



CITY OF BUFFALO, MINNESOTA

MS4 Stormwater Pollution Prevention Plan

City of Buffalo, MN
November 2022



Real People. Real Solutions.

Prepared by:

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BMP Summary Sheet

MCM1: Public Education and Outreach

MS4 Name:	City of Buffalo
Minimum Control Measure:	MCM1 Public Education and Outreach
BMP Title:	Public Education and Outreach Plan
MNR040000 Permit Reference:	Lines 16.1 - 16.9

BMP Description:

The City of Buffalo has developed a public education program to distribute educational materials or equivalent outreach that informs the public of the impact stormwater discharges have on waterbodies. The program includes suggested actions citizens and businesses can take to reduce the discharge of pollutants to stormwater. The target audience for the program includes residents, property owners, and businesses.

Based on the EPA EJSscreen report (Updated in 2022) the Population of Buffalo is approximately 16,361 and has the following demographics.:

	Buffalo, MN	State of MN
Low Income	17%	24%
Linguistically Isolated	1%	2%
Less Than High School Education	5%	7%
Under Age 5	8%	6%
Over Age 64	14%	15%

The City has identified that residents, property owners, and businesses in the City of Buffalo seek information via the City’s official newspaper, City website, Facebook page, and Twitter. The City will use the City website and social media to distribute written educational materials. The City may consider additional methods of equivalent outreach such as newsletters, tabling at events, workshops, and utility bill inserts.

The City of Buffalo has identified the topics below as high priority issues to be developed during the 2020 Permit Cycle:

- Mercury Pollution Management (which may include but is not limited to: adding website content for Mercury, auditing high-priority potential sources, mailings to high-priority potential sources, public education event, and/or mass mailings to water reclamation plant users)
- Promoting the adoption of residential BMPs (which may include but is not limited to: reducing fertilizer use, installing rain gardens and rain barrels, benefits of pollinator gardens, residential car washing best practices, water conservation practices, managing yard waste/composting, pond maintenance, stormwater reuse, etc.)

The education program will include the distribution of educational materials or equivalent outreach focused on the topics below annually:

- Illicit discharge recognition and reporting to the City
- Deicing salt impacts on receiving waters, methods to reduce use, and proper storage to residents, businesses, commercial facilities, and institutions
- Pet waste impacts receiving waters, management of pet waste, and the City Code

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Written materials will be in English. The City will provide copies of written educational materials in alternative formats or languages upon request. Requests can be made via the email or phone numbers posted on the City website or in person at City Hall.

BMP Documentation and Measurable Goals:

Educational materials to be distributed annually:

- Dates, description, quantity of materials distributed, and estimated audience will be documented

Educational materials to be distributed per permit term:

- Two high priority issues selected from above
- Dates, description, quantity of materials distributed, and estimated audience will be documented

Document any feedback or requests for alternative educational material format from the Public and the City’s Action because of that feedback or request.

- The City will respond to all feedback or requests within 5 regular business days.

BMP Review and Update:

This BMP will be reviewed each calendar year in advance of the MS4 Annual Report. The annual review will include an assessment of program compliance, and the measurable goals, and determine any necessary or desirable BMP improvements.

Necessary changes to the BMP will be documented as part of the MS4 Annual Reporting. Changes to the BMP will be implemented within 60-calendar days of the MS4 Annual Report being submitted.

Schedule:

Permit Term	Provide education on two high-priority topics
Annual	Provide education on illicit discharge recognition and reporting, deicing salt impacts, pet waste impacts
Annual	BMP Review and update as needed
Ongoing	BMP Documentation and Measurable Goals
As Needed	Additional methods of outreach

Responsible Party for this BMP:

Position Title: Engineering/GIS Technician

Department: Engineering Department

Contact Phone: (763) 684-5418

Contact E-mail: Storm.water@ci.buffalo.mn.us

Other(s): Bolton & Menk will provide informational items for public outreach upon request by the City.

The City may elect to partner with other MS4 permittees, community groups, watershed management organizations, or other groups to implement its education and outreach program.

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

BMP Summary Sheet

MCM2: Public Participation/Involvement

MS4 Name:	City of Buffalo
Minimum Control Measure:	MCM2 Public Participation/Involvement
BMP Title:	Public Participation/Involvement Plan
MNR040000 Permit Reference:	Lines 17.1 – 17.8

BMP Description:
<p>The City of Buffalo provides an on-going opportunity for the public to provide input on the adequacy of the Stormwater Pollution Prevention Plan (SWPPP) by making the SWPPP available on the City website. Comments are accepted at any time and may be submitted via the contact information on the website or at the public comment period of any regularly scheduled City Council Meeting. In addition, the City solicits public feedback regarding the adequacy of the SWPPP in the City’s official newspaper once per calendar year. All oral and written responses received are to be considered.</p> <p>Supplemental documentation such as annual reports and enforcement response procedures (ERPs) are available to the public upon request. Information requests can be made via the email or phone numbers posted on the City website or in person at City Hall. Stormwater ordinances are available online via MuniCode.</p> <p>The City of Buffalo hosts an adopt-a-storm drain program to encourage residents, homeowners, businesses, and community groups to improve water quality by keeping leaves, trash, and debris out of our storm sewer system. The adopt-a-storm drain program is a year-round involvement opportunity that focuses on pollution prevention to improve water quality. The adopt-a-storm drain program is promoted on the City website and social media.</p>
BMP Documentation and Measurable Goals:
<p>Document all oral and written input regarding the SWPPP submitted by the public.</p> <ul style="list-style-type: none"> • The City responds to and document all feedback within 5 regular business days • The City documents all responses to public input including any revisions to the SWPPP as a result. <p>The City documents notices provided to the public which solicits input on the SWPPP</p> <ul style="list-style-type: none"> • Documentation includes dates, locations, and the estimated number of participants reached <p>Adopt-a-storm drain involvement activity:</p> <ul style="list-style-type: none"> • Annual report will include dates and locations of cleanings, estimated number of participants and estimated impact of leaves, trash, debris recovered
BMP Review and Update:
<p>This BMP will be reviewed each calendar year in advance of the MS4 Annual Report. The annual review will include an assessment of program compliance, and the measurable goals, and determine any necessary or desirable BMP improvements.</p> <p>Necessary changes to the BMP will be documented as part of the MS4 Annual Reporting. Changes to the BMP will be implemented within 60-calendar days of the MS4 Annual Report being submitted.</p>

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Schedule:	
Ongoing	Solicit public input on the SWPPP
Ongoing	Provide a public involvement event
Ongoing	BMP Documentation and Measurable Goals
Annual	BMP Review and update as needed.
Responsible Party for this BMP:	
Title:	Engineering/GIS Technician
Department:	Engineering Department
Contact Phone:	763-684-5418
Contact E-mail:	Storm.water@ci.buffalo.mn.us
Other(s):	Bolton & Menk will post the public notice. Engineering Department facilitates the Adopt-a-drain program in conjunction with Hamline University

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

BMP Summary Sheet

MCM3: Illicit Discharge Detection and Elimination (IDDE)

MS4 Name: City of Buffalo

Minimum Control Measure: MCM3 Illicit Discharge Detection And Elimination

BMP Title: Illicit Discharge Detection and Elimination Plan

MNR040000 Permit Reference: Lines 18.1 – 18.18

BMP Description:

The City maintains an updated GIS map of the MS4 that includes:

- All pipes 12 inches or greater in diameter, including stormwater flow direction in those pipes,
- Outfalls labeled with a unique identification (ID) number, and geographic coordinates,
- Structural stormwater BMPs,
- Stormwater ponds,
- Raingardens,
- Publicly owned drain tile
- All receiving waters, and
- Inventory of priority areas identified as having a higher likelihood of illicit discharges. Areas will be determined based on:
 - Zoning,
 - Previous known or suspected IDDE, and
 - Areas with storage of significant materials that could result in an illicit discharge

City Code (Sec. 48-196) prohibits non-stormwater discharges to the City's stormwater system, except for those non-stormwater discharges authorized in item 3.2 of the MS4 General Permit.

City Code (Sec. 6-6) states it is unlawful for any owner to suffer or permit an animal to defecate upon public property, or the private property of another, without immediately removing the excrement and disposing of it in a sanitary manner.

City Code (Sec. 10-63) states commercial, institutional, and non-NPDES permitted industrial facilities storing salt and salt-containing materials outdoors must meet minimum standards for storage and handling. Storage areas must be covered; Located outside of areas likely to flood or to be exposed to stormwater or snowmelt runoff; Located on an impervious surface; and Protection practices to reduce exposure when transferring material in designated salt storage areas such as but not limited to sweeping, diversions, and/or containment must be implemented.

City Field Staff will receive annual training to recognize and report IDDE. Training may include but is not limited to videos, handouts, posted materials, in-person presentations, webinars, training manuals, and attendance at outside events. The type and level of training will be determine based on work duties and responsibilities.

- Field staff to be trained includes police department, fire department, utilities, streets and parks, and engineering department.
- City Staff responsible for investigating, locating, eliminating, and/or enforcement will receive training every three (3) calendar years following the initial training.

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Written Procedures for this BMP:

Investigating, Locating, and Eliminating the Source of Illicit Discharge:

The following written procedure will be followed for investigating, locating, and eliminating the source of illicit discharges.

- Timeframe:
 - Reports of Illicit Discharge Received from the Public to the City via email, phone call, or visit to the City Hall:
 - An appropriate City Staff member from the Fire, Police or Streets Department will be dispatched to inspect the site. The IDDE Checklist will be used to evaluate the suspected IDDE and determine the next steps.
 - A response to the person(s) making the initial report will be made within 5 regular business days of the report being received.
 - Reports of Illicit Discharge Received from Emergency Responders (e.g. Fire or Police) 911 report:
 - The report will be forwarded to a City staff member at the police or fire department.
 - The staff member will use the IDDE Checklist to evaluate the suspected IDDE and determine the next steps.
 - Reports of Illicit Discharge Received from City Staff that are not related to an emergency response action:
 - The Field Staff will report the suspected IDDE to their immediate supervisor. The supervisor will determine the urgency of the report and refer it accordingly.
 - Using the IDDE Checklist, the field staff and supervisor will determine if further investigation is necessary.
 - If necessary, an appropriate City staff member or consultant will be dispatched to inspect the site. The IDDE Checklist will be used to evaluate the suspected IDDE and determine the next steps.
- Available Tools and Methods to Detect and Track the Source of an Illicit Discharge:
 - When possible, the person inspecting the suspected IDDE will attempt to track the source by visually inspecting and following suspected IDDE upstream to determine the source and type of discharge.
 - When visual inspection is not possible, or if the source cannot be easily identified, the City may use storm sewer televising, water sampling and testing, smoke tests, dye tests, or other methods. The City Administration may determine with Consultant when services are appropriate to assist with these actions.
 - Maps of the City stormwater collection system will be utilized to identify the upstream structure locations.
- IDDE Containment and Cleanup Methods:
 - IDDE Containment and Cleanup may require specialized training and equipment. City Staff will not attempt to contain or cleanup material if those actions would interfere with an emergency responder or without proper PPE and training.
 - Cleanup methods for IDDE will depend on the source and composition.
 - When possible, City Staff will attempt to stop a suspected illicit discharge from entering a receiving water by containing the material by placing a sandbag or other block in the municipal storm conveyance system downstream of the suspected IDDE.
 - The City Administrator will be notified as soon as possible about the extent and potential impacts of identified IDDE.
 - The City Administrator will direct the reporting of the identified IDDE to the State Duty Officer and determine if Consultant assistance is appropriate.
 - The City will follow the directions of the State Duty Officer.

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

- A clean-up plan will be developed and implemented.
- The City will implement the appropriate Enforcement Response Procedures depending on the IDDE.

Spill Response:

The following written procedure will be followed for responding to spills, including emergency response procedures to prevent spills from entering the MS4.

- Spill Avoidance:
 - Appropriate field staff will be trained on spill avoidance for the duties assigned to them.
- Spill Response Checklist:
 - Field Staff will be trained on Spill Response and provided a Spill Response Checklist.
 - The Checklist includes:
 - How to identify a spill,
 - Steps to contain a spill,
 - Who and when to notify about a spill,
 - All spills that meet the criteria listed on the Spill Response Checklist will be reported to City Administration.
 - The City Administration will:
 - Direct the reporting of the Spill to the State Duty Officer,
 - Direct any City Cleanup Response, and
 - Determine if Enforcement Response Procedures are appropriate

Receipt of Stormwater Reports, Complaints, and Concerns:

The following written procedure will be followed for receipt of reports, complaints, and concerns.

- The contact information for the City is posted on the City Website including “Report a Problem or Concern” for electronic submittal.
- Complaints that are received will be forwarded to City Administration.
- The City Administration will review the complaint and determine next steps, including but not limited to initiating action under the City’s ERPs.

Written Enforcement Response Procedures (ERPs):

The City maintains written ERPs as described in this SWPPP and the City Code.

BMP Documentation:

Document all training:

- Date,
- Attendees' names and departments, and
- General subject matter covered.

Document Stormwater Reports and Complaints:

- Date and source of the report, and
- City response to the report.

Document all Enforcement Actions required under this BMP:

- Sources (if known) including a description and name of the person responsible for violating the terms and conditions of the City Code
- date(s) and location(s) of the observed violation(s) including identification of outfalls or other areas where illicit discharges have been discovered
- description of the violation(s),
- corrective action(s) (including completion schedule) issued by the City,
- referrals to other regulatory organizations (if any), and

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- date(s) violation(s) resolved.

BMP Review and Update:

This BMP will be reviewed each calendar year in advance of the MS4 Annual Report. The annual review will include an assessment of program compliance, and the measurable goals, and determine any necessary or desirable BMP improvements.

Necessary changes to the BMP will be documented as part of the MS4 Annual Reporting. Changes to the BMP will be implemented within 60-calendar days of the MS4 Annual Report being submitted.

Schedule:

Annual	Field Staff Training (Training may be broken up to be seasonally appropriate.)
Annual	BMP, Written Procedure, Checklist, and ERPs review and update as needed.
Ongoing	BMP Documentation

Responsible Party for this BMP:

- Title: City Engineer, Engineering/GIS, and Streets Superintendent
- Department: Engineering/GIS and Streets and Parks Department
- Others(s): Supervisors will schedule and document all field staff receive training.
Field staff will complete assigned training.
Bolton & Menk will provide training material upon request by the City.

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

BMP Summary Sheet

MCM 4: Construction Site Stormwater Runoff Control

MS4 Name:	City of Buffalo
Minimum Control Measure:	MCM4 Construction Site Stormwater Runoff Control
BMP Title:	Construction Site Stormwater Runoff Control Program
MNR040000 Permit Reference:	Lines 19.1 – 19.16

BMP Description:

The City of Buffalo’s Construction Site Stormwater Runoff Control program addresses construction activity with a land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale.

City Code (Sec. 40-220) states erosion and siltation control measures shall be coordinated with the different stages of construction. Appropriate control measures shall be installed prior to development when necessary to control erosion.

The permit requires that the permittee's regulatory mechanism(s) to require site plans be submitted for review before the beginning of construction. §11.41 of the City Code meets this requirement.

City Code (Sec. 40-220) requires every applicant for a building permit, excavating permit, or subdivision approval over 1.0 acre submit site plans including a SWPPP for review prior to the beginning of construction. All SWPPPs shall meet or exceed the requirements of the MN General Permit to Discharge Stormwater Associated with Construction Activity No. MNR100001.

City Staff performing site plan reviews and site inspections will receive training for these duties. The type and level of training will be determine based on the work duties and responsibilities. Previously trained individuals will receive a refresher-training at least every three calendar years following the initial training.

- Training may include but is not limited to videos, handouts, posted materials, in-person presentations, webinars, training manuals, and attendance at outside events.
- City staff to be trained may include the engineering inspector and contractor.

BMP Written Procedures for this BMP:

Site Plan Reviews:

The following written procedure will be followed for Site Plan Review before the start of all construction activity.

- Sites that disturb 1.0 acres or more/Projects less than one acre that are part of a larger common plan of development or sale:
 - A written notice will be provided to the party that submitted the application to the City and the Property Owner of the need to apply for and obtain coverage under the CSW Permit,
 - A written checklist, consistent with the CSW and the City Code will be used to document the plan review. The checklist is based on the MPCA checklist (wq-strm2-47) modified to fit the needs of the City.
 - A copy of the checklist will be kept with the permit application for a period of not less than 3-calendar years from the date of all City permits being closed.
- Sites that disturb less than 1.0 acres and are not part of a larger common plan of development or sale:
 - A checklist will be used for the plan review.
 - The checklist may be discarded once the permit is approved.

Site Inspections:

The following written procedure will be followed for Site Inspections during construction activity:

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

- Sites that disturb 1.0 acres or more/Projects less than one acre that are part of a larger common plan of development or sale:
 - A written checklist, consistent with the CSW and the City Code will be used during site inspections. The checklist is based on the MPCA checklist (wq-strm2-36) modified to fit the needs of the City
 - The site inspections will be performed by the engineering department or contractor
- Sites that disturb less than 1.0 acres and are not part of a larger common plan of development or sale:
 - A checklist may not be used
 - Erosion and sediment control on these sites will be inspected:
 - During spot inspections by the by engineer staff or contractors, and
 - In response to complaints or concerns reported to the City.

High-Priority/Low-Priority Sites for Inspections:

The following written procedure will be followed to determine high and low priority sites for inspections:

- Sites that are over 1.0 acre in disturbance and located in the Shoreland Area will be considered high priority.
 - The City will inspect all high priority sites every 14 days.
- All other sites over 1.0 acre/Projects less than one acre that are part of a larger common plan of development or sale will be considered low priority.
 - The City will inspect all low priority sites every 30 calendar days.
 - Inactive construction sites (where construction activities have ceased for 14 or more calendar days) may be reduced to as needed.
- All complaints or concerns reported to the City will be inspected within 5 regular business days of the City receiving the complaint or concern.

Receipt of Stormwater Reports, Complaints, and Concerns:

Refer to the written procedures section of MCM3 Illicit Discharge Detection And Elimination of this SWPPP for the written procedure for receipt of receipt of stormwater reports, complaints, and concerns.

Written Enforcement Response Procedures (ERPs):

The City maintains written ERPs as described in this SWPPP and the City Code.

BMP Documentation:

Document all Plan Reviews:

- Project name and Location,
- Total acreage to be disturbed,
- Property Owner and Construction Contractor (if known),
- For sites that are required to obtain coverage under the CSW Permit
 - Proof of coverage under the CSW Permit,
 - Calculations for the permanent stormwater treatment system,
 - Water quality volume treated compared to required water quality volume,
 - Any “higher level of engineering” used to justify deviation from the CSW or MS4 Permit Requirements.
 - All legal agreements related to stormwater.

Refer to the BMP Documentation section of MCM3 Illicit Discharge Detection and Elimination of this SWPPP for the items required to be documented for:

- Training,
- Receipt of Stormwater Reports, Complaints, and Concerns, and
- Enforcement Actions

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

BMP Review and Update:

This BMP will be reviewed each calendar year in advance of the MS4 Annual Report. The annual review will include an assessment of program compliance, and the documented information, and determine any necessary or desirable BMP improvements.

Necessary changes to the BMP will be documented as part of the MS4 Annual Reporting. Changes to the BMP will be implemented within 60-calendar days of the MS4 Annual Report being submitted.

Schedule:

Annual	Staff Training
Annual	BMP, Written Procedure, Checklist, and ERPs review and update as needed.
Ongoing	BMP Documentation

Responsible Party for this BMP:

Title: Engineering/GIS Technician and City Engineer
 Department: Engineering Department
 Contact Phone: 763-684-5418
 Contact E-mail: Storm.water@ci.buffalo.mn.us
 Others: Supervisors will schedule and document staff receive training appropriate to their duties.
 Staff will complete assigned training.
 Bolton & Menk may provide training material upon request by the City.
 Bolton & Menk will conduct site plan reviews.

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

BMP Summary Sheet

MCM5 Post-Construction Stormwater Management

MS4 Name: City of Buffalo
Minimum Control Measure: MCM5 Post-Construction Stormwater Management
BMP Title: Post-Construction Stormwater Management Plan
MNR040000 Permit Reference: Lines 20.1 – 20.23

BMP Description:

A Post-Construction Stormwater Management program that prevents or reduces water pollution after construction activity is completed for construction activity with land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, within the permittee's jurisdiction and that discharge to the permittee's MS4.

The City ordinance (Sec. 40-220, 40-221) requires the submittal of site plans with post- construction stormwater management BMPs designed with accepted engineering practices for review before permit approval. Construction may not begin until permit approval is received.

The City Code requires owners of construction activity to treat the water quality volume to meet or exceed the current CSW requirements. The City Code includes wording to meet the requirements of the 2020 MS4 General Permit.

The City maintains an updated mapped inventory on GIS of structural stormwater BMPs not owned by the City if the BMP includes a legal agreement between the City and private entity responsible for long-term maintenance and if the BMP was installed after August 1, 2013.

A legal agreement (such as a Development Agreement or similar document) will be required for:

- New structural stormwater BMPs constructed that are intended to be owned and operated by a non-government party. The document will lay out requirements for long-term maintenance and provide access for City inspection,
- When cash payment or donation of land is made in lieu of construction of required structural BMPs, and
- When construction of required structural BMPs will not be completed within 24 calendar months of the start of the construction activity.

City Staff performing site plan reviews and inspecting structural BMPs will receive training for these duties. The type and level of training will be determine based on the work duties and responsibilities. Individuals will receive an initial training and attend refresher-training at least every three calendar years.

BMP Written Procedures for this BMP:

Refer to the written procedures section of MCM4 Construction Site Stormwater Control of this SWPPP for the written procedure for site plan reviews.

Written Enforcement Response Procedures (ERPs):

The City maintains written ERPs as described in this SWPPP and the City Code.

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

BMP Documentation:	
Refer to the BMP Documentation section of MCM3 Illicit Discharge Detection and Elimination of this SWPPP for the items required to be documented for: <ul style="list-style-type: none"> • Training, and • Enforcement Actions Refer to the BMP Documentation section of MCM4 Construction Site Stormwater Control of this SWPPP for the items required to be documented for site plan reviews.	
BMP Review and Update:	
This BMP will be reviewed each calendar year in advance of the MS4 Annual Report. The annual review will include an assessment of program compliance, and the measurable goals, and determine any necessary or desirable BMP improvements.	
Necessary changes to the BMP will be documented as part of the MS4 Annual Reporting. Changes to the BMP will be implemented within 60-calendar days of the MS4 Annual Report being submitted.	
Schedule:	
Sept. 2022	<ul style="list-style-type: none"> • The City Code has been updated to match the 2020 MS4 General Permit • The mapped inventory of BMPs will be updated to add those not owned or operated by the City.
Ongoing	BMP Documentation
Annual	BMP Review and update as needed
Responsible Party for this BMP:	
Title:	City Engineer
Department:	Engineering Department
Contact Phone:	320-905-2704
Contact E-mail:	justin.kannas@bolton-menk.com
Others:	City Council will amend the City Code to match the 2020 MS4 General permit GIS Staff will update the mapped inventory of BMPs Supervisors will schedule and document staff receive training appropriate to their duties. Staff will complete assigned training. Bolton & Menk will provide training material and code revision recommendations.

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

BMP Summary Sheet

MCM6: Pollution Prevention/Good Housekeeping for Municipal Operations

MS4 Name:	City of Buffalo
Minimum Control Measure:	MCM6 Pollution Prevention/Good Housekeeping for Municipal Operations
BMP Title:	Pollution Prevention/Good Housekeeping Plan
MNR040000 Permit Reference:	Lines 21.1 – 21.15

BMP Description:

The City of Buffalo implements an operations and maintenance program that prevents or reduces the discharge of pollutants to the MS4 from City owned/operated facilities and operations.

The City maintains a mapped inventory on GIS of municipal owned/operated facilities that may contribute pollutants to stormwater discharges. The inventory consists of the following facilities:

- Utility Service Campus
- Streets & Parks Campus
- Airport
- Public Buildings (City Hall, Police Station, Community Center)
- Compost Site
- Parks
- Public Parking Lots
- Salt and Snow storage

The City owns and operates a salt sand mixture storage area at the Streets & Parks campus. The salt storage area is covered and located on an impervious surface. Loading and unloading is conducted in a designated area and spilled material is swept up to avoid loss of salt.

The City reviews good housekeeping BMPs and implements new BMPs when feasible to prevent or reduce pollutants in stormwater discharges. Good housekeeping BMPs implemented by the City include:

- Waste disposal and storage, including dumpsters protected from contact with stormwater
- Management of temporary and permanent stockpiles of materials such as street sweepings, snow, sand, and sediment removal piles
 - When feasible stockpiles are protected from contact with stormwater, and
 - Sediment controls at the base of stockpiles on the down gradient perimeter
- Vehicle fueling, washing, and maintenance in designated areas only
- Routine sweeping of municipal streets and parking lots
- Proper application and storage of herbicides, pesticides, and fertilizers
- Training schedules outlined below

Training:

Annual Training is provided for City Staff commensurate with individual's responsibilities including:

- to recognize illicit discharge risks and implement controls to avoid them during normal duties. (e.g. park maintenance, pothole repair, paving activity, etc.);
- use and location of Spill Kits;
- proper application of herbicides, pesticides, and fertilizers;

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

- BMPs to minimize the use of deicers;
- tools and resources to assist in winter maintenance (e.g., deicing application rate guidelines, calibration charts, Smart Salting Assessment Tool);
- Importance of protecting water quality

Department Supervisors utilize the schedule below that establishes initial training for staff including new and seasonal employees. Trainings for new employees should occur within their first year of employment. Trainings for existing staff should occur annually to reinforce and refresh BMPs and procedures. When new information or policies are implemented, training documents are updated as appropriate in response to the change.

The City has adopted the Field Handbook for Snowplow Operators and the Snow & Ice Control Guidebook created by MNDOT as the city snow and ice management policy for winter maintenance operators.

Inspections:

The City inspects structural stormwater BMPs for structural integrity, function, and maintenance. The inspection is conducted using a checklist which incorporates illicit discharge observation. When feasible, inspections are conducted during dry-weather conditions.

- BMPs are inspected annually. Inspection schedule may be altered based on complaints indicating a greater frequency or; reduced to every two (2) calendar years if maintenance is not required for 2 consecutive years. Any adjustments to inspection schedule are documented.

The City inspects priority areas identified as having a higher likelihood for illicit discharge. The inspection is conducted using a checklist which incorporates illicit discharge observation. When feasible, inspections are conducted during dry-weather conditions.

- Priority Areas are inspected annually. Refer to GIS inventory for map of areas with a higher likelihood for illicit discharge.

The City inspects stormwater ponds and outfalls (excluding underground outfalls) to determine structural integrity, function and maintenance needs. The inspection is conducted using a checklist which incorporates illicit discharge observation. When feasible, inspections are conducted during dry-weather conditions.

- Ponds and outfalls are inspected prior to the expiration date of the permit, typically 20% annually.
- If a pond requires sediment excavation/removal, documentation outlined below is maintained.

If maintenance is needed as a result of the inspection, repairs will be conducted as soon as possible, or an alternative schedule will be documented. A written description of maintenance conducted is documented as described below.

BMP Written Procedures for this BMP:

Refer to the BMP written procedures section of MCM3 Illicit Discharge Detection and Elimination of this SWPPP for the written procedure for:

- Investigating, Locating, and Eliminating the Source of Illicit Discharge, and
- Spill Response

The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

Determining TSS and TP Treatment Effectiveness

The following written procedure is for the purpose of determining the Total Suspended Solids (TSS) and Total Phosphorus (TP) treatment effectiveness of all City owned/operated ponds constructed and used for the collection and treatment of stormwater. These procedures are not used to determine stormwater credits.

- The City will use a literature-based approach to assess stormwater pond effectiveness.
 - Pollutant removal percentages for stormwater pond BMPs vary. Values for TP and TSS include a range of values, from lowest to highest percent removal, observed in the literature. (*Pollutant Removal Percentages for Stormwater Pond BMPs. Minnesota Pollution Control Agency, 15 July 2015*)
 1. TSS (Low-median-high): 60-84-90
 2. TP (Low-median-high): 34-50-73
- Staff will evaluate the pond's design, construction, and maintenance before assigning TSS and TP effectiveness. Staff will use their best judgement when records or data is not available.
 - New ponds will be assigned an estimated effectiveness based on the design and construction of the pond. Ponds will be reevaluated during subsequent inspection cycles for reduced effectiveness.
 - Existing ponds that have reduced detention times due to sediment build up but are receiving regular maintenance and still effectively functioning in removing sediment will be assigned median effectiveness.
 1. TSS – 84%
 2. TP – 50%
- Existing ponds that have substantial reduction in detention times due to sediment build up (50%) and are receiving regular maintenance, but sediment removal is significantly diminished by the buildup, will be assigned low effectiveness.
 1. TSS – 60%
 2. TP – 34%
- Existing ponds that have substantial reduction in detention times due to sediment build up such that there is no sediment removal after precipitation events will be assigned zero effectiveness.
- Existing ponds that that have been dredged to remove sediment build up and restored to original design parameters will be assigned their original expected effectiveness.
 1. TSS – 90%
 2. TP – 73%
- In any situation above, staff may assign a lower pond effectiveness if they determine that the original design and/or construction and/or existing maintenance preclude the pond from effectively removing sediments. Assigned values can range anywhere from 0-90% for TSS and 0-73% for TP.
- Staff will use the Minnesota Stormwater Manual wiki - Design Criteria for Stormwater Ponds (http://stormwater.pca.state.mn.us/index.php/Design_criteria_for_stormwater_ponds) as a guide during pond evaluation.
- Staff will complete a visual inspection to ensure that there is not significant sediment buildup, hydrologic short circuiting or repairs/maintenance needed that would affect sediment or nutrient removal effectiveness.
- Pond effectiveness will be conducted in conjunction with the City's stormwater pond inspection cycle which runs concurrent with the MS4 General Permit cycle.
- Based on inspection findings, repair, replacement, or maintenance measures will be scheduled as necessary are necessary in order to ensure the structural integrity and proper function of structural stormwater BMPs and outfalls. The City will complete necessary maintenance as soon as possible. If necessary, maintenance cannot be completed within one year of discovery, the permittee must document a schedule(s) for completing the maintenance.

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BMP Documentation:	
<p>Refer to the BMP Documentation section of MCM3 Illicit Discharge Detection and Elimination of this SWPPP for the items required to be documented for:</p> <ul style="list-style-type: none"> • Training, • Investigating, Locating, and Eliminating the Source of Illicit Discharge, and • Spill Response <p>Document the following information associated with the operations and maintenance program:</p> <ul style="list-style-type: none"> • date(s) and a description of maintenance conducted as a result of inspection findings, including whether or not an illicit discharge is detected, and • schedule(s) for maintenance of structural stormwater BMPs and outfalls, <p>Document pond sediment excavation and removal activities, including:</p> <ul style="list-style-type: none"> • a unique ID number and geographic coordinates of each stormwater pond from which sediment is removed, • the volume of sediment removed from each stormwater pond, • results from any testing of sediment from each removal activity, and • location(s) of final disposal of sediment from each stormwater pond. 	
BMP Review and Update:	
<p>This BMP will be reviewed each calendar year in advance of the MS4 Annual Report. The annual review will include an assessment of program compliance, and the measurable goals, and determine any necessary or desirable BMP improvements.</p> <p>Necessary changes to the BMP will be documented as part of the MS4 Annual Reporting. Changes to the BMP will be implemented within 60-calendar days of the MS4 Annual Report being submitted.</p>	
Schedule:	
Ongoing	BMP Documentation
Annual	Inspect structural stormwater BMPs
Annual	Inspect and observe City Staff operations and facilities <ul style="list-style-type: none"> • Implement training, BMPs, written procedures to correct or reduce potential sources of illicit discharge.
Each Permit Cycle	Inspect all both City owned/operated and privately owned/operated ponds and outfalls at least one time per Permit Cycle.
Responsible Party for this BMP:	
Title:	Engineering Technician and Streets Superintendent
Department:	Engineering and Streets Departments
Others:	Supervisors will schedule and document staff receive training appropriate to their duties. Staff will complete assigned training. Bolton & Menk will provide training material upon request by the City.

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