Stormwater Management Plan (SWMP)

CITY OF BELTON, MISSOURI
SEPTEMBER 2021
NIKIA FREIBERGER

Table of Contents

Table of Figures

Introduction

The City of Belton, Missouri is an operator of a small municipal separated storm sewer system (MS4). As part of the National Pollutant Discharge Elimination System (NPDES) Phase II requirements, the City is required to develop, implement and enforce a stormwater management program designed to reduce the discharge of pollutants from their MS4 to the "maximum extent practicable" to protect water quality requirements of the Clean Water Act. The stormwater management program must include six minimum control measures:

4.1 Public Education and Outreach on Stormwater Impacts

4.2 Public Participation

4.3 Illicit Discharge Detection and Elimination (IDDE)

4.4 Construction Site Stormwater Runoff Control

4.5 Post-Construction Stormwater Management in New Development and Redevelopment

4.6 Pollution Prevention/Good Housekeeping for Municipal Operations

The City of Belton is regulated and permitted through the Water Pollution Control Branch of the Missouri Department of Natural Resources (MDNR). The implementation of the stormwater management program began in March 2003 with a five-year permit cycle. The Stormwater Management Plan (SWMP) document was updated in March 2008 at the time of the first permit renewal and again for the five-year permit cycles beginning in 2013 and 2018. In 2021, the City applied for and was issued the new comprehensive MOR04C permit. The following report details the City's approach to stormwater management for the next five-year permit cycle starting in November 2021.

MCM #1: Public Education and Outreach on Stormwater Impacts

4.1 Permit Requirement

The MS4 Operator shall implement a public education program to distribute educational materials to the community and/or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

4.1.A. Target Audiences

Target audiences who are likely to have significant stormwater impacts have been identified as the following: *Homeowners and Contractors*.

The target audiences may remain the same for the entire permit cycle or may change if the tracking and adaptive management reviews show a new target may be better for the MS4. Any changes shall be stated and explained in the MS4 Stormwater Management Program Report.

4.1.B. Target Pollutants

The MS4 Operator must specify a target pollutant for each target audience specified in 4.1.A. These pollutants shall be the subject of the educational program and are as follows:

Table 4-1: Target Pollutants

Target Audience	Target Pollutants
Homeowners	• Grass clippings & leaf litter • Fertilizer & Pesticides • Pet Waste • Vehicle Washing • De-icing, rock salt usage, storage • Illegal disposal of household hazardous wastes
Contractors	• Oil, grease, fluids from vehicles • Sediment runoff from construction/ land disturbance

The target pollutants may remain the same for the entire permit cycle or may change if needed. Any changes shall be stated and explained in the MS4 Stormwater Management Program Report.

4.1.C. Outreach and Education BMPs

The MS4 Operator must utilize appropriate educational resources to be used as BMPs in conjunction with selected pollutants for the selected target audiences. The MS4 Operator must implement a minimum of four education and outreach BMPs each permit cycle. Table 4-2 below provides the selected BMPs, measurable goals, tracking and adaptive management, and an explanation of how the BMP relates to the target pollutant and target audience.

Table 4-2: Outreach and Education BMPs

BMP	Measurable Goals	Tracking & Management	Audience/Pollutant/BMP Relation
Information on the City Website	Maintain a webpage with up-to-date information and working links. All links shall be checked, and the page shall be updated as necessary at a minimum annually. Must be maintained the entire year.	The number of hits shall be tracked. The MS4 Operator shall use this to see which messages get reactions, and if certain messages may need more education.	This BMP provides up-to-date information to all members of the public but specifically homeowners on the target pollutants noted in Table 4-1.
Social Media Posts	Post a minimum of four (4) times a year, on a minimum of one social media platform. The messages shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff. The messages shall be seasonally appropriate.	The number of views, impressions, and other interaction shall be tracked. The MS4 Operator shall use this to see which messages get reactions, and if certain messages may need more education.	This BMP provides information on seasonally relevant target pollutants to all members of the public, but specifically Belton homeowners in an easily accessible and digestible format.
Require installation of permanent embossed, or precast inlets with "No Dumping – Drains to Stream" or similar message	All new inlets in the City of Belton.	Number of inlets, the location of the inlets shall be tracked. These areas shall be noted on MCM #3 dry weather screenings, and illicit discharge investigations as a method to determine if the markings are effective or if areas could benefit from markings.	This BMP requires contractors to mark all new inlets with a "No Dumping – Drains to Stream" stamp which serves as a visual reminder to contractors and homeowners when they encounter marked inlets.
Paid Membership in a regional or watershed group.	Organization must focus on stormwater runoff.	The group may enact BMPs on behalf of all members, the permittee must participate to ensure their MS4 has representation and receives some of the educational BMPs.	The City of Belton is a paid member of the South Grand Regional Watershed Alliance (SGRWA). This group organizes stream clean-ups in Belton and provides educational materials to participants during events.

This City has an active inlet marking program but cannot meet the required 10% inlets marked per year requirement to include the activity as an implemented BMP due to low participation rates.

The MS4 Operator may change BMPs throughout the permit cycle if it is determined through tracking and adaptive management reviews that a different BMP may be more effective for the MS4. Any changes shall be reflected in the SWMP and explained in the MS4 Stormwater Management Program Report.

4.1.D. Involvement BMPs

The MS4 Operator shall implement a minimum of two (2) involvement BMPs and include tracking and adaptive management processes. Table 4-3 below, provides the selected BMPs, measurable goals and tracking and adaptive management.

Table 4-3: Involvement BMPs

BMP	Measurable Goals	Tracking & Management
Stream/Lake or Watershed clean-up events: Adopt-a-Stream	To be considered an event, the land area cleaned must be at minimum 2 acres, or 400 yards of stream/streambank/watershed, or 2 miles of roadside. (These may be combined such as 1 acre of land and 200 yards of stream.)	Track the area or distance cleaned (by acre, yard, or lane miles), the amount of waste removed (by tonnage, cubic yard, or Stream Team bag count) and the attendance. Use the waste measurements to determine if there are priority area for litter entering stormwater, or areas for illegal dumping.
Ongoing yard waste collection, designated yard waste collection area, household hazardous waste collection, or street sweeping program	Provide the service as an annual occurrence or at readily accessible locations. For street sweeping, this shall be conducted at minimum, twice a year.	Track the amount collected. If educational information is being used in conjunction with this activity, track for changes due to the education. Tracking can be used with illicit discharge tracking, to determine if the rate of this type of discharges or dumping were reduced.

4.1.E. MS4 Operator Support

The MS4 Operator shall create or support the involvement BMP(s) in Section 4.1.D. To be considered support given to the coordinating groups the MS4 Operator shall at a minimum conduct the following or similar:

- Plan, or assist with planning the event or activity;
- Contribute supplies, materials, tools, or equipment;
- Provide assistance from MS4 staff during the activity;
- Provide assistance with recruiting volunteers for events;
- Make a space available for projects, meetings, or events;
- Advertisement for the events;
- Supply disposal services;
- Arrange land or stream access;
- Financial support; and
- In-kind donation such as food.

City of Belton MS4 staff generally provide the support specified in Table 4 – 4. This support is subject to change to meet evolving needs.

Table 4-4: MS4 Staff Support

BMP	MS4 Staff Support
Adopt-A-Stream	• Coordinate with SGRWA on spring stream clean-up. • Contribute supplies and equipment • Provide assistance from MS4 staff during cleaning events • Advertise for clean-up events • Supply disposal services
Yard Waste Collection	• Coordinate with waste collection services • Advertise Yard Waste Collection times

4.1.F. Adaptive Management

The MS4 Operator shall review the Public Education and Outreach on Stormwater Impacts Program, at a minimum, annually and update implementation procedures and/or BMPs as necessary within the requirements of the permit. This may be conducted when preparing the MS4 Stormwater Management Program Report for submittal to MDNR.

MCM #2: Public Participation

4.2 Permit Requirement

The permittee shall develop and implement a comprehensive public participation program that provides opportunities for public participation in the development and oversight of the permittee's Stormwater Program.

This program must provide opportunities for public participation of the permittee's permit renewal and shall, at a minimum, comply with any state and local public notice requirements. Additionally, the program must provide opportunities for public participation in activities related to developing and implementing the Stormwater Management Program.

4.2.A. Public Notice

To promote public involvement in the SWMP, the City will provide a thirty (30) day review period for draft permits and SWMP updates prior to their submission to MDNR.

4.2.B. Operator Website

As part of the public notice, draft permits and/or SWMP updates shall be posted on the City of Belton, Public Works Department's Stormwater Management webpage.

i. The public can submit comments by email to publicworkscomments@belton.org. This email shall be provided on the webpage with the draft documents.
ii. The MS4 Operator shall respond to comments received during the comment period.
iii. Copies of public comments shall be retained along with records of information submitted by the public as part of the public notice process. These comments and responses shall be made available to the public or MDNR upon request.

4.2.C. Public Information Meeting

The MS4 Operator shall hold a public information meeting to provide information on, or describe the contents of, the proposed Stormwater Management Program. This meeting shall be advertised for at least thirty (30) days prior to the public meeting.

i. The MS4 Operator shall post notice on the City's Stormwater Management webpage along with the standard public event advertisement method.
ii. The notice shall include date, time, and location.
iii. The meeting must be held withing the service area of the MS4. Typically, this will be at the City Hall Annex Council Chambers.

4.2.D. Public Inquiries

The MS4 Operator shall have a publicly available method to accept public inquiries, or concerns, and to take information provided by the public about stormwater and stormwater related topics.

i. The City of Belton website features a “Report a Concern or Ask a Question” option for all users. Submissions related to stormwater are sent to the MS4 Operator.
ii. All reports shall be tracked, recording the topic, location, and concern. This information can help identify pollutants of concern, priority areas, pollutant sources, educational needs, and other information the MS4 Operator may use to evaluate the Stormwater Management Program.

4.2.E. City Council Update

A representative of the MS4 Operator, who is familiar with the MS4 Stormwater Program, shall provide an update to the governing board. This shall be conducted at minimum, annually with the status of, or updates on, the Stormwater Management Program, and compliance with the Stormwater Management Program.

4.2.F. Tracking Mechanisms

The MS4 Operator shall track attendance, inquiries, or concerns in the MS4 folder per the requirements of Section 4.2 of the permit/SWMP. Using adaptive management, the MS4 Operator shall review the Public Participation Program, at minimum, annually and update implementation procedures as necessary within the requirements of the permit/SWMP. This shall be used to review how to best reach the public, the effectiveness of the mechanisms, the effectiveness of reaching the public and the City Council, and if the community and MS4 government are working together for water quality. Any additional events and/or BMPs shall be acknowledged in the Stormwater Management Program report.

MCM #3: Illicit Discharge Detection and Elimination (IDDE)

4.3 Permit Requirement

The MS4 Operator shall implement and enforce a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200 at 40 CFR 122.26(b)(2)) into its regulated MS4.

4.3.A. Storm Sewer System Map

MS4 staff shall maintain a current storm sewer system map that shall be updated as needed to include features which are added, removed, or changed. This map is electronic and is kept by the GIS Technician. MS4 staff and/or construction inspection staff are responsible for providing updates to the GIS Technician. The map must show at a minimum:

i. The location of all MS4 outfalls. The map shall be detailed enough that the outfalls can be accurately located;
ii. The names and locations of all receiving waters of the state that receive discharges from the MS4 outfalls; and
iii. The boundary of the regulated MS4 area.

The map shall be readily available and used by field staff as needed. The map and any accompanying necessary information shall be made available to MDNR upon request.

4.3.B. Outfall Mapping

The MS4 Operator must record the sources of information used for the map and must track, at a minimum:

i. A numbering or naming system of all outfalls;
    1. Outfalls are labeled for their watershed and numbered.
ii. Dates that the outfall locations were verified/last field survey; and
iii. For newly added outfalls, the date that it was added to the storm sewer system.

Outfall locations and inspection information is tracked via the ArcGIS Collector application. All MS4 Staff shall have access to this application to facilitate inspection record keeping and illicit discharge detection and elimination program monitoring.

4.3.C. Regulatory Mechanism

The City prohibits non-stormwater discharges through ordinance, specifically *Article V. – Stormwater Pollution Prevention – Illicit Discharges*. A copy of the ordinance can be found in Attachment 2. Prohibited non-stormwater discharges include:

i. Litter
ii. Household hazardous waste disposal
iii. Leaf disposal

iv. Use of soaps & detergents with discharge to stormwater
v. Illegal dumping of solid waste
vi. Vehicle fluid disposal
vii. Pet waste
viii. Sewage

4.3.D. Dry Weather Screening

The City's dry weather screening strategy is as follows:

i. The MS4 Operator or designated staff shall conduct outfall field assessments. The screening shall be conducted during dry weather conditions (minimum of 72 hours after the last precipitation event) to check for the presence of discharges.
    1. As a new permittee of the Comprehensive permit, MS4 staff shall locate and screen all outfalls over the first 5-year permit cycle (Oct. 2021 – Oct. 2026). Staff shall also identify priority areas.
    2. After the first 5-year permit cycle ends, MS4 staff shall screen at least 60% of all the outfalls during each permit cycle. Priority areas identified in the first permit cycle shall be screened each year.
ii. The screening shall include a checklist to; ensure a complete inspection of each outfall, enhance consistency, and to track field screening. This shall be used regardless of the presence of dry weather flow.

    When discharge is present, the checklist shall note the following general observations and physical characteristics at a minimum:
    1. Date and time
    2. Weather conditions and temperature
    3. Color of discharge
    4. Estimate of flow rate (can be qualitatively noted)
    5. Odor
    6. Surface scum, algal bloom, floatables or oil sheen present
    7. Deposits or stains (note color)
    8. Turbidity (can be qualitatively noted)
    9. Stream impact including vegetation, fish, wildlife
    10. Length of impacted stream
    11. Notes of obvious source of flow

4.3.E. Diagnostic Monitoring for Non-Stormwater Flows

The following procedures are for possible illicit discharges which may be collected and analyzed by a contracted lab, or similar agreement with another entity who is equipped and experienced in sample collection and analysis.

i. Diagnostic monitoring shall include sampling of unknown discharges from MS4 outfalls that are found to be flowing or ponding more than 72 hours after the last precipitation event and considered to be an illicit discharge.
ii. The samples shall be analyzed for relevant parameters to determine if a pollutant is involved.
    1. Relevant parameters will need to be determined on a case-by-case basis depending on the nature of the discharge and what the potential sources may be.
    2. The City of Belton has an account with Pace Analytical for supplying and analyzing samples. City staff that are collecting samples shall be trained to properly collect and transport samples.
    3. Possible parameters to sample for and analyze when deemed applicable include but are not limited to:
        a. pH
        b. Oil and grease
        c. *E. Coli* or fecal coliform
        d. Surfactants or fluorescence concentration
        e. Specific conductivity
        f. Ammonia
        g. Chlorine
        h. Dissolved oxygen
        i. Fluoride/hardness

4.3.F. Illicit Discharge Source Tracing

If initial screening indicates that a dry weather discharge contains pollutants, or if an illicit discharge is suspected from another reporting method, the source shall be traced. MS4 staff shall visually trace and/or dye test to locate the source of the discharge. In cases of non-flowing discharges, storm drain access points upstream of the illicit discharges will be inspected for staining or other evidence of contamination. The following investigative tools may also be used as appropriate:

i. Storm sewer sampling
ii. Map of the storm sewer system
iii. Closed circuit television
iv. Smoke or dye tracing
v. Tunnel entry

4.3.G. Illicit Discharge Source Removal

Once the source is located, the pollutant and source must be removed. Exact procedure for removal will depend on the source, pollutant, and circumstances. The MS4 Operator must maintain necessary contacts with appropriate entities that may be needed for proper removal. This information shall be accessible to responsible staff.

Ideally, the MS4 Operator will work with the source of the illicit discharge to remedy the situation. Possible remedies shall include:

i. Implement source control or treatment BMPs to prevent reoccurrence of the violation
ii. Remediation or restoration of the affected property

4.3.H. Priority Area Identification

To prevent further illicit discharges, the MS4 Operator shall identify priority areas such as, but not limited to:

i. Areas with evidence of ongoing illicit discharges
ii. Areas with a history of illicit discharges
iii. Certain land use influencing storm sewer/ proximity of potential sources
iv. Areas of higher population density
v. Neighborhood with onsite sewage systems
vi. Areas with known litter or dumping issues
vii. Areas with large or increased number of citizen complaints
viii. Industrial areas

Annually, the MS4 Operator shall evaluate the priority area list/map and update as necessary to reflect changing priorities.

4.3.I. IDDE Program Procedures

The MS4 Operator shall maintain written procedures for implementing the IDDE Program, including the following components, to ensure program continuity and consistency.

i. A description of the dry weather screening strategy and implementation schedule to detect and address non-stormwater discharges, including discharges from illegal dumping and spills to Belton's storm sewer system.
ii. A description of how the discharge is evaluated and the possible parameters that are tested.
iii. If contracted to another entity, the contact information shall be listed.

The City of Belton is in the process of developing the IDDE Program and plans to have in completed within the first 5-year permit cycle as required in permit section 4.3.P.

4.3.J. Discharge Investigations

The MS4 Operator must conduct investigations in response to field screening discoveries, spills, or in response to complaints from the public, municipal staff, or adjacent MS4s. The investigation must work to determine the source of the connection, the nature and volume of discharges through the connection, and the party responsible for the connection. Responses shall meet the following investigation timelines:

i. Immediately respond to all illicit discharges, including spills, that are determined to constitute a threat to human health, welfare, or the environment.
ii. Investigate (or refer to the appropriate agency with the authority to act) within five (5) business days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge which does not constitute a threat to human health, welfare, or the environment.
iii. If illicit connections or illicit discharges are observed related to, discharging to, or discharging from, an adjacent MS4 Operator's municipal storm sewer system, the MS4 Operator must notify the other MS4's Operator within 24 hours of discovery or as soon as practicable.

4.3.K. Enforcement Procedures

The MS4 Operator has procedures for appropriate enforcement, depending on the situation, this may include fines, the ability to collect cleanup and abatement costs, and actions to ensure that the permittee's illicit discharge ordinance is being implemented.

i. The MS4 Operator shall maintain a written description of the enforcement procedure. This shall include a copy of or link to the ordinance that the MS4 Operator will use to enforce the prohibition of illicit discharges into the MS4.
    1. A copy of the enforcement procedures can be found in Attachment 1.

4.3.L. IDDE Database

The MS4 Operator shall maintain a database to track dry weather field screenings, spills, incidents, and investigations.

i. Tracking mechanisms shall be used for incidents, investigations, enforcement and follow up. This data shall be used to continuously evaluate the effectiveness of the IDDE program. This data shall be reviewed to determine if there is a new priority area. At a minimum, the MS4 Operator must annually record:
    1. Number of outfalls screened
    2. Number of complaints received and investigated
    3. Number of illicit discharges removed
ii. The MS4 Operator shall document all investigation to track at a minimum:
    1. The date(s) the illicit discharge was observed and investigated
    2. Summary of procedures used to investigate the illicit discharges
    3. The outcome of the investigation including sample results and findings
    4. Any follow-up of the investigation including cleanup, enforcement actions, visits to confirm the illicit discharges have removed
    5. The date the investigation or issue was closed or resolved.

4.3.M. Public Hazards Notice

The MS4 Operator shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

4.3.N. Annual Review

The MS4 Operator shall review the IDDE Program, at minimum, annually and update implementation procedures as necessary.

4.3.O. Existing Permittee Program Evaluation

Not Applicable.

4.3.P. New Permittee IDDE Program Development

As a new MOR04C permit holder, City of Belton MS4 staff must develop an IDDE Program. The IDDE Program shall be described in the SWMP and be fully implemented withing five years of permit issuance.

i. The City of Belton currently has an illicit discharge ordinance. It can be found in Attachment 2.
ii. The MS4 Operator shall complete the outfall map in accordance with Section 4.3.A of the MS4 Permit. All outfalls shall be dry weather screened withing the first five (5) years of permit issuance.

4.3.Q. Staff Training

The MS4 Operator must develop and implement a training program for all municipal field staff, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or connection to the storm sewer system.
This includes staff who may handle materials which may become an illicit discharge. This shall include discharges through spills, improper disposal, mismanagement, improper vehicle or equipment washing or rinsing. This training is outlined in the O&M Manual to provide training focused on topics that are relevant specific facilities.

i. New staff shall take training within a year of being hired.
ii. The applicable staff include the following:
    1. Vehicle maintenance staff
    2. Transportation Division staff
    3. Water Services Division staff
    4. Code enforcement staff
    5. Park maintenance staff
    6. Relevant engineering division staff
    7. Relevant police department staff
    8. Relevant fire department staff
    9. Other city staff shall be included if appropriate
iii. The training date, topics and the attendance shall be recorded

iv. Reviews of the training effectiveness shall be considered after municipal site inspections or after an incident occurs. If a certain department or facility did not perform the way they were trained, or if an issue arises that was not handled properly, the MS4 Operator should consider if the training is enough or is ineffective. The MS4 Operator shall consider ways to survey or test staff to see if the training is effective.

4.3.R. Annual IDDE Program Review

Using adaptive management, the MS4 Operator shall review their IDDE Program, at minimum, annually and update implementation procedures as necessary. This data shall be used to continuously evaluate the effectiveness of each BMP and the implementation of each BMP. Any new/additional BMPs shall be acknowledged in the Stormwater Management Program report.

MCM #4: Construction Site Stormwater Runoff Control

4.4 Permit Requirement

"*The MS4 Operator shall develop, implement and enforce a program to reduce pollutants in any stormwater runoff to their MS4 from construction activities that result in land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.*"

4.4.A. Regulatory Mechanism

The City of Belton has enacted an ordinance, specifically *Article III. – Subdivision Design – Stormwater runoff plan,* that requires construction site runoff control BMPs at construction/land disturbance sites greater than or equal to one (1) acre or less than one acre sites if the construction activity is part of a larger common plan or development or sale that would disturb one acre or more. Copies of the ordinance and Land Disturbance Permit are included in this SWMP as Attachment 2 and Attachment 4.

4.4.B. Plan Review

The MS4 Operator or designated representative shall be responsible for reviewing pre-construction plans. The Preliminary Stormwater Plan Checklist (Attachment 5) shall be used during plan review to ensure that the following requirements are met and that designs are in accordance with KC-APWA Section 5600, the City of Belton Design and Construction Manual, and the APWA/MARC BMP Manual.

i. Incorporate the consideration of potential water quality impacts through procedures for site plan review. The site plan review procedures shall evaluate threats to water quality by considering, at a minimum, the following factors:
    1. Soil erosion potential
    2. Site slope
    3. Project size and type
    4. Sensitivity of receiving waterbodies
    5. Discharge flow type
    6. Location of discharge point in relation to receiving water
    7. Proximity of the site to receiving waterbodies
    8. Other factors relevant to the MS4 service area

ii. Use the Preliminary Stormwater Plan checklist, and other listed criteria, to ensure consistency and completeness.

iii. Include requirements for construction site operators to select, install, implement, and maintain appropriate stormwater control measures.
    1. This includes temporary BMPs throughout the life of the land disturbance, and permanent BMPs which remain on site as required by Belton's design specifications.

iv. Consider ways to minimize disturbed areas through actions such as, phased construction requirements, temporary seeding or sodding, or erosion mats to exposed areas.
v. Include requirements for construction site operators to control construction-site waste that may cause adverse impacts to water quality. This shall include at a minimum:
    1. Discarded building materials
    2. Concrete truck, and mortar mix washout
    3. Chemicals (such as fertilizer, paint, oils, herbicides, pesticides)
    4. Litter
    5. Sanitary waste

4.4.C. Inspection and Enforcement

The MS4 Operator has the authority to preform site inspections and enforce control measures. The MS4 Operator shall utilize the Public Works Inspection Form (Attachment 6); the General BMP and SWPPP Inspection Form (Attachment 7), and/or the Erosion and Sediment Control Inspection Report Form (Attachment 8) as necessary during site inspections.

The construction site runoff control program includes the following:

i. Identify priority sites for inspection based on nature of the construction activity, topography, disturbed area, and the characteristics of soils and sensitivity of, or proximity to, receiving water.
ii. Construction site inspections shall include assessment of compliance with the MS4 Operator's construction site storm water runoff control ordinance or regulatory mechanism, and other applicable ordinances.
iii. The inspections shall evaluate any structure that functions to prevent pollution of stormwater or to remove pollutants from stormwater and use enforcement policies to require BMPs are implemented and effective.
iv. Final inspection, upon completion of the land disturbance and prior to final approval of construction project. Ensure all disturbed areas have been stabilized, that all temporary erosion and sediment control measures are removed.
v. The inspections conducted by the MS4 Operator shall be documented with one or more of the aforementioned checklists. The appropriate checklist must include structural BMPs and verify the self-inspections which are conducted by the construction site operator. These MS4 Operator checklists may be electronic.

4.4.D. Enforcement Policy Requirement

The construction site runoff control program includes an established, escalating enforcement policy that clearly describes the action to be taken for violations.

i. The MS4 Operator has the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.

ii. Enforcement responses to violations must consider the following criteria at minimum:
    1. Degree and duration of the violation
    2. Effect the violation has on the receiving water
    3. Enforcement actions shall be timely to ensure the actions are effective. These procedures and actions are written and available for MS4 staff for consistency and training purposes and can be found in Attachment 1
    4. The MS4 Operator has the authority to use the following enforcement procedures:
        a. Stop Work orders
        b. Verbal education or educational materials given to the construction site operator
        c. Written warnings or notice of violation
        d. Bonding or escrow requirements
        e. Fines/penalties
        f. Denials for previous non-compliance or current non-compliance at other sites

Additional relevant policies include: *Stormwater and Flood Management Policy* (Attachment 9) and *UDC Chapter 32 Section 2 Stormwater and Floodplain Penalties* (Attachment 10) which states that a notification letter shall be sent to the property owner with a specified time period for the property owner to take corrective action and outlines the process by which the enforcement response is chosen.

4.4.E. Inspection Requirements

The MS4 Operator shall require the construction site operator to conduct inspections at minimum:

i. Every fourteen (14) days, when construction is active; and
ii. Within 72 hours of any storm event, and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased.

Checklists used for the inspections conducted by construction site operators shall be submitted to the MS4 Operator, or the MS4 Operator shall verify that these inspections are being conducted by the construction site operator checklists during MS4 Operator inspections**.**

These requirements are listed out in Attachment 4: *City of Belton Land Disturbance Permit.*

4.4.F. Land Disturbance Inventory

The MS4 Operator shall maintain an inventory of active public and private land disturbance sites, as defined in Section 4.4 of the permit. This may be supplemented with records such as a plan review checklists and email correspondence.

The inventory must contain:

i. Relevant contact information for each project

ii. Size of the project/ area of disturbance
iii. If the site is a priority site/ how high of priority

The MS4 Operator satisfies this requirement by keeping records of the Attachment 5. *Preliminary Stormwater Plan Checklist* for each project.

4.4.G. Inspection Record

The MS4 Operator shall track their oversite inspections. This is done by retaining copies of records such as the SWPPP Construction Inspection Template (Attachment 10) and email correspondence. The MS4 Operator must make these inventories available to the MDNR upon request.

Construction inspections are conducted weekly, and the tracking includes the following at a minimum:

i. Inspection dates and time
ii. Inspector name
iii. Inspection findings
iv. Follow up actions and dates, including corrective actions and enforcement actions

4.4.H. SWMP Compliance Review

Not Applicable.

4.4.I. SWMP Compliance Development

The City of Belton is a new MOR04C permit holder, with a previously developed construction site runoff program ordinance, see Attachment 3. A formal inventory of active sites shall be developed by November 2022 and updated as new projects are permitted.

4.4.J. Public Input Concerning Land Disturbance

The Stormwater Management Program includes procedures for the MS4 Operator to receive and consider information submitted by the public about land disturbance sites. This is in combination with 4.2.D of this SWMP.

4.4.K. Construction Site Runoff MS4 Training

The MS4 Operator shall provide, or support access to, construction site runoff control training for MS4 inspectors, construction inspectors and plan reviewers at minimum once every permit cycle. This education shall be tracked or documented.

The MS4 Operator shall provide annual training to applicable MS4 Staff that includes:

i. Inspection checklist and procedure review
ii. Plan review checklist and procedure review

iii. Proper BMP usage, installation, and maintenance training

Further information for MS4 training can be found in the Operation and Maintenance manual which is referenced in the MCM #6 Pollution Prevention/Good Housekeeping section in this document.

4.4.L. MS4 Inspection and Enforcement Procedures

The MS4 Operator must provide written procedures outlining the local inspection and enforcement procedures to construction inspection staff to ensure consistency among the inspections. These include the *SWPPP Construction Inspection Template* (Attachment 10) and *Stormwater and Flood Management Policy* (Attachment 7).

4.4.M. Review

Using adaptive management, the MS4 Operators shall review, at minimum annually, the Construction Site Stormwater Runoff Control Program and evaluate the ordinances, review procedures, inspection procedures, enforcement procedures, receipt of public information procedures, and effectiveness of training procedures to ensure compliance with these requirements and determine if changes are needed. This annual review may include but is not limited to:

i. Evaluating the most common violations, how the violations are handled, how many are escalated;
ii. If the education program can assist in reducing violations;
iii. Determining if the site plans match the sites when violations arise or if additional items need to be evaluated at plan review;
iv. Assessing public complaints being addressed in a timely manner; and
v. Evaluating if the inspections are thorough and consistent across different sites.

MCM #5: Post-Construction Stormwater Management in Development

4.5 Permit Requirement

"The MS4 Operator shall continue or develop, implement, and enforce a program to address the quality of long-term stormwater runoff from new development and redevelopment projects that disturb equal to and greater than one acre, including projects less than one acre that are part of a larger common plan of development or sale that would disturb one acre or more and that discharge into the regulated MS4. The MS4's program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts."

4.5.A. Ordinance Requirements for Developers

The MS4 Operator uses *Chapter 32 of the City of Belton Unified Development Code* and land disturbance permits to address post-construction runoff from new development and redevelopment projects to the extent allowable under state and local law for sites equal to or greater than one acre including projects less than one acre that are part of a larger common plan of development or sale. The goal of this approach is to arrive at designs that protect sensitive areas, minimize the creation of stormwater pollution, utilize BMPs that effectively remove stormwater pollution, and attempt to maintain predevelopment runoff conditions. Erosion and sediment control plans, MDNR permitting, and grading plans are required to be submitted for approval by the MS4 Operator before the land disturbance permit is issued to the developer. Sediment and erosion control standards, design methods, and specifications must meet APWA and City requirements and are made available through the MS4 Operators website at https://www.belton.org/Government/Departments/Public-Works-Department/Design-and-Construction-Manual.

4.5.B. Minimizing Water Quality Impacts

The MS4 Operator shall continue or develop their strategy to minimize water quality impacts. This shall include a combination of structural and/or non-structural controls (BMPs) appropriate for the permittee's community.

Structural controls include but are not limited to; extended detention basins, grass swales, bio-retention, permeable surfaces, sand filter basins, stormwater planters, proprietary BMPs.

Erosion, sediment control, and land development plans shall be designed in accordance with APWA 5600 and the MARC BMP Manual which are available on the MS4 Operator website at the link in section 4.5.A of this document. This includes the design of the forementioned structural BMPs.

Non-structural controls include but are not limited to; stream buffers, no mow zones, preservation of open spaces, tree preservation, impervious cover reduction, land use planning, and low impact development.

Erosion, sediment control, and land development plans shall be designed in accordance with APWA 5600 and the MARC BMP Manual. This includes the design of the forementioned non-structural BMPs.

i. Policies and ordinances that provide requirements and standards to direct development to identified areas;
ii. Protection of sensitive areas such as wetlands and riparian areas;
iii. Maintain and/or increase open space (which may include a dedicated funding source for open space acquisition);
iv. Maintain requirements for buffer zones along water bodies;
v. Require minimizing impervious surfaces;
vi. Require minimizing disturbance of soils and vegetation;
vii. Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure;
viii. Programs which incentivize the use of green infrastructure;
ix. Requirements for minimization of directly connected impervious areas; and
x. Tree preservation ordinances.

Erosion and sediment control plans, MDNR permitting, and grading plans are required to be submitted for approval by the MS4 Operator before the land disturbance permit is issued to the developer. The MS4 Operator considers all structural and non-structural BMPs that can be used to minimize impacts on water quality.

4.5.C. Plan Review Requirements

Pre-construction plan review shall be conducted by the MS4 Operator to assess site characteristics at the beginning of the construction site design phase to ensure adequate planning for stormwater program compliance.

The structural or non-structural controls chosen shall; protect sensitive areas, minimize the creation of stormwater pollution, and effectively reduce stormwater pollution. This can be achieved by reasonably mimicking pre-construction runoff conditions on all affected new development projects, or the MS4 Operator may achieve this goal through a method more appropriate for specific locations.

i. The plan review process shall use the Preliminary Stormwater Plan Checklist (Attachment 5), the UDC Land Use Ordinance (Attachment 12), GIS and site visits
ii. The plan review process shall evaluate non-structural BMP selection first, such as comprehensive plans, zoning ordinances, buffer strips, and/or maximization/preservation of open space. Non-structural BMPs primarily prevent stormwater runoff from a site, which could influence the options for structural BMPs which help mitigate the stormwater related impacts after they have occurred.

4.5.D. Operation and Maintenance Enforcement Requirements

The MS4 Operator shall enact an ordinances or similar enforcement mechanisms to ensure adequate long-term operation and maintenance (O&M) of the selected BMPs, including, as appropriate, agreements between the MS4 Operator and other parties such as post-development landowners or regional authorities within the first five-year permit cycle.

i. Long term O&M shall be addressed during the plan review and approval process.
ii. Copies of O&M manuals shall be retained by the party responsible for the post-construction BMP, and with the MS4 Operator. This may be done electronically.

4.5.E. Post Construction BMP Inspection Requirements

The MS4 Operator shall inspect, or require inspection of, each water quality structural and non-structural water post-construction BMP according to the following at minimum:

i. A minimum of one (1) inspection shall be conducted during construction, and one (1) inspection before the site is finalized, to verify water quality facilities are built as designed and any applicable boundaries or practices for non-structural BMPs are being observed. This may be conducted in combination with MCM 4 inspections.
    1. The MS4 inspector shall have access to the approved plans to ensure proper installation.
ii. A minimum of once in the first three years after the installation by the MS4 Operator.
iii. Annually by the owner or operator of the post-construction BMP, or by the MS4 Operator. If completed by the BMP owner or operator, this inspection report shall be submitted to the MS4 Operator for evaluation and review.
iv. The MS4 Operator shall inspect a minimum of 60% of all water quality post-construction BMPs within the five-year permit cycle. This must include installations with ongoing or open enforcement issues.

The MS4 Operator shall use the *SWPPP Construction Inspection* and be involved during the planning and development agreement process. MS4 Staff shall review ESC plans prior to making decisions regarding the operation and maintenance of permanent, structural BMPs. The *Stormwater and Flood Management Policy* reflects requirements ii-iv above.

4.5.F. Water Quality Development Regulation Requirements

The MS4 Operator must maintain a plan designed to ensure compliance with the MS4's post-construction water quality regulatory mechanism. This plan includes escalating enforcement mechanisms the MS4 Operator has the authority to use to ensure compliance.

The MS4 Operator has the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.

Enforcement responses to violations must consider at minimum:

i. Degree and duration of the violation
ii. Effect the violation has on the receiving water
iii. Compliance history of the post-construction BMP owner or operator
iv. Cooperation of the owner or operator with compliance efforts

Attachment 9. *Stormwater and Flood Management Policy* outlines the enforcement mechanisms that the MS4 Operator shall utilize when determining the severity of penalties for developers. The MS4 Operator has authority through the *UDC Chapter 32 Stormwater and Flood Plain Management Penalties* in which section 2 describes the enforcement capabilities of the MS4 Operator including violation notices, penalties, stop work orders, withholding certificate of occupancy, suspension of permit, civil penalties, and criminal penalties.

4.5.G. Enforcement Actions

Enforcement actions shall be timely to ensure the actions are effective. The MS4 Operator shall begin enforcement actions within thirty (30) days of discovering a violation.

The MS4 Operator shall maintain at a minimum of two possible sanctions. These include, but are not limited to:

i. Education regarding the BMP and verbal warnings
ii. Written warnings or notice of violation (this includes email notification)
iii. Property lien
iv. Fines

Attachment 9. *Stormwater and Flood Management Policy* includes a schedule and listing for enforcement actions.

4.5.H. Tracking and Inventory for Permanent Water Quality BMPs

The MS4 Operator shall maintain an inventory tracking the water quality post-construction BMPs. This inventory must contain, at a minimum:

i. Relevant contact information for the responsible person(s) or entity (e.g., tracking number, name, address, phone, etc.);
ii. The type of post-construction BMP;
iii. Applicable operations and maintenance documents;
iv. Date the MS4 Operator approved the construction site plan; and,
v. If the water quality facility is owned or operated by the MS4, the tracking shall also include any maintenance, such as sediment clean-out or replanting.

The MS4 Operator shall maintain a file for each development and capital project with all prudent information, including contact information, permanent BMP type, operation and maintenance documents, and the date of MS4 Operator site plan approval. Files to be included in a project folder along with a description of what that file should contain are included in the Project Management Manual (Attachment 13).

4.5.I. Post Construction BMP Inspection Tracking

The MS4 Operator shall also track the post construction BMP inspections. This is done by retaining copies of records such as inspection checklists, violations and email correspondence. The MS4 Operator must make these inventories available to MDNR upon request.

The MS4 Operator shall track at a minimum:

i. Inspection dates/ times;
ii. Inspector name(s);
iii. Inspection findings; and,
iv. Follow up actions including all enforcement actions.

An example can be viewed in the references of this document as Attachment 5. General BMP and SWPPP Inspection Form.

4.5.J. Existing Permittee Self Evaluation

Not applicable.

4.5.K. Newly Regulated Permittee Ordinance and Regulation Development

As a new MOR40C permit holder, the City shall develop an ordinance or regulatory mechanism. Development of this program shall be completed within the first five (5) years of the permit issuance.

The inventories of public and private post-construction water quality BMPs must be completed within two (2) years of permit issuance and then updated as new projects are permitted and projects are completed.

4.5.L. Development Water Quality Training for MS4 Inspectors

The MS4 Operator shall provide appropriate training for MS4 inspectors at minimum once every permit cycle. This may include Green Infrastructure training, or specific operation of proprietary post-construction BMPs. The MS4 shall provide overall training to explain the function of both structural and non-structural post-construction water quality BMPs.

Attachment 14: *Stormwater Training Policy* outlines all stormwater topics which are covered in required annual training for MS4 Staff.

4.5.M. Review

Using adaptive management, all MS4 Operators shall review, at minimum annually, their Post-Construction Site Stormwater Management in New Development and Redevelopment Program and evaluate effectiveness of the overall program. and determine if changes are needed. This annual review may include but is not limited to:

i. Reviewing the number and types of developments;
ii. How many BMPs were installed/inspected;
iii. The amount of watershed area being treated;
iv. The types of violations found and how frequently; and
v. How education could improve the effectiveness of the program.

Attachment 9: Stormwater and Flood Management Policy, includes these review procedures.

MCM #6: Pollution Prevention/Good Housekeeping for Municipal Operations

4.6 Permit Requirement

"The permittee shall develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations."

4.6.A. Training Program

The MS4 Operator shall maintain and utilize an employee training program for MS4 municipal operations staff. The training shall be given, at minimum, annually to all MS4 staff who work with material handling, at MS4 owned or operated vehicle/equipment maintenance areas, storage yards, and material storage facilities. This may be broken up into staff units, or by applicable topics.

The MS4 Operator generally provides training every spring for all applicable municipal staff. A full inventory of training material is maintained by MS4 Staff.

4.6.B. Stormwater Pollution Prevention Training

Training shall be used to prevent and reduce stormwater pollution. Training shall cover a minimum of the following topics/activities (if applicable to the MS4):

i. Vehicle and equipment washing;
ii. Fluid disposal and spills;
iii. Fleet, equipment, and building maintenance;
iv. Park and open space maintenance procedures (including fertilizer, herbicide, pesticide application);
v. New construction, road maintenance, and land disturbances;
vi. Stormwater system maintenance;
vii. MS4 operated salt and de-icing operations;
viii. Fueling;
ix. Solid waste disposal;
x. Street sweeper operations; and
xi. Illicit Discharges.

A full list of potential topics and a description of applicable staff, as well as specific facilities and activities can be found in the Introduction of the *Stormwater Operation and Maintenance Manual (px. table x)*.

4.6.C. Training Materials and Procedures

The MS4 Operator shall:

i. Maintain materials to use in the training program, such as those available from the EPA, the state, or other organizations.
ii. Maintain written procedures for the training program. Include a description of how this training will coordinate with all other minimum control measures (such as Illicit Discharge), monitoring and TMDL implementations where applicable.
iii. Maintain a written schedule to offer topic specific training when it is appropriate. Such as, swimming pool discharges in the summer, leaf disposal in the fall, proper salt clean-up and usage in the winter.

Attachment 14: Stormwater Training Policy contains a description of training coordination, applicability, and seasonal changes.

4.6.D. Municipal Operations and Facilities

The MS4 Operator shall maintain a list of all municipal operations and facilities that are impacted by the operation and maintenance program.

This shall include a minimum of the following if owned and operated by the MS4 and if applicable to the MS4:

i. Maintenance yards;
ii. Fleet or maintenance shops, including parks department;
iii. Storage yards;
iv. Parks, golf courses, swimming pools, and splash pads;
v. Municipal parking lots;
vi. Salt/sand storage locations;
vii. Snow disposal areas; and
viii. Other locations expected to contribute floatables and/or pollutants.

A complete list of operations and facilities is maintained by MS4 Staff and can be seen in Table 1 (page x) of the referenced document *Stormwater Operation and Maintenance Manual*.

4.6.E. MS4 Owned or Operated Industrial Facilities

The MS4 Operator shall maintain a list of industrial facilities the MS4 Operator owns or operates which are subject to NPDES permits for discharges of stormwater associated with industrial activity. The list shall include the permit number or a copy of the No Exposure Exemption Certification (if applicable) for each facility.

This includes Municipal projects with a land disturbance permit, wastewater facilities, airports, etc.

NPDES permitted facilities not owned or operated by the permittee are not required to be part of the list, however the MS4 Operator should be familiar with all such facilities in their MS4 service area as they may signify a priority area for the IDDE program.

The Wastewater Treatment Facility is maintained by the City's Water Services Division. The facility is regulated by MDNR and is operated under Permit # MO0117412. Table 4 (page x) in reference document *Stormwater Operation and Maintenance Manual* outlines BMPs and proper maintenance procedures for the Wastewater Treatment Facility.

4.6.F. Controls for Reducing or Eliminating Floatables and Pollutants

The MS4 Operator shall develop or maintain controls for reducing or eliminating the discharge of floatables and pollutants from municipal facilities listed in Section 4.6.D and 4.6.E.

These controls shall include at a minimum, where applicable:

i. A list of potential pollutant sources at each facility, such as materials used and stored on site;
ii. A minimum of annual inspections of all municipally owned or operated facilities for stormwater issues;
iii. Records shall be kept for inspections and follow up. This may be a checklist, and may be electronic;
iv. Use of structural controls/BMPs to reduce or prevent pollutants from entering waters of the state or into another MS4 where needed.
v. A map with descriptions of these BMPs shall be maintained for each facility;
vi. All paints, solvents, petroleum products, and petroleum waste products (except fuels) under the control of the permittee shall be stored so these materials are not exposed to stormwater;
vii. Sufficient practices of spill prevention, control, and/or management shall be provided to prevent any spill of these pollutants from entering waters of the state;
viii. This shall include spill kits when liquid product is stored at a facility; and any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
ix. Tracking of rock salt/brine or other de-icer usage;
x. Maintaining municipal salt storage area(s) after use of rock salt, at minimum:
xi. Sweep and/or shovel spillage in loading area and storage area, and unload salt hoppers or keep under cover when salt is in the hopper.

A list of potential pollutants for all municipal facilities can be seen in the referenced document *Stormwater Operation and Maintenance Manual*. There is a section for each facility and operation within the MS4. Each facility and operation contain a specific table outlining each potential pollutant, BMP, or action required. The MS4 Operator has a policy outlining inspection schedules, procedures, and record keeping requirements that can be seen in Attachment 14. *Stormwater Training Policy* and site-specific topics are outlined in the referenced document *Stormwater Operation and Maintenance Manual*.

4.6.G. Procedures for Proper Waste Management of MS4 Structures

The MS4 Operator has procedures for proper disposal of waste removed from the MS4 structures and areas of jurisdiction outlined in the Stormwater Operation and Maintenance Manual.

This waste, shall include at minimum:

i. Street sweeper spoils and washout;
ii. Accumulated sediment;
iii. Dredged materials;
iv. Floatables, trash and litter;
v. Leaves, other organic matter; and
vi. Other debris.

4.6.H. Vehicle and Equipment Washing Procedures

The MS4 Operator shall maintain and utilize the following procedures, at minimum, for the washing of all municipal vehicles and equipment (if applicable to the MS4):

i. Use of any soap or detergent shall only be where there is connection to sanitary sewer or equivalent treatment; and
ii. Any wash or rinse water that contains pollutants such as salt, oils, grease, sediment, grass clippings, lawn chemicals, or pesticides shall not be discharged to waters of the state or the MS4 system without appropriate treatment.
iii. Any washing or rinsing activities shall be conducted in an appropriate area so the water is treated. This area(s) shall be marked on the map of the facility.

All applicable MS4 municipal employees shall receive training for vehicle wash procedures annually as stated in Attachment 14. *Stormwater Training Policy*.

4.6.I. Procedures, Controls, Schedules, and Explanation of Tracking

The MS4 Operator shall maintain written explanation of the controls, procedures, inspection schedules, and explanation of tracking of these controls. Tracking may be done by retaining inspection reports or checklists.

The City of Belton utilizes one overarching Operations and Maintenance Manual for all applicable MS4 facilities. This document is still in production, but after completion, each individual site shall be familiar with the document, and a copy shall be present on each site referenced in the document or available electronically.

Annually, the MS4 Operator shall evaluate the results, controls, and inspection procedures to ensure compliance with these requirements and determine if changes are needed. This evaluation may also aid in finding priority areas or pollutants in relation to MCM 3, or adding more education in relation to MCM 1.

4.6.J. Flood Management Projects

The MS4 Operator shall maintain procedures to determine if there are impacts to water quality for new flood management projects, if applicable. Any flood management projects shall require the protection of water quality in the standards that are used to plan, design, build, and maintain stormwater infrastructure.

Flood management projects are those projects developed or designed to reduce flooding.

4.6.K. Existing Permittees Evaluation

Not applicable.

4.6.L. New Permittees Development

As a newly regulated permittee, the MS4 Operator shall develop this program. The SWMP shall describe the pollution prevention/ good housekeeping plan and scheduled implementation. Development of this program shall be completed within the first five (5) years of the permit issuance.

4.6.M. Review

Using adaptive management, the MS4 Operator shall review their Municipal Operations Program, at minimum, annually and update implementation procedures as necessary within the permit requirement. Any additional BMPs shall be acknowledged in the Stormwater Management Program Report.

Attachments

Attachment 1: Illicit Discharge Enforcement and Abatement Procedures

Attachment 2: Illicit Discharge Ordinance

Attachment 3: Article III. – Subdivision Design – Stormwater Runoff Plan

Attachment 4: City of Belton Land Disturbance Permit

Attachment 5: Preliminary Stormwater Plan Checklist

Attachment 6: Public Works Inspection Form

Attachment 7: General BMP and SWPPP Inspection Form

Attachment 8: Erosion and Sediment Control Inspection Report Form

Attachment 9: Stormwater and Flood Management Policy

Attachment 10: UDC Chapter 32 Section 2 Stormwater and Floodplain Penalties

Attachment 11: Stormwater Runoff Ordinance

Attachment 12: UDC Land Use Ordinance

Attachment 13: SWPPP Construction Inspection Template

Attachment 14: Stormwater Training Policy

Attachment 15: Project Management Manual