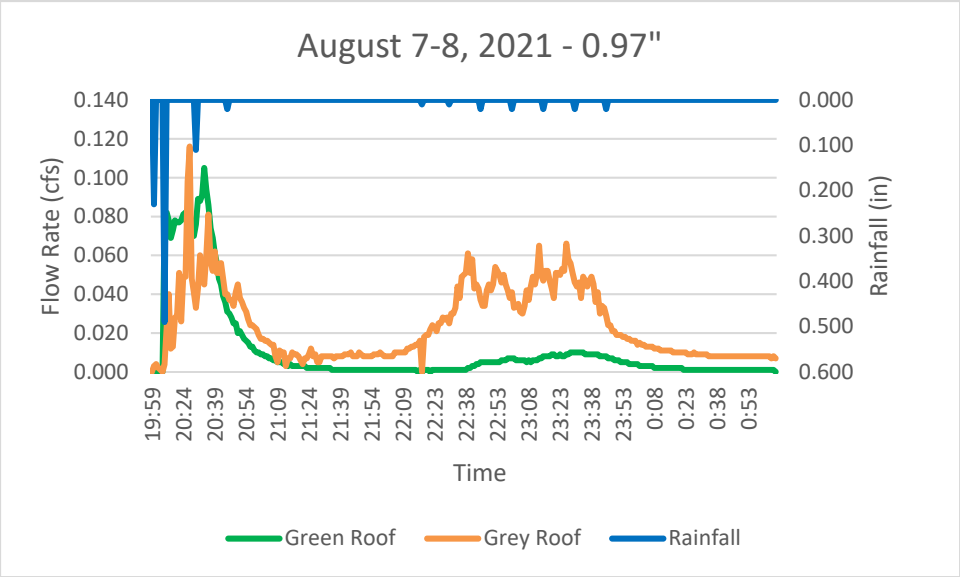


Figure 4: Discharge events for 6/24/21 and 08/7/21-8/8/21 at the green/grey roofs

Total discharge from the bioretention and basin also varied greatly. During the 2021 sampling period the basin flow meter measured a total volume of 80,618.47 cubic feet (603,068.04 gallons). Monitoring equipment recorded discharge from the bioretention system only 19 of 20 rain events detailed in the table below, with a total discharge observed of 38,818.56 cubic feet (290,383.01 gallons). The bioretention system had 41,799.91 cubic feet (312,685.03 gallons) less total flow than the basin, a 51.85% reduction in volume for the monitored events. In comparison to 2020, a drier year, the total from the basin was almost doubled during the wetter 2021 monitoring period; the bioretention reduction of total flow was similar in 2020 at 47.92%.

On average, peak flow reduction through the bioretention system has been consistent with previous years of monitoring. In 2020 peak flow was reduced by 80.87%; 2021 peak flow was reduced by 77.69%. The overall average was slightly lower due to one instance where the bioretention peak flow rate was higher than the rate for the basin; this occurred at a time of consecutive storms, and the bioretention system would have been saturated. The bioretention system showed a delay of flow compared to the basin flow. In all cases, the start of flow from the bioretention system was recorded after the onset of basin flow (Table 4). During most rain events, especially those less than one inch, flow through the bioretention system displayed a common pattern in which initial and peak flow was delayed and peak flow was slower and more muted compared to the basin (Figure 5).

Year	Date	Event Precip	Total Basin Flow	Adjusted Total Basin Flow	Total Bioretention Flow	Peak Flow Rate Basin	Peak Flow Rate Bioretention	Flow Rate Reduction	Initial Flow Delay
yyyy	*dd-mmm*	*in*	*cf*	*cf*	*cf*	*cfs*	*cfs*	*%*	*min*
2021	23-May	0.04	55.66	67.35	49.14	0.08	0.007	91.25	90
2021	24-May	0.12	266.36	322.30	233.75	0.071	0.03	57.75	75
2021	26-27-May	1.17	5797.89	7015.45	3908.55	1.86	0.465	75.00	60
2021	11-Jun	0.61	1569.45	1899.03	1094.89	0.882	0.138	84.35	30
2021	20-Jun	0.25	443.78	536.97	237.44	0.23	0.049	78.70	15
2021	24-Jun	1.08	3634.24	4397.43	2593.8	2.61	0.22	91.57	30
2021	25-Jun	0.48	3233.85	3912.96	1395.99	2.04	0.13	93.63	65
2021	29-Jun	0.09	225.72	273.12	157.55	0.121	0.028	76.86	30
2021	14-15-Jul	0.3	2227.13	2694.83	612.81	0.792	0.03	96.21	60
2021	17-Jul	0.7	4711.48	5700.89	2182.92	2.43	0.28	88.48	45
2021	31-Jul	0.42	6997.45	8466.91	2682.17	2.424	0.492	79.70	15
2021	7-Aug	0.98	5676.42	6868.47	3647.09	2.404	0.47	80.45	15
2021	20-Aug	0.3	307.891	372.55	457.66	0.228	0.125	45.18	15
2021	24-25-Aug	0.09	216.82	262.35	8.94	0.048	0.002	95.83	90
2021	27-Aug	0.67	2479.89	3000.67	1125.62	1.797	0.149	91.71	15
2021	28-29-Aug	0.46	3106.75	3759.17	1289.09	0.169	0.105	37.87	30
2021	31-Aug	2.06	8384.78	10145.58	8915.05	2.458	2.629	-6.96	45
2021	2-5-Sep	0.83	3518.97	4257.95	3750.58	2.283	0.326	85.72	15
2021	17-Sep	0.02	97.06	117.44	0	0.027	0	100.00	
2021	20-Sep	0.13	227.22	274.94	64.36	0.151	0.012	92.05	60
2021	30-Sep-1-Oct	0.44	1406.32	1701.65	818.68	2.369	0.174	92.66	15
2021	24-Oct	2.57	12041.7	14570.46	3592.48	1.405	0.266	81.07	30
		Total Flow:		**80618.47**	**38818.56**		**Average:**	**77.69**	

Table 4: Summary of 2021 rain/discharge events for the bioretention system and basin at Saddlebrook

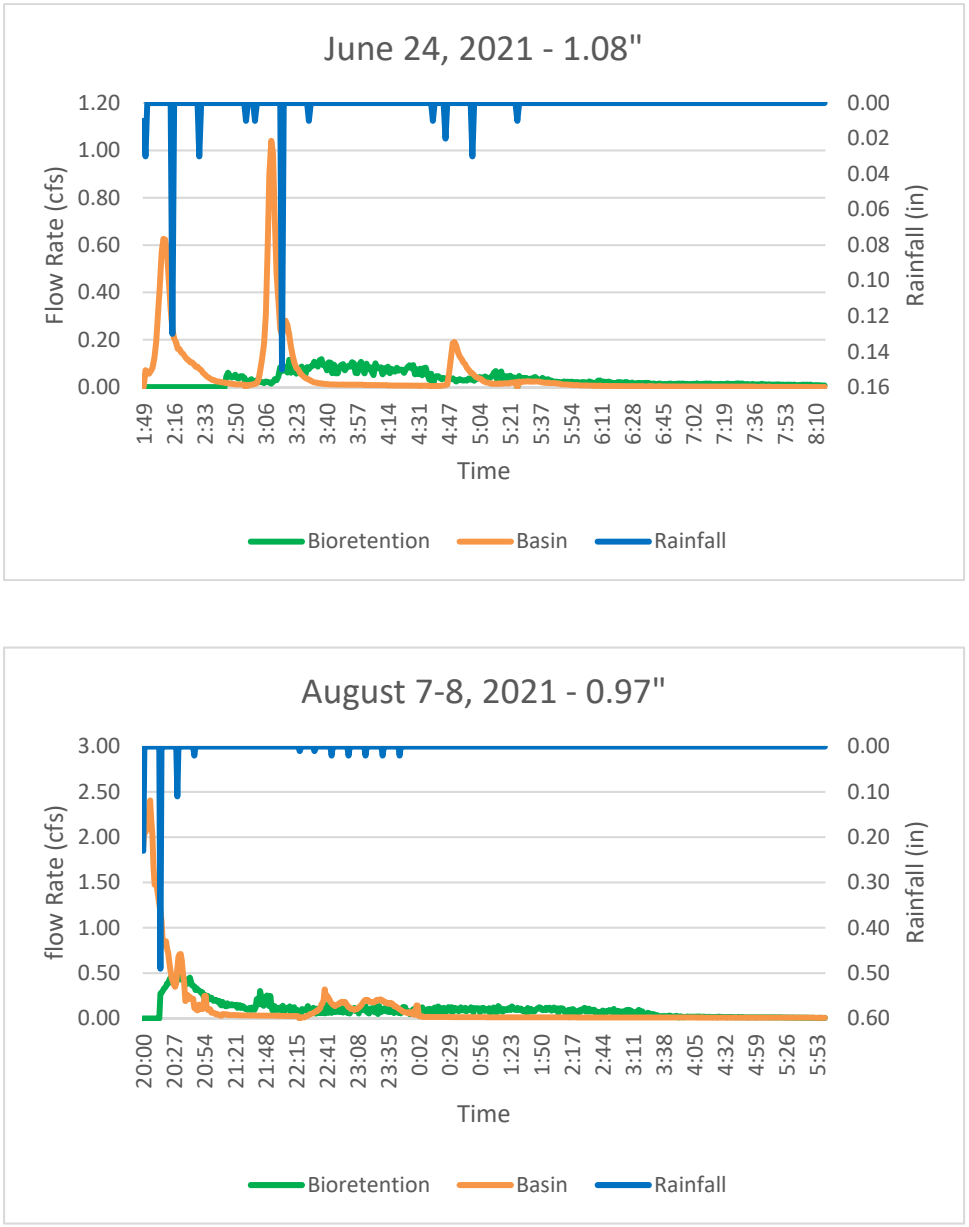


Figure 5: Discharge events for 6/24/21 and 08/7/21-8/8/21 at the bioretention system and basin

In 2021, the HOBO water level sensor installed at the bottom of the bioretention system did not produce reliable results and installation will need to be modified in 2022.

Orchard Park

Local rain data was gathered from the Papio Missouri NRD weather station at Little Papillion Creek near Irvington, Nebraska (ID: 06610750). One HOBO water level pressure transducer was installed in the east bioretention system at the north end of Orchard Park. Flow enters through curb cuts along N 66th Street into the west bioretention system then overflows into the east cell. During the 2021 monitoring period, the underdrain valve in the west bioretention cell was closed to promote ponding and subsequent spillover from the street garden to main bioretention system. Event 1 and Event 2 weren't the same dates used at other sites. July 31, 2021 and August 7-8, 2021 were chosen for Orchard Park.

Event 1

The local rain gauge during Event 1, July 31, 2021, recoded 1.28 inches of rainfall in 2 hours and 15 minutes for an average intensity of 0.57 in/hr (14.5 mm/hr).

Sensor level started to record at the same time the rain gauge data recorded. The maximum ponded water level reached 1.615 inches. Water level took approximately 2 hours and 50 minutes to draw down at 0.57 in per hour.

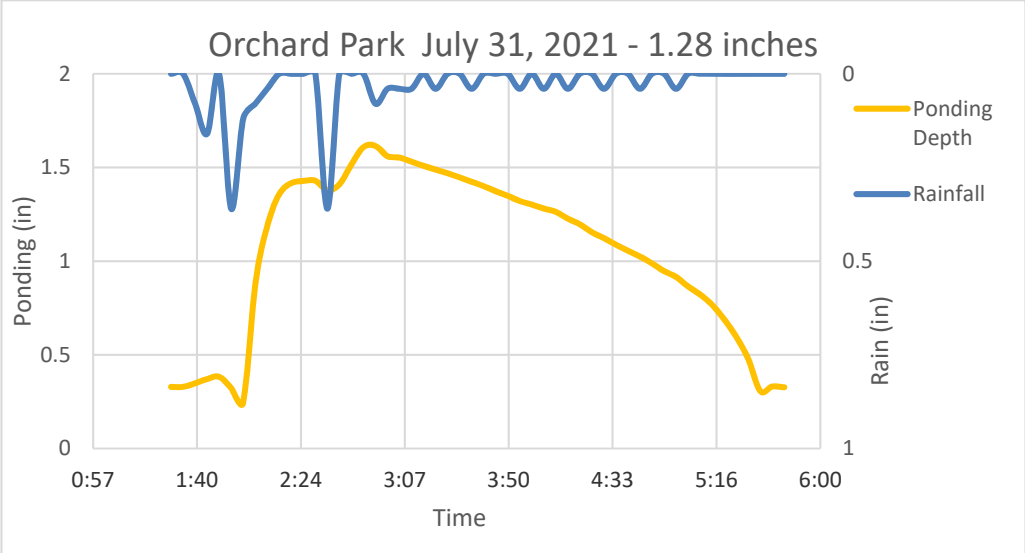


Figure 6: Orchard Park Event 1

Event 2

The local rain gauge during Event 2, August 7-8, 2021, recorded 1.96 inches of rainfall in under an hour, for an average intensity of 2.13 in/hr (54.1 mm/hr).
Sensor level started to record data prior to the rain gauge recording rain. The maximum ponded water level reached 1.651 inches. Water level took approximately 5 hours and 50 minutes to draw down at 0.28 in per hour.

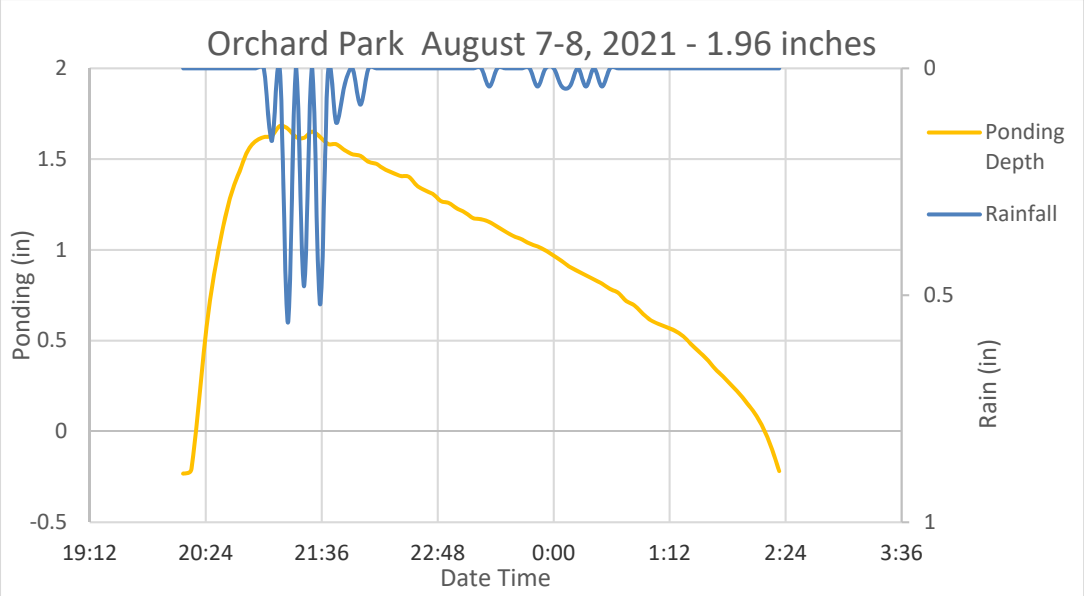


Figure 7: Orchard Park Event 2

Orchard Park bioretention system continues to perform as designed and is effective at managing stormwater runoff that enters it. This is the oldest bioretention system demonstration project for the Program that utilizes the infiltration cell concept (limited footprint of amended soils and underdrain with a valve). The valve on the underdrain system is a significant factor for improving the overall effectiveness of the bioretention system. The ability to slow water flow through it significantly reduces peak flow and total flow due to evapotranspiration and infiltration losses. Monitoring will continue in 2022.

Creighton Prep

A stilling basin with a pressure transducer near the overflow weir measures the ponding depth of the bioretention system. An on-site rain gauge was used for measuring rain events. For both events, data shows that the system is effectively detaining water to delay peak discharge.

Event 1
Total precipitation for this event was 0.40 inches with an average intensity of 0.2 in/hr (5.08mm/hr). A small level of ponding was briefly observed as the rain was concluding, but this was quickly drawn down. More significant ponding began 20 minutes after the end of the storm and lasted approximately 2 hours. The maximum ponded depth for Event 1 was 0.958 feet which occurred 15 minutes after ponding began. Average drawdown for Event 1 was 0.31 inches per hour (7.874 mm/hr).

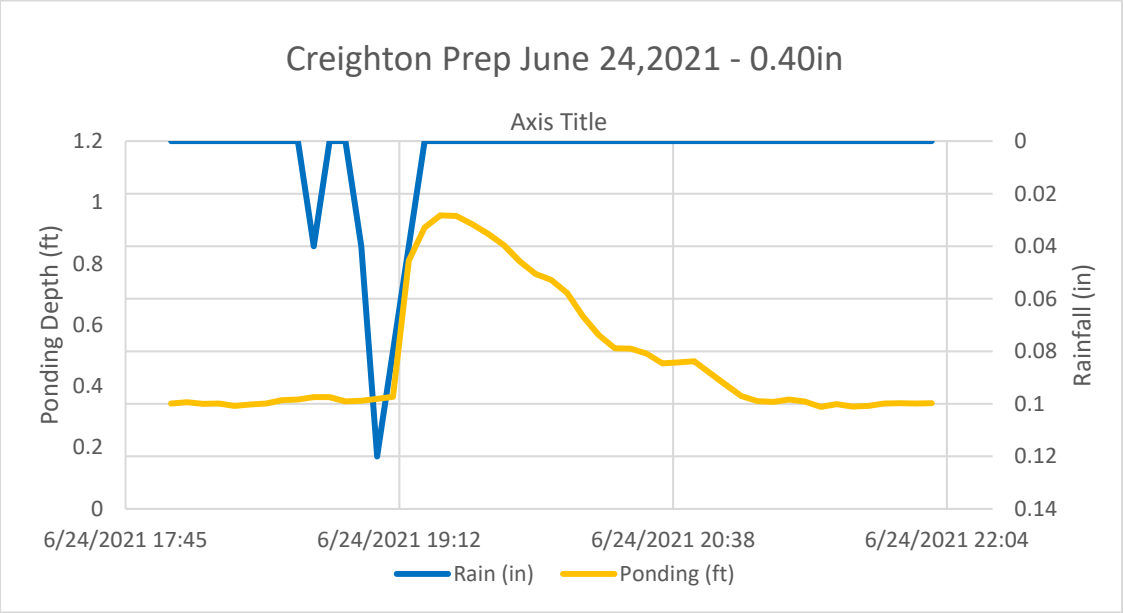


Figure 8: Creighton Prep Event 1

Event 2
Total precipitation was recorded at 2.52 inches of rain at an average intensity of 1.01 in/hr (25.65mm/hr). In comparison to Event 1, there was more significant ponding during this rain event, as well as a longer draw down time. More significant ponding did not occur until roughly 30 minutes after the end of the rain. Maximum ponding depth was 2.28 feet and occurred just over 30 minutes after ponding began. Average drawdown for Event 2 was 0.28 in/hr and it took less than 7 hours to dewater.

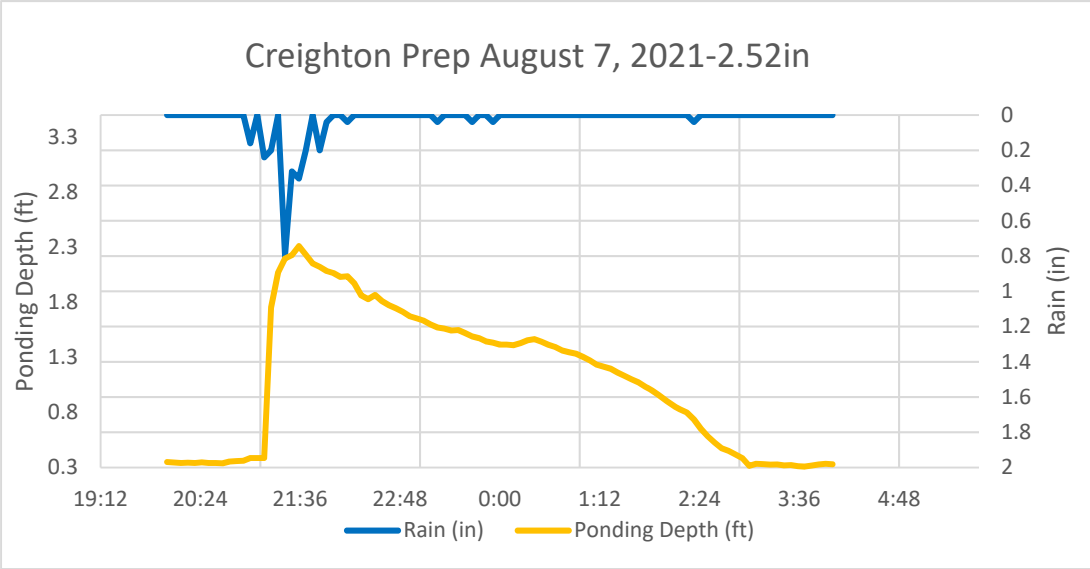


Figure 9: Creighton Prep Event 2

Water Quality

Water quality samples were collected on 10/13/2021 from the outflow only due to weather-related safety concerns accessing the inflow sampling location. The samples consist of three collections from the underdrain in the bioretention system, with first sample collected at 3:00am for the first, and 4:00am for the last. In addition to the three samples a blind duplicate was also retrieved to validate lab and field sampling techniques.

Area rain data was unavailable for this site because rain equipment was removed prior to sampling. NOAA at Eppley Airfield was used for rain site analysis. The rain event sampled produced 1.09 inches. The last recordable rain event in that area was on 10/2/21 and produced 0.02 inches of rain, 11 days without runoff prior.

Lab ID:	**1576602-01**	**1576602-02**	**1576602-03**		**Reporting Limit**
Sample Time:	3:00	3:20	4:00		
Constituent	**Out 1**	**Out 2**	**Out 3**	**Duplicate**	
TKN (mg/L)	0.98	0.76	0.8	0.8	0.5
NO2/NO3-N (mg/L)	0.24	<	0.26	0.26	0.2
Dissolved P (mg/L)	<	0.12	0.15	0.15	0.05
P (mg/L)	0.13	0.20	0.26	0.24	0.05
TS (mg/L)	80	66	68	52	10
TSS (mg/L)	56	29	13	14	4
E. coli (CFU/100mL)	24,196	19,863	15,531	17,329	1

Table 5: Creighton Prep Outflow Water Quality Results

Water quality samples were delivered to Midwest Laboratories in an iced cooler on 10/13/21 shortly after they opened. Water quality samples were tested for Total Kjeldahl Nitrogen (TKN), Nitrate/Nitrite Nitrogen (NO3/NO2-N), Phosphorous (P), Total Dissolved Phosphorus, Total Dissolved Solids (TDS), Total Suspended Solids (TSS). *E. coli* samples were analyzed at the City of Omaha's EQCD lab to ensure holding time were met.

Adams Park

Local rain data was gathered from the Papio Missouri NRD Rain Gauge at City Maintenance Shop (ID: 411701095570601). A total of 0.16 inches of rain fell at Adams Park during Event 1 at an average rate of 0.20 mm/hr. A total of 3.42 inches fell during Event 2 at an average rate of 6.20 mm/hr.

Water level data was used to assess the Adams Park site in 2021. Water level data was collected from three pressure transducers installed on site: PT-1) upstream of outlet structure, PT-2) in a micropool on the west side of the wetland area, and PT-3) upstream of the culvert beneath the future park road, as shown in Figure 10. Pressure Transducer-3 (PT-3) encounters flow first. In 2020, the placement of the sensor was adjusted to the bottom of the channel so that if any water was present, the sensor would definitely capture the reading, compared to its previous placement more off to the side where some accumulation data may have been missed. Ponding in the micropool is largely dependent on flow from the main channel overtopping a berm at roughly 1074.75 feet. Pressure Transducer-1 (PT-1) is installed at a lower elevation to record data even when water elevation is low. When the water surface elevation is above 1076.50 feet, drawdown is controlled by the slotted weir at the outlet structure. After the water surface elevation drops below 1076.50 feet, drawdown is controlled by an 8-inch orifice with an invert elevation of 1074.00 feet. Flow monitoring equipment was not installed in 2021.

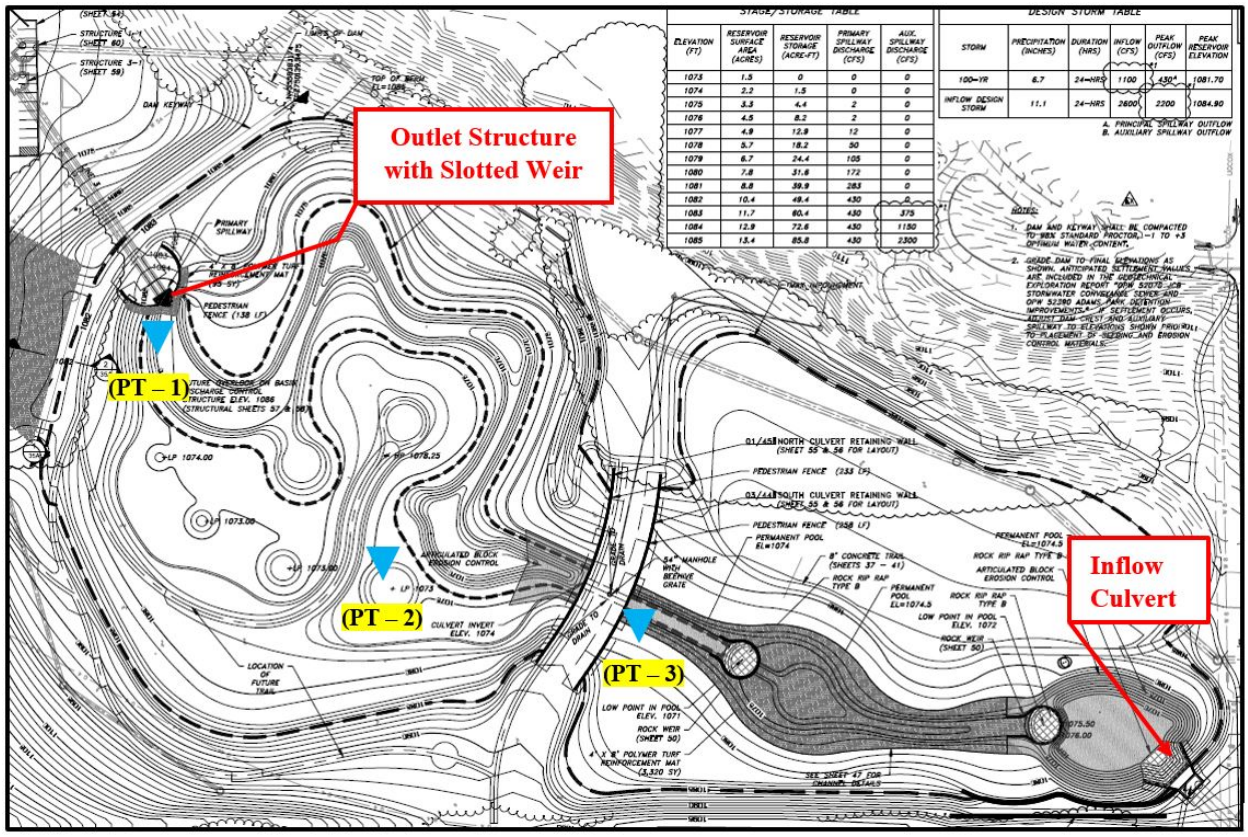


Figure 10: Inflow, outflow and pressure transducer locations at Adams Park

2021 Water Level Monitoring
The collected water level data from pressure transducers 1, 2 and 3 were found to be incomplete, and the water level data retrieved did not overlap, necessitating selecting two rain events with water level data from at least two pressure transducers.

Event 1
PT-1 is excluded due to unavailability of water level data during the event.

Rainfall amounts recorded from the Papio-Missouri NRD rain gauge registered light precipitation of 0.12" on 7/30/2021 at 7:15am, and 0.04" on 7/31/2021 at 3:45am. The collected data shows an approximate 15 minute lag time between the start of ponding in the detention area upstream of the future park road (PT-3) and the start of ponding downstream of the future park road in the micropool (PT-2). Ponding at PT-3 dewatered to its permanent pool elevation in approximately 2 days after each influx of runoff from the ongoing rain event, whereas ponding at PT-2 persisted for greater than 5 days after the second spike (Figure 11).

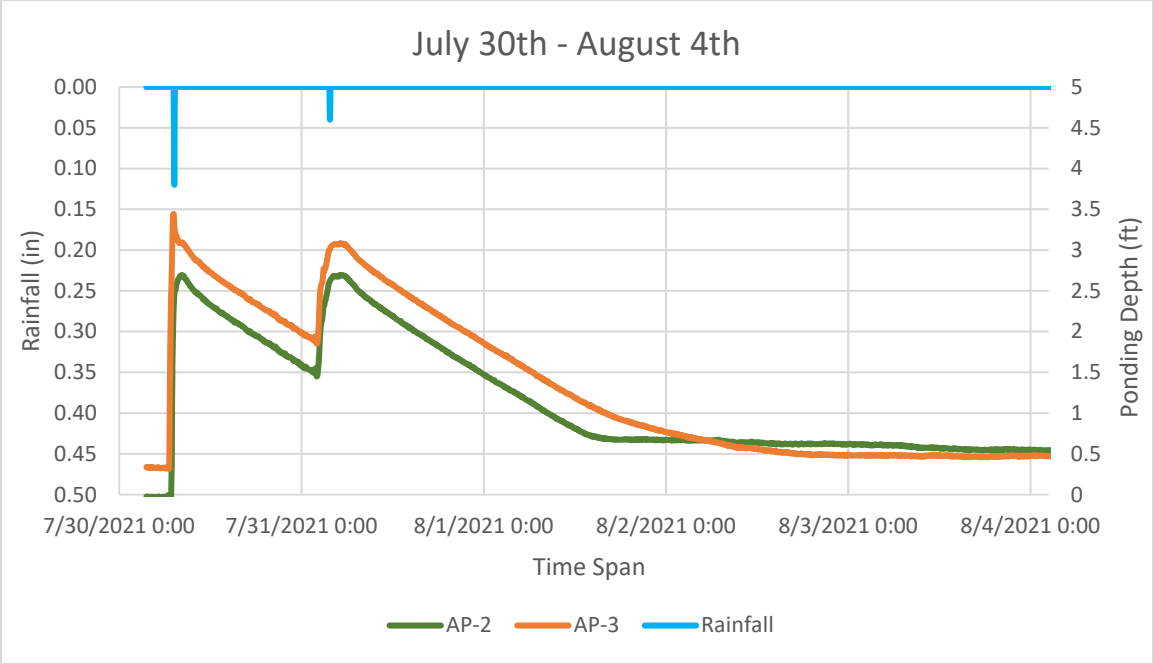


Figure 11: Adams Park Event 1

Event 2
PT-2 is excluded due to unavailability of water level during the event.

Rainfall reported from the Papio-Missouri NRD rain gauge showed heavy accumulation with 2.99" of precipitation between 9:15pm through 10:00pm on August 7, 2021. There was approximately a 10 minute lag time between the start of ponding upstream at PT-3 and the start of ponding downstream at PT1. From the onset of the rain event, peak ponding at PT-1 was observed in 25 minutes where ponding depth becomes controlled by the slotted weir drainage ports. Ponding at PT-3 dewatered to its permanent pool elevation in approximately 2.21 days after the rain event, whereas ponding at PT-1 lasted approximately 4.44 days.

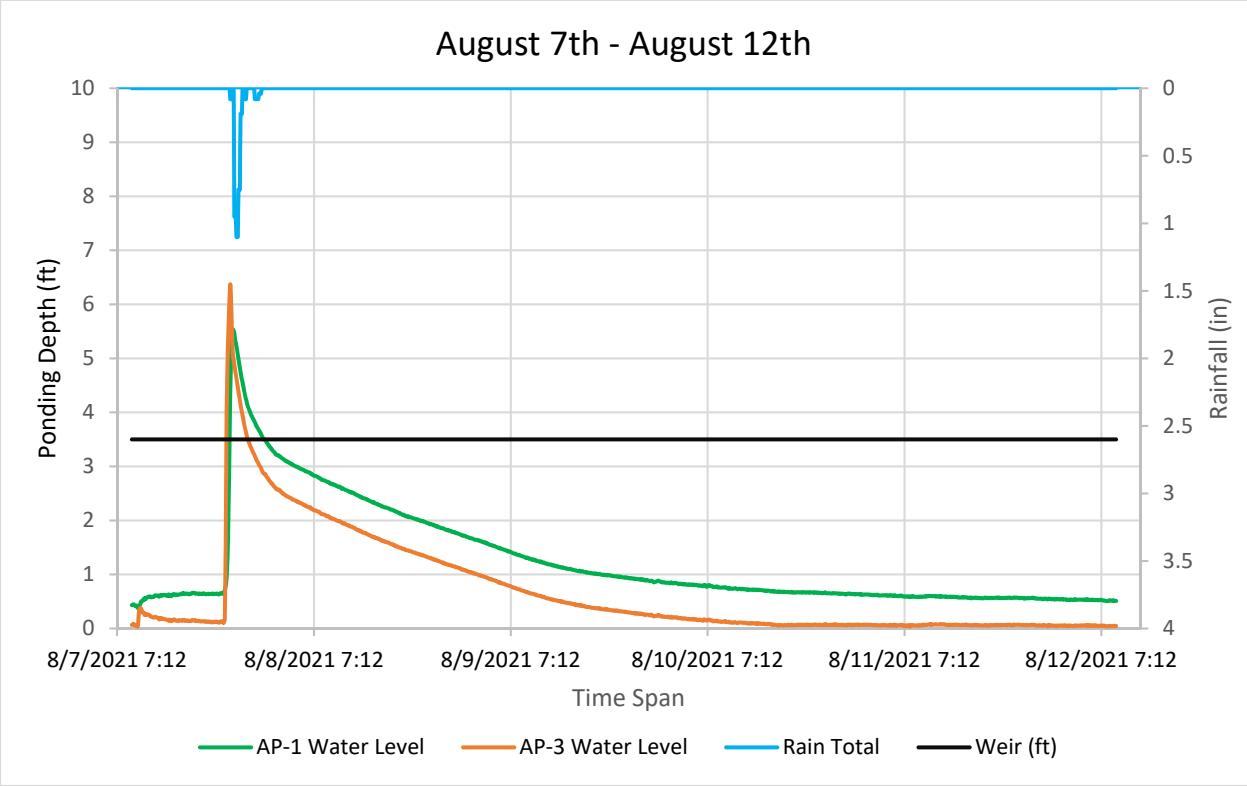


Figure 12: Adams Park Event 2

Albright Park

Rainfall was obtained from the rain gauge located at Hitchcock Park. One pressure transducer was installed in the AgriDrain outlet control structure, on the upstream side of the inline weir. Installing the pressure transducer at this location allows for observation of the drawdown rate within the bioretention system due to evaporation (in the case of ponded water), infiltration, and evapotranspiration. The pressure transducer was installed at the bottom of the AgriDrain structure, approximately 72 inches below the structure rim elevation, as depicted in Figure 13. The top of the inline weir is approximately 62 inches above the bottom of the AgriDrain structure. Ponding occurs when the water depth reaches approximately 36 inches above the sensor level. Based on the construction plans, there is approximately 26 inches of ponding available until the hydraulic grade line of the ponded water exceeds the weir elevation, when water from the bioretention system would discharge to the downstream system. Ponded water that overtopped the AgriDrain rim elevation would enter control structure through the bar grate lid and could bypass the inline weir, discharging directly to the outlet pipe.

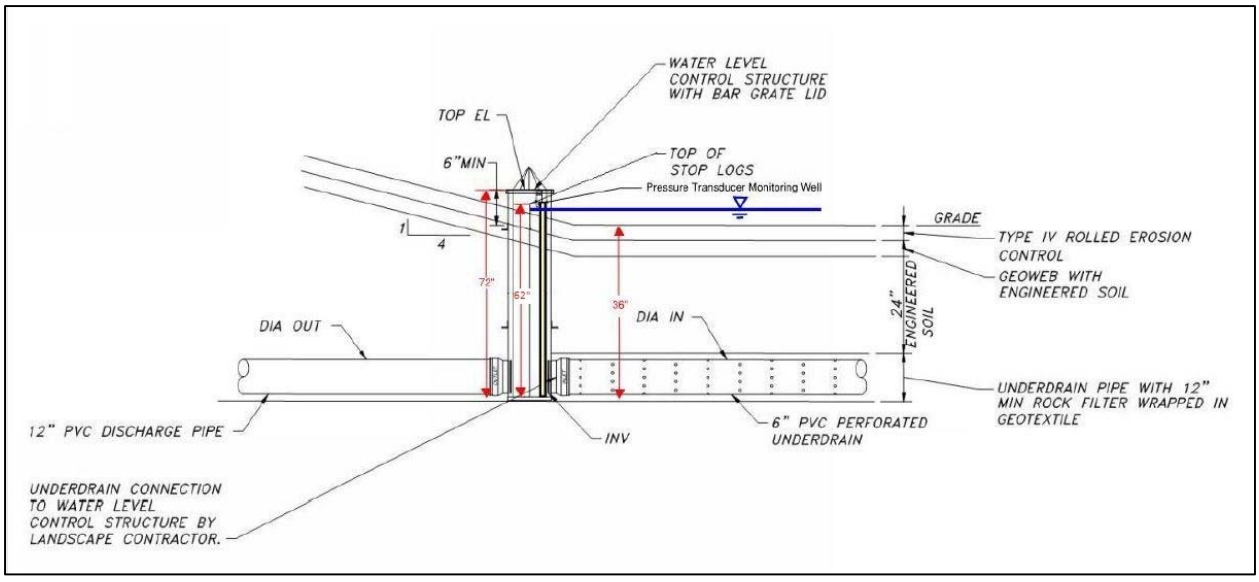


Figure 13: Albright Park AgriDrain Structure

The bioretention sensor had a constant reading height of roughly 4 inches throughout the entire monitoring period. An adjustment will be made in 2022 to eliminate this issue.

Event 1

The event did not result in an overflow/bypass of the Agridrain weir. Ponding occurred in the bioretention system, beginning approximately 20 minutes after the initiation of the rain event, peaking 55 minutes after the beginning of the storm. There was a 20 minute delay in the Agridrain sensor registering precipitation from the initiation of ponding, and a 5 minute lag in the Agridrain peaking after the bioretention system peak. Drawdown in the bioretention from this event was steady throughout the first 4 hours at an average rate of 1.54 in/hr (39.12 mm/hr). The Agridrain level slowly drew down at an average rate of 1.43 in/hr (36.32 mm/hr) for the first 4 hours and maintained a steady rate until the level reached the top of the underdrain. The drawdown rate increased to 3.26 inches per hour (82.80 mm/hr) during elevations between the top and bottom elevations of the underdrain. Remaining drawdown took approximately 3.5

hours, with a rate of 0.18 inches per hour (4.57 mm/hr). The system successfully treated the storm event without a discharge to the storm sewer system.

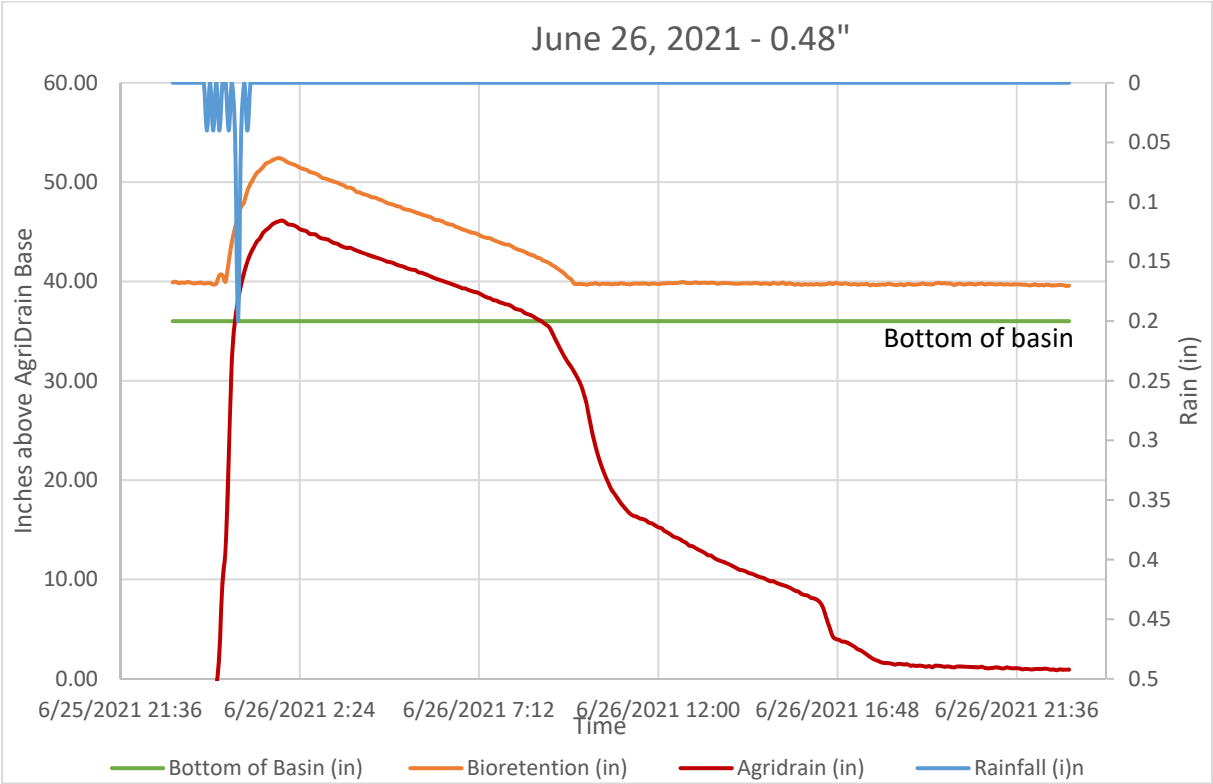


Figure 14: Albright Park Event 1 Water Level

Event 2

The Event 2 rain event for Albright Park was characterized by the largest volume being received in a period of 15 minutes, followed by lighter rain that extended over the following 3.5 hours.

Water level peaked at the Agridrain and in the bioretention system within 5 hours of the peak rain and while rain was still active, with the Agridrain 5 minutes after the bioretention system. Peak height was maintained for approximately 2 hours. The first phase of drawdown at the Agridrain had an average rate of 0.91 inches per hour (23.11 mm/hr) for the first 3 hours. Then, once the bioretention system had drawn down, the Agridrain rate steeply increased to 21.54 inches per hour (547.12 mm/hr) for the next 2.5 hours, until the level reached approximately 18 inches – half the height between the bottom of the Agridrain structure and bottom of the bioretention system. Drawdown continued for approximately the next 11.5 hours at a rate of 2.27 inches per hour (57.66 mm/hr) until level reached the top of the underdrain, at which point, the drawdown slowed down to 0.23 inches per hour (5.84 mm/hr) for the following 36 hours, approximately. The final phase of drawdown below the bottom of underdrain took almost 36 hours with a rate of 0.35 inches per hour (8.89 mm/hr).

Water level drew down slowly during and immediately after rainfall in comparison to Event 1 as expected with a larger and longer duration storm. The system successfully treated the storm event without a discharge to the storm sewer system.

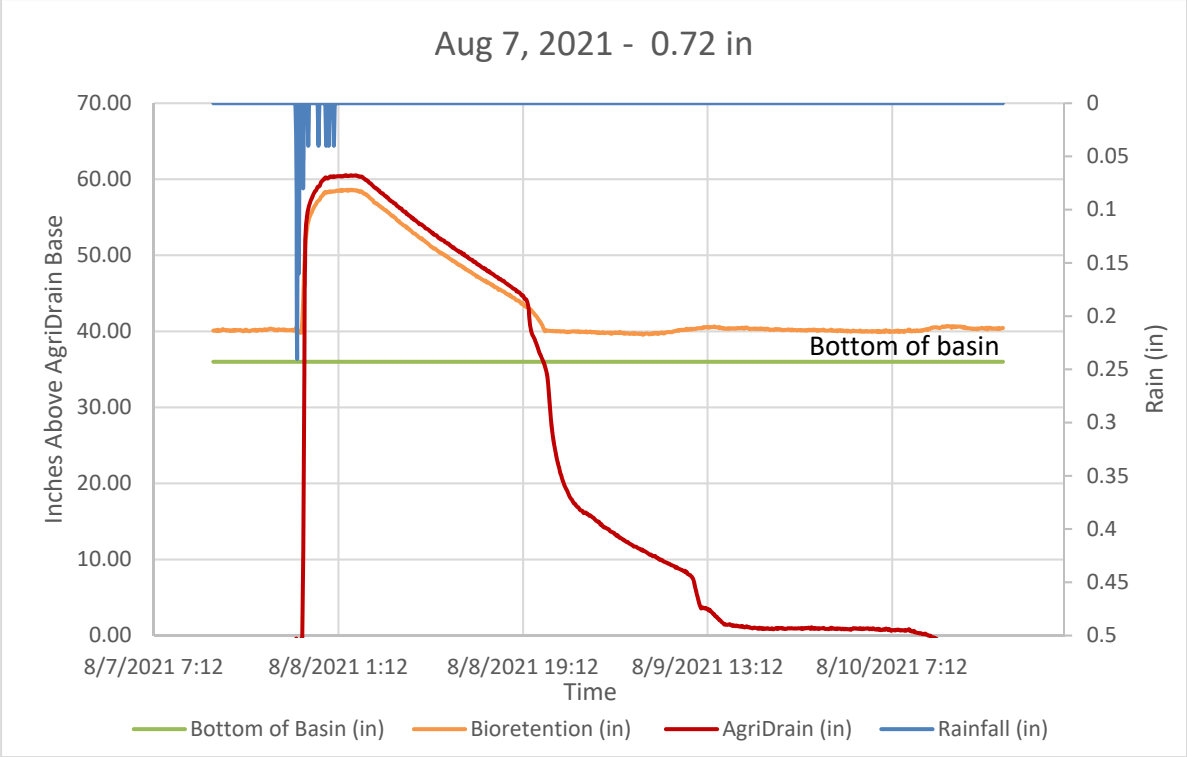


Figure 15: Albright Park Event 2

The Albright Park bioretention system is functioning as intended. The removal of the gap in the outflow weir provided additional capacity and the weir structure was not overtopped during the two events. With the additional capacity, low drawdown rates were observed even for a rain that was almost 1inch in accumulation. With the gap in the weir addressed in 2020, the bioretention system performance was significantly improved with respects to total water quantity managed and reducing peak flows. Monitoring at Albright Park will continue in 2022.

Sewer Maintenance

Water Quality Assessment

Water quality samples were collected on 10/13/21 at the inflow and outflow locations as depicted in Figure 16. Three inflow grab samples were collected from the curb cut that discharges to the bioswale and conveys flow to the bioretention system, three samples were collected from the underdrain for the pervious pavement, and three outflow samples were collected from the bioretention underdrain via monitoring flume. A blind duplicate was grabbed from the curb cut for validation of lab and field sampling techniques.

Local rain data was collected from the Papio-Missouri River Natural Resources District Rain Gauge located at the Big Papillion Creek at Q Street (ID: 06610770). The rain event sampled produced 1.36". Rain started at 2:50am and first sample was taken at 3:00am. The last measurable rainfall prior to sampling was on September 30, 2021, totaling 0.44".

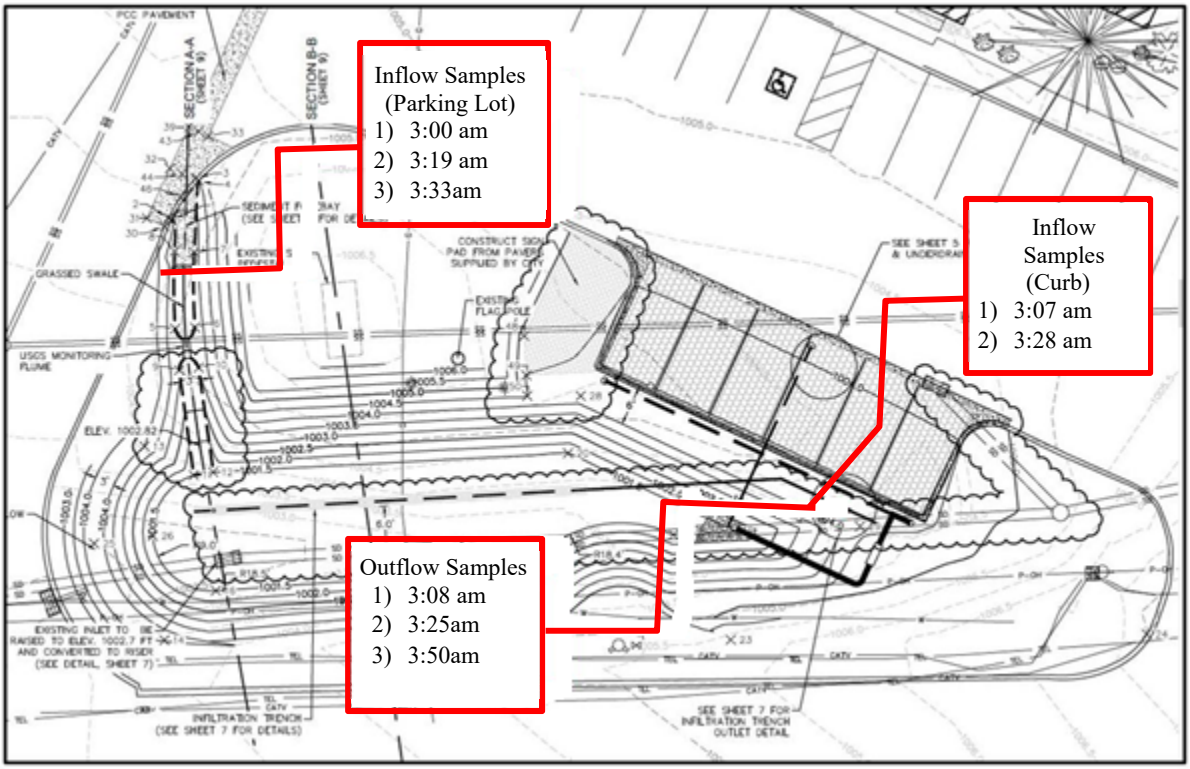


Figure 16: Sewer Maintenance water quality sampling locations

Water quality samples were delivered to Midwest Laboratories in an iced cooler on 10/13/2 at 9:00 am. Water quality samples were tested for Total Kjeldahl Nitrogen (TKN), Nitrate/Nitrite Nitrogen (NO3/NO2-N), Phosphorous (P), Total Dissolved Phosphorus, Total Dissolved Solids (TDS), and Total Suspended Solids (TSS). *E. coli* analyses were conducted by EQCD personnel at the City of Omaha lab. Tables 6, 7 and 8 summarize the results of the water quality testing at the inflow and outflow points.

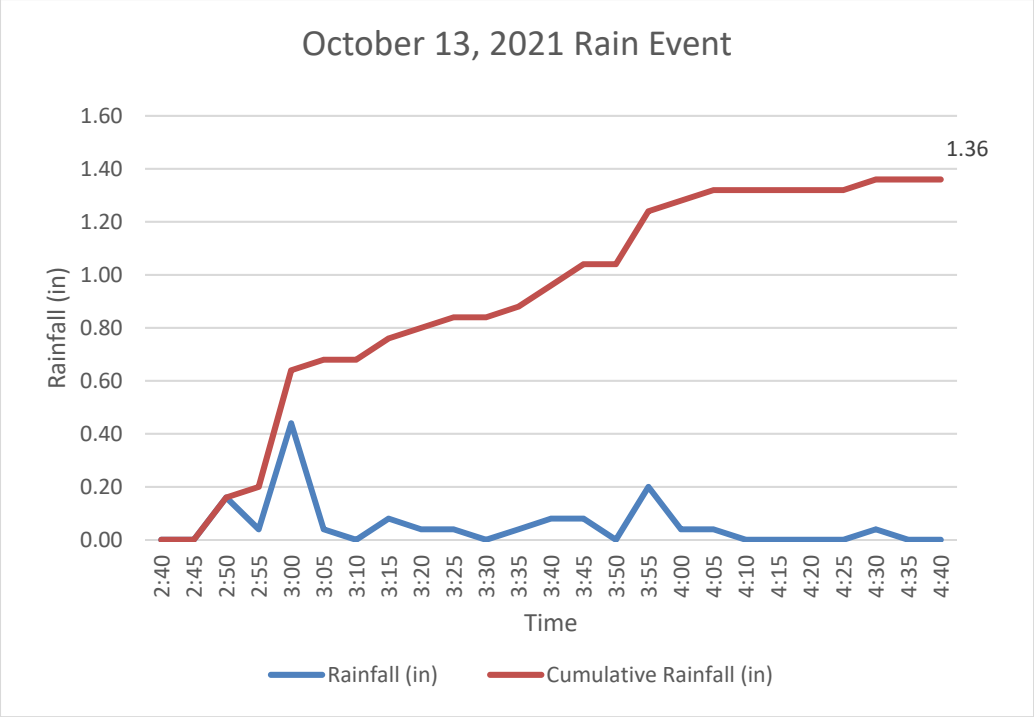


Figure 17: Rainfall for Wet Weather Sampling Event at Sewer Maintenance

Lab ID:	**1576601-01**	**1576601-02**	**1576601-03**	**1576601-07**	**Reporting Limit**
Sample Time:	3:00	3:19	3:33		
Constituent	**Curb In 1**	**Curb In 2**	**Curb In 3**	**Duplicate**	
TKN (mg/L)	1.54	<	<	<	0.5
NO2/NO3-N (mg/L)	0.31	<	<	<	0.2
Dissolved P (mg/L)	<	<	<	<	0.05
P (mg/L)	0.71	0.1	0.07	0.07	0.05
TS (mg/L)	960	92	86	32	10
TSS (mg/L)	804	60	60	14	4
^E. coli (CFU/100mL)	3.1	12.2	4.1	2	1

Tables 6: Sewer Maintenance Curb Inflow Water Quality Results

Lab ID:	1576601-08	1576601-09	1576601-10	Reporting Limit
Sample Time:	3:07	3:28	3:18	
Constituent	**Parking Lot In 1**	**Parking Lot In 2**	**Parking Lot In 3**	
TKN (mg/L)	<	<	<	0.5
NO2/NO3-N (mg/L)	0.77	1.08	1.17	0.2
Dissolved P (mg/L)	<	<	<	0.05
P (mg/L)	0.14	0.07	0.07	0.05
TS (mg/L)	115	30	37	10
TSS (mg/L)	71	14	12	4
^E. coli (CFU/100mL)	111.9	46.5	53.6	1

Table 7: Sewer Maintenance Inflow Water Quality Results

Lab ID:	1576601-04	1576601-05	1576601-06	Reporting Limit
Sample Time:	3:08	3:25	3:50	
Constituent	**Out 1**	**Out 2**	**Out 3**	
TKN (mg/L)	0.67	<	0.52	0.5
NO2/NO3-N (mg/L)	1.18	1.14	1.04	0.2
Dissolved P (mg/L)	0.1	0.09	0.11	0.05
P (mg/L)	0.31	0.16	0.18	0.05
TS (mg/L)	140	95	108	10
TSS (mg/L)	35	17	10	4
E. coli (CFU/100mL)	3	1986.3	721.5	1

Table 8: Sewer Maintenance Outflow Water Quality Results

At the two inflow points, the concentrations decreased over time, with the exception of NO2/NO3 at the Parking Lot inflow point. Except for NO2/NO3 and *E. coli*, concentrations were lower coming from the permeable pavement compared to the flow entering from the curb cut. The most significant difference was in the concentrations of total solids and total suspended solids between the two inflow points. The second round of samples from the outflow showed a dip in value for total solids, TKN, and phosphorous, but a significant spike in *E.coli.* Average outflow concentrations were higher than average inflow concentrations for NO2/NO3-N, DP, P and *E. coli*.

USGS Water Balance Assessment

United State Geologic Survey (USGS) monitoring equipment was in-place at the Sewer Maintenance Facility in 2021 to assess the water balance of the bioretention system, see their summary report in this attachment for more details. The 2021 season was the first full monitoring

season incorporating the new monitoring equipment and the completed efforts to improve the infiltration into the underdrain. Monitoring will continue with USGS as well as water quality monitoring in 2022.

2021 Green Infrastructure Monitoring at the Omaha Sewer Maintenance Facility

Provided by: USGS

Project Title: Green Infrastructure Monitoring at the Omaha Sewer Maintenance Facility

Monitoring Objectives:

- To characterize the water balance components of a green infrastructure project during storm events.
- To demonstrate green infrastructure performance in the soils and climate of Omaha, Nebraska for comparison to other sites nationwide.

Monitoring Approach: The project site was selected through consultation with the City of Omaha in anticipation of the design and construction of a green infrastructure project at their Sewer Maintenance Facility near 69th and Q Streets. The project included permeable pavers in sequence with a bioretention cell, and monitoring equipment was incorporated into the design. The project was designed in 2013, constructed in 2014, and non-winter monitoring occurred from 2015-21.

The water balance was measured in the bioretention cell in the following manner: inflow into the bioretention cell was measured by a cutthroat flume at one entrance to the cell and by a Palmer Bowlus flume to capture the flow entering the cell through the permeable pavers. Flow out of the cell through an underdrain was measured by a Palmer Bowlus flume installed on the underdrain pipe. Due to construction of the underdrain pipe at a slope greater than that specified in the design, the data from this underdrain flume was often compromised by critical velocities. More recently, this flume was also impacted by leakage into the monitoring chamber. In 2020 the underdrain flume was removed and replaced with an ultrasonic flow sensor (and flow control structure to maintain pipe-full conditions) and full system monitoring resumed on August 13, 2020. Overflow leaving the cell through a standpipe during high-volume events was estimated by treating the standpipe opening as a weir and measuring the depth of water above the standpipe. Potential evapotranspiration was measured by a Campbell Scientific ET107 system, and rainfall was measured using a tipping bucket mechanism. Infiltration was estimated as the residual of that water balance.

Preliminary Results:

Monitoring at the site characterized the water balance components of 224 metered stormwater events from 2015-21. These monitoring data are published in the USGS National Water Information System under station number 411219096010601. On average, during metered events, the bioretention cell redirected approximately 61-percent of the stormwater volume away from the storm sewer through infiltration and evaporative processes in 2015-2019. This and other metrics will be considered locally when trying to identify ways to improve performance in other green infrastructure projects. Regionally, those metrics will be put in the context of other cities to evaluate how different soils and climatic conditions may influence the design and performance of otherwise similar green infrastructure projects.

The 2021 monitoring season was the first full season with the ultrasonic flow sensor on the underdrain line. The season had one gap in monitoring in July when the transducer in the swale inflow flume failed, leading to six events for which a water balance could not be calculated. Otherwise, monitoring of events was successful.

Another important change in operations for 2021 is that leakage from the permeable paver storage basin into the monitoring chamber was redirected. The chamber itself was re-sealed during the installation of the ultrasonic flow sensor in 2020 to reduce those leaks. Some leaking into the chamber still occurs, but it is much less than before and is managed well by the sump pump installed in the chamber. However, the monitoring data suggest that the water in the paver storage basin is bypassing the drain pipe near the top of the basin, which is where flow-monitoring equipment is located. For example, whereas the water-level in the paver storage basin would take several days to return to normal following a rainfall event, it now takes a matter of hours. Additionally, the measured flow through the paver drain pipe was greatly reduced in 2021 over previous years despite an average amount of precipitation. Instead, it is hypothesized that the water in the paver storage basin has found a short-circuiting path (or paths) directly into the bioretention cell and/or into the underdrain line. This leads to a skewing of the water balance as water bypasses the inflow monitoring locations, which is evidenced by negative removal efficiencies (or more outflow than inflow) in the calculations.

In light of this suspected change in the hydrology of the cell, an alternative approach was explored that grouped the paver storage basin and bioretention cell together in the water balance. Instead of measuring the inflow volume from the pavers into the bioretention cell, the inflow volume into the pavers was estimated and used in the water balance for the grouped system. This approach relies on the assumption that the entirety of inflow into the pavers finds its way into the bioretention cell, whether through the drain pipe or by short-circuiting. Flow volume into the permeable pavers can be estimated from precipitation. The runoff coefficient method calculates the runoff into the paver storage basin as a product of the precipitation total, the contributing drainage area, and a coefficient that represents the percent of precipitation that becomes runoff.

This simplistic approach is sensitive to the assigned value of the runoff coefficient. Fortunately, the monitoring setup for the bioretention cell allows the coefficient to be directly calibrated by calculating the runoff generated from past events to the measured runoff in the swale inflow flume. A few assumptions were made during the coefficient evaluation. The precipitation amount required to generate runoff (initial abstraction) is dictated by many factors, including rainfall intensity and meteorological conditions, and was taken as 0.09 inches based on prior rainfall totals that did not produce any measured runoff. This amount was subtracted from the precipitation for all runoff calculations. Also, because of the high variability in small events, all events with a total measured runoff of less than 25 cubic feet were excluded from the calibration. Finally, because of the geometry of the swale, it is possible for a portion of the flow to bypass the entrance to the swale, so the measured flow was assumed to be 70 percent of the total runoff volume generated from the drainage area. Following these adjustments, the runoff coefficient determined from the evaluation of the swale flow data for 161 events was 0.8.

Runoff volume into the paver storage basin was calculated using the same runoff coefficient method with a coefficient of 0.8 and an initial abstraction of 0.09 inches. All runoff entering the cell was assumed to enter the cell and was taken as the second inflow component of the water balance and used for the summary and comparisons. Calculating runoff into the paver storage basin improves the water balance of the events but does not completely eliminate negative water balances in some events. Although this suggests some uncertainty remains from using the runoff coefficient approach, the new water balance numbers are more in line with past measurements and expectations.

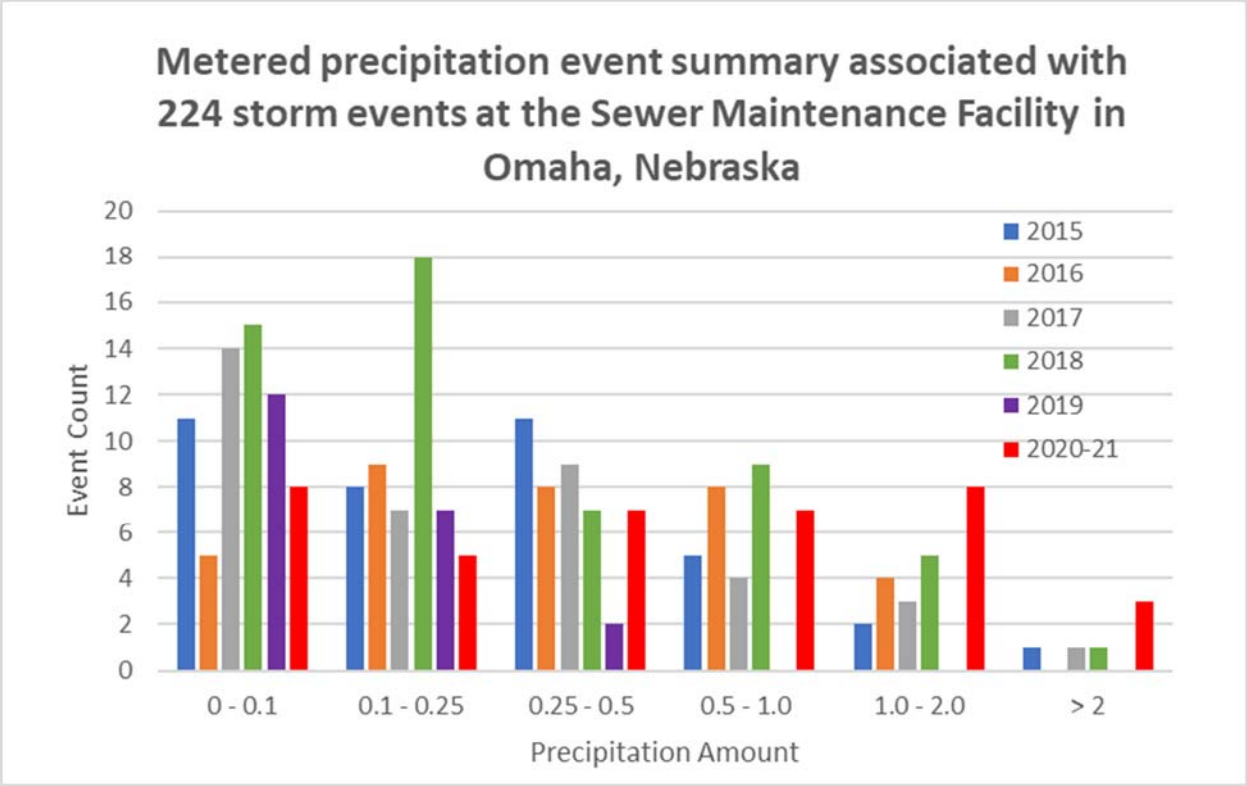
Measured stormwater removed from the storm sewer system by the bioretention cell at the Omaha Sewer Maintenance Facility.

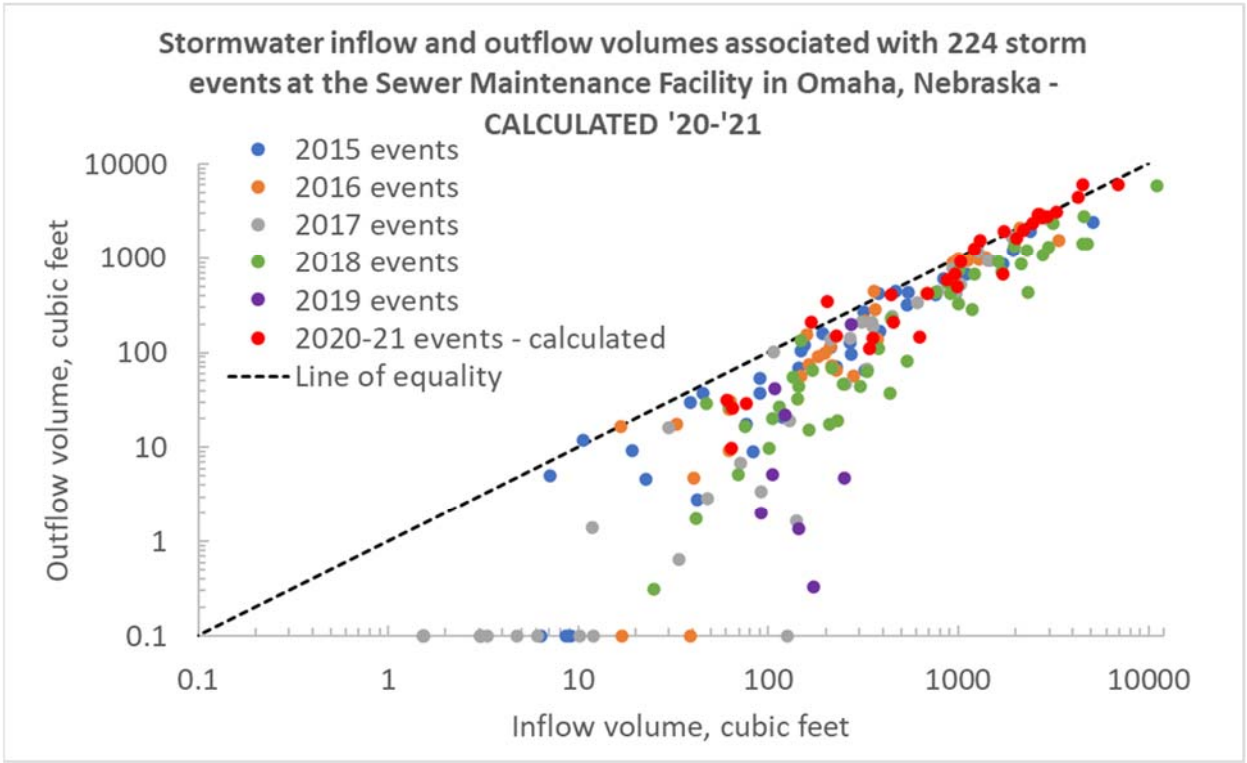
	Number of metered events	Number of unmetered events	Metered Inflow volume, cubic ft	Metered Outflow volume, cubic ft.	Removal, cubic feet	Removal, percentage	Average peak reduction, percent	Maximum peak reduction, percent
Total	224	132						
2015	38	24	19,063	11,360	7,703	40%	73%	100%
2016	34	28	22,512	17,532	4,980	22%	76%	100%
2017	39	22	19,562	13,335	6,227	32%	89%	100%
2018	55	4	58,154	26,303	31,851	55%	91%	100%
[1]2019	21	38	1,813	274	1,539	85%	91%	100%
[2,3]2020	3	2	830	206	624	75%	-	-
[3]2021	35	6	53,783	47,093	6,690	12%	-	-

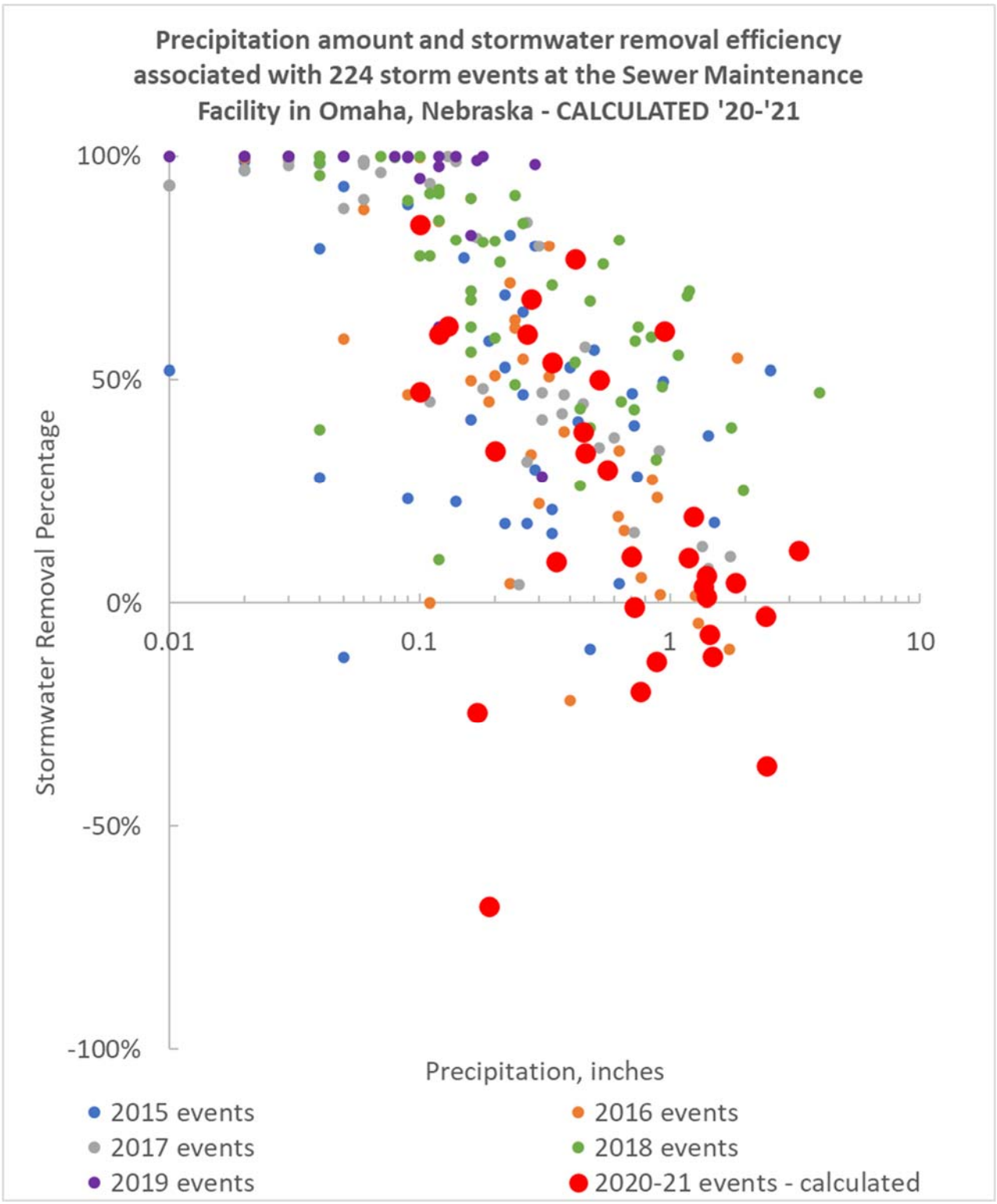
[1] External leakage into the underdrain flume in 2019 compromised water balance measurements on precipitation events generally greater than 0.3 inches, and so the 2019 metrics represent only small events.

[2] Monitoring did not begin until August 12, 2020, due to underdrain maintenance.

[3]Paver storage basin inflow calculated. Peak flows not calculated.

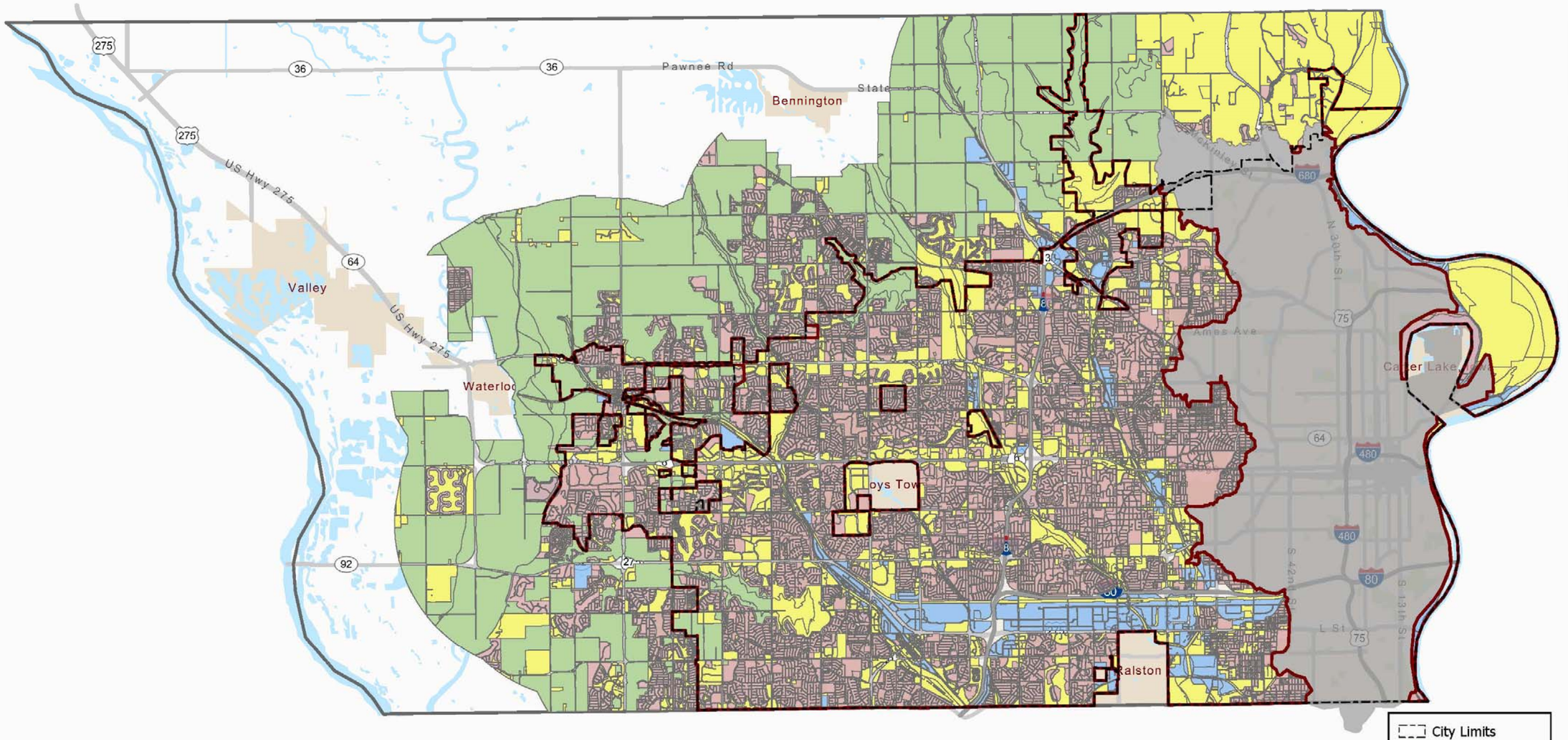

Metered precipitation event summary associated with 224 storm events at the Sewer Maintenance Facility in Omaha, Nebraska
Event Count
20
18
16
14
12
10
8
6
4
2
0
2015
2016
2017
2018
2019
2020-21
0 - 0.1
0.1 - 0.25
0.25 - 0.5
0.5 - 1.0
1.0 - 2.0
> 2
Precipitation Amount


Stormwater inflow and outflow volumes associated with 224 storm events at the Sewer Maintenance Facility in Omaha, Nebraska - CALCULATED '20-'21
Outflow volume, cubic feet
10000
1000
100
10
1
0.1
2015 events
2016 events
2017 events
2018 events
2019 events
2020-21 events - calculated
Line of equality
0.1
1
10
100
1000
10000
Inflow volume, cubic feet


Precipitation amount and stormwater removal efficiency associated with 224 storm events at the Sewer Maintenance Facility in Omaha, Nebraska - CALCULATED '20-'21
100%
50%
0%
-50%
-100%
Stormwater Removal Percentage
0.01
0.1
1
10
Precipitation, inches
2015 events
2016 events
2017 events
2018 events
2019 events
2020-21 events - calculated

ATTACHMENT I

City of Omaha MS4 and ETJ Land Use



Land Use	Omaha	ETJ	Total
Agricultural	5	53.22	58.22
Commercial	27.06	19.63	46.69
Industrial	7.17	1.11	8.28
Residential	46.28	14.55	60.82

ATTACHMENT J

2021 REPORT

KOB'S EFFORTS RELATED TO STORMWATER

Public Awareness Communications

AGREEMENT: KOB shall develop public awareness communications that promote stormwater protection and educate the community about the impacts that specific human activities have on water quality. KOB will document the number of announcements, the type of media, the specific topic addressed, and the dates that the announcements were made.

RESULTS:

- **Social Media & E-Newsletters** – KOB developed and paid for boosted, educational Facebook/Instagram posts covering virtual events and a variety of topics including: actions people can take to prevent stormwater pollution, the virtual World O! Water festival, the appropriate disposal of fireworks waste, stormwater benefits of native trees/plants and green infrastructure, and use of UnderTheSink for HHW disposal. In addition, KOB sent out e-newsletters to our distribution list covering various stormwater pollution topics and virtual events. In total, these posts and e-newsletters achieved 369,625 impressions and 25,440 engagements.
- **Video & Webpage Views** – KOB also promoted our *Protecting Our Waters* video and *How To Safely Dispose of Firework Waste* video over the course of the year. These videos were viewed 36,559 times via YouTube and Facebook. In addition, 2,739 individuals visited KOB webpages related to stormwater (Only Rain Down the Storm Drain, Firework Waste Disposal, etc.).
- **Media Coverage** – KOB also helped secure free media coverage from local print publications and television stations covering topics such as rainwater harvesting and how to responsibly dispose of firework waste.
- **Tracking File** – The **2021 Tracking Google Document for EQC** notes additional details about paid advertising/outreach and free media coverage (e.g., date of the advertising or media coverage).

World O! Water

AGREEMENT: KOB shall assist with the planning, coordination, promotion, and evaluation of the World O! Water event, which engages the public on issues related to water conservation, pollution, and recreation. KOB's role will include helping with advertising, recruiting and coordinating volunteers, securing new event partners and vendors, reserving equipment for the event, coordinating waste reduction efforts, and surveying event attendees.

RESULTS:

- **Event Support & Participation** – Due to the pandemic, the City of Omaha decided to convert the World O! Water (WOW) festival into a virtual format. In support of this virtual event, KOB completed the following: developed multiple educational activities; coordinated the design, Spanish translation, printing, and distribution of 1,150 WOW "challenge cards" (listing/explaining the educational activities); established a partnership with the Omaha Public Library to have all 12 branches conduct virtual "story times" and book displays focused on water-related topics and promote WOW participation; and help review and edit content on the website. In addition, KOB promoted the event via radio and digital channels, achieving 53,223 impressions and 1,962 engagements. The event website received 1,731 visitors.
- **Feedback Survey** – The virtual event/website did not include functionality to capture feedback from visitors. Thus, KOB was unable to conduct a follow-up survey to assess satisfaction levels, knowledge gained, perceived benefit, etc.

School-Based Educational Activities/Presentations

AGREEMENT: KOB shall conduct age-specific educational activities with youth from Omaha schools regarding the topics of water conservation, water quality, and storm water management. KOB will document the date and location of activities as well as the number of activities conducted, the participants involved, and the percentage of activities that integrate service learning.

RESULTS:

- **Participants & Service-Learning** – Due to the pandemic and school district restrictions in the spring, KOB modified its approach to stormwater-focused educational programming with schools. During the first half of the year, KOB educators conducted virtual lessons. KOB also started providing interested teachers with resource kits, curriculum, and remote one-on-one support/coaching to help them conduct environmental education activities on their own with their students. Over the second half of the year, KOB transitioned back to in-person, onsite programming. In total, KOB conducted 54 in-person/virtual lessons for 1,154 students and their classroom teachers in 2021. Service-learning elements were included with nearly all of the in-person lessons. Over the course of 2021, KOB also provided remote support/coaching and resource kits to teachers at several schools who conducted KOB-developed lessons with a total of 449 youth.
- **Teacher Trainings** – KOB conducted five virtual and two onsite teacher training workshops for 82 total educators. The workshops focused on the topic of water (i.e., water pollution prevention, impacts of pollutants on aquatic ecosystems, native trees/plants & green infrastructure, water conservation, etc.). Through these workshops, teachers became certified in the environmental education curriculum and learned how to effectively integrate it into their classrooms. The educators who completed our workshops will reach a total of 3,431 students on an annual basis.
- **Tracking File** – The **2021 Tracking Google Document for EQC** notes additional details about KOB's school-based education efforts connected to stormwater management & pollution prevention (e.g., program date, location, etc.).

Community-Based Educational Activities/Presentations

AGREEMENT: KOB shall conduct presentations at community outreach events that educate citizens about the City of Omaha's Stormwater Program and how to prevent water pollution. KOB will document the type and number of presentations conducted, and the estimated number of participants involved. KOB will also track the date that the presentation was conducted and the location and name of each event.

RESULTS:

- **Participants** – Due to COVID-19, there were fewer opportunities to conduct in-person community outreach in 2021, especially during the first half of the year. Despite these challenges, KOB was still able to safely host onsite education booths highlighting stormwater pollution prevention at four events that reached 810 total people. KOB also conducted two stormwater-related webinars involving 60 participants. In addition, KOB developed educational activities focused on water quality/conservation topics that caretakers could use with their children. These online-accessible lessons and resources were accessed by 357 individuals/families. And as noted on the first page of this report, 1,731 people visited the World O! Water website with its wide array of resources and activities related to water quality and water conservation, many of which were developed by KOB.
- **Tracking File** – The **2021 Tracking Google Document for EQC** notes additional details about KOB's community outreach efforts connected to stormwater pollution prevention (e.g., event date, location, etc.).

Marking Storm Inlets

AGREEMENT: KOB shall organize the marking of storm inlets with discs warning that illegal dumping is prohibited and that storm drains are connected to open bodies of water. KOB will recruit, train, and coordinate volunteers to perform the markings and distribute educational door hangers to area residents regarding how to prevent water pollution. KOB will document the number of storm inlets marked, the locations and the year the markings occurred, the number of educational door hangers distributed, and the results of the related online assessment survey. KOB will also track the number of volunteers involved and total number of volunteer hours completed.

RESULTS:

- **Discs** – KOB volunteers installed "No Dumping / Drains to Waterways" discs on 1,627 storm drains. Contractors for the City's Public Works Department also obtained 53 discs and installed them over the course of the year. In addition, volunteers cleaned out 438 inlets that already had discs. The number of installed discs is a reduction from last year despite 2020 also posing pandemic challenges. Each year, we typically work with at least one boy scout who is pursuing Eagle Scout designation and at least one girl scout who is seeking Silver/Gold status. We also regularly coordinate Americorps NCCC teams to install a significant number of discs. On average, each of these aforementioned key scouts/groups install 350 to 750+ discs; however, these types of partnerships/projects typically take six to twelve months to set up and gain approval from the respective entities (e.g., approval of a proposed Eagle Scout project, confirmation from Americorps leadership, etc.). In 2020, we had already completed the front-end work over the course of 2019. But due to COVID-19 challenges posed in 2020, we were unable to develop new projects with Eagle and Gold/Silver scouts and Americorps teams for 2021. Consequently, we did not have any of these key scouts/groups complete projects in 2021, which impacted our numbers. Despite these limitations, we were still able to recruit and mobilize other volunteer groups to conduct more than 40 disc installation events. This included implementing our Clean Waters Challenge in the second half of 2021 to help install more discs. Multiple families worked with us as part of this engaging and impactful initiative.
- **Door Hangers** – In conjunction with installing discs, KOB also asks volunteers to distribute English/Spanish "Only Rain Down the Storm Drain" educational door hangers to residents living near the marked storm drains. Given the COVID-19 pandemic, KOB waited until mid-summer to have volunteers start disseminating these educational pieces. During the second half of the year, volunteer distributed a total of 1,808 educational door hangers.
- **Community Survey** – In addition to encouraging people to never dump anything down a storm drain and highlighting simple actions that residents can take to prevent stormwater pollution, the educational door hangers also advertise an incentive (i.e., monthly gift certificate drawing) for completing an online assessment. The assessment includes questions that reference educational content from the door hanger. The results of the survey for 2021 include the following:
    - 94% of respondents accurately indicated why it is important to never dump anything down a storm drain
    - 90% of respondents accurately identified potential stormwater pollutants
    - Regarding the likelihood of continuing current behaviors and adopting new actions to prevent stormwater pollution, the percentage ranged from 92% of respondents indicating they are likely or very likely to sweep/blow grass clippings on the street back into their yard to 21% of respondents indicating they are likely or very likely to obtain/use a rain barrel to collect runoff from their roof (there were eight total behaviors listed).
- **Volunteers** – Even though the pandemic reduced volunteer interest, 532 volunteers (374 youth and 158 adults) participated in the Only Rain Down the Storm Drain program this year. These volunteers provided a total of 929 hours of community service.
- **Tracking File** – KOB staff updated the City's GIS system with the marked storm drains. The **2021 Tracking Google Document for EQC** also notes the locations of the marked storm drains, the month they were marked, and additional information about volunteers (e.g., organizations/families involved).

Household Hazardous Waste

AGREEMENT: KOB shall distribute brochures provided to them by the City of Omaha or developed by KOB regarding the proper disposal of household hazardous waste (HHW) and promote the use of the HHW facility, UnderTheSink. KOB will document the distribution outlets as well as the number and type of brochures distributed.

RESULTS:

- **Brochures** – For much of the year, KOB refrained from distributing brochures per COVID-19 safety protocols. Plus, given the reduction of in-person community events due to the pandemic, there were significantly fewer opportunities to disseminate these educational pieces. Despite these challenges, KOB still safely distributed 505 brochures that highlight UnderTheSink and the appropriate disposal of HHW (340 of KOB's *Disposing of Household Chemicals* brochure and 165 of the City's *Water Pollution Comes in Many Forms* brochure). In addition, KOB worked with the City of Omaha to ensure UnderTheSink information was included with outreach at Omaha Spring/Fall Cleanup sites.
- **Door Hangers** – As noted in the "Marking Storm Inlets" section of this report, KOB waited until mid-summer for pandemic safety reasons to start having volunteers distribute "Only Rain Down the Storm Drain" educational door hangers to homes near marked storm drains. In addition to encouraging residents to never dump anything down a storm drain and providing information about actions to prevent stormwater pollution, the door hangers also highlight UnderTheSink facility and how to appropriately dispose of HHW. A total of 1,808 educational door hangers were distributed.
- **Tracking File** – A full list of distribution outlets and dates, along with the type and number of brochures passed out, is included in the **2021 Tracking Google Document for EQC**.

Litter Cleanups Near Waterways

AGREEMENT: KOB shall recruit and coordinate volunteers to collect litter near streams and dam sites, as well as other public areas that have storm water management features (green infrastructure) or a body of water nearby. KOB will document the areas addressed, the number of volunteers involved, the total number of volunteer hours completed, the dates of the cleanup activities, and the number of bags of litter collected.

RESULTS:

- **Cleanups** – This year, KOB volunteers coordinated 552 total litter cleanups. Out of this amount, 243 of the cleanups involved a lake/dam site (e.g., Zorinsky Lake Park), a park/trail in close proximity to a water body (e.g., Seymour Smith Park, Keystone Trail, etc.), or a stream bank cleanup (e.g., Hell Creek).
- **Volunteers & Service Hours** – A total of 2,430 volunteers (823 youth and 1,607 adults) participated in these 243 litter cleanups, providing 5,168 hours of service to the community.
- **Bags of Litter Collected** – The volunteers collected 2,095 bags of litter (trash & recycling) from the noted areas.
- **Tracking File** – The **2021 Tracking Google Document for EQC** notes additional details about KOB's litter cleanups for the year, including date, location, families/organizations involved, etc.