



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
**MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) –
STORMWATER MANAGEMENT PLAN (SWMP) REPORT**

FOR OFFICE USE ONLY
PROJECT ID NUMBER
DATE RECEIVED

Part A – MS4 PERMIT HOLDER INFORMATION

1. MS4 NAME City of Grandview	2. NPDES PERMIT NUMBER MO-R040015	3. MS4 UNIQUE ID NO. (Used with E-Reporting)	
4. ADDRESS 1200 MAIN STREET	5. CITY GRANDVIEW	6. STATE MO	7. ZIP CODE 64030
8. TELEPHONE NUMBER WITH AREA CODE 816-316-4856	9. EMAIL JWHITE@GRANDVIEW.ORG		
10. NAME OF MS4 CONTACT PERSON JACLYN WHITE			
11. Has any areas of the MS4 been added or removed from the MS4 jurisdiction due to annexation or other legal means since the most recent permit application (renewal, new, modification), or most recent MS4 SWMP report? If yes, please include a map along with a brief description as an attachment. YES <input type="checkbox"/> ; NO <input checked="" type="checkbox"/>			

Part B – REPORTING PERIOD

1. Is your MS4 subject to a TMDL?
YES ; NO

If yes, you are required to submit the MS4 report annually. Reports are due February 28th each year. For the first reporting period, the beginning date will be June 13, 2016, and the ending date will be December 31, 2016. All other annual reports shall cover the reporting period of January 1st to December 31st each year.

2. Is your MS4 new permitted (i.e., is this your first MS4 permit)?
YES ; NO

If yes, you are required to submit the MS4 SWMP Report annually. Reports are due February 28th each year. For the first reporting period, the beginning date will be the date of issuance of the permit and the ending date will be December 31, 2016. All other annual reports shall cover the reporting period of January 1st to December 31st each year.

3. Is your MS4 a previously permitted MS4 and not subject to a TMDL?
YES ; NO

If yes, you are required to submit the MS4 SWMP Report Biennially (i.e., once every two years). Reports are due February 28th every odd year. The first report will be due February 2017, and will cover the reporting period from June 13, 2016, to December 31, 2016. All other reports shall cover the reporting period of January 1st of the first year to December 31st of the second year.

4. If you are part of a co-permitted MS4 permit, submit combined MS4 SWMP Reports, and one or more of the co-permitted MS4s have annual reporting based on the above criteria, then submit your MS4 SWMP Report annually by February 28th of each year.

IF you are part of a co-permitted MS4 permit and do not submit combined MS4 SWMP Reports, then each MS4 co-permittee will submit their MS4 SWMP Report based on the above criteria.

5. Reporting Period:
BEGINNING: JUNE 13, 2016 ENDING: DECEMBER 31, 2016

Part C – SWMP PROGRESS AND COMPLIANCE

As an attachment, please provide information for each of the items below. Provide informative data, success stories, and experiences that support the successful implementation of your SWMP.

1. Describe the status of compliance with permit conditions for the permitted MS4.
2. Provide information regarding the progress toward achieving the statutory goal of reducing the discharge of pollutants to the Maximum Extent Practicable to the MS4.
3. If another governmental entity implements any Best Management Practice (BMP) or Minimum Control Measure (MCM), please provide the following:
 - a. Name of the government entity;
 - b. Name of the primary contact for the government entity;
 - c. Contact information (i.e., address, city, ZIP Code, State, and phone number); and
 - d. Specific BMP(s) or MCM(s) being implemented by the government entity.

(It is the responsibility of the permittee to provide all information under this report regardless if BMP(s) or MCM(s) are being implemented by another governmental entity. If a complete is being implemented by the other governmental entity, then only indicated the MCM rather than each BMP under the MCM.)

4. Provide a summary of any stormwater activities and known construction activities that will be covered under the authority of the MS4 permit that are scheduled to begin during the next reporting period.
5. Provide a description of any changes to the SWMP, BMP(s), measurable goal(s), and the iterative process that have occurred during the covered reporting period.
6. Provide a list of BMPs that were evaluated during the covered reporting period, and provide information on how the BMP was determined effective.
 - a. If any of the BMPs were determined ineffective, provide a summary on how the ineffective BMP was resolved.
7. If any water samples were collected and analyzed during the covered reporting period by the permitted MS4 or on behalf of the permitted MS4, please complete Part D – Water Sample(s) Analysis.

Part D – WATER SAMPLE(S) ANALYSIS

PARAMETER OR INDICATOR	FREQUENCY	RESULT	DRY WEATHER SAMPLE?	WET WEATHER SAMPLE?
NOT APPLICABLE			YES <input type="checkbox"/> ; NO <input type="checkbox"/>	YES <input type="checkbox"/> ; NO <input type="checkbox"/>
			YES <input type="checkbox"/> ; NO <input type="checkbox"/>	YES <input type="checkbox"/> ; NO <input type="checkbox"/>
			YES <input type="checkbox"/> ; NO <input type="checkbox"/>	YES <input type="checkbox"/> ; NO <input type="checkbox"/>
			YES <input type="checkbox"/> ; NO <input type="checkbox"/>	YES <input type="checkbox"/> ; NO <input type="checkbox"/>
			YES <input type="checkbox"/> ; NO <input type="checkbox"/>	YES <input type="checkbox"/> ; NO <input type="checkbox"/>
			YES <input type="checkbox"/> ; NO <input type="checkbox"/>	YES <input type="checkbox"/> ; NO <input type="checkbox"/>
			YES <input type="checkbox"/> ; NO <input type="checkbox"/>	YES <input type="checkbox"/> ; NO <input type="checkbox"/>
			YES <input type="checkbox"/> ; NO <input type="checkbox"/>	YES <input type="checkbox"/> ; NO <input type="checkbox"/>

1. Are any of the parameters above being sampled due to the MS4 being subject to an established or approved Total Maximum Daily Load? If yes, please indicate the parameter/pollutant.

YES ; NO

2. Does the data support Water Quality attainment or support trend data toward Water Quality attainment? If yes, please describe.

YES ; NO

Part E – TOTAL MAXIMUM DAILY LOAD (TMDL) ASSUMPTIONS AND REQUIREMENTS ATTAINMENT PLAN (ARAP)

1. Is your MS4 subject to an established or approved TMDL? If no, please indicate "No" below and do not complete any other portion of the TMDL ARAP portion of this report.

YES ; NO

2. Has your TMDL ARAP been completed and submitted? If no, please provide a summary as an attachment on the progress toward submitting and implementing the TMDL ARAP.

YES ; NO

3. Has your TMDL ARAP received approval from the Department? If yes, please provided a summary of the status of the ARAP and include implementation status of identified BMPs and measurable goals along with any changes to BMPs or measurable goals (if applicable)..

YES ; NO

4. Does the TMDL ARAP incorporate Integrated Planning? If yes, please provide a summary of the status of the Integrated Plan.

YES ; NO

PART F – SUBMIT REPORT TO:

Missouri Department of Natural Resources
Water Protection Program
MS4 Program Coordinator
P.O. Box 176
Jefferson City, MO 65102-0176

PART G - CERTIFICATION

I certify under penalty of law this document and all attachments were prepared under my direction or supervision in accordance with a system designated to ensure qualified personnel properly gather and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE OR PERMITTEE (LEGALLY RESPONSIBLE PERSON)

Jaclyn White

NAME (PRINTED OR TYPED)

JACLYN WHITE

DATE SIGNED

2/24/2017

TITLE

CITY ENGINEER

This report has been prepared in compliance with the requirements of National Discharge Elimination System (NPDES) Permit #MO-R040015 issued by the Missouri Department of Natural Resources (MDNR). This report outlines the planning and implementation of stormwater management activities required by this permit, referred to as Best Management Practices (BMPs) or the six minimum control measures. This report provides a report of progress on Measurable Goals (MGs) as identified in the City's Stormwater Management Program (SWMP) report (revised September 2013) for the period of June 13, 2016 through December 31, 2016. In addition, an update on financial management of the program is provided.

General Summary of Implementation Status

The purpose of this report is to complete an annual review of the City's SWMP. This annual report summarizes that review by providing a status of the City's compliance with the permit, an assessment of the current identified Best Management Practices (BMPs), and progress on achieving the Measurable Goals (MGs).

The following sections of this report will describe the City's approach to each BMP and summarize activities performed during the reporting period to meet MGs. MGs that have been addressed during previous reporting periods are not summarized due to the fact that this documentation has been provided to MDNR as part of previous annual reports. In addition, activities that the City plans to commence during the next reporting period to supplement the existing activities as needed are described. The City anticipates addressing the following items during the next reporting period:

- Comprehensive Review of the SWMP. The City is currently under contract with a consulting firm to review activities defined for two of the six Minimum Control Measures (MCMs).

Measure 1-Public Education and Outreach

Status of compliance with permit

The City has implemented a public education program to distribute educational materials to the community (or equivalent outreach activities) about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff. BMPs identified in the SWMP to implement this MCM include:

- Distribute educational materials to the community and post information to the City website, Facebook page, and Twitter account.
- Conduct outreach activities to address the impacts of stormwater runoff in partnership with local community groups and regional planning organizations.

Measureable Goals-Progress toward achieving statutory goal of reducing discharge

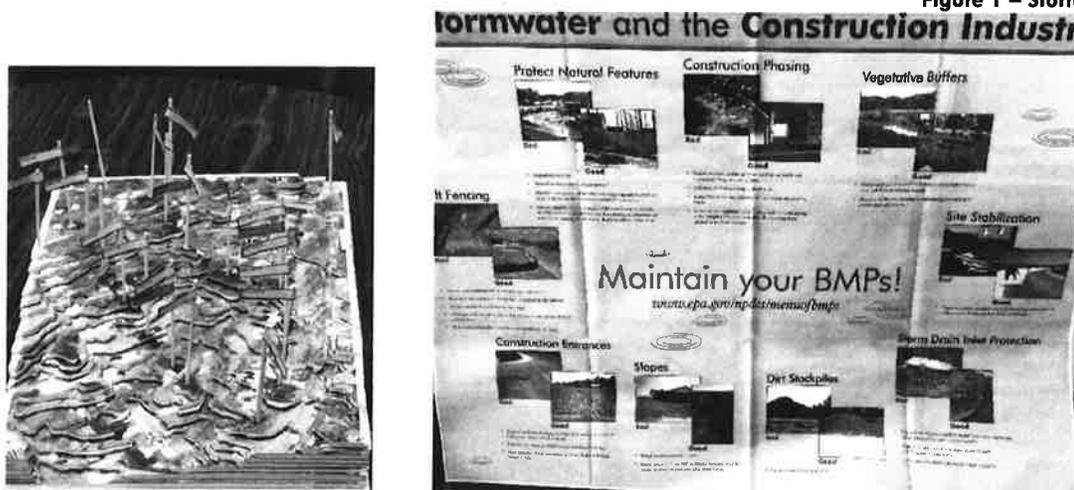
MGs for each BMP include defining target pollutant sources to address and defining an audience for distributed materials. The selection of stormwater educational topics to be developed and distributed to the public include addressing stormwater runoff related to lawn and garden activities, water conservation, hazardous waste disposal, trash management, and illicit discharges.

Status of Measureable Goals (MGs)

- The City has continued providing recycling information to citizens in coordination with Job One. This has been communicated through both pamphlets available at the Public Works counter in City Hall and through the City's website: <http://www.grandview.org/i-want-to/recycle>.
- An oil and tire disposal program is available through the City. Citizens can dispose of up to five (5) gallons of waste oil and up to eight (8) tires at the Public Works Maintenance Facility. This program has been communicated through both pamphlets available at the Public Works counter in City Hall and through the City's website: <http://www.grandview.org/work/city-government/public-works/clean-up-disposal-programs/waste-oil-disposal>. Approximately 502 tires were disposed of during the reporting period at a cost of \$1,539.75.

- The City offers reimbursement to citizens for household hazardous waste disposal. This allows up to 100 lbs. of household hazardous waste disposal, reimbursable up to \$50 annually per household. Information on waste collected and the process is available through the City's website: <http://www.grandview.org/work/city-government/public-works/clean-up-disposal-programs/household-hazardous-waste-disposal-reimbursement>. The City reimbursed three (3) citizens over the reporting period, for a total cost of \$150.00.
- A Citizens Line to report issues continues to be available. Residents can use this hotline to report storm or sanitary sewer issues, debris, and trash, with issues documented as Service Requests. The hotline is a Public Works department phone number, and is available on the 'Department of Public Works Pamphlet' at City Hall, and through the 'Contact Us' link on the website. During this reporting period, the City documented 22 Service Requests related to the stormwater program and/or water quality.
- Stormwater material has been provided at various City events, including Music on Main and the Citizens Academy. The Citizens Academy is held each spring, with 10 students per session. Stormwater is discussed and presented as part of these meetings. Stormwater material, such as 3D layouts and posters, are available in the City Hall main lobby in a very visible location. An example of this material is shown in Figure 1. Between 10 and 25 people per day view the material on display in the lobby.

Figure 1 – Stormwater Material



- The City has recently updated its website with plans to track the number of people who visit the Stormwater page in the coming reporting period.
- Public Works held a public hearing for replacement curb and sidewalk program and new curb and sidewalk program on December 13, 2016. Stormwater improvements impacted by these programs were discussed as part of this hearing, and the community was invited to provide feedback.
- The City coordinates with the Mid-America Regional Council on several regional stormwater initiatives, including holding positions on committees specifically involved in the Integrated Plan for the Blue River Basin and Green Infrastructure.
- There were approximately 100 stormwater educational brochures that were printed. These brochures are printed as needed and available in the lobby and distributed at City events.
- Number of visitors to the City's stormwater website page: <http://www.grandview.org/work/city-government/public-works/sewer/stormwater-runoff>. There were 158 visitors to this webpage in the reporting period.

Moving Forward

During the next reporting period, the City plans to implement the following activities associated with its current MGs for this MCM:

- Document the number of stormwater educational brochures that are printed. These brochures are printed as needed and available in the lobby and distributed at City events.

Track the number of visitors to the City's stormwater website page: <http://www.grandview.org/work/city-government/public-works/sewer/stormwater-runoff>

Measure 2-Public Involvement and Participation

Status of compliance with permit

The second MCM includes the implementation of a public involvement and participation program that complies with State and local public notice requirements and involves the public in the development and oversight of the SWMP policies and procedures. BMPs identified in the SWMP to implement this MCM include:

- Involving the public in the development and submittal of the City's SWMP.
- Creating a volunteer committee to discuss stormwater issues, provide regular input to the MS4 program, and develop future stormwater management projects.

Measureable Goals

MGs for each BMP include identifying the target audience, adhering to all public notice requirements, and presenting informational material on the City's website regarding the development and oversight of the SWMP. Any proposed changes to the SWMP shall be presented at a City public open house, giving citizens the ability to provide comments and participate in the development of the SWMP and the MS4 program. A volunteer committee to discuss stormwater issues, provide input into the MS4 program, and develop future stormwater management projects shall be initiated.

Status of Measureable Goals

The City has continued utilizing the Trash Busters Program. Individuals and/or organizations participating in this program have the opportunity to earn money picking up trash/debris from roadsides. The City pays \$5 per bag of trash collected. During the reporting period, one (1) citizen and one (1) organization participated in this program, or approximately 20 people. The City paid \$310.00 for the 62 bags of trash collected.

- A Citizens Line to report issues continues to be available. Residents can use this hotline to report storm or sanitary sewer issues, debris, and trash, with issues documented as Service Requests. The hotline is a Public Works department phone number, and is available on the 'Department of Public Works Pamphlet' at City Hall, and through the 'Contact Us' link on the website. During this reporting period, the City documented 22 Service Requests related to the stormwater program and/or water quality.
- The twice-annual Community Clean-up Program continues to be implemented. For the reporting period, the City hosted one (1) clean-up program. In fall 2016, the Clean-up Program was held on November 5, November 12 and November 19, 2016. As part of this program, the Public Works Department allows residents and local businesses to drop off any solid waste or yard debris at the Grandview Ballpark for \$15 per vehicle per load. During this reporting period, the City collected 44 dumpsters of waste in the fall clean-up.
- The City continues to invite feedback through project public hearings and provides opportunities for community interaction as part of its many existing Public Works projects. The City feels that any volunteer committee needs to have a focused purpose, whether that be project related or community related, and will continue to explore opportunities for engagement of stormwater within the community. The City approaches providing community interaction with stormwater holistically, giving the community context of its purpose and goals as part of City projects, such as the curb and sidewalk program public hearing, and through overarching City programs like the Citizens Academy.

Moving Forward

During the next reporting period, the City plans to implement the following activities associated with its current MGs for this MCM:

- Continue to identify opportunities for community interaction and discussion of stormwater. A specific avenue that the City intends to utilize is the City's Facebook page.

Measure 3-Illicit Discharge Detection and Elimination (IDDE)

The third MCM includes the development, implementation, and enforcement of a program to detect and eliminate illicit discharges into the City's regulated small MS4. BMPs identified in the SWMP to implement this MCM include:

- Develop and maintain a storm sewer system map showing the locations of all stormwater outfalls and the names and locations of all waters of the State that receive discharges from these outfalls.
- Effectively prohibit illicit discharges into the storm sewer system through City ordinance.
- Locate priority areas with higher likelihood of connections.
- Implement a sanitary sewer infiltration/inflow study to detect points of interconnection between the City's MS4 and the public sanitary sewer system through smoke testing.
- Develop procedures for tracing the source of an illicit discharge.
- Develop procedures for removing the source of the illicit discharge.
- Provide training about the illicit discharge program to City staff.
- Inform public employees, businesses, and the public about the City recycling program for household hazardous wastes.
- Address certain categories of non-stormwater discharges or flows only if the City identifies them as significant contributors of pollutants to the MS4.

Measurable Goals (MGs)

MGs for each BMP include developing a storm sewer system map and updating this map, as necessary. The storm sewer system map shall be used to identify priority areas with the likelihood of illicit connections. At least 60% of the 114-mile MS4 for sanitary sewer interconnections shall be investigated by the year 2020. The City shall schedule training sessions for its staff. In addition, the City shall distribute literature at the City's fall and spring festivals and provide program information on its website and Facebook page. Occasional incidental non-stormwater discharges will be evaluated on a case-by-case basis to determine whether such discharges may appropriately be directed to the MS4. An illicit discharge ordinance (Ord. No. 4195 § 2, 6-25-91) provides a regulatory mechanism for the City for this MCM.

Status of Measurable Goals

- The City has continued utilizing the Trash Busters Program. Individuals and/or organizations participating in this program have the opportunity to earn money picking up trash/debris from roadsides, which keeps trash out of the storm sewer system. The City pays \$5 per bag of trash collected. During the reporting period, one (1) citizen and one (1) organization participated in this program, or approximately 20 people. The City paid \$310.00 for the 62 bags of trash collected.
- An oil and tire disposal program is available through the City. Citizens can dispose of up to five (5) gallons of waste oil and up to eight (8) tires at the Public Works Maintenance Facility. This program has been communicated through both pamphlets available at the Public Works counter in City Hall and through the City's website:

<http://www.grandview.org/work/city-government/public-works/clean-up-disposal-programs/waste-oil-disposal>.
Approximately 502 tires were disposed of during the reporting period at a cost of \$1,539.75.

- The City offers reimbursement to citizens for household hazardous waste disposal. This allows up to 100 lbs. of household hazardous waste disposal, reimbursable up to \$50 annually per household. Information on waste collected and the process is available through the City's website: <http://www.grandview.org/work/city-government/public-works/clean-up-disposal-programs/household-hazardous-waste-disposal-reimbursement>. The City reimbursed three (3) citizens over the reporting period, for a total cost of \$150.00.
- A Citizens Line to report issues continues to be available. Residents can use this hotline to report storm or sanitary sewer issues, debris, and trash, with issues documented as Service Requests. The hotline is a Public Works department phone number, and is available on the 'Department of Public Works Pamphlet' at City Hall, and through the 'Contact Us' link on the website. During this reporting period, the City documented 22 Service Requests related to the stormwater program and/or water quality.
- The twice-annual Community Clean-up Program continues to be implemented. For the reporting period, the City hosted one (1) cleanup program. In fall 2016, the Clean-up Program was held on November 5, November 12 and November 19, 2016. As part of this program, the Public Works Department allows residents and local businesses to drop off any solid waste or yard debris at the Grandview Ballpark for \$15 per vehicle per load. During this reporting period, the City collected 44 dumpsters of waste in the fall clean-up.
- City staff and consultants currently update the City's stormwater maps in CAD and GIS. During this reporting period, the City contracted with Trekk Design Group to review inspection data that was previously collected for a third of the City's storm sewer system. The City is moving to a full GIS-based stormwater map. City staff updates the stormwater mapping as needed and per provided project as-builts for public improvements when the City accepts a project.
- Open channels and/or streams within the City are visually investigated as impacted, at least once per year. For this and next reporting period, the City is under contract and is in process of a complete full video inspection of selected open channels, including inspection of all identified stormwater outfalls.
- Approximately 27,231 LF of the sanitary system was smoke tested during this reporting period as part of the Infiltration and Inflow Reduction Plan (Area 3B). The City has not discovered any cross connections with the storm system as part of these annual investigations to-date.

Moving Forward

During the next reporting period, the City plans to implement the following activities associated with its current MGs for this MCM:

- The City has contracted with a consultant to develop a plan for dry weather flow monitoring at the City's outfalls. This plan will include a process for identifying new outfalls, such as intervals for open channel inspections, and a timeframe for annual inspections of each outfall and sampling of identified dry weather flow. Outfalls will be prioritized for inspection frequency based on the age of adjacent sanitary sewer infrastructure, proximity of septic systems, land use, locations of existing NPDES Industrial permits, and past complaints of chemical spills or dumping. A sampling and/or screening protocol for flowing outfalls will be established, including identifying parameters for sampling and equipment for use. A process will be established to identify the source or sources of active flow in conjunction with the City's adopted ordinance.

Measure 4-Construction Site Stormwater Runoff Control

The fourth MCM includes the development, implementation, and enforcement of a program to reduce pollutants in any stormwater runoff to their regulated small MS4 from construction activities that result in a 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. BMPs identified in the SWMP to implement this MCM include:

- Implement and enforce an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State or local law.
- Require construction site operators to implement appropriate erosion and sediment control BMPs.
- Require construction site operators to control waste, including discarded building materials, sediment, concrete truck washout, litter, and sanitary waste that may cause adverse impacts to water quality. Implement procedures for site plan review that incorporate considerations of potential water quality impacts.
- Implement procedures for the City to receive and consider information submitted by the public, including coordination with the City's public education program.
- Implement and maintain procedures for site inspection and enforcement of erosion and sediment control measures.

Measurable Goals (MGs)

MGs for each BMP are addressed through requirements in the City's adopted erosion and sediment control ordinance (Ord. No. 6198, § 1, 6-10-08).

Status of Measureable Goals

- A Citizens Line to report issues continues to be available. Residents can use this hotline to report storm or sanitary sewer issues, debris, and trash, with issues documented as Service Requests. The hotline is a Public Works department phone number, and is available on the 'Department of Public Works Pamphlet' at City Hall, and through the 'Contact Us' link on the website. During this reporting period, the City documented 22 Service Requests related to the stormwater program and/or water quality.
- The City issues an 'Erosion and Sediment Control Permit' for land disturbance of an acre or more. As part of this process, the City reviews the construction project erosion and sediment control plans and the project's SWPPP. The permit holder is required to pay a permit fee, maintain an inspection log, perform inspections, define a concrete washout area, and contact the City during defined periods of construction for inspection. The permit is valid until the final certificate of occupancy for the project is issued. The City has had up to three (3) active 'Permits' over the reporting period.
- City inspectors currently track all construction site runoff inspections in their project diary. Public and private improvements disturbing more than 1 acre of land are inspected at least once per week and/or after 0.5-inch of rainfall within a 24-hour period per the rain gauge at the Public Works Maintenance Facility.
- The City completes training through mentoring and available resources through the Kansas City Metro American Public Works Association (APWA) chapter.

Moving Forward

During the next reporting period, the City plans to implement the following activities associated with its current MGs for this MCM:

- The City has contracted with a consultant to inspect a sampling of active construction sites, with the goal of assessing current implementation and enforcement of the erosion and sediment control practices defined in its ordinance. This task will be completed spring 2017 to identify any needed modifications to the BMPs defined as part of this MCM.

Measure 5-Post-Construction Stormwater Management in New Development and Redevelopment

The fifth MCM includes the development, implementation, and enforcement of a program to address the long-term quality of stormwater runoff from new development and redevelopment projects that disturb 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 that discharge into the City's regulated small MS4. BMPs identified in the SWMP to implement this MCM include:

- Develop and implement strategies combining structural and/or non-structural BMPs to improve the quality of stormwater runoff.
- Implement an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law.
- Ensure adequate long-term operation and maintenance of BMPs.
- Identify priority areas to be addressed by the post-construction stormwater management program.
- Develop and implement policies and ordinances that provide requirements and standards related to non-structural BMPs.
- Implement policies that encourage infill development in higher density urban areas and areas with existing storm sewer infrastructure and encourage redevelopment of brownfield or grayfield sites.
- Implement education programs for developers and the public about project designs that minimize water quality impacts.
- Implement other measures, such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, site designs that provide for integration of a variety of infiltration practices, and source control measures often thought of as good housekeeping, preventive maintenance, and spill prevention.

Measurable Goals (MGs)

MGs for each BMP include activities related to the implementation of structural and non-structural strategies for development and redevelopment projects, tracking this infrastructure, and having policies to minimize water quality impacts as part of development and/or redevelopment.

Status of Measureable Goals

- The City requires that all new and redevelopment follow the current APWA 5600. This version requires a default strategy for stormwater management associated with new or redevelopment to be the Comprehensive Protection strategy. This strategy requires volumetric and/or extended detention control of the 90% mean annual event storm, which is in-line with Post-Construction Stormwater Management requirements defined by this permitting authority. It requires 40-hour extended detention of runoff from the local 90% mean annual event (1.37"/24-hour rainfall) and references to use the MARC/APWA BMP Manual for additional design criteria. When volumetric control for the 90% mean annual event is provided by upstream permanent best management practices that provide infiltration on a site, this volume may be deducted from the detention control.
- The City has reviewed three (3) new development and/or redevelopment plans over the reporting period where an acre or more of land would be disturbed. Public Works reviews all Community Development plans for compliance with the City's stormwater design criteria (APWA 5600). The City encourages and supports the design and implementation of water quality structural and non-structural best management practices meeting APWA 5600 where it makes sense as part of project design and construction. Examples of this design and construction during the reporting period include the 155th Street Improvement project and the Truman Farm Home Trail Project. Improvements from these projects to 155th Street and Harry Truman Drive will have designed stormwater quality improvements installed before next reporting period.

- The City owns and maintains three (3) detention basins at the following locations: 138th Terrace; 137th & Craig; 4010 Main.
- On December 13, 2016, The City implemented updated Flood Insurance Rate Maps (FIRM maps) and FEMA standards by ordinance. A Public Hearing was held on November 22, 2016 regarding the implementation of the updated FIRM maps and FEMA standards.

Moving Forward

During the next reporting period, the City plans to implement the following activities associated with its current MGs for this MCM:

- Continue to Map all publically maintained structural BMPs.
- Identify requirements for privately maintained structural and non-structural BMPs.

Measure 6-Pollution Prevention and Good Housekeeping for Municipal Operations

The final MCM includes the development and implementation of an operation and maintenance program that includes a training component and has the ultimate goal of preventing and reducing pollutant runoff from municipal operations. BMPs identified in the SWMP to implement this MCM include:

- Develop and implementation of an operation and maintenance program with the ultimate goal of preventing pollutant runoff related to activities performed by the City's Public Works Department. This program can include street sweeping, recycling, pesticide use, and the disposal of waste from the MS4.
- Implement maintenance BMPs, schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants to the City's MS4.
- Implement controls to reduce or eliminate the discharge of pollutants from streets, municipal parking lots, and fleet or maintenance shops with outdoor storage areas.
- Implement controls to reduce or eliminate the discharge of solid waste, pollutants from fueling facilities, substances regulated under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and other substances including paint, solvents, and petroleum waste products.
- Implement procedures for the proper disposal of waste removed from the City's MS4, including dredged material, accumulated sediments, floatables, and other debris.
- Implement procedures to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices and practices.
- Develop an employee training program.

Measurable Goals (MGs)

MGs for each BMP include continuing to offer programs to reduce the risk to stormwater quality within the City, implementing design criteria as part of all new projects that addresses water quality, and to continue to educate staff about MS4 requirements as part of daily routines within the City.

Status of Measurable Goals

- The City has continued utilizing the Trash Busters Program. Individuals and/or organizations participating in this program have the opportunity to earn money picking up trash/debris from roadsides. The City pays \$5 per bag of trash collected. During the reporting period, one (1) citizen and one (1) organization participated in this program, or approximately 20 people. The City paid \$310.00 for the 62 bags of trash collected.

- The City has continued providing recycling information to citizens in coordination with Job One. This has been communicated through both pamphlets available at the Public Works counter in City Hall and through the City's website: <http://www.grandview.org/i-want-to/recycle>.
- An oil and tire disposal program is available through the City. Citizens can dispose of up to five (5) gallons of waste oil and up to eight (8) tires at the Public Works Maintenance Facility. This program has been communicated through both pamphlets available at the Public Works counter in City Hall and through the City's website: <http://www.grandview.org/work/city-government/public-works/clean-up-disposal-programs/waste-oil-disposal>. Approximately 502 tires were disposed of during the reporting period at a cost of \$1,539.75.
- The City offers reimbursement to citizens for household hazardous waste disposal. This allows up to 100 lbs. of household hazardous waste disposal, reimbursable up to \$50 annually per household. Information on waste collected and the process is available through the City's website: <http://www.grandview.org/work/city-government/public-works/clean-up-disposal-programs/household-hazardous-waste-disposal-reimbursement>. The City reimbursed three (3) citizens over the reporting period, for a total cost of \$150.00.
- City staff and consultants currently update the City's stormwater maps in CAD and GIS. During this reporting period, the City contracted with Trekk Design Group to analyze inspection data for a third of the City's system. The City is moving to a full GIS-based stormwater map. City staff updates the stormwater mapping as needed, and per provided project as-builts for public improvements provided when the City accepts a project.
- Open channels/streams within the City are visually investigated as impacted, at least once per year. The City is currently under contract to complete full video inspection of selected open channels, including inspection of all identified stormwater outfalls.
- The City has one refueling facility. It is investigated with relation to stormwater runoff and where runoff from this facility enters the MS4.
- The City has developed Stormwater Maintenance Policy and Procedures during this reporting period that establish core policies for defining stormwater maintenance responsibility, driveway culverts and roadside ditch maintenance responsibility, private system maintenance, fencing and landscaping within drainage easements, definition of stormwater maintenance through work order projects, and a master stormwater project list. In addition, this document provides standard procedures on how staff should address a reported stormwater concern, prioritization of the stormwater maintenance list, and prioritizing stormwater projects. This policy, combined with the procedures, helps the City proactively manage its stormwater infrastructure.
- The City tracks Service Requests to document when the Public Works Department was first contacted about an issue, that a request is responded to, and to identify if there is a history of problems within a given area. For this reporting period, the following number of Service Requests were documented: 22 stormwater related requests; 6 street sweeping requests; and 18 trash in road requests. The Service Request system allows a mechanism for citizens and staff to document any illegal dumping, suspicious discharges to the storm system, and issues with construction site stormwater runoff.
- During this reporting period, the City provided street sweeping on 45.1 centerline miles of street. The City completes all sweeping in-house, twice annually.
- The City visually investigates all stormwater structures annually. Maintenance of these structures is documented in the Service Request system. When a Service Request is registered, the structure is investigated and maintenance or a project defined per the City's Stormwater Maintenance Policy and Procedures.

Moving Forward

During the next reporting period, the City plans to implement the following activities associated with its current MGs for this MCM:

- Provide one (1) formal training to Public Works staff on an MS4 MCM.

- Coordinate with the City's Parks and Recreation Department on MS4 opportunities.

Financial Management

In an effort to fulfill the requirements of NPDES Permit #MO-R040015, the City of Grandview uses a combination of in-house staff resources and consultants. This includes a total estimated expenditure of \$540,000 annually. During a typical year, this total expenditure includes \$390,000 for contract improvements in the stormwater system, and \$150,000 for maintenance activities and staffing. For the next reporting period, the City's budget for the stormwater program will continue to remain consistent with these expenditures, and include:

- \$115,000 for curb repair;
- \$100,000 for new curb construction;
- \$100,000 for storm drainage improvement projects;
- \$75,000 for storm channel renovations; and
- \$150,000 for stormwater maintenance activities and staffing.

Please advise if additional information is needed regarding any information presented in this report.