Illinois Environmental Protection Agency

2520 West Iles Avenue • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Division of Water Pollution Control
ANNUAL FACILITY INSPECTION REPORT
for NPDES Permit for Storm Water Discharges from Separate Storm Sewer Systems (MS4)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. Complete each section of this report.

Report Period: From March, 2021 To March, 2022

Permit No. ILR40 0245

MS4 OPERATOR INFORMATION: (As it appears on the current permit)

Name: City of South Beloit Mailing Address 1: 519 Blackhawk Boulevard

Mailing Address 2: County: Winnebago

City: South Beloit State: IL Zip: 61080 Telephone: 815-389-3023

Contact Person: Tracy Patrick, City Clerk Email Address: t.patrick@southbeloit.org
(Person responsible for Annual Report)

Name(s) of governmental entity(ies) in which MS4 is located: (As it appears on the current permit)

City of South Beloit

THE FOLLOWING ITEMS MUST BE ADDRESSED.

A. Changes to best management practices (check appropriate BMP change(s) and attach information regarding change(s) to BMP and measurable goals.)

1. Public Education and Outreach ☐
2. Public Participation/Involvement ☐
3. Illicit Discharge Detection & Elimination ☐
4. Construction Site Runoff Control ☐
5. Post-Construction Runoff Control ☐
6. Pollution Prevention/Good Housekeeping ☐

B. Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.

C. Attach results of information collected and analyzed, including monitoring data, if any during the reporting period.

D. Attach a summary of the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule.)

E. Attach notice that you are relying on another government entity to satisfy some of your permit obligations (if applicable).

F. Attach a list of construction projects that your entity has paid for during the reporting period.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Owner Signature: Date:

Tracy Patrick City Clerk

Printed Name: Title:

EMAIL COMPLETED FORM TO: epa.ms4annualinsp@illinois.gov

or Mail to: ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL
COMPLIANCE ASSURANCE SECTION #19
2520 WEST ILES AVENUE
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

IL 532 2585
WPC 691 Rev 4/25

2021-2022

South Beloit, Illinois
Attachments to IEPA Annual Report, NPDES Permit for Storm Water Discharge from MS4's (2021-2022) – Year #8

A. No changes to the best management practices at this time.

B. 1. Public Education and Outreach

- The City provided educational brochures for the public in hard copy form at City Hall. Examples of these brochures have been attached to this report.
- Site plans submitted to the City are reviewed by the City Engineer. The City informs developers about best management practices (BMP's) for site plans which are received during initial project kickoff meetings.
- The City did not hold a public meeting for MS4/SWMP review in 2021.

2. Public Participation/Involvement

- Storm Drain Marking – The City of South Beloit Streets Department paints storm inlets annually to clearly demarcate that they drain to water ways. Records of said inlet marking were not located.
- The City has continued the medication drop off location at the police station. They average between 3 to 5 pounds of medication collected per month.
- The City encourages residents to volunteer for Keep Northern Illinois Beautiful *Great American Cleanup Day*. Community cleanup days are also sponsored and held annually by the Nature at the Confluence, focusing on environmental cleanup.
- The City established contact information on the website for the public to notify the agency about storm water related issues.

3. Illicit Discharge Detection & Elimination

- The City continues to complete updates to storm sewer maps as necessary.
- The City sends updates to the WinGIS map program.
- The City checks for illegal dumping and illegal discharge during dry periods. No complaints of illicit discharges were received during the reporting period. Due to personnel changes, records of outfall inspections were not collected.
- The City's Ordinances are reviewed annually and are updated as needed.
- The City continues to operate their Illicit Discharge Detection & Elimination (IDDE) Plan. The plan has been successful and no updates were required during this reporting period.

4. Construction Site Runoff Control

- The City reviews the Erosion & Sediment Control Ordinance routinely.
- The City reviews site plans for appropriate erosion and sediment BMPs according to the City ordinance and requires an Erosion Control Inspection Log and other necessary paperwork onsite with NPDES permits for construction site operators.
- The City encourages green infrastructure in new developments when applicable.
- The City continues to update and revise procedures.

- The City works with developers and regional inspectors to ensure BMP's are being implemented.

5. <u>Post-Construction Runoff Control</u>

- City staff reviews the Storm Water Management Plan annually.
- City staff sweeps all streets within the City boundaries each spring, fall and summer, as necessary. Due to personnel changes, records of street sweepings were not collected. The City has now created a street sweeping log to be shared during the 2022 reporting period.
- City staff repaired/cleaned multiple inlets throughout the City, and a log of the inlets that received maintenance is attached to this report.
- City Engineer continues to review any new proposed development over one acre or a smaller than one acre parcel within a larger development to oversee and ensure compliance with MS4 BMP's and address any issues with compliance. A copy of a City development review letter is included with this report.
- City staff and City Engineer review site plans and conduct surprise site inspections, ensuring proper paperwork has been obtained for permits. The City also uses inspections completed by the Winnebago County Soil Conservation district to enforce compliance.

6. <u>Pollution Prevention/Good Housekeeping</u>

- City did not conduct annual training for City staff that was documented.
- The City adopted Winnebago County's Hazardous Waste Spill Response and Prevention Program as their ordinance. They use Winnebago County's HAZMAT team for emergency situations.
- The City Fire Department receives paperwork annually for businesses that handle large amounts of hazardous waste.
- The City keeps a large supply of oil dry for any spills on City roadways.
- The majority of City trucks have spill kits to contain small spills.

C. No monitoring data collected at this time.

D. The City will continue to enforce BMP's for site developments. The City will attempt to meet the measurable goals outlined in its permit. The City shall specifically review its sewer outfall inventory and update it as needed. The City will continue to review any site developments and assist the permit holders in complying with their NPDES permit requirements.

E. The City works with the Winnebago County HAZMAT team during hazardous waste spills.

F. City Projects

- 2021 MFT Program
- 2021 ITEP Bike Path Project

PURDUE UNIVERSITY

PURDUE EXTENSION

FNR-426-W
IISG-10-14

Protecting Our Water and Environmental Resources

Climate Change
How will you manage stormwater runoff?

EXPERT REVIEWED

Robert McCormick, Planning with POWER Project Leader, Illinois-Indiana Sea Grant
Leslie Dorworth, Aquatic Ecologist, Illinois-Indiana Sea Grant

Introduction

Most climate change scientists agree on one thing: we're going to see more frequent and intense storm and rainfall events along with increased flooding, stormwater runoff, and soil erosion. The increased runoff and flooding will force planners and stormwater specialists to develop strategies to deal with the increased volume and velocity of stormwater.

Some of these strategies may include:

1. Plan for more green infrastructure.
2. Use low impact development strategies to reduce stormwater.
3. Minimize impervious surfaces such as parking lots, roads, and rooftops.
4. Use smart growth and sustainable growth strategies that decrease road building and include transportation choices other than automobiles.
5. Encourage riparian buffers along streams, rivers, and waterways and maintain flood plains.
6. Protect and reestablish wetlands to hold runoff and recharge groundwater.
7. Encourage tree planting, especially in urban settings.
8. Promote landscaping with native vegetation to further reduce runoff and the need for irrigation.
9. Accelerate the move to separate, combined sewer overflows to reduce pollution from sewage, bacteria, and *E. coli* entering waters during storm events.
10. Coordinate planning of infrastructure, housing, and transportation under the new climate change regime.

Plan for More Green Infrastructure

The infrastructure that supports a community includes both the gray infrastructure we build (roads, buildings, sewer/water/electrical lines) and the green infrastructure or the natural environment (water, air, natural resources). When developing a plan for the future, think of green infrastructure as a network of interconnected natural areas and open space that provides critical functions such as groundwater recharge, pollution mitigation, reduced

runoff and erosion, and improved air quality for communities. Forests, wetlands, natural areas, riparian buffers, agricultural land, and flood plains are examples of green infrastructure. Communities may also need to develop strategies for upgrading infrastructure in already developed areas.

Use Low Impact Development Strategies

Traditional approaches to stormwater management include use of pipes, curbs, gutters, storm drains, and detention ponds. With more frequent and intense precipitation events, communities will need to use new strategies such as bioretention, vegetated swales, and porous/pervious/permeable paving alternatives to supplement traditional stormwater conveyance systems.

Minimize Impervious Surfaces

Two-thirds of our impervious surfaces today consist of roads, highways, and parking lots. We'll need new ordinances and building/construction design requirements to reduce imperviousness in the future. Many communities are revising parking lot requirements and designs for new buildings. Road construction is under increased scrutiny across the country as community planners ask for complete streets that include space for pedestrians, bicycles, and mass transit. Increasing our transportation choices reduces the need for more pavement.

Use Smart Growth and Sustainable Growth Strategies

Smart growth strategies direct development near existing infrastructure. By locating new houses near offices and entertainment in downtown and town centers, we reduce the need for new infrastructure (roads, streetlights, electric lines, sewers, waterlines, gas lines, etc.). This lowers greenhouse emissions and ultimately lessens the cost of services for all communities. Combining compact, mixed-use development with commercial, residential, and office space leads to reduced water consumption and runoff. At the same time, it reduces greenhouse gas emissions by reducing energy consumption.

Encourage Riparian Buffers and Maintain Flood Plains

Increased precipitation events will dictate how we mitigate runoff from flooded areas. Changes in climate will force us to maintain natural flood plains and to forbid construction and development in those flood plains. Under certain scenarios, flood plains may need to be expanded to encompass more land area that will accommodate the increased rainfall events. In addition, we'll need riparian buffers (vegetated areas) and filter strips along waterways to further slow runoff and filter non-point pollutants. Otherwise, we could face increased erosion and, with it, increased pollution of streams, rivers, and lakes.

Protect and Reestablish Wetlands

Wetlands could become increasingly important both in drier areas and in high-runoff areas under future climate change scenarios. They'll be highly valued, because they have great capacity to hold water, recharge groundwater, and mitigate water pollutant. Constructed wetlands, as well as natural wetlands, will be valued for these vital functions related to a community's water supply.

Encourage Tree Planting

We should plant more trees in our communities. Trees help us manage stormwater by reducing runoff and mitigating erosion along streams and waterways when they are part of riparian buffers. Other critical functions provided by trees include cooling the heat islands in urban areas and shading pedestrians as they travel on streets and roadways.

Promote Landscaping with Native Vegetation

Traditional landscaping includes high-maintenance turfgrass and other nonnative species that require vast amounts of water during dry periods. In addition, turfgrass and nonnative species require excess fertilizer and pesticide applications that contribute to nonpoint pollution and runoff. This further contaminates surface and groundwater resources of local communities. Communities should promote the use of native vegetation in landscaping.

Accelerate the Move to Separate, Combined Sewer Overflows

Increased frequency and intensity of storm events will result in more combined sewer overflows (CSOs) that release additional, untreated sewage into streams and rivers across the country. That sewage carries with it bacteria, particularly *E. coli*. CSOs are regulated and every community should have a mitigation control plan; however, the need to replace this outdated infrastructure with the new climate change forecasts is much more urgent now due to the increased potential for contamination.

Coordinate Planning of Infrastructure, Housing, and Transportation

Finally, coordination in planning becomes essential as the overall system faces increased stress. Land-use planning is closely linked to transportation planning, and both have tremendous effects on the environment and natural resources. We must use our critical resources efficiently as we face potential climate change that could cause scarcity, depletion, and diminished quality of water, land, and air for communities in the future. With planning we can prevent some of these problems.

Additional Resources

Chicago Wilderness

www.chicagowilderness.org

Chicago Wilderness is an alliance of federal, state, and local governments, environmental and non-governmental organizations, and institutions of higher learning working together to improve the quality of life and to protect natural resources for the citizens of the Chicago region. The group has developed the Climate Action Plan for Nature, which addresses biodiversity and climate change in the Chicago region.

Chicago Climate Action Plan

www.chicagoclimateaction.org

The Chicago Climate Action Plan highlights the plans the city of Chicago proposes to take on relative to reducing the city's contribution to climate change.

NOAA Climate Services

www.climate.gov/#climateWatch

NOAA Climate Services site provides a national perspective on the impacts of climate change.

Intergovernmental Panel on Climate Change

www.ipcc.ch

The Intergovernmental Panel on Climate Change is the leading body for the assessment of climate change, established by the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) to provide the world with a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences.

The Midwestern Regional Climate Center

http://mcc.sws.uiuc.edu

The Midwestern Regional Climate Center at the University of Illinois serves the nine-state (Illinois, Indiana, Wisconsin, Michigan, Kentucky, Iowa, Missouri, Minnesota, and Ohio) Midwest region. The center is an excellent source for climate data and research.

Post Carbon Institute

www.postcarbon.org

Post Carbon Institute provides individuals, communities, businesses, and governments with the resources needed to understand and respond to the interrelated economic, energy, and environmental crises that define the 21st century.

For More Information

ID-255 *Protecting Our Water and Environmental Resources*

ID-256 *Nonpoint Source Pollution: A Threat to Our Waters*

ID-257 *Impacts of Development on Waterways*

ID-258 *Strategies for Coping with Runoff*

ID-259 *How to Get Started: Protecting Your Community From Polluted Runoff*

ID-260 *The Relationship Between Land Use Decisions and the Impacts on Our Water and Natural Resources*

FNR-245 *Brownfields: A Rural Community Problem*

FNR-255 *Stormwater Runoff*

FNR-256 *Stormwater and Non-Point Source Pollution*

FNR-257 *Open Space Planning*

FNR-409-W *Smart Growth and Protection of Natural Resources*

FNR-415-W *Sustainable Land Use: Impact on Climate Change and Health*

FNR-425-W *Climate Change: Are you preparing for it?*

FNR-427-W *Climate Change: Where does it fit in your future plans?*

Planning with POWER Presentation module model ordinances also are available.

These publications are available on the *Planning with POWER* website: www.planningwithpower.org

Local Decision Maker, a new Web-based GIS planning tool and decision support system is now available at: www.purdue.edu/ldm

If you are interested in pursuing the Smart Growth Principles, the protection of natural resources, and natural-resources-based planning, contact Robert McCormick at (765) 494-3627 and or rmccormi@purdue.edu.

Photo Credits

All photos come from the Planning with Power website (http://www.planningwithpower.org/).

PURDUE AGRICULTURE

NEW 1/11

Clean Water

Everybody's Business

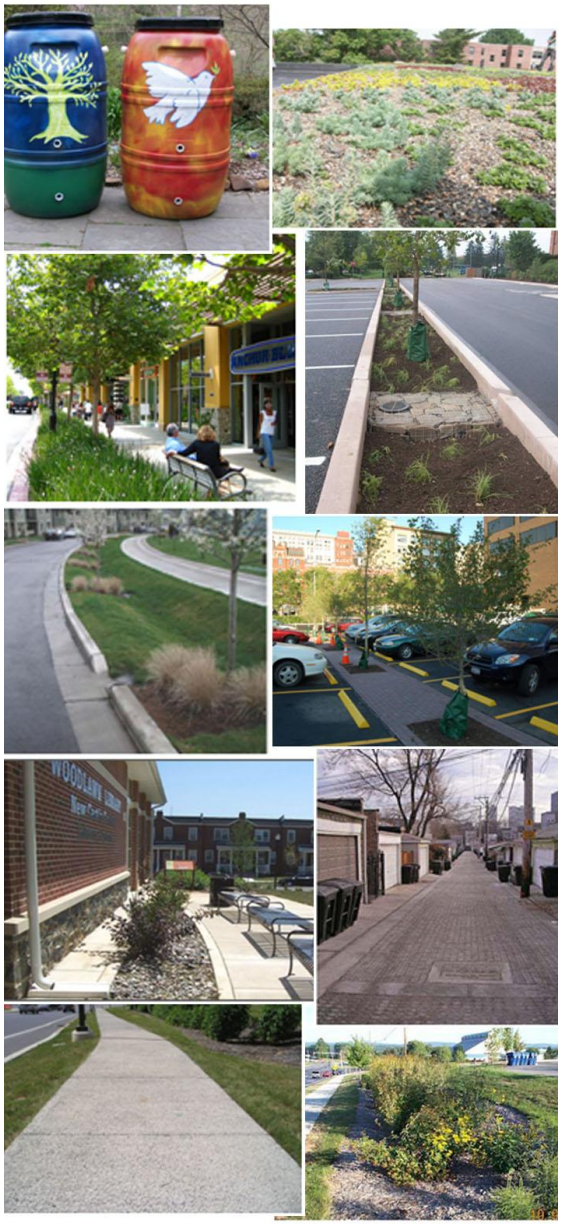
10 Things You Can Do to Prevent Stormwater Runoff Pollution

- Use fertilizers sparingly and sweep up driveways, sidewalks, and gutters
- Never dump anything down storm drains or in streams
- Vegetate bare spots in your yard
- Compost your yard waste
- Use least toxic pesticides, follow labels, and learn how to prevent pest problems
- Direct downspouts away from paved surfaces; consider starting a rain garden
- Take your car to the car wash instead of washing it in the driveway
- Check your car for leaks and recycle your motor oil
- Pick up after your pet
- Have your septic tank pumped and system inspected regularly

EPA United States Environmental Protection Agency

For more information, visit www.epa.gov/nps or www.epa.gov/npdes/stormwater

FACT SHEET: Overview of Green Infrastructure



Examples of Green Infrastructure (GI) techniques, including several from Lancaster City

DESCRIPTION

What is Green Infrastructure? Green infrastructure (GI) refers to a decentralized network of site-specific stormwater management techniques (see below for examples). GI techniques are implemented to reduce the volume of stormwater runoff entering the sewer system while also restoring the natural hydrologic cycle. As opposed to gray infrastructure - the traditional network of costly large scale conveyance and treatment systems - green infrastructure manages stormwater through a variety of small, cost-effective landscape features located on-site.

Green infrastructure is particularly important in urban areas with combined sewers, where during wet weather events, combined sewer overflows (CSOs) result in untreated combined sewage being discharged directly into water bodies. (See diagram on page 2). These CSO events can significantly impact downstream water quality. As cities are increasingly required by legislation to reduce the frequency and volume of CSO events, greater emphasis is being placed on implementing alternative ways of managing urban stormwater runoff using GI techniques.

How does Green Infrastructure work? Green infrastructure employs the following processes to design a hydrologically functional site that mimics predevelopment conditions:

- Infiltration (allowing water to slowly sink into the soil)
- Evaporation/transpiration using native vegetation
- Rainwater capture and re-use (storing runoff to water plants, flush toilets, etc.)

Common Green Infrastructure Techniques

- Downspout Disconnection
- Cisterns/Rain Barrels
- Bioretention (Rain Gardens)
- Vegetated ("Green") Roofs
- Stormwater Planter Boxes
- Infiltration Practices (Basins, Trenches, Dry Wells)
- Pervious Pavement with Infiltration
- Green Streets/Green Alleys
- Vegetated Swales
- Tree Trenches
- Vegetated Curb Extensions

BENEFITS OF GREEN INFRASTRUCTURE

Environmental Benefits

- Recharges and improves quality of ground and surface waters
- Provides natural stormwater management
- Improves energy efficiency
- Reduces urban heat island effect
- Improves aquatic and wildlife habitat

Social Benefits

- Improves aesthetics and livability of urban communities
- Increases recreational opportunities
- Improves water and air quality
- Fosters environmental education opportunities

Economic Benefits

- Reduces existing and potential future costs of gray infrastructure
- Increases property values
- Reduces energy consumption costs

Image Source: artfulrainwaterdesign.net

GREEN INFRASTRUCTURE CAN REDUCE THE FREQUENCY AND VOLUME OF CSO EVENTS

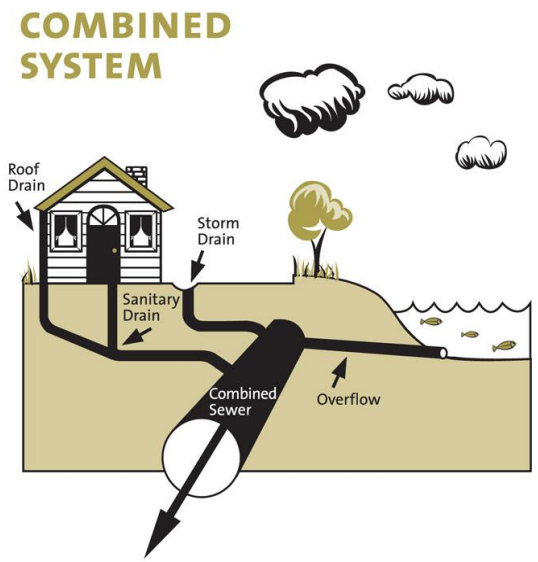


Diagram of combined sewer system
Source: EcoJustice.ca

ADDITIONAL CONSIDERATIONS

Maintenance of Green Infrastructure

Similar to conventional gray infrastructure, green infrastructure does require some level of maintenance to ensure optimal performance:

- Many GI techniques require regular maintenance, whether related to vegetation (weeding, pruning, mulching) or operational maintenance/repair (cleaning pervious pavement)
- The life cycle of the technology or vegetation used in the GI technique must be taken into account when preparing a maintenance plan

Cost of Green Infrastructure

- Costs for green infrastructure vary widely depending on specific site conditions and the type of GI techniques being used
- Often the cost of GI projects is competitive with or less than comparable gray infrastructure projects

From:	Brandon Boggs
To:	Nicholas Jayne
Cc:	Frank McKearn; Wes Edge; Kelly Edge; Vaughn Lewis; Jessica Roberts; Seth Gronewold
Subject:	RE: City of South Beloit - Storage Queen LLC - Site Development Permit Review
Date:	Monday, October 4, 2021 2:58:00 PM
Attachments:	image001.png image003.png image005.png image006.png image008.png Fence-Permit-Dumpster-Enclosure-Permit-revised-3-21.pdf sign-application.pdf

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Nick,

Please see the blue text below for our comments related to this submission:

Drainage Report Comments

- It is mentioned that Lot 6 of the Hatfield Business Park is included in the calculations for the stormwater detention ponds. Display Lot 6 on Exhibit 1 and on Exhibit 3. Also include a Post Construction Drainage Areas table for Lot 6 on Exhibit 3.

General Comments

- Provide an approved NPDES permit for City Records.

Title Sheet

- Please replace Seth's name and email with my information (Brandon Boggs, bboggs@fehr-graham.com)

Sheet C1.03 Erosion Control Notes

- Under Section V.A.1.a. change 14 days to 7 days and change 21 days to 14 days.
- Under Section V.A.1.b. change 14 days to 7 days.

Sheet C4.01 Removals Plan

- Show the existing curb returns and pavement on the north side of Manchester Road as being removed and replaced with matching curb and gutter.
    - The City has concerns about this area being mistaken as an entrance/exit once buildings and fences are constructed.

Sheet C4.04 Site Layout Plan

- Specify that both stormwater detention basins will be re-graded to meet the proposed contours in Phase 1.
- Show proposed curb & gutter and HMA pavement as necessary for the removal of the existing curb returns and pavement.
- Fencing in the front yard shall be 4' in height and decorative in nature (does not include chain link) unless setback 30' from the property line, per Jessica Roberts (Zoning Official).
    - Separate fence permitting will be required (see attached application).
- All signage will require separate permitting as well, per Jessica (see attached application).
- Graphically represent the different phases and their cutoff points. This can be simple lines or

shading differences so that the City is able to know approximate construction limits.

- The City has concerns with the entrance being constructed on the curved Technology Drive/Finley Way. Please provide an alternate intersection design.
    - Initial thought was a T-intersection with stop controlled movements on the property exit and eastern Technology Drive leg.

Sheet C4.05 Grading and Drainage Plan

- Demonstrate how the green space south of Building B will drain. It appears to be relatively flat or potentially drain to the Manchester Road curb & gutter.

Sheet C4.06 Grading and Drainage Plan

- The spot grade 785.62, north of the northwest corner of Building I appears to be inaccurate. Revise the grade or provide an inlet if it is an intentional low point.

Sheet C4.08 Storm Sewer Plan

- Indicate on the plans that if the contractor chooses to install water main quality storm sewer that the storm sewer needs to be pressure tested per Standard Drawing NO. 21 of the Standard Specifications for Water and Sewer Construction in Illinois.

Sheet C5.01 Landscaping Plan

- Jessica has requested that conifer/evergreen trees be considered throughout the site, specifically on the southern property line along Manchester Road, to ensure that there is a year-round buffer that will be maintained even during winter months.

Sheet C5.02 Lighting Plan

- Jessica has no further comments.

Please let us know if you have any questions or concerns.

Sincerely,

BRANDON BOGGS | Engineer
Fehr Graham | Engineering & Environmental

From: Nicholas Jayne <Njayne@rhbatterman.com>
Sent: Monday, October 4, 2021 9:59 AM
To: Brandon Boggs <bboggs@fehr-graham.com>
Cc: Frank McKearn <FMcKearn@rhbatterman.com>; Wes Edge <westly.edge@gmail.com>; Kelly Edge <edge.kelly@gmail.com>
Subject: RE: City of South Beloit - Storage Queen LLC - Site Development Permit Review

Brandon,

Wanted to follow up as it has been a couple of weeks since you said you were shooting to send us

Year Completed	Number of Inlets	Maintenance Type	Street(s)	Location	Project
2021	2	Adjust/cleaning	Roscoe Avenue	SE/SW corners at Olive Street	2021 ITEP Bike Path
2021	1	Adjust/cleaning	Roscoe Avenue	NE corner at Oak Grove Ave	2021 ITEP Bike Path
2021	4	Adjust/cleaning	Roscoe Avenue	All corners of Elmwood/Roscoe	2021 ITEP Bike Path
2021	1	Adjust/cleaning	Roscoe Avenue	SE corner at Lathrop/Elmwood	2021 ITEP Bike Path
2021	1	Adjust/cleaning	Clark Street	NE corner of Clark/Wheeler	2021 ITEP Bike Path
2021	3	Adjust/cleaning	Gardner Street	NE/NW/SE corners of Bailey/Gardner	2021 ITEP Bike Path
2021	1	Adjust/cleaning	Ingersol Place	SE corner of Bailey/Ingersol	2021 ITEP Bike Path
2021	1	Adjust/cleaning	South Park Avenue	NW corner of Bailey/S. Park	2021 ITEP Bike Path