

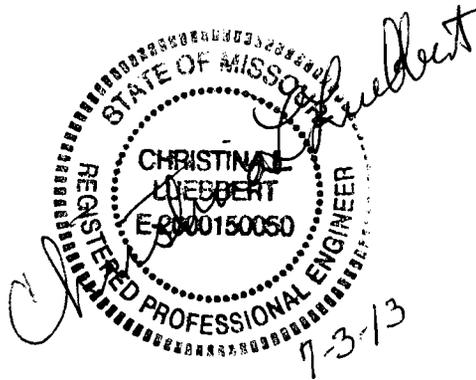
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WATER PROTECTION PROGRAM

**STORMWATER  
MANAGEMENT PLAN  
HOLTS SUMMIT, MO**

**June 2013-June 2018**



Prepared By:

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**FOR HOLTS SUMMIT, MO**

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**PART I  
CITY OF HOLTS SUMMIT  
BACKGROUND**

## **City of Holts Summit Background**

### Information on the Permittee:

Name of the Permittee: City of Holts Summit, Missouri

Type of Entity: City – Municipality

Total Area (acres): 3.49 sq. miles

Mailing Address: 245 S. Summit Drive, Holts Summit, MO 65043

Primary Contact: Brian Crane, City Administrator

Phone Number: 573-896-5600

Secondary Contact: Mark Tate – Street Superintendent

Phone Number: 573-896-5600

Population (2010): 3,247

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

MS4 System Location: Holts Summit, Missouri

Name of Organization: City of Holts Summit, Missouri

County Permittee Resides: Callaway County

The major receiving waters within the permitted area include: Turkey Creek, Niemans Creek, Rivaux Creek, Skunk Creek, and Unnamed Tributary of the Missouri River. See outfall map in the Appendix.

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: Turkey Creek, Niemans Creek, Rivaux Creek, Skunk Creek, and Unnamed Tributary of the Missouri River.

The Permittee does not discharge to waters classified as major reservoirs.

The Permittee has some area defined as wetlands as identified by the National Wetland Inventory. See map in the Appendix.

Stormwater from Holts Summit 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 stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff.**

Section 4.2.1.1 of the Missouri general permit for small municipal separate storm sewer systems ("Permit") requires that the City implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and steps the public can take to reduce pollutants in storm water runoff. This section describes the program elements intended to meet this requirement.

## 1.2 *Target pollutants*

Section 4.2.1.1.1 of the Permit requires that the public outreach and education program identify the target pollutant sources the City's public education program is designed to address. The following is a list of the leading pollutants, expected to be experienced in the permitted area, that are carried by stormwater runoff into water bodies. This list is based on typical pollutants found in urban stormwater runoff:

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

## 1.3 *Target audiences*

Section 4.2.1.1.2 of the Permit requires that the public outreach and education program identify the target audiences for the City's education program who are likely to have significant storm water impacts (including commercial, industrial and institutional entities). During the development of the proposed education program, Holts Summit identified the potential sources of stormwater pollutants that needed to be reduced to improve overall water quality. The target audiences were selected because changing their behavior would have a significant stormwater quality

impact on the target pollutants. The target audiences for the public education program are:

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

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

Sections 4.2.1.1.3 through 4.2.1.1.5 of the Permit requires that the public outreach and education program include a plan to inform individuals and households about steps they can take to reduce storm water pollution, how to become involved in the SWMP (with activities such as local stream and lake restoration activities) and describe the outreach strategy, including the mechanisms (e.g., printed brochures, newspapers, media, workshops, etc.) to reach target audiences, and how many people expected to be reached over the permit term. The following Best Management Practices were selected to meet these requirements:

##### **1.4.1 Stormwater Web Page**

The City of Holts Summit has selected the use of a web page for implementation as part of this Stormwater Management Program.

The City maintains a web page with stormwater education information on the City's web site. The page includes general stormwater information, conveys actions citizens can take to improve stormwater quality, and has direct links to the stormwater ordinances and guidance documents. The website will be reviewed annually to determine if any updates are needed.

##### **1.4.2 Brochures**

The City of Holts Summit has selected brochures for implementation as part of this Stormwater Management Program.

The City developed informational brochures related to protecting water quality based on a Citizen Information Series developed in Jefferson City. The topics include "Erosion and Sediment Control", "Illicit Discharges", "Solid Waste Management", "Household Hazardous Waste" and "Lawn and Garden Waste Management". These educational materials are available at City Hall and on the City web site. They will be replenished as needed. The approximate number of brochures printed and distributed will be reported annually.

#### 1.4.3 City Newsletter Article

The City of Holts Summit has selected distributing information through its newsletter for implementation as part of this Stormwater Management Program. This will allow the City to distribute to the widest audience possible.

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

#### 1.4.4 Distribute Educational Materials at Community Event

The City of Holts Summit has selected distributing educational materials at a community event for implementation as part of this Stormwater Management Program. This will allow the City to distribute to the widest audience possible. Staff will distribute stormwater education materials at least once per year at a community event. 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 Social Media

The City of Holts Summit has selected the use of social media for implementation as part of this Stormwater Management Program. This will allow the City to distribute to the widest audience possible. The City currently maintains a Facebook page. As social media continues to evolve, the City will leverage the various technologies to distribute education information to its citizens.

Staff will post stormwater education information to some form of social media at least twice a year. The number of times information is posted, to which social media site it is posted and the general content of the educational message will be reported on annually.

## **2. Public Involvement in Stormwater 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 stormwater management program and that the public participation process should make efforts to reach out and engage all economic and ethnic groups.**

Section 4.2.2.1 of the Missouri general permit for small municipal separate storm sewer systems ("Permit") requires that the City implement a public participation/involvement 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. This section describes the program elements intended to meet this requirement.

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

The City of Holts Summit will comply with state and local public notice requirements when implementing the public involvement/participation program (Permit Section 4.2.2.1). The public will be included in reviewing and implementing the stormwater management program as much as possible. The target audiences for the public involvement program are the same as those listed in Section 1.3 (Permit Section 4.2.2.1.2).

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

#### **2.3.1 Public Input on SWMP**

Section 4.2.2.1.1 of the Permit requires the City to describe how the public was involved in the development and submittal of the application and SWMP document. The City of Holts Summit will post the SWMP on the City web site and inviting comment. The SWMP will be presented Board of Aldermen meeting and public comment invited at that time.

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

#### **2.3.2 Existing Public Meetings**

Section 4.2.2.1.3 requires the City to describe the types of public involvement activities included in the program. The City of Holts Summit has selected inviting public input through existing meetings for implementation as part of this Stormwater Management

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

### 2.3.3 Community Group Activities

Section 4.2.2.1.3 requires the City to describe the types of public involvement activities included in the program. The City of Holts Summit will continue to work with various community groups to perform implementation of the Stormwater Management Plan.

Staff will work with these groups to leverage their man power to implement the stormwater program at least once each permit year. A summary of the types of activities completed and approximate number of people involved will be provided in the annual report.

### **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-stormwater discharges into your storm sewer system and implement appropriate enforcement procedures and actions. Develop and implement a plan to detect and address non-stormwater 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.**

Section 4.2.3.1 of the Missouri general permit for small municipal separate storm sewer systems ("Permit") requires that the City develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200) into the City's regulated small MS4.

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

Section 4.2.3.1.1 of the Permit requires the City of Holts Summit to develop a storm sewer 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. This map was developed during the last permit cycle. It is a GIS-based map that integrates additional GIS data such as aerial photography, contour data, etc. that is available. The original data collection was performed by Geo-Verify, LLC.

The map is updated as the system expands or as discrepancies with field information are discovered. This map is available upon request.

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

Section 4.2.3.1.2 of the Permit requires the City of Holts Summit to effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into their storm sewer system and implement appropriate enforcement procedures and actions. The City passed an illicit discharge detection and elimination ordinance on December 12, 2011. This ordinance can be found in Subchapter G of Chapter 45 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**

Section 4.2.3.1.3 of the Permit requires the City of Holts Summit to develop a plan and implementation schedule to detect and address non-storm water discharges, including discharges from illegal dumping and spills, to the City's system. The plan must include dry weather field screening for non-storm water flows and field tests of selected chemical parameters as indicators of discharge sources. The plan shall also address on-site sewage disposal systems that flow into the City's storm drainage system. A description of this plan is as follows:

#### **3.4.1 Procedure for Locating Priority Areas for Screening (per Section 4.2.3.1.3.1 of the Permit)**

The City of Holts Summit will complete a desktop exercise in the first permit year to prioritize areas for the dry weather field screening program. The drainage areas contributing to the major outfalls of the jurisdiction will be reviewed. Outfalls with large drainage areas will be broken down into smaller sub-drainage areas. Land uses (commercial, industrial, residential, etc.) of each contributing drainage area will be reviewed. The screening locations will be selected based on the land use and the size of the enclosed system.

The results of this desktop exercise will be documented in writing. The selected outfall screening locations will be mapped. 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 Holts Summit will conduct dry weather field screening of outfalls. The outfall inspections will be prioritized according to the findings of the desktop exercise discussed in Section 3.4.1. Additional outfalls may be inspected as time and resources allow. These outfall inspections may be coordinated with the community group activities discussed in Section 2.3.4. All outfalls will be inspected at least once every two permit years. 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 Holts Summit will continue to investigate cross-connection of the sanitary sewer system with stormwater system through CCTV inspection. 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.

Additionally, the City will work with the Callaway County Health Department to review areas served by on-site sewage treatment systems. Under the recently passed sewer bond issue, all of these systems should be eliminated by 2015.

3.4.4 Procedures for Tracing Source  
(per Section 4.2.3.1.3.2 of the Permit)

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

3.4.5 Procedures for Removing Source  
(per Section 4.2.3.1.3.3 of the Permit)

The City of Holts Summit 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. City Staff will remove the source of any illicit discharges discovered where the responsible party cannot be identified.

3.4.6 Plan to Ensure Enforcement  
(per Section 4.2.3.1.3.4 of the Permit)

The City of Holts Summit will develop a written Enforcement Response Plan in the first permit year. This plan will document the exact work process from the receipt of information from the public or discovery of an illicit discharge through the removal of the source. It will include identification of the responsibilities of any staff involved in the process. It will also include enforcement escalation as necessary.

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

3.4.7 Public/Employee Education  
(per Section 4.2.3.1.3.5 of the Permit)

The City of Holts Summit 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 information is included in the stormwater education

brochures. City staff attend OSHA Level II Hazardous Spills training annually. This BMP also addresses the minimum control measure for public education. See Section 1 for additional details.

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

The City of Holts Summit will continue to encourage its citizens to participate in the HHW collection program through the Mid-Missouri Solid Waste District 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-Stormwater/Incidental Flows***

#### 3.5.1 Addressing Non-Stormwater Flows (per Section 4.2.3.1.4 of the Permit)

The City of Holts Summit does not currently see the need to address the following non-stormwater 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-Stormwater Flows (per Section 4.2.3.1.5 of the Permit)

The City of Holts Summit 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***

Section 4.2.3.1.6 of the Permit states that the City "should inventory, inspect and have enforcement authority for industries and commercial enterprises within their boundary that may contribute pollutants via storm water to the MS4." Since this is not a requirement, the City does not plan to do this at this time. However, the illicit discharge ordinance gives them the authority to do so if this becomes a requirement.

## 4. Construction Site Stormwater Controls

### 4.1 Regulatory Requirement

**40 CFR 122.34 (b)(4) -Develop, implement and enforce a program to reduce pollutants in any stormwater 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.**

Section 4.2.4.1 of the Missouri general permit for small municipal separate storm sewer systems ("Permit") requires that the City develop, implement, and enforce a program to reduce pollutants in any storm water 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 storm water 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.

### 4.2 Selected BMPs for Construction Site Stormwater Controls

#### 4.2.1 Construction Site Runoff Control Ordinance (per Section 4.2.4.1.1)

The City of Holts Summit adopted a construction site runoff control ordinance on December 12, 2011. This ordinance requires require operators to implement erosion and sediment control BMPs at construction sites (Permit Section 4.2.4.1.1.1) and includes sanctions to ensure compliance, to the extent allowable under State or local law (per Permit Section 4.2.4.1.1.2). The ordinance can be found in Chapter 45 of the City Code which is available on the City web site (in lieu of providing a copy with this plan per Permit Section 4.2.4.1.1.3). The related design guidance has been drafted and will be adopted within the first permit year. Construction site runoff control guidance can be found in Chapter 8 of the draft

Stormwater Design Manual. The ordinance and associated design guidance will be reviewed at least once during the permit cycle to determine if any changes are needed.

#### 4.2.2 Construction Site Waste Control

Per Section 4.2.4.1.2 of the Permit, the City of Holts Summit adopted a construction site runoff control ordinance on December 12, 2011, that included requirements for construction site operators to control construction-site waste that may cause adverse impacts to water quality, such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste. The specific requirements related to construction site waste control can be found in Section 45-460 of the City Code which is available on the City web site. The ordinance will be reviewed at least once during the permit cycle to determine if any changes are needed.

#### 4.2.3 Pre-Construction Plan Review

Section 4.2.4.1.3 of the Permit requires the City to develop procedures to consider and review all pre-construction site plans for potential water quality impacts. The City of Holts Summit drafted plan review policies and procedures adding emphasis on protection of water quality as part of the stormwater design manual. These review procedures will be adopted in the first permit year.

All development and re-development projects disturbing greater than one acre (or otherwise requiring City review) will be evaluated for the potential impact to water quality and comments provided to minimize the potential for discharge of pollutants from the site. These plans will likely be reviewed by a third party consulting engineer.

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

#### 4.2.4 Receive Public Input on Construction Projects

Section 4.2.4.1.4 of the Permit requires the City to develop procedures to receive and consider information submitted by the public, including coordination with the City's public education program. This BMP also coordinates with MCM #2.

The City can receive public input on construction projects through the existing Planning and Zoning hearings and Board of Aldermen 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

Section 4.2.4.1.5 of the Permit requires the City to develop procedures to inspect sites and enforce control measures, including prioritization of site inspections. Inspection procedures were developed during the previous permit cycle.

All development and re-development projects disturbing greater than one acre will be inspected at least monthly when active utilizing the inspection checklist. The inspection records are kept in the street superintendent's office. Due to the generally low number of active projects, there is no current need for prioritization of the inspections.

The number of construction site inspections completed will be reported annually.

#### 4.2.6 Ensuring Compliance (Enforcement)

Section 4.2.4.1.6 of the Permit requires the City to develop a plan to ensure compliance with the ordinance, including the sanctions and enforcement mechanisms the City will use to ensure compliance and procedures for when certain sanctions will be used. The City of Holts Summit's stormwater ordinance has a detailed outline of 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 deeming the violation a nuisance if abatement is necessary.

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

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

### **5.1 Regulatory Requirement**

**40 CFR 122.34 (b)(5) –Develop, implement and enforce a program to address stormwater 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.**

Section 4.2.5.1 of the Missouri general permit for small municipal separate storm sewer systems ("Permit") requires that the City develop, implement, and enforce a program to address the quality of long-term storm water 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. The City's program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts by reasonably mimicking pre-construction runoff conditions on all affected new development projects and by effectively utilizing water quality strategies and technologies on all affected redevelopment projects, to the maximum extent practicable. The City shall assess site characteristics at the beginning of the construction design phase to ensure adequate planning for storm water program compliance. The purpose for this approach is to arrive at designs and practices that provide for most effective water quality treatment through infiltration, flow rates and similar site-design opportunities.

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

Section 4.2.5.1.4 of the Permit requires the City of Holts Summit to specify priority areas for this program. The City considers any area that may be developed or re-developed a "priority area" for the post-construction stormwater management program. This small bedroom community of the Jefferson City Urbanized Area has had modest growth over the last decade (10.6%) and intends to implement their new stormwater quantity and quality management ordinances as this growth continues.

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

Per Section 4.2.5.1.1 of the Permit, the City of Holts Summit has developed a strategy to minimize water quality impacts of new and redevelopment (disturbing greater than one acre) by reasonably mimicking pre-development condition to the maximum extent practicable.

This plan includes the following structural and non-structural Best Management Practices:

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

Section 4.2.5.1.2 of the Permit requires the City of Holts Summit to develop 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. The City of Holts Summit adopted a comprehensive stormwater management ordinance on December 12, 2011. This code can be found in Chapter 45 of the City Code on the City's web site.

This ordinance included provisions for stormwater quantity and quality management on new developments disturbing greater than an acre through runoff reduction (through infiltration, capture/re-use and/or evapotranspiration), control of the channel protection volume (1-year, 24-hour storm to pre-development conditions) and management of flood flows (10-year for residential projects and 25-year for commercial/industrial projects). It also has requirements for treatment of the water quality volume (storage required to capture and treat 90% of the average annual stormwater runoff volume).

A flexible approach to mitigating the stormwater quantity and quality impacts was provided for redevelopment projects. Developers may reduce impervious area, provide mitigation for all new area and 20% of the pre-development impervious area, utilize innovative approaches such as green roofs or pervious pavements, provide off-site treatment or combine these methodologies.

The ordinance will be reviewed at least once during the permit cycle for any needed modifications. The number of developments reviewed and/or constructed under these criteria will be reported on annually.

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

Section 4.2.5.1.3 of the Permit requires the City of Holts Summit to have a plan to ensure adequate long-term operation and maintenance of selected BMPs, including types of agreements between the City and other parties such as the post-development landowners or regional authorities.

The City adopted a comprehensive post-construction stormwater management ordinance on December 12, 2011. This ordinance included provisions to authorize the inspection of post-construction stormwater BMPs. It also included enforcement mechanisms if violations are found. This code can be found in Subchapter F of Chapter 45 of the City Code on the City's web site.

The City will develop an inventory of post-construction BMPs and identify the responsible parties for each. At this time, no post-construction BMPs exist within the MS4. Once post-construction BMPs have been constructed (with maintenance agreements recorded), they will be inspected biannually. Results of these inspections and a summary of enforcement actions taken will be reported annually.

### 5.3.3 Non-structural BMPs

Section 4.2.5.1.5 of the Permit requires the City of Holts Summit to identify non-structural BMPs that will be utilized in the program. The City will utilize its planning and development codes to direct growth to identified areas, protect sensitive areas, maintain or increase open space, provide buffers along sensitive water bodies, 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 comprehensive stormwater management ordinance passed on December 12, 2011 included protection for wetlands and riparian areas. A stream buffer of 25 feet is required along all streams (indicated by blue lines on the USGS quadrangle maps) for all new and redevelopments disturbing more than one acre.

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 stormwater management and source control/good housekeeping where feasible. Any specific educational efforts will be reported on annually.

#### 5.3.4 Structural BMPs

Section 4.2.5.1.6 of the Permit requires the City of Holts Summit to identify structural BMPs that will be utilized in the program. The City adopted a comprehensive post-construction stormwater management ordinance on December 12, 2011. The City drafted a structural BMPs to manage the quantity and quality of stormwater runoff from new and redevelopment sites disturbing greater than one acre. The manual addresses: detention, infiltration, evapotranspiration, engineered re-use, and other retrofit technologies. This manual will be adopted the first permit year.

Developers may also reference the Missouri Guide to Green Infrastructure among a variety of other reputable sources for additional design guidance on structural best management practices.

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.**

Section 4.2.6.1 of the Missouri general permit for small municipal separate storm sewer systems ("Permit") requires that the City 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**

Section 4.2.6.1.1 of the Permit requires the City to list of all municipal operations that are impacted by this operation and maintenance program. The City shall also include a list of industrial facilities the City owns or operates that are subject to NPDES permits for discharges of storm water associated with industrial activity that ultimately discharge to their MS4. The City shall include the permit number or a copy of the industrial application form for each facility.

The City of Holts Summit is implementing Good Housekeeping practices in all municipal operations that can reasonably be expected to impact water quality. The City of Holts Summit'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 and Treatment (NPDES Permits #MO-0106810 and #MO-0033910)

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)**

Section 4.2.6.1.2 of the Permit requires the City of Holts Summit to identify maintenance BMPs, maintenance schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants to the City's regulated small MS4.

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. Litter removed from the MS4 will be disposed of in dumpsters. Other floatables and grit will be disposed of according to solid waste management standards.

Metrics related to the operation and maintenance of the MS4 will be collected (i.e. Number of manhours spent inspecting and/or cleaning catch basins, pipes, and ditches) and reported on annually.

#### **6.3.2 Streets/Parking Lot Pollution Control**

Section 4.2.6.1.3 of the Permit requires the City of Holts Summit to implement controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots. The City 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 sweep all City maintained streets that have curb and gutter at least once each year. Other streets will be swept as time and resources allow. Municipal parking lots will be swept at least once each year. Litter will be picked up as staff and volunteer resources are available.

Metrics related to the streets/parking lot pollution control will be collected (i.e. Number hours spent street sweeping, 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**

Section 4.2.6.1.3 of the Permit also requires the City of Holts Summit to implement controls for reducing or eliminating the discharge of

pollutants from maintenance and storage yards. The City 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 City maintenance facility is located at 514 Karen Drive.

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

Section 4.2.6.1.3 of the Permit also requires the City of Holts Summit to implement controls for reducing or eliminating the discharge of pollutants from waste transfer stations. The City contracts solid waste collection and disposal. The waste transfer station is not within the MS4 jurisdictional boundary.

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

Section 4.2.6.1.3 of the Permit also requires the City of Holts Summit to implement controls for reducing or eliminating the discharge of pollutants from fleet or maintenance shops with outdoor storage. The City 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 Public Works/Parks equipment and vehicles is performed at the City maintenance facility located at 514 Karen Drive. Maintenance of vehicles for other departments takes place at various commercial maintenance shops.

The City staff will follow general Good Housekeeping practices. The maintenance facility 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

Section 4.2.6.1.3 of the Permit also requires the City of Holts Summit to implement controls for reducing or eliminating the discharge of pollutants from salt/sand storage areas. The City 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 at the City maintenance facility located at 514 Karen Drive.

The site 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

Section 4.1.5 of the Permit requires the City of Holts Summit to implement good housekeeping practices at facilities under their control in order to keep solid waste from entry into waters of the state to the maximum extent practicable. Additionally, Section 4.2.6.1.5 of the Permit requires the City of Holts Summit to adopt procedures for the proper disposal of waste removed from the City's MS4 and area of jurisdiction, including dredged material, accumulated sediments, floatables, and other debris.

The City of Holts Summit 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 rights-of-way, buildings, open space, etc. 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

Section 4.1.6 of the Permit requires the City of Holts Summit to adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures at all fueling facilities under their control. The City will operate and maintain its municipal fueling operations in a manner to prevent and/or reduce pollutants discharged to the MS4 to the maximum extent practicable.

There are no fueling stations operated by the City. There is a 75 gallon mobile tank on one of the Public Works trucks. This tank is inspected regularly for any leaks. Other than what is served by the mobile tank and small tools that require mixed fuel, all fueling of City equipment and vehicles takes place at commercial gas stations. City staff will

follow general Good Housekeeping practices as they relate to storage and dispensing of fuel.

Fuel storage 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

Section 4.1.7 of the Permit requires the City of Holts Summit to manage all substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that are transported, stored, or used for maintenance, cleaning or repair by the City according to the provisions of RCRA and CERCLA. The City of Holts Summit will manage hazardous substances that fall under the RCRA/CERCLA regulations.

#### 6.3.10 Paints/Solvents Management

Section 4.1.8 of the Permit requires the City of Holts Summit to store all paints and solvents under their control so that these materials are not exposed to storm water. Sufficient practices of spill prevention, control, and/or management will be provided to prevent any spills of these pollutants from entering a water of the state. 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.

The City of Holts Summit 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

Section 4.1.8 of the Permit also requires the City of Holts Summit to store all petroleum products and petroleum waste products (except fuel) under their control so that these materials are not exposed to storm water. Sufficient practices of spill prevention, control, and/or management will be provided to prevent any spills of these pollutants from entering a water of the state. 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.

The City of Holts Summit 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. The City maintenance facility at 514 Karen Drive has a 250 gallon waste oil tank. Records are kept on the disposal of this waste.

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

Section 4.2.6.1.6 of the Permit requires the City of Holts Summit to adopt 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 or practice.

New flood management projects completed by private developers must follow the post-construction stormwater management ordinance which requires the treatment of the water quality storm. The City of Holts Summit rarely completes new flood management projects. However, in the event that one is scheduled on the capital projects list, the City's Stormwater Consultant 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**

Section 4.2.6.1.7 of the Permit requires the City of Holts Summit to implement a government employee training program to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. The City shall describe any existing, available materials it plans to use such as those available from EPA, State or other organizations. The City shall describe how this training program will be coordinated with the outreach programs developed for the public information minimum measure and the illicit discharge minimum measure.

The City of Holts Summit 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***

Section 4.1.9 of the Permit requires the City to document the decision process for each minimum control measure and include rationale statements for each BMP and measurable goal defined. The City of Holts Summit 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 will be made available for public inspection and comment upon completion.

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

Section 4.1.3 of the Permit requires the City to identify the person primarily responsible for the SWMP, and the person(s) responsible for each minimum control measure if different from the primary responsible person. The person responsible for the overall management and implementation of the permittee's stormwater management program is the City Administrator. Others will be involved in the execution of each of the individual activities in the program.

### ***7.3 Evaluation***

The City of Holts Summit 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.

### ***7.4 Modifications and Updates***

The City of Holts Summit understands that this plan is intended to be a "living document" with measurable goals and objectives. However, it is difficult to speculate the resources that will be available from year to year. Therefore, the annual report will provide an opportunity to improve the specificity of the goals and objectives set forth in more general terms within this plan. Each year, the annual report will include details of the progress made under each minimum control measure as well as details of the proposed activities for the coming year towards each goal. The annual reports will be added as appendices to this plan and act as interim updates as such.



304 Travis Court  
Jefferson City, MO 65101  
573-291-6567

July 3, 2013

Missouri Department of Natural Resources  
Water Protection Program  
Attn: Ruth Wallace  
Jefferson City, Missouri 65101

Re: Revised SWMPs for Excelsior Springs, Marshall and Holts Summit

Dear Ms. Wallace:

Please find enclosed the revisions to the above referenced Stormwater Management Plans. Each has been amended to more completely reference the permit requirements. Additionally, areas of program deficiencies were more fully addressed or clarified. I did not reprint the appendices to the Marshall plan so I would appreciate it if you would simply swap out the enclosed plan with the body of the original plan.

I also worked with Liberty to amend their plan. Brian Hess indicated he would be sending you the revised plan in an email later today.

Thank you for your time and consideration of these revisions. Please let me know if you need any additional information.

Sincerely,

A handwritten signature in black ink that reads 'Christina L. Luebbert'. The signature is written in a cursive style with a large, prominent initial 'C'.

Christina L. Luebbert, P.E., CFM, LEED AP  
Owner/Principal Engineer

Enclosures

**PHASE II MS4 PROGRAM REVIEW AND ASSESSMENT  
Small Separate Storm Sewer System (Small MS4)**

Date(s) of Review May 28, 2013

Permittee Holts Summit Small MS4

Permit # MOR040064

Reviewer(s) Ruth Wallace

**Document(s) Reviewed:**

PERMIT(s) DATED \_\_\_\_\_

SWMP(s) DATED June 2013-June 2018

Annual Report(s) with/without Monitoring Data DATED \_\_\_\_\_

TMDL Monitoring Plan(s) DATED \_\_\_\_\_

**General Comments:** The June 2013-June 2018 Stormwater Management Program Plan (SWMP) was written without regard to permit conditions for which the application is being made. Each minimum control measure outlined in the SWMP simply references the supporting federal regulation language. The Clean Water Act and federal regulation, as well as the Missouri Clean Water Law and state regulation provide the foundation for development of NPDES permits. The nature of NPDES Permitting involves the inclusion of numeric and narrative limits as determined through policy and best professional judgment as a means to address regulatory requirements.

The inclusion of narrative best management practices (BMPs) is particularly important in MS4 permits where the Department is obligated under 40 CFR Part 125 to incorporate best management practices into permits as a means to guide MS4s toward the narrative Maximum Extent Practicable (MEP) standard. Without baseline best management practices, it is difficult to make any assumptions about MS4 program progress toward MEP, especially in the absence of numeric limits at outfalls.

By disregarding permit conditions, your MS4 is at risk of non-compliance. While several of the outlined activities in your SWMP may address permit requirements by default, it is evident in a few areas that certain permit conditions may be ignored.

While this review could include permit requirements throughout, discussion will be limited to the post-construction runoff control requirements for demonstration purposes.

**1. Public Outreach & Education**

Adequate

Somewhat Adequate

Inadequate

**Comments:**

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While the 2008 permit requirements (carried over to the 2013 permit draft) are not included. Permit requirements are stated as follows:

- 4.2.5           **Post-Construction Storm Water Management in New Development and Redevelopment**
- 4.2.5.1        *Permit requirement.* The permittee shall develop, implement, and enforce a program to address the quality of long-term storm water 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 permittee's regulated small MS4. The permittee's program shall ensure that controls are in place that have been designed and implemented to prevent or minimize water quality impacts by reasonably mimicking pre-construction runoff conditions on all affected new development projects and by effectively utilizing water quality strategies and technologies on all affected redevelopment projects, to the maximum extent practicable. The permittee shall assess site characteristics at the beginning of the construction design phase to ensure adequate planning for storm water program compliance. The purpose for this approach is to arrive at designs and practices that provide for most effective water quality treatment through infiltration, flow rates and similar site-design opportunities. As part of the SWMP document, the post-construction runoff control program shall include the following information, at a minimum:
- 4.2.5.1.1      A strategy to minimize water quality impacts, by reasonably mimicking pre-construction runoff conditions in affected new development and incorporating water quality protection in affected redevelopment projects to the maximum extent practicable, and include a combination of structural and/or non-structural BMPs appropriate for the permittee's community;
- 4.2.5.1.2      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. If the permittee needs to develop a mechanism, the permittee shall describe the plan and a schedule for implementation. If the permittee's ordinance or regulatory mechanism is already developed, the permittee shall include a copy of the relevant sections with the SWMP document;
- 4.2.5.1.3      A plan to ensure adequate long-term operation and maintenance of selected BMPs, including types of agreements between the permittee and other parties such as the post-development landowners or regional authorities;
- 4.2.5.1.4      Specific priority areas for this program; and
- 4.2.5.1.5      Any non-structural BMPs in the permittee's program, including, as appropriate:
- 4.2.5.1.5.1     Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation;
- 4.2.5.1.5.2     Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure, and redevelopment of Brownfield sites or grayfields which may include abandoned malls or similar properties;

**RECOMMENDATIONS:**

It is recommended the City submit the revised SWMP no later than July 3, 2013.