



**STORM WATER  
MANAGEMENT PLAN**

**CITY OF GLADSTONE, MO**

**June 2013-June 2018**

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**SMALL MS4 STORM WATER MANAGEMENT PROGRAM**  
**FOR GLADSTONE, MO**

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**PART I  
CITY OF GLADSTONE  
BACKGROUND**

## **City of Gladstone Background**

### Information on the Permittee:

Name of the Permittee: City of Gladstone, Missouri  
Type of Entity: City – Municipality  
Total Area (acres): 8.06 sq. miles  
Mailing Address: 7010 N. Holmes, Gladstone, MO 64119  
Primary Contact: Timothy A. Nebergall, P.E. – Public Works Director/City Engineer  
Phone Number: 816-436-5442  
Secondary Contact: Anthony Sands – Staff Engineer  
Phone Number: 816-436-5442  
Population (2010): 25,410

### Information on the Municipal Separate Storm Sewer System:

MS4 System Location: Gladstone, Missouri  
Name of Organization: City of Gladstone, Missouri  
County Permittee Resides: Clay County  
The major receiving waters within the permitted area include: East Creek, Cave Creek, Old Maids Creek, Mill Creek, Rock Creek and Shoal Creek

None of the receiving waters are on the latest CWA's list of impaired waters.

### Information on Adjacent Waterways:

The Permittee is within 100 feet of: East Creek, Cave Creek, Old Maids Creek, Mill Creek, Rock Creek and Shoal Creek  
The Permittee discharges to waters classified as major reservoirs: None.  
The Permittee has some area defined as wetlands as identified by the National Wetland Inventory. See attached map.  
Storm water from Gladstone does not discharge to a sinkhole.

**PART II  
MINIMUM  
CONTROL  
MEASURES**

## **1. Public Education and Outreach**

### **1.1 Regulatory Requirement**

**40 CFR 122.34 (b)(1) – Implement a public education program to distribute educational materials to the community of contact, equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps the public can take to reduce pollutants in storm water runoff.**

### **1.2 Target pollutants**

The following is a list of the leading pollutants, experienced in the permitted area, that are carried by storm water runoff into water bodies:

1. Suspended solids
2. Oil and grease
3. Pesticides/Herbicides
4. Bacteria/Nutrients/Oxygen-depleting substances
5. Habitat alterations
6. Litter/Trash

### **1.3 Target audiences**

During the development of the proposed education program, Gladstone identified the sources of storm water pollutants that needed to be reduced to improve overall water quality. The target audiences were selected because changing their behavior would have a significant storm water quality impact on the target pollutants. The target audiences for the public education program are:

1. Citizens (Homeowners)
2. Business Owners
3. Children
4. Developers and Home Builders
5. City Staff
6. Elected Officials

### **1.4 Selected BMPs for Public Education and Outreach**

- 1.4.1 Participate in the Mid-America Regional Council's (MARC) water quality public education programs and integrate them into the City's local SWMP.

The City of Gladstone will continue the utilization of the MARC water quality public outreach and education programs for implementation

as part of this Storm Water Management Program. This BMP will allow the City to continue leveraging their membership in MARC to better meet their SWMP goals. It will be integrated into the local program by posting information on the City web site, making the various informational materials available at City facilities and distribution of informational materials as opportunities arise. Included with the materials will be information about how the public can get involved with the storm water program. This is further discussed in Section 2.

In addition to these more local efforts, MARC is continuing to promote public education on steps that can be taken to reduce storm water pollution through radio PSAs, educational displays at community events, giving away items with a NPS pollution reduction message, hosting workshops and training seminars for businesses and homeowners and provide extensive educational resources via their web site. MARC also performs a water quality attitude survey approximately every other year which provides "measurement" of changes in the metro area. The City of Gladstone will continue to review the results of previous and future surveys to evaluate the progress of this BMP.

#### 1.4.2 Storm Water Web Page

The City of Gladstone has selected the use of a web page for implementation as part of this Storm Water Management Program. The website will be reviewed annually to determine if any additional updates are needed.

#### 1.4.3 City Magazine Articles

The City of Gladstone has selected distributing information through its magazine ("Coming Home to Gladstone", circulation  $\pm 17,500$ ) for implementation as part of this Storm Water Management Program. This will allow the City to distribute to the widest audience possible.

The City magazine is generated approximately twice each year. Staff will put storm water education information in the magazine as the opportunity arises. The number of storm water articles published will be reported on annually.

#### 1.4.4 Distribute Educational Materials at Community Events

The City of Gladstone has selected distributing educational materials at a community event for implementation as part of this Storm Water Management Program. This will allow the City to distribute to the widest audience possible. Staff will distribute storm water education materials at least twice per year at a community event.

This may include "Gladfest" (generally in October) and the Home Show (generally in April). The annual report will indicate at which event(s) staff distributed information, the approximate number of attendees at the event and the type of information distributed.

#### 1.4.5 Utility Bill Announcements

The City of Gladstone has selected using utility bill announcements for implementation as part of this Storm Water Management Program. This will allow messages to get out to a wider variety and larger volume of people.

The measurable goal for implementation of this BMP is to include information with utility bills at least once per year. Staff may tailor messages to tie into different education and outreach activities.

#### 1.4.6 Presentations to Neighborhood Associations

The City of Gladstone has selected using presentations to neighborhood associations for implementation as part of this Storm Water Management Program. The City currently has approximately ten (10) active neighborhood associations. An average of one (1) new neighborhood association is organized each year with assistance of the City. When presentations are made to these neighborhood associations, storm water management education is incorporated into the discussion. The number and frequency of these presentations will be included in the City's annual report.

#### 1.4.7 Social Media

The City of Gladstone has selected the use of social media for implementation as part of this Storm Water Management Program. This will allow the City to distribute to the widest audience possible. The City currently maintains a presence on various social media (Facebook, Twitter). As social media continues to evolve, the City will leverage the various technologies to distribute education information to its citizens.

## **2. Public Involvement in Storm Water Management Program Development**

### **2.1 Regulatory Requirement**

**40 CFR 122.34 (b)(2) -At a minimum, comply with state, tribal, and local public notice requirements when implementing a public involvement/participation program. EPA recommends that the public be included in developing, implementing, and reviewing your storm water management program and that the public participation process should make efforts to reach out and engage all economic and ethnic groups.**

### **2.2 Public Notice/Target Audiences**

The City of Gladstone will comply with state and local public notice requirements when implementing the public involvement/participation program. The public will be included in reviewing and implementing the storm water management program as much as possible. The target audiences for the public involvement program are the same as those listed in Section 1.3.

### **2.3 Selected BMPs for Public Involvement**

#### **2.3.1 Existing Public Meetings**

There is an open public comment period at each City Council meeting where citizens are allowed input on any City issue. Additionally, development and redevelopment issues as they relate to storm water are discussed at the Planning and Zoning hearings. The City Council typically has meetings twice a month and the Planning and Zoning hearings are typically held monthly (as needed). The number of meetings where storm water input is received will be reported annually.

#### **2.3.2 Public Input on SWMP**

This BMP allows for direct public involvement and participation in the development and implementation of the SWMP. The SWMP will be presented to the Environmental Management Advisory Committee (EMAC) for comment. In addition, the SWMP will be posted to the City website.

A summary of input received, if any, will be included in the annual report.

#### **2.3.3 Community Group Activities**

The City of Gladstone will continue to work with various community groups to perform implementation of the Storm water Management Plan. In the past, these groups have included the neighborhood associations, cub scouts, and other civic groups. These groups have worked on storm drain marking, litter pick-up, etc.

Staff will continue to work with these groups to leverage their manpower to implement the storm water program. A summary of the types of activities completed and approximate number of people involved will be provided in the annual report.

#### 2.3.4 Yard Waste Recycling Program

The City of Gladstone will continue to operate its successful regional yard waste recycling program. Partially funded by the MARC Solid Waste Management District, the City collects trees, brush, leaves and grass clippings which are then turned into mulch for commercial sale. This material might otherwise be disposed of improperly in area waterways and storm sewers.

The public will be able to continue utilizing this recycling program. Staff will report on the approximate number of cubic yards of mulch generated each year.

### **3. Illicit Discharge Detection and Elimination**

#### **3.1 Regulatory Requirement**

**40 CFR 122.34 (b)(3) -Develop, implement, and enforce a program to detect and eliminate illicit discharges into your small MS4. Develop a storm sewer system map, showing the location of all outfalls and the names and locations of all water of the U.S. that receive discharges from those outfalls. To the extent allowable under state, tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into your storm sewer system and implement appropriate enforcement procedures and actions. Develop and implement a plan to detect and address non-storm water discharges including illegal dumping to your system. Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. Address categories listed in 122.34(b)(3)(D)(iii) if you determine they are significant contributors of pollutants to MS4.**

#### **3.2 Storm Sewer System Map**

The City of Gladstone has developed a storm sewer system map showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls. The data was originally collected by Black and Veatch and mapped into GIS.

The map will continue to be updated as the system expands or as discrepancies with field information are discovered.

#### **3.3 Illicit Discharge Detection and Elimination Ordinance**

The City of Gladstone passed an illicit discharge detection and elimination ordinance on October 26, 2009. This ordinance can be found in Chapter 120 of Title VI in the City Code (available on the City web site). The ordinance will be reviewed once each permit cycle to determine if any updates are needed.

#### **3.4 Plan to Detect and Address Illicit Discharges**

##### **3.4.1 Procedure for Locating Priority Areas for Screening**

The City of Gladstone has developed a map of all major outfalls within their jurisdiction (defined as 36" diameter or larger). These major outfalls have been identified as the priority locations for screening.

The outfall locations will be reviewed at the end of the permit cycle to determine if any additional screening locations are needed due to changes within the watersheds. Screening records will also be reviewed to determine if the monitoring frequency of any of the locations needs to change (more or less frequent).

#### 3.4.2 Dry Weather Field Screening

The City of Gladstone will conduct dry weather field screening of outfalls. The outfall inspections will be prioritized according to the information discussed in Section 3.4.1. Additional outfalls may be inspected as time and resources allow. Generally, 25% of the outfalls will be inspected each year. The number of outfall inspections completed will be reported annually.

#### 3.4.3 Investigate cross-connection of sanitary and storm sewer systems

The City of Gladstone will continue to investigate cross-connections to the sanitary sewer system (e.g. sump pumps) through CCTV inspection and education. This work will be coordinated with the City's wastewater inflow and infiltration (I&I) reduction program. The lineal feet of sanitary and/or storm sewer lines inspected will be reported annually.

#### 3.4.4 Utilization of CiviCall Tracking System

The City of Gladstone has selected utilization of the CiviCall tracking system as part of this Storm Water Management Program. Staff currently receives calls/electronic submissions related to a variety of public works issues including storm water problems. A work order is generated and closed out after resolution of the issue is completed. A summary of the number of storm water issues reported and tracked through this system will be included in the annual report.

#### 3.4.5 Procedures for Tracing Source

The City of Gladstone will continue to utilize its storm sewer system map to trace the source of any illicit discharges that are discovered.

#### 3.4.6 Procedures for Removing Source

The City of Gladstone will utilize the enforcement mechanisms within its adopted ordinance to remove the source of any illicit discharges discovered where the responsible party can be identified. The City will remove the source of any illicit discharges discovered where the responsible party cannot be identified.

#### 3.4.7 Plan to Ensure Enforcement

The City of Gladstone will utilize the enforcement mechanisms within its adopted ordinance to ensure enforcement.

The number of illicit discharges detected, investigated and eliminated will be reported on annually.

#### 3.4.8 Public/Employee Education

The City of Gladstone (utilizing MARC information) has developed a public education effort to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. This BMP also addresses the minimum control measure for public education. See Section 1 for additional details.

#### 3.4.9 Continue Household Hazardous Waste (HHW) Collection Program

The City of Gladstone will continue to encourage its citizens to participate in the HHW collection program in order to prevent these materials from becoming illicit discharges. The public education program will further advertise these options for proper disposal of HHW.

### **3.5 *Non-Storm Water/Incidental Flows***

#### 3.5.1 Addressing Non-Storm water Flows

The City of Gladstone does not currently see the need to address the following non-storm water flows into their MS4: landscape irrigation, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, springs, water from crawl space pumps, footing drains, lawn watering, flows from riparian habitats and wetlands, flows from street wash water, and flows from emergency fire-fighting activities. These flows are not considered significant contributors of pollutants to the MS4.

#### 3.5.2 Addressing Incidental Non-Storm Water Flows

The City of Gladstone does not currently see the need to address incidental non-stormwater flows into their MS4 (such as non-commercial or charity car washes). These flows are not considered significant contributors of pollutants to the MS4.

### **3.6 *Industrial/Commercial Facilities***

The City of Gladstone is not currently required to inventory and inspect industrial or commercial facilities. However, the illicit discharge ordinance gives them the authority to do so if this becomes a permit requirement.

## **4. Construction Site Storm Water Controls**

### **4.1 Regulatory Requirement**

**40 CFR 122.34 (b)(4) -Develop, implement and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Program must include: the development and implementation of (at a minimum) and ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, requirements for construction site operators to implement appropriated erosion and sediment control BMPs, requirements for construction site operators to control waste at the construction site, procedures for site plan review which incorporate consideration of potential water quality impacts, procedures for receipt and consideration of information submitted by the public.**

### **4.2 Selected BMPs for Construction Site Storm Water Controls**

#### **4.2.1 Construction Site Runoff Control Ordinance**

The City of Gladstone adopted an erosion and sediment control ordinance on December 12, 2005. The ordinance can be found in Chapter 2200 of Title IX of the City Code which is available on the City web site. The ordinance will be reviewed during the permit cycle to determine if any amendments are needed. Additionally, if there are any changes to the federal or state requirements during the term of this permit (ie. numeric limits), the City will make any necessary changes to their codes.

#### **4.2.2 Construction Site Waste Control**

The City of Gladstone adopted an erosion and sediment control ordinance on December 12, 2005. This code can be found in Title IX, Chapter 2200 of the City Code which is available on the City web site. The ordinance will be reviewed during the permit cycle to determine if any changes are needed.

#### **4.2.3 Pre-Construction Plan Review**

The City of Gladstone has selected plan review for implementation as part of this Storm Water Management Program. All development and re-development projects disturbing greater than 200 square

feet are evaluated for the potential impact to water quality and comments are provided to minimize the potential for discharge of pollutants from the site. Currently, there is a preliminary/conceptual discussion of the requirements at a development review meeting prior to preparation of construction documents. Then, the technical details are reviewed when the final plans are submitted in order to obtain permits.

The number of plans reviewed for water quality impacts will be reported annually.

#### 4.2.4 Receive Public Input on Construction Projects

The City of Gladstone has selected receiving public input for implementation as part of this Storm Water Management Program. This BMP coordinates with MCM #2 and can be integrated into existing activities through receipt of information from the public at the existing Planning and Zoning hearings and City Council meetings. Additional input can be received less formally through the City web site and at the designated phone number and mailing address.

Information about construction site runoff control will be integrated into the public education program as feasible. This may increase the input received from the public on construction projects.

A summary of the input from the public on construction projects will be included in the annual report.

#### 4.2.5 Construction Site Inspections

The City of Gladstone has selected construction site inspections for implementation as part of this Storm Water Management Program. Inspection procedures were developed during the previous permit cycle. All development and re-development projects disturbing greater than 200 square feet will be inspected regularly when active. The number of construction site inspections completed will be reported annually.

#### 4.2.6 Ensuring Compliance (Enforcement)

The City of Gladstone's storm water ordinance outlines the process that will be followed for enforcement including escalation as necessary. It includes the use of verbal and written notifications, stop work orders, permit revocations, and correction by City (paid by deposit) if necessary.

The number of construction site runoff control enforcement actions taken will be reported on annually.

## **5. Post Construction Storm Water Management for New Development/ Redevelopment**

### **5.1 Regulatory Requirement**

**40 CFR 122.34 (b)(5) –Develop, implement and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects that are less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for your community. Use an ordinance or other regulatory mechanism to address post-construction runoff. Ensure adequate long-term operation and maintenance of BMPs.**

### **5.2 Priority Areas for Post-Construction Program**

The City of Gladstone considers any area that may be developed or re-developed a “priority area” for the post-construction storm water management program.

### **5.3 Selected BMPs for Post Construction Storm Water Management for New Development/Redevelopment**

The City of Gladstone performs plan reviews on all new development/redevelopment projects that include storm water management. In 2007, the City of Gladstone endorsed the Mayor’s Climate Protection Agreement and since that time, sustainability and green initiatives, including storm water management, have been primary City Council goals. Plan reviews include BMP recommendations such as rain gardens, bio-swales, and other strategies to minimize water quality impacts of new and redevelopment (disturbing greater than one acre) by mimicking pre-development conditions.

#### **5.3.1 Ordinance to address post-construction management**

The City of Gladstone is landlocked and is approximately 98% development. To date, the City of Gladstone has not currently adopted a comprehensive post-construction stormwater management ordinance or design standard. However, staff has worked with developers on a less formal basis to ensure that

development and redevelopment projects are addressing stormwater management.

Within the first year of the permit cycle, the City will develop a more formal ordinance and adopt (possibly with amendments) the Kansas City American Public Works Association (APWA) Section 5600 and the APWA/MARC Manual for Best Management Practices for Water Quality or similar standard. The ordinance will include provisions for stormwater quantity and quality management. The ordinance will be reviewed at the end of the permit cycle for any needed modifications.

#### 5.3.2 Plan for Long Term Operation and Maintenance of Post-Construction BMPs

The City of Gladstone will adopt a plan for long term operation and maintenance of Post-Construction BMPs within the first year of the permit cycle. The plan will include developing an inventory of existing post-construction BMPs and identifying responsible parties for each.

#### 5.3.3 Non-structural BMPs

The City of Gladstone will utilize its planning and development codes to direct growth to identified areas, maintain or increase open space, minimize impervious surfaces, minimize soil/vegetation disturbance, encourage infill development, encourage the redevelopment of brownfield and grayfield sites, and improve site design for overall water quality impact.

The number of new and redevelopments submitted for review utilizing these non-structural BMPs will be reported on annually.

The public education and outreach program will include elements of post-construction storm water management and source control/good housekeeping where feasible. Any specific educational efforts will be reported on annually.

#### 5.3.4 Structural BMPs

The City of Gladstone is looking to adopt portions of the MARC Storm Water Quality BMP Manual or similar standard. This manual lays out the parameters for using a variety of structural BMPs to manage the quantity and quality of storm water runoff from new and redevelopment sites disturbing greater than one acre. The

manual addresses: detention, infiltration, evapotranspiration, engineered re-use, and other retrofit technologies.

The number of new and redevelopments submitted for review utilizing these structural BMPs will be reported on annually.

## **6. Pollution Prevention/Good Housekeeping for Municipal Operations**

### **6.1 Regulatory Requirement**

**40 CFR 122.34 (b)(6) 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.**

### **6.2 List of Municipal Operations**

Per the permit requirement, the City of Gladstone is implementing Good Housekeeping practices in all municipal operations that can reasonably be expected to impact water quality. The City of Gladstone's municipal operations as they relate to the MS4 permit and program include the management and maintenance of:

- Parks and Open Space
- Other Municipally-Owned Recreational Facilities
- Roads and Streets
- Municipal Fleet (Vehicles and Equipment)
- Vehicle and Equipment Yards
- Municipal Buildings
- Municipal Parking Lots
- Storm Sewer System
- Salt/Sand Storage Areas
- Wastewater Collection

Additionally, any construction or land disturbance undertaken by City crews or by contractors to the City would be considered "municipal operations".

### **6.3 Selected BMPs for Municipal Operations**

#### **6.3.1 MS4 Maintenance (including proper management of waste removed from MS4)**

The City of Gladstone will operate and maintain its municipal separate storm sewer system (MS4) in order to reduce pollutants discharged from the MS4 to the maximum extent practicable. Public Works staff will inspect storm sewers and inlets/catch basins as they conduct their other routine duties. They will clean out pipes and structures from debris and any other pollutants discovered during these inspections.

Metrics related to the operation and maintenance of the MS4 will be collected (ie. Number of catch basins, storm sewers or ditches inspected and/or cleaned, etc.) and reported on annually.

#### 6.3.2 Streets/Parking Lot Pollution Control

The City of Gladstone will operate and maintain its street system and municipally owned parking lots in a manner to reduce pollutants discharged to the MS4 to the maximum extent practicable. Public Works staff will regularly perform street and parking lot sweeping. Generally, major collectors and arterials are swept biweekly during the sweeping season while lower traffic volume roads are swept at least once in the spring and once in the fall. Parking lots are swept as needed (typically before large events). Litter will be picked up as staff and volunteer resources are available.

Metrics related to the streets/parking lot pollution control will be collected (ie. Number of lane miles swept, number of times parking lots are cleaned, number of man hours spent picking up litter, etc) and reported on annually.

#### 6.3.3 Pollution Control for Maintenance/Storage Yards

The City of Gladstone will operate and maintain its municipal maintenance and storage yard in a manner to prevent and/or reduce pollutants discharged from the site to the MS4 to the maximum extent practicable. The Public Works maintenance facility is located at 4000 NE 76<sup>th</sup> Street. This facility is home to the streets and parks maintenance. Other departments use this facility for fleet maintenance as well.

The site will follow general Good Housekeeping practices related to outdoor storage. It will be inspected annually to review the need for additional site specific BMPs. The results of these inspections will be included in the annual report.

#### 6.3.4 Pollution Control for waste transfer stations

The City of Gladstone does not provide solid waste collection and disposal. There is no waste transfer station within the MS4 jurisdictional boundary.

#### 6.3.5 Pollution Control for Fleet and Maintenance Shops

The City of Gladstone will operate and maintain its municipal fleet and maintenance shop in a manner to prevent and/or reduce pollutants discharged from these sites to the MS4 to the maximum extent practicable. Fleet maintenance for most City equipment and vehicles is performed at the Public Works maintenance facility (4000 NE 76<sup>th</sup> Street). Some maintenance of public safety vehicles (fire trucks and ambulances) is completed by private contractors.

The maintenance shop will follow general Good Housekeeping practices. It will be inspected annually to review the need for additional site specific BMPs related to fleet maintenance. The results of these inspections will be included in the annual report.

#### 6.3.6 Pollution Control for Salt/Sand Storage

The City of Gladstone will operate and maintain its salt/sand storage areas in a manner to prevent and/or reduce pollutants discharged from these sites to the MS4 to the maximum extent practicable. Deicing materials are kept under cover at the Public Works maintenance facility (4000 NE 76<sup>th</sup> Street). There is also a small covered stockpile at the water treatment plant (913 NW 44<sup>th</sup> Terrace).

These sites will follow general Good Housekeeping practices throughout the year. Additionally cleanup and inspections of the storage areas will be conducted after snow events. These sites will be reviewed annually to determine the need for additional site specific BMPs. The results of these inspections will be included in the annual report.

#### 6.3.7 Solid Waste Control

The City of Gladstone will manage solid waste on and within municipally owned facilities to prevent and/or reduce pollutants discharged from these sites to the MS4 to the maximum extent practicable. This will include trash removal from City buildings, open space, and rights-of-way (as resources permit). Solid waste will be properly stored in dumpsters with lids until it can be disposed of by the solid waste management contractor.

#### 6.3.8 Pollution Control for Fueling Operations

The City of Gladstone will operate and maintain its municipal fueling facility in a manner to prevent and/or reduce pollutants discharged from this site to the MS4 to the maximum extent practicable. A 2,000

gallon diesel storage tank and a 2,000 gallon gasoline storage tank are located at the Public Works maintenance facility (4000 NE 76<sup>th</sup> Street).

The fuel storage tanks are leak tested every week by the Veeder Root system. The system is also equipped with a leak alarm, which includes visual and audible alerts. The pumps are controlled by a FuelMaster system, which will shut down the pumps if the fuel dispensed volume indicates a leak. Employees are trained regularly on spill prevention, control and countermeasure procedures.

City staff will follow general Good Housekeeping practices as they relate to storage and dispensing of fuel. Fuel storage and dispensing locations will be inspected annually to determine if any additional BMPs are necessary. The results of these inspections will be included in the annual report.

#### 6.3.9 RCRA/CERCLA Substance Management

The City of Gladstone will manage hazardous substances that fall under the RCRA/CERCLA regulations.

#### 6.3.10 Paints/Solvents Management

The City of Gladstone will manage paints and solvents in a manner to prevent and/or reduce pollutants discharged to the MS4 to the maximum extent practicable. This will apply to any area where these products are stored or used.

City staff will follow general Good Housekeeping practices in the storage and use of these products. Paint and solvent storage areas will be inspected annually to determine if any additional BMPs are necessary. The results of these inspections will be included in the annual report.

#### 6.3.11 Petroleum/Petroleum Waste Products Management

The City of Gladstone will manage petroleum and petroleum waste products in a manner to prevent and/or reduce pollutants discharged to the MS4 to the maximum extent practicable. This will apply to any area where these products are stored or used.

City staff will follow general Good Housekeeping practices in the storage and use of petroleum and petroleum waste products. Storage areas will be inspected annually to determine if any additional BMPs are necessary. The results of these inspections will be included in the

annual report. Quantities of used oil that is recycled will also be reported annually.

#### 6.3.12 Water Quality Impacts of Flood Control Projects

The City of Gladstone will ensure new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices. New flood management projects completed by private developers must follow the post-construction storm water management ordinance which requires the treatment of the water quality storm. The City of Gladstone rarely completes new flood management projects. However, in the event that one is scheduled on the capital projects list, the City Engineer will review the plans to determine if the water quality storm has been effectively treated. Any information related to new or retrofitted flood management projects will be included in the annual report.

### **6.4 Employee Training**

The City of Gladstone will provide training to employees related to Good Housekeeping in Municipal Operations at least once each year. A summary of the number of employees trained and the topics discussed will be included in the annual report.

## **7. General Rationale**

### ***7.1 Decision Process***

The City of Gladstone reviewed the General Permit requirements and selected each of the BMPs after reviewing research from notable sources such as the EPA and the Center for Watershed Protection. Programs from other communities were also examined. Various BMPs were selected based on the evidence that they will have a positive impact on targeted pollutants. City staff also examined each BMP for how it could fit into existing activities and mechanisms. The SWMP is available for public inspection and comment on the City's website.

### ***7.2 Responsible Person***

The person responsible for the overall management and implementation of the permittee's storm water management program is the City Engineer. Others will be involved in the execution of each of the individual activities in the program.

### ***7.3 Evaluation***

The City of Gladstone will report annually on the level of achievement toward all measurable goals. Where applicable, metrics will be documented. Qualitative anecdotal evidence will also be documented where possible. The proposed water quality attitude survey may also serve as a measurement in the change of the public's attitudes and behaviors.

## **8. Plan Preparation Assistance**

The City of Gladstone's Storm Water Management Plan was prepared with the assistance of Christina Leubbert, P.E., CFM, LEED AP, Leubbert Engineering, 304 Travis Court, Jefferson City, MO 65101. The City of Gladstone extends a special thank you for her time and assistance in preparation of this plan.

## **9. Comments and Questions**

Comments and questions regarding the City's Storm Water Management Plan may be directed to the City via mail, email, or phone at the following:

Gladstone City Engineer  
4000 NE 76<sup>th</sup> Street  
Gladstone, MO 64119  
[stormwater@gladstone.mo.us](mailto:stormwater@gladstone.mo.us)  
816-436-5442