Storm Water Management Program

Ohio EPA MS4 Permit Number OHQ0000003
2014-2019

December 2016 Update

City of Springdale
Storm Water Management Program

Prepared By:
STRAND ASSOCIATES®
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CERTIFICATION

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

[Signature]

Doyle H. Webster
Mayor
City of Springdale, OH
Executive Summary

The previous National Pollutant Discharge Elimination System (NPDES) permit for authorization for small Municipal Separate Storm Sewer Systems (MS4s) to discharge storm water (NPDES Permit No. OHQ000002) required the development and implementation of a Storm Water Management Program (SWMP) that satisfied the appropriate water quality requirements of Ohio Revised Code (ORC) 6111 and the Clean Water Act. The SWMP document is intended to identify and describe the best management practices (BMPs) selected by the City of Springdale (City) to meet the requirements of the six minimum control measures (MCMs) described in the permit, why those BMPs were selected in light of local water quality issues, and performance standards for BMP implementation. The six MCMs are:

1. Public Education and Outreach on Storm Water Impacts
2. Public Participation / Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention / Good Housekeeping for Municipal Operations

The NPDES small MS4 permit was reissued on September 11, 2014 (NPDES Permit No. OHQ000003), and requires MS4 communities which are renewing coverage under this permit to update their SWMP to be consistent with the permit and submit the updated SWMP to Ohio EPA for review. Permit No. OHQ000003 requires that where applicable, BMPs shall be selected to address U.S. EPA approved Total Maximum Daily Load (TMDL) recommendations for identified water quality problems associated with MS4 discharges within the City of Springdale’s watershed(s).
System Overview and Total Maximum Daily Loads (TMDLs)

The City of Springdale (City) is located on the northern fringe of Hamilton County in southwestern Ohio. The requirements of the MS4 permit are applicable to the entire City area, which is considered an urbanized area due to the amount of development that has occurred within the City. Based on 2010 census data, the population within the City was 11,223. The land area of the City is 3,209 acres, or approximately 5.01 square miles, highlighted in the figure below.

Because of existing topography, the majority of the City flows in an eastern and southern direction and falls within the Mill Creek watershed. A small portion of the City, approximately 50 acres of the Beacon Hills residential development in the northwestern section of the City, flows in a western direction and falls within the Great Miami River watershed. Runoff from both watersheds is ultimately conveyed in a southern direction before discharging into the Ohio River. These two watersheds are highlighted in the following figures.
Both the Mill Creek watershed and the Great Miami River watershed are in various stages of development through the Ohio EPA’s TMDL program. Information on each of the watersheds and current TMDL status is described in the table below.

<table>
<thead>
<tr>
<th>Watershed</th>
<th>HUC 10</th>
<th>Status of TMDL</th>
<th>Pollutants for TMDL</th>
<th>Sources / Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mill Creek</td>
<td>0509020301</td>
<td>Approved in April 2005</td>
<td>Nutrients, including dissolved nitrogen and total phosphorous</td>
<td>Municipal and other sewage treatment plants, combined and separate sewer overflows, urban runoff, landfills, land disposal, industrial point sources, construction, land development / suburbanization, on-site sewage systems, channel modification.</td>
</tr>
<tr>
<td>Great Miami River (Lower)</td>
<td>0508000209</td>
<td>TMDL report is in preparation.</td>
<td>Not yet published, although nutrients listed as a special issue.</td>
<td>The Great Miami River (lower) watershed was studied during 2010. A final study plan was published by OEPA in May 2010.</td>
</tr>
</tbody>
</table>
Organizational Chart

The following organizational chart provides a visual representation of how the City of Springdale will accomplish the goals outlined in this Storm Water Management Program. Partnerships with other local storm water groups will continue to be considered to enhance specific components of the storm water management program, but the City will ultimately be responsible for implementing tasks associated with each of the six MCMs.

City of Springdale
Public Works Department
Jeff Agricola, Director of Public Works

MCM #1 Public Education and Outreach
Jeff Agricola
Director of Public Works

MCM #2 Public Involvement / Participation
Jeff Agricola
Director of Public Works

MCM #3 Illicit Discharge Detection and Elimination
Jeff Agricola
Director of Public Works

MCM #4 Construction Site Stormwater Runoff Control
Gregg Taylor
Building Official

MCM #5 Post-Construction Stormwater Management
Gregg Taylor
Building Official

MCM #6 Pollution Prevention / Good Housekeeping
Jeff Agricola
Director of Public Works

Matthew Clayton
Health Commissioner
Minimum Control Measure 1: Public Education and Outreach on Storm Water Impacts
Minimum Control Measure 1: Public Education and Outreach on Storm Water Impacts

The City of Springdale MS4 permit requires public education and outreach efforts to do the following:

*Shall 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 the steps that the public can take to reduce pollutants in storm water runoff.*

**Performance Standards:** Program shall include more than 1 mechanism and at least five different storm water themes or messages over the permit term, at least one theme shall be targeted to the development community, and reach at least 50% of the population.

The following tables outline the best management practices (BMPs) selected by the City of Springdale to accomplish MCM 1. The City of Springdale has the legal authority to implement all identified BMPs. More than one mechanism will be implemented for public education and outreach. The five themes the City will focus on include the following:

1. Nutrient Pollution
2. Erosion Prevention and Sediment Control (Targeted to the Development Community)
3. Residential Storm Water Management
4. Litter and Trash
5. Hazardous Waste Disposal

The City expects to reach at least half of its population over the permit term through the implementation of the following BMPs.

<table>
<thead>
<tr>
<th>BMP Type: Hard-Copy Outreach Materials</th>
</tr>
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</table>

**Description of BMP:** The City will develop, print, and distribute at least one brochure or fact sheet on each storm water theme over the five-year permit term. The City will also publish at least one article annually in the City-published newsletter about the impacts of storm water runoff. Specific themes related to impacts of nutrients on storm water runoff will be considered to support the Mill Creek TMDL objectives.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Schedule and Frequency</th>
<th>Responsible Party</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track the number of brochures distributed over the permit term, and document any specific City events where brochures are distributed to the public.</td>
<td>Ongoing</td>
<td>City of Springdale Public Works Dept.</td>
<td>City residents, City employees, City businesses</td>
</tr>
<tr>
<td>Document the number of press releases or news articles published over the permit term, with a goal of at least one article per year during the permit term.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
<td>City residents</td>
</tr>
</tbody>
</table>
Rationale for BMP: Routinely providing written information on storm water topics to City residents, employees, and businesses will enhance public awareness of water quality issues. City-published newsletters reached the majority of the population within the City during the previous permit term, and this continues to be an effective public outreach activity.

How BMP addresses TMDL: One of the target themes for the outreach materials will be focused on nutrients to support the Mill Creek TMDL objectives.

### BMP Type: Web-Based Storm Water Materials

**Description of BMP:** The City will continue implementing a web-based storm water library of educational materials, via the City’s website, to promote education and outreach of the storm water program and related issues. Various storm water themes will be posted on an annual basis, including an erosion prevention and sediment control theme targeted to the development community. Website links to the Ohio EPA TMDL website will be included, along with a link to the Mill Creek TMDL report. The City’s storm water website is: [http://www.springdale.org/storm-water-management.aspx](http://www.springdale.org/storm-water-management.aspx)

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Schedule and Frequency</th>
<th>Responsible Party</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track the number of website hits over the permit term.</td>
<td>Ongoing</td>
<td>City of Springdale Public Works Dept.</td>
<td>City residents, local developers</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Online communication continues to be an effective method to provide current storm water information to people of a wide variety of demographics.

**How BMP addresses TMDL:** The website will be updated to include links to Ohio EPA’s TMDL program and specific links to the Mill Creek and Great Miami River watersheds. Links to information about impacts of nutrients on water quality will also be added to the website.

### BMP Type: Participation in City-Wide Event

**Description of BMP:** The City will present storm water runoff related information and themes at a minimum of one City-wide event on an annual basis. Themes are anticipated to included City maintenance and service activities that help prevent storm water pollution, such as the street sweeping program, catch basin cleaning program, and leaf collection program.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Schedule and Frequency</th>
<th>Responsible Party</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document the number of people in attendance during the event.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
<td>City residents</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** The City-wide event allows residents an opportunity to engage directly with City staff responsible for administering the storm water program.

**How BMP addresses TMDL:** One of the target themes for the City-wide event will be focused on nutrients to support the Mill Creek TMDL objectives.
MCM 1 Decision Process – Rationale Statement
The rationale statement shall include the following information, at a minimum:

i. **How you will inform individuals and households about the steps they can take to reduce storm water pollution.**

Refer to the tables above for a description of the BMPs the City intends to implement to inform the public about storm water runoff pollution and ways to reduce pollution and improve water quality.

ii. **How you plan to inform individuals and groups on how to become involved in the storm water program (with activities such as local stream restoration activities).**

Website updates and City-published newsletters will be utilized to notify individuals about upcoming opportunities to get involved in the storm water program.

iii. **Who are the target audiences for your education program who are likely to have significant storm water impacts (including commercial, industrial and institutional entities) and why those target audiences were selected?**

Refer to the table above for a description of the target audiences. These audiences were selected because they represent a broad base including the public, City employees, City businesses, and developers.

iv. **What are the target pollutant sources your public education program is designed to address?**

Because the Mill Creek has an approved TMDL that emphasizes water quality impacts associated with nutrients, specific themes will be developed to educate the public about how nutrients can impact local streams. Information about other pollutants will be included during the permit term as well, such as sediments and bacteria.

v. **What is your outreach strategy, including the mechanisms (e.g., printed brochures, newspapers, media, workshops, etc.) you will use to reach your target audiences, and how many people do you expect to reach by your outreach strategy over the permit term.**

Refer to the tables above for detailed outreach strategies that are intended to reach the public, including City residents, City employees, City businesses, and local developers. The City expects to reach at least half of its population over the permit term.

vi. **Who (person or department) is responsible for overall management and implementation of your storm water public education and outreach program and, if different, who is responsible for each of the BMPs identified for this program.**

Refer to the tables above for the responsible party for each BMP included in the program. The City of Springdale Public Works Department is responsible for the implementation of the public education and outreach MCM. Partnerships with other local storm water groups will continue to be considered to enhance public education and outreach efforts, but the City will ultimately be responsible for implementing tasks associated with this MCM.
vii. How will you evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs?

The measurable goals were selected to be specific, measurable, achievable and realistic. The City intends to evaluate the effectiveness of the public education and outreach BMPs by tracking and documenting information as described in the tables above.
Minimum Control Measure 2: Public Involvement/Participation
Minimum Control Measure 2:  
Public Involvement/Participation

The City of Springdale MS4 permit requires the public involvement/participation efforts to do the following:

*Shall comply with State and local public notice requirements and satisfy this minimum control measure’s minimum performance standards when implementing a public involvement/participation program.*

**Performance Standards:** Include, at a minimum, five public involvement activities over the permit term.

The following tables outline the best management practices (BMPs) selected by the City of Springdale to accomplish MCM 2. The City of Springdale has the legal authority to implement all identified BMPs. The City intends to implement at least five public involvement activities over the permit term.

### BMP Type: City Programs for Residential Involvement

**Description of BMP:** The City will continue to implement City-sponsored programs to encourage residential involvement for storm water quality improvement. These programs are anticipated to include the City’s annual leaf collection program, and the collection of household hazardous waste from residents. The Public Works department performs leaf collection in the fall season, and this is a free service that is available to all residents. The City encourages the public to refrain from placing leaves in the street, which can cause localized flooding and potential water quality issues.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Schedule and Frequency</th>
<th>Responsible Party</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement the leaf collection program for City residents. Document the dates each year when the leaf collection program is initiated by the City.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
<td>City residents</td>
</tr>
<tr>
<td>Implement the household hazardous waste program for City residents, including the collection of used motor oil. The quantity will be measured through the City’s good housekeeping program.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
<td>City residents</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Providing residents with an opportunity to utilize this free service from the City allows the public to be involved with storm water management and quality improvement through the effective prevention of leaves in the storm sewer system and local waterways.

**How BMP addresses TMDL:** Prevention of leaves from entering the storm sewer system and local waterways can provide a benefit of reduced nutrients from the leaves. This would provide a benefit during the fall season when the program is implemented.
BMP Type: Pet Waste Bags at City Parks

**Description of BMP:** The City will continue to provide bags for pet wastes at each City-owned park. The total number of stations where bags are provided for pet wastes is 10, with at least one station provided at every park.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Schedule and Frequency</th>
<th>Responsible Party</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain pet waste disposal stations in public spaces.</td>
<td>Ongoing</td>
<td>City of Springdale Parks and Recreation Dept.</td>
<td>City residents (pet owners, park users)</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Involving the public in cleaning up after their pets provides value not only in keeping pollution out of the water, but also educating residents and keeping the Parks clean. **How BMP addresses TMDL:** No direct link to nutrient reduction goals of the Mill Creek TMDL.

BMP Type: Stream Clean-Up Events

**Description of BMP:** The City will participate and encourage the public to participate in at least one stream clean-up event annually during the permit term.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Schedule and Frequency</th>
<th>Responsible Party</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document the number of volunteers participating in stream clean-up events.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
<td>City residents</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Engaging the public in stream clean-up events provides opportunity for hands-on education and outreach while also cleaning up local streams. **How BMP addresses TMDL:** No direct link to nutrient reduction goals of the Mill Creek TMDL.

MCM 2 Decision Process – Rationale Statement

*The rationale statement shall include the following information, at a minimum:*

1. **Have you involved the public in the development and submittal of your NOI and SWMP description?**

   A draft of this storm water management plan was posted on the City’s website for public review and comment.

2. **What is your plan to actively involve the public in the development and implementation of your program?**

   A draft of this storm water management plan was posted on the City’s website for public review and comment. Refer to the tables above for a description of the BMPs the City intends to implement to encourage public involvement and participation for water quality improvement. The proposed SWMP includes various opportunities for the public to get involved in the implementation of the SWMP.
iii. Who are the target audiences for your public involvement program, including a description of the types of ethnic and economic groups engaged? You are encouraged to actively involve all potentially affected stakeholder groups, including commercial and industrial businesses, trade associations, environmental groups, homeowner’s associations, and educational organizations, among others.

Refer to the table above for a description of the target audiences. Generally, these BMPs are targeted more toward City residents, but City employees and City businesses will be encouraged to participate in public involvement activities, such as stream clean-up events.

iv. What are the types of public involvement activities included in your program? Where appropriate, consider the following types of public involvement activities: citizen representatives on a storm water management panel, public hearings, working with citizen volunteers willing to educate others about the program, volunteer monitoring or stream/beach clean-up activities.

Refer to the table above for a description of the public involvement activities included in the program.

v. Who (person or department) is responsible for the overall management and implementation of your storm water public involvement/participation program and, if different, who is responsible for each of the BMPs identified for this program.

Refer to the tables above for the responsible party for each BMP included in the program. The City of Springdale Public Works Department is responsible for the implementation of the public involvement/participation MCM.

vi. How you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The measurable goals were selected to be specific, measurable, achievable and realistic. The City intends to evaluate the effectiveness of the public involvement/participation BMPs by tracking and documenting information as described in the tables above.
Minimum Control Measure 3: Illicit Discharge Detection and Elimination
Minimum Control Measure 3: Illicit Discharge Detection and Elimination

The City of Springdale MS4 permit requires the illicit discharge detection and elimination efforts to do the following:

*Shall develop, implement and enforce a program to detect and eliminate illicit discharges.*

*Shall develop a comprehensive storm water system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls; MS4 system (catch basins, pipes, ditches, detention/retention ponds, post construction water quality BMPs), and private water quality BMPs.*

*Shall submit to EPA a list of HSTSs including addresses; a map of HSTS’s including type and size of conduits that receive discharges.*

*Shall effectively prohibit through ordinance, or other regulatory mechanism, illicit discharges including enforcement procedures.*

*Shall development and implement a plan to detect and eliminate non-storm water discharges, including illegal dumping and HSTS. At a minimum this includes:*

  i.  *Working with applicable agencies and/or departments to identify HSTS’s that could be connected to central sewers, and require connection for any HSTS not operating properly.*

  ii. *Working with the health department to develop a proactive O&M program.*

  iii. *Actively investigating contamination sources during dry weather screening.*

  iv. *Evaluating the planned/possible installation of sewers in areas with high densities of HSTS’s.*

*Shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.*

*Shall address the following categories of non-storm water discharges or flows if identified as significant contributors of pollutants: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, and discharges or flows from firefighting activities.*

**Performance Standards:** *Initial dry weather screening of all storm water outfalls over the permit term. Establish priorities and goals for long-term system wide surveillance of MS4. System map shall be updated as needed.*

The following tables outline the BMPs selected by the City of Springdale to accomplish MCM 3. The City of Springdale has the legal authority to implement all identified BMPs.
Storm Water Management Program
December 2016 Update

BMP: Update Storm Sewer System Mapping

Description of BMP: The City has already developed a comprehensive mapping database of the existing storm sewer system. The database includes catch basins, pipes, ditches, flood control facilities, post-construction water quality BMPs, storm water outfalls, and receiving streams. The City intends to continue updating the map as necessary to include any new storm sewer system data from new development or redevelopment projects. The City also intends to add available information on the only two remaining home sewage treatment system (HSTS) within the City.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document any new information added to the storm sewer system mapping database during the permit term.</td>
<td>Ongoing</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
</tbody>
</table>

Rationale for BMP: Updating the storm system mapping with information on future development and redevelopment projects will continue to provide the City with a detailed database of the storm sewer system mapping information.

How BMP addresses TMDL: No direct link to nutrient reduction goals of the Mill Creek TMDL, but having an accurate map can be beneficial in the future if nutrient loadings need to be estimated.

BMP: Dry-Weather Screening of Storm Water Outfalls

Description of BMP: The City will conduct dry-weather screening of all known storm water outfalls during the permit term. The City has a dry-weather screening reporting form to assist with the dry-weather screening of outfalls.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track the location and number of outfalls screened for illicit discharges during dry weather.</td>
<td>All outfalls will be screened at least once during the permit term.</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
</tbody>
</table>

Rationale for BMP: Screening storm water outfalls will assist the City in identifying illicit discharges throughout the storm sewer system.

How BMP addresses TMDL: Dry-weather screening of outfalls for illicit discharges will ultimately improve water quality once resolved, however this will not directly impact the nutrient loadings in the Mill Creek TMDL.
BMP: Implementation of Illicit Discharge Detection and Elimination Program

**Description of BMP:** The City will continue implementing its illicit discharge detection and elimination program to eliminate illicit discharges within the storm sewer system. The City has already developed and implemented an illicit discharge ordinance. This is Ordinance No. 68-2006, which adopted Section 95.03 of the Springdale Codified Ordinances [http://www.springdale.org/springdale-code-of-ordinances.aspx](http://www.springdale.org/springdale-code-of-ordinances.aspx).

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain existing ordinance prohibiting illicit discharges including enforcement procedures.</td>
<td>Ongoing</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>City of Springdale Health Department</td>
</tr>
<tr>
<td>Document the number of illicit discharge reports identified and resolved.</td>
<td>All reports of illicit discharges will be investigated and resolved.</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>City of Springdale Health Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Eliminating illicit discharges results in a successful program.

**How BMP addresses TMDL:** Eliminating illicit discharges will improve water quality, however this will not directly impact the nutrient loadings in the Mill Creek TMDL.

### MCM 3 Decision Process – Rationale Statement

*The rationale statement shall include the following information, at a minimum:*

1. **How you will develop a comprehensive storm sewer map showing the location of all outfalls and the names and location of all receiving waters. Describe the sources of information you used for the maps, and how you plan to verify the outfall locations with field surveys. If already completed, describe how you developed this map. Also, describe how your map will be regularly updated.**

   The City has already developed a comprehensive mapping database of the existing storm sewer system. The database includes catch basins, pipes, ditches, flood control facilities, post-construction water quality BMPs, storm water outfalls, and receiving streams. The City developed the map based on a combination of comprehensive field data collection and the integration of information from record drawings from new development and redevelopment projects. The City intends to continue updating the map as necessary to include any new storm sewer system data from new development or redevelopment projects. The City also intends to add available information on the only remaining home sewage treatment system (HSTS) within the City. The City will utilize additional City resources to keep GIS shapefiles updates as changes are needed.

2. **The mechanism (ordinance or other regulatory mechanism) you will use to effectively prohibit illicit discharges into the MS4 and why you chose that mechanism. If you need to develop this mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your program.**
The City will continue implementing its illicit discharge detection and elimination program to eliminate illicit discharges within the storm sewer system. The City has already developed and implemented an illicit discharge ordinance. This is Ordinance No. 68-2006, which adopted Section 95.03 of the Springdale Codified Ordinances (http://www.springdale.org/springdale-code-of-ordinances.aspx). The City chose to use the ordinance as its mechanism to enforce the illicit discharge program because it allows the City to impose penalties for non-compliance. A copy of this ordinance is included as Appendix A of this SWMP document.

iii. **Your plan to ensure through appropriate enforcement procedures and actions that your illicit discharge ordinance (or other regulatory mechanism) is implemented.**

The City’s Ordinance 68-2006 includes penalties for non-compliance – this is the enforcement mechanism. Through the dry-weather screening of outfalls, the City will implement a plan to detect the source of any illicit discharges, then ultimately use the ordinance if necessary to implement enforcement procedures.

iv. **Your plan to detect and address illicit discharges to your system, including discharges from illegal dumping and spills. Your plan shall include dry weather field screening for non-storm water flows and Ohio EPA recommends field tests of selected chemical parameters as indicators of discharge sources. You shall describe the mechanisms and strategies you will implement to ensure outfalls which have previously been dry-weather screened will not have future illicit connections. Your plan shall also address on-site sewage disposal systems (including failing on-lot HSTSSs and off-lot discharging HSTSSs) that flow into your storm drainage system. Your description shall address the following, at a minimum:**

1. **Procedures for locating priority areas which include areas with higher likelihood of illicit connections (e.g., areas with older sanitary sewer lines, for example) or ambient sampling to locate impacted reaches;**

   Priority areas will be located by considering areas with concentrated resident complaints/reports, and areas of the system noted by City staff as a possible concern. The City has only two remaining HSTSSs, so there are no longer clusters of HSTSSs that could be used in a prioritization of areas with potential for higher illicit discharges.

2. **Procedures for tracing the source of an illicit discharge, including the specific techniques you will use to detect the location of the source;**

   City crews have the ability to provide general field investigations, CCTV inspection, dye testing, and smoke testing to help locate the source of illicit discharges. Water quality sampling may also be utilized where needed.

3. **Procedures for removing the source of the illicit discharge.**

   Illicit discharges will be resolved on a case-by-case basis given the unique nature of each situation.

4. **Procedures for program evaluation and assessment.**
The dry-weather screening of all storm sewer system outfalls will provide an opportunity to assess the illicit discharge detection and elimination program.

v. **How you plan to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. Include in your description how this plan will coordinate with your public education minimum measure and your pollution prevention/good housekeeping minimum measure programs.**

The hazards of illicit discharges will be a topic or theme that is covered under the hard-copy outreach materials and web-based storm water material BMPs described under MCM 1 in this SWMP document.

vi. **Who is responsible for overall management and implementation of your storm water illicit discharge detection and elimination program and, if different, who is responsible for each of the BMPs identified for this program.**

Refer to the tables above for the responsible party for each BMP included in the program. The City of Springdale Public Works Department is responsible for the implementation of the illicit discharge detection and elimination MCM.

vii. **How you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.**

The measureable goals were selected to be specific, measureable, achievable and realistic. The City intends to evaluate the effectiveness of the illicit discharge detection and elimination BMPs by tracking and documenting information as described in the tables above.
Minimum Control Measure 4: Construction Site Storm Water Runoff Control
Minimum Control Measure 4:  
Construction Site Storm Water Runoff Control

The City of Springdale MS4 permit requires the construction site storm water runoff control efforts to do the following:

*Shall 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 including projects less than one acre that are part of a larger common plan of development. At a minimum this includes:*

1. **Ordinance or other requirements for construction site operators to require erosion and sediment controls as well as sanctions to ensure compliance.**
2. **Requirements for construction site operators to implement appropriate erosion and sediment control BMPs.**
3. **Requirements for construction site operators to control waste at the construction site that may cause adverse impacts to water quality.**
4. **Procedures for storm water pollution prevention plan review which incorporates consideration of potential water quality impacts.**
5. **Procedures for the receipt and consideration of information submitted by the public.**
6. **Procedures for site inspection and enforcement of control measures.**

**Performance Standards:** Program shall include a pre-construction SWPPP

for all land disturbances greater than 1 acre. Applicable sites shall be initially inspected. Frequency of follow up shall be monthly unless otherwise documented.

The following tables outline the best management practices (BMPs) selected by the City of Springdale to accomplish MCM 4. The City of Springdale has the legal authority to implement all identified BMPs.

### BMP: Tools and Program Updates

<table>
<thead>
<tr>
<th>Description of BMP: The City has already developed and implemented an ordinance with requirements for erosion prevention and sediment control measures. This is Chapter 151 of the City’s Codified Ordinances (<a href="http://www.springdale.org/springdale-code-of-ordinances.aspx">http://www.springdale.org/springdale-code-of-ordinances.aspx</a>). The City will focus on tools and program updates to meet this MCM.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measureable Goal</td>
</tr>
<tr>
<td>Evaluate and update construction site inspection program as needed.</td>
</tr>
<tr>
<td>Maintain existing ordinances and sanctions. (Chapter 151 of Codified Ordinances).</td>
</tr>
</tbody>
</table>
Develop a checklist for SWPPP plan review by City staff.  

| To be developed by Year 5 of permit term. | City of Springdale Building Department |

**Rationale for BMP:** Standardized tools and updated program objectives will aid the City in the successful implementation of this MCM.

**How BMP addresses TMDL:** Although the Mill Creek TMDL targets are focused on nutrients, construction and land development are listed as sources of water quality pollutants. As a result, the implementation of standardized tools and program updates can help address sedimentation issues.

### BMP: Construction Site Runoff Control Implementation

**Description of BMP:** This BMP includes implementation of the program in accordance with the ordinances and regulations already in place.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track the number of construction site inspections completed.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
<tr>
<td>Track the number of SWPPPs reviewed as part of plan review process.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
<tr>
<td>Track the number of construction runoff issues reported.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Implementation of construction site runoff plan review and inspection activities are critical for a successful construction site runoff control program.

**How BMP addresses TMDL:** Although the Mill Creek TMDL targets are focused on nutrients, construction and land development are listed as sources of water quality pollutants. As a result, the implementation of standardized tools and program updates can help address sedimentation issues.

### MCM 4 Decision Process – Rationale Statement

The rationale statement shall include the following information, at a minimum:

1. **The mechanism (ordinance or other regulatory mechanism) you will use to require erosion and sediment controls at construction sites and why you chose that mechanism.** If you need to develop this mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your SWMP description.

   The City has already developed and implemented an ordinance with requirements for erosion prevention and sediment control measures. This is Chapter 151 of the City’s Codified Ordinances (http://www.springdale.org/springdale-code-of-ordinances.aspx). The City chose to use the ordinance as its mechanism to enforce the construction site runoff control program because it allows the City to impose penalties for non-compliance. A copy of this ordinance is included as Appendix B of this SWMP document.

2. **Your plan to ensure compliance with your erosion and sediment control regulatory mechanism, including the sanctions and enforcement mechanisms you will use to**
ensure compliance. Describe your procedures for when you will use certain sanctions. Possible sanctions include non-monetary penalties (such as a stop work orders), fines, bonding requirements, and/or permit denials for non-compliance.

Chapter 151 of the City’s Codified Ordinances includes penalties for non-compliance – this is the enforcement mechanism.

iii. Your requirements for construction site operators to implement appropriate erosion and sediment control BMPs and control waste at construction sites that may cause adverse impacts to water quality. Such waste includes, but is not limited to, discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste.

All requirements are detailed in Chapter 151 of the City’s Codified Ordinances.

iv. Your procedures for pre-construction storm water pollution prevention plan review which incorporate consideration of potential water quality impacts. Describe the estimated number of sites that will have pre-construction site plans reviewed.

All proposed construction sites in the City are required to go through the plan review process which includes the development of a SWPPP for erosion control. As part of this permit cycle, a checklist will be developed to further standardize the plan review process.

v. Your procedures for receipt and consideration of information submitted by the public. Consider coordinating this requirement with your public education program.

Information submitted by the public related to construction erosion issues are inspected by the City of Springdale staff, and the City coordinates with the contractor to resolve the issue.

vi. Your procedures for site inspection and enforcement of control measures, including how you will prioritize sites for inspection.

The City of Springdale Building Department is responsible for conducting monthly inspections of all active construction sites, and quarterly inspections on all inactive sites, and additional inspections as needed.

vii. Who is responsible for overall management and implementation of your construction site storm water control program and, if different, who is responsible for each of the BMPs identified for this program.

The City of Springdale Building Department is responsible for the review and approval of plan submittals including SWPPPs, as well as site inspections.

viii. Describe how you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The measurable goals were selected to be specific, measurable, achievable and realistic. The City intends to evaluate the effectiveness of the construction site runoff control BMPs by tracking and documenting information as described in the tables above.
Minimum Control Measure 5: Post-Construction Storm Water Management in New and Redevelopment
Minimum Control Measure 5: 
Post-Construction Storm Water Management in New and Redevelopment

The City of Springdale MS4 permit requires the post-construction storm water management in new and redevelopment efforts to do the following:

*Shall 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 less than one acre that are part of a larger common plan of development.*

*Shall develop and implement strategies which include a combination of structural and/or non-structural BMPs.*

*Shall use an ordinance, or other regulatory mechanism, to address post-construction runoff from new and redevelopment.*

*Shall ensure adequate long-term operation and maintenance of BMPs.*

**Performance Standards:** Post construction SWMP shall include a pre-construction SWPPP review of all projects which disturb greater than 1 acre. Site shall be inspected to ensure controls are installed per requirements. Program shall ensure long term O&M plans are developed and agreements are in place.

The following tables outline the best management practices (BMPs) selected by the City of Springdale to accomplish MCM 5. The City of Springdale has the legal authority to implement all identified BMPs.

### BMP: Tools and Program Update

**Description of BMP:** The City has already developed and implemented an ordinance with requirements for post-construction storm water runoff control measures. This is Chapter 151 of the City’s Codified Ordinances (http://www.springdale.org/springdale-code-of-ordinances.aspx). The City will focus on implementing tools and program updates to meet this MCM.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a storm water plan review checklist to assist City staff with reviews.</td>
<td>To be developed by Year 3 of permit term.</td>
<td>City of Springdale Building Department</td>
</tr>
<tr>
<td>Evaluate and update post construction BMP inspection program.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
<tr>
<td>Review existing ordinances and guidelines and update as needed.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
</tbody>
</table>
**Rationale for BMP:** Standardized tools and updated program objectives will aid the City in the successful implementation of this MCM.

**How BMP addresses TMDL:** Although the Mill Creek TMDL targets are focused on nutrients, construction and land development are listed as sources of water quality pollutants. As a result, the implementation of standardized tools and program updates can help address sedimentation issues.

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**BMP: Post-Construction Runoff Control Implementation**

**Description of BMP:** The City will continue implementation of the post-construction storm water runoff control program in accordance with the ordinances and regulations already in place.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track the number of privately owned post-construction BMPs installed.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
<tr>
<td>Track the number of City owned post-construction BMPs installed.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
<tr>
<td>Track the number of private maintenance agreements put in place.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
<tr>
<td>Track the number of post-construction BMPs inspected.</td>
<td>Ongoing</td>
<td>City of Springdale Building Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Ongoing management and implementation of the post construction program is the key to the program being successful and impactful.

**How BMP addresses TMDL:** Program management and implementation will keep the designers and contractors accountable for the proper design and installation of BMPs which will provide water quality benefits to help meet the TMDLs.

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**MCM 5 Decision Process – Rationale Statement**

The rationale statement shall include the following information, at a minimum:

i. **Your program to address storm water runoff from new development and redevelopment projects. Include in this description any specific priority areas for this program.**

   The City of Springdale requires by ordinance all new and redevelopment projects that disturb greater than 1 acre to implement post-construction storm water runoff control, both for water quantity and water quality. A copy of this ordinance is included as Appendix B of this SWMP document.

ii. **How your program will be specifically tailored for your local community, minimize water quality impacts, and attempt to maintain pre-development runoff conditions.**
Per the City’s storm water management ordinance, the designer/contractor must submit a detailed SWPPP including post-construction storm water control techniques with sizing calculations and drawings. The City then reviews the submittal and coordinates with the designer/contractor to address any deficiencies. This site-specific review by City staff is the component that allows the program to be specifically tailored for the local community. The City is already almost completely developed, as evidenced by no new development over one acre occurring over the last several years. There are a few remaining green space areas that could ultimately be developed in the future, but most of the post-construction storm water management facilities in the future could be due to redevelopment projects.

iii. Any non-structural BMPs in your program, including, as appropriate: green infrastructure storm water management techniques, 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; policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure; education programs for developers and the public about project designs that minimize water quality impacts; and other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, and source control measures often thought of as good housekeeping, preventive maintenance and spill prevention.

As indicated above, The City is already almost completely developed. The City’s storm water management ordinance includes language references to the latest edition of the Ohio Department of Natural Resources (ODNR) Rainwater and Land Development Manual and the Ohio Department of Transportation (ODOT) Location and Design Manual as references for post-construction storm water management design. The City’s Building Official also maintains a current list of the City of Springdale’s Post-Construction Best Management Practices.

iv. Any structural BMPs in your program, including, as appropriate: green infrastructure storm water management techniques, storage practices such as wet ponds and extended-detention outlet structures; filtration practices such as grassed swales, bioretention cells, sand filters and filter strips; and infiltration practices such as infiltration basins and infiltration trenches.

The City has mapped all of the structural post-construction storm water BMPs that have been installed within the City on previous new development and redevelopment projects. The City is currently in the process of converting the information in the GIS database of these post-construction BMPs from a point shapefile to a polygon shapefile to better represent the footprint of the BMP.

v. The mechanisms (ordinance or other regulatory mechanisms) you will use to address post-construction runoff from new developments and redevelopments and why you chose the mechanism(s). If you need to develop a mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is
already developed, include a copy of the relevant sections with your program.

The City has already developed and implemented an ordinance with requirements for post-construction storm water runoff control measures. This is Chapter 151 of the City’s Codified Ordinances (http://www.springdale.org/springdale-code-of-ordinances.aspx). The City chose to use the ordinance as its mechanism to enforce the post-construction storm water runoff control program because it allows the City to impose penalties for non-compliance.

vi. How you will ensure the long-term operation and maintenance (O&M) of your selected BMPs. Options to help ensure that future O&M responsibilities are clearly identified include an agreement between you and another party such as the post-development landowners or regional authorities.

The City’s ordinance requires the submittal of a maintenance schedule for post-construction storm water management practices. Operation and maintenance requirements are shown on the property deed or covenants that are included with the property. Through easements, the City has the ability to conduct inspections of post-construction storm water management practices and the ordinance is used to enforce corrective measures if any deficiencies are identified.

vii. Who is responsible for overall management and implementation of your post-construction SWMP and, if different, who is responsible for each of the BMPs identified for this program.

The City of Springdale Building Department is responsible for the review and approval of post-construction storm water management practices, as well as site inspections.

viii. How you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The measureable goals were selected to be specific, measureable, achievable and realistic. The City intends to evaluate the effectiveness of the post-construction storm water runoff control program by tracking and documenting information as described in the tables above.
Minimum Control Measure 6: Pollution Prevention/Good Housekeeping For Municipal Operations
Minimum Control Measure 6: Pollution Prevention/Good Housekeeping for Municipal Operations

The City of Springdale MS4 permit requires the pollution prevention/good housekeeping for municipal operations efforts to do the following:

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

**Using training materials available from OEPA or other organizations, program shall include employee training 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,**

**Shall include a list of industrial facilities owned and operated by the City. SWP3 plans shall be developed and implemented as required.**

**Performance Standards:** Include at minimum an annual employee training. Operation and maintenance shall include appropriate documented procedures, controls, maintenance schedules, and record keeping.

The following table outlines the best management practices (BMPs) selected by the City of Springdale to accomplish MCM 6. The City of Springdale has the legal authority to implement all identified BMPs.

### BMP: Employee Training

**Description of BMP:** The City will utilize available storm water training materials including online webinars, storm water conferences, educational seminars, etc. to train City staff on storm water related issues.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document the specific staff and number of hours of training completed each year during the permit term.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Training City staff is a very important aspect of reducing pollution from municipal facilities. Using materials and training already available results in efficiencies and consistent messaging.

**How BMP addresses TMDL:** Reducing pollution from municipal facilities could include reduction of nutrient loads consistent with the Mill Creek TMDL.
**BMP: Implementation of SWPPP at Municipal Facilities**

**Description of BMP:** The City has already developed a Storm Water Pollution Prevention Plan (SWPPP) at its municipal facility located at 335 Northland Boulevard. The City will continue implementing the recommendations included in the SWPPP at this facility. The City will continue to conduct inspections of this facility on a quarterly basis. The City also plans to reassess and update the SWPPP at least once during the permit term. Additionally, the City will continue to coordinate with Ohio EPA regarding the potential need for a SWPPP at its compost facility located at Chamberlin Park just north of Interstate-275. The potential need for a SWPPP at this compost facility will be further researched by the City and coordinated with Ohio EPA when the General Permit for Storm Water associated with Industrial Activity (OHR000006) is issued by Ohio EPA in the near future. The municipal facility at 335 Northland Boulevard is currently the only facility owned and maintained by the City that requires the implementation of a SWPPP.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct an inspection of the City’s municipal facility located at 335 Northland Boulevard.</td>
<td>Quarterly</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td>Review and update the existing SWPPP previously developed for the City’s municipal facility located at 335 Northland Boulevard.</td>
<td>Once by the End of the Permit Term</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td>Research and coordinate with Ohio EPA regarding the potential need for a SWPPP at the City’s compost facility located at Chamberlin Park. Develop and implement a SWPPP for this compost facility if required by Ohio EPA.</td>
<td>Once by the End of the Permit Term</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** The implementation of SWPPPs can result in reduced pollutant loadings of storm water runoff coming from the City’s municipal facilities.

**How BMP addresses TMDL:** Reducing pollution from municipal facilities could include reduction of nutrient loads consistent with the Mill Creek TMDL.

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**BMP: Operation and Maintenance Program**

**Description of BMP:** The City will continue implementation of activities associated with the City’s Operation and Maintenance Program for municipal facilities.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document the quantity of waste disposal annually, including yard waste, landfill material from residents, used motor oil, used vehicle batteries, used paint, used antifreeze, and used tires.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td>Document the amount of road salt applied to roads.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td>Document the amount of pesticide and herbicide applied by the City.</td>
<td>Annually</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td>Conduct street sweeping and document the amount of material collected and properly disposed of.</td>
<td>Quarterly</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td>Document the number of catch basins inspected and cleaned. All catch basins are anticipated to be cleaned at least once during the permit term.</td>
<td>Once During Permit Term</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
<tr>
<td>Daily procedures being followed – vehicle washing, automotive fluid disposal, illegal dumping, etc.</td>
<td>Ongoing</td>
<td>City of Springdale Public Works Dept.</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Implementing the O&M plans is critical for reducing pollution from municipal facilities.

**How BMP addresses TMDL:** Reducing pollution as a result of operation and maintenance program implementation could reduce nutrient loads consistent with the Mill Creek TMDL.

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**MCM 6 Decision Process – Rationale Statement**

*The rationale statement shall include the following information, at a minimum:*

**i.** Your operation and maintenance program to prevent or reduce pollutant runoff from your municipal operations. Your program shall specifically list the municipal operations that are impacted by this operation and maintenance program.

Their City’s O&M program is divided among various departments including Parks, Public Works, Public Utilities, Police, and Fire – each department has a customized O&M program that is suited to their specific facilities.

**ii.** Any government employee training program you will use 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. Describe any existing, available materials you plan to use. 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.

See above table for information related to the employee training program. This program will be coordinated with Illicit Discharge and Public Outreach programs to the extent that the information provided in all programs will be consistent and will be cross-referenced as appropriate.

**iii.** Your program description shall specifically address the following areas:

1. Maintenance activities, maintenance schedules, and long-term inspection
procedures for controls to reduce floatables and other pollutants to your MS4.

These items are handled in an ongoing manner by each department so they can be easily customized and adapted as appropriate.

2. Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas you operate. A description of the materials used for roadway and municipal parking lot winterization (use of salt, sand, bottom ash, etc. or combination thereof), associated application rates, and the rationale for the selected application rates shall be included. Also identify controls or practices to be used for reducing or eliminating discharges of pollutants resulting from roadway and municipal parking lot winterization activities.

The City currently implements street sweeping, snow and ice removal, leaf collection, catch basin cleaning, pipe cleaning, as well as general good housekeeping at municipal facilities.

3. Procedures for the proper disposal of waste removed from your MS4 and your municipal operations, including dredge spoil, accumulated sediments, floatables, and other debris.

The City utilizes proper disposal methods to dispose of wastes from the MS4. Street debris is dewatered and hauled to the landfill.

4. 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 practices.

These procedures are covered in the City’s storm water ordinance.

iv. **Who is responsible for overall management and implementation of your pollution prevention/good housekeeping program and, if different, who is responsible for each of the BMPs identified for this program.**

Refer to the tables above for the responsible party for each BMP included in the program. The City of Springdale Public Works Department is responsible for the implementation of the good housekeeping MCM.

v. **How you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.**

The measureable goals were selected to be specific, measureable, achievable and realistic. The City intends to evaluate the effectiveness of the good housekeeping program by tracking and documenting information as described in the tables above.
Appendix A
Chapter 95 of City’s Codified Ordinances
(Illicit Discharges)
CHAPTER 95: SAFETY, SANITATION, AND HEALTH

Section

95.01  Barricades for excavations and openings
95.02  Discarding litter prohibited
95.03  Illegal discharges and illicit connections
95.99  Penalty

§ 95.01  BARRICADES FOR EXCAVATIONS AND OPENINGS.

   It shall be unlawful for any person, firm, or corporation to create or maintain any open excavation, well, pit, hole, or shaft in the earth with sides having a gradient ratio of steeper than one to one without providing an effective barricade at least 3-1/2 feet in height so as to prevent the accidental falling into such opening by persons on foot, unless the premises on which the opening exists are otherwise securely fenced, where the premises are in or adjacent to a residential zone.

(Ord. 56-1987, passed 10-21-87)

§ 95.02  DISCARDING LITTER PROHIBITED.

   (A)  No person, firm or corporation shall, regardless of intent, throw, drop, discard, place, sweep or deposit litter or cause litter to be thrown, dropped, discarded, placed, swept or deposited on any public street, public property or private property not owned by him unless the person has:

      (1)  Been directed to do so by a public official as part of a litter collection drive; or

      (2)  Thrown, dropped, discarded, placed, swept or deposited the litter in a litter receptacle in a manner that prevents it from being carried away by the elements.

   (B)  As used in this section, LITTER means garbage, trash, waste, rubbish, ashes, cans, bottles, wire, paper, cartons, boxes, automobile parts, furniture, glass, yard waste, including leaves, grass clippings, tree and shrubbery limbs or anything else of an unsightly or unsanitary nature thrown, dropped, discarded, placed, swept or deposited by a person on any public street, public property, or private property not owned by him.

   (C)  Any person, firm or corporation found guilty of violating this section shall be guilty of a minor misdemeanor. Each day that this violation continues shall be deemed a separate offense.

(Ord. 21-1996, passed 7-17-96)

§ 95.03  ILLEGAL DISCHARGES AND ILLICIT CONNECTIONS.

   (A)  Statement of purpose. This section establishes methods for controlling the introduction of pollutants into the Municipal Separate Storm Sewer System (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this section are:

      (1)  To regulate the contribution of pollutants to the MS4 by storm water discharges by any user;

      (2)  To prohibit illicit connections and discharges to the MS4;

      (3)  To establish legal authority to perform all inspection, surveillance and monitoring procedures necessary to ensure compliance with this section;
To establish penalties for making illicit/illegal connections and creating/allowing illicit discharges.

Applicability. This section shall apply to all water entering the MS4 generated on any developed or undeveloped lands unless explicitly exempted by this section.

Responsibility for administration. The Mayor or designee is responsible for the administration of the Illicit Discharge Ordinance.

Ultimate responsibility. The standards set forth in this section are minimum standards. Compliance with these provisions does not allow any person to otherwise cause contamination, pollution, or unauthorized discharge of pollutants. Compliance with these provisions does not relieve any person, firm or other entity from complying with any state and/or federal regulation(s) that address illicit discharges, hazardous spills, and/or other pollutant discharges.

Discharge prohibitions.

(1) No person shall discharge or cause to be discharged into the MS4 or into a watercourse, any pollutants or waters containing any pollutants other than storm water. For purposes of this section, watercourse shall have the same definition as in § 151.01 of the Springdale Codified Ordinances.

(2) The commencement, conduct or continuance of any illegal discharge to the MS4 is prohibited except as described as follows:

   (a) The following discharges are exempt from discharge prohibitions established by this section: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising groundwater, groundwater infiltration to storm drains, uncontaminated pumped groundwater, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, noncommercial washing of vehicles, natural riparian habitat or wetland flows, swimming pools (if meeting requirements articulated in division (H) of this section), fire fighting activities, and any other water source not containing pollutants.

   (b) Discharges specified in writing by the city as being necessary to protect public health and safety and/or otherwise specified elsewhere in this section.

   (c) Dye testing is an allowable discharge, but requires a documented notification to the Springdale Health Department prior to the time of the test.

   (d) The prohibition shall not apply to any non-storm water discharge permitted under a NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the United States Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

(3) The commencement, conduct or continuance of any illicit connection to the MS4 is prohibited as follows, aside from the exceptions previously articulated in this section:

   (a) The construction, use, maintenance or continued existence of illicit connections to the MS4 is prohibited.

   (b) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

   (c) A person is considered to be in violation of this section if the person connects a line conveying sewage to the MS4, or allows such a connection to continue after the effective date of this section.

Monitoring of discharges. The city or designee shall be permitted to enter and inspect facilities subject to regulation under this section as often as may be necessary to determine compliance with this section. If a discharger has security measures in place, which requires proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the city. Facility operators shall allow the city ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of the NPDES permit to discharge storm water, and the performance of any additional duties as defined by federal, state and local law.

   (1) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the city and shall not be replaced. The costs of clearing such access shall be borne by the owner or operator of the premises.

   (2) Unreasonable delays in allowing the city access to the premises are a violation of this section. A person is in violation of this regulation if the person denies the city reasonable access to the premises for the purpose of conducting any activity authorized or
(3) If the city has been refused access to any part of the premises from which storm water or non-storm water is discharged, and it is able to demonstrate probable cause to believe that there may be a violation of this section, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this section or any order issued hereunder, or to protect the overall public health, safety, and welfare of the city, then the city may seek issuance of a search warrant from any court of competent jurisdiction.

(G) Notification of spills. Notwithstanding other requirements of law, as soon as any person responsible for a premises, or responsible for emergency response to a premises has information of any known or suspected, illegal discharges discharging into, the MS4, or water of the U.S. said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such discharges. In the event of a discharge of hazardous materials, said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the city in person or by calling the City of Springdale Illegal Dumping Hotline at (513) 346-5535 as soon as possible. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the city within three working days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for the duration required under the Ohio records retention law.

(H) Swimming pool discharges. For private residential swimming pools, backwash water, resulting from cleaning of the swimming pool filtration medium and/or elements, should be discharged to the sanitary sewer. All discharges to sanitary sewers must be permitted prior to discharge and must comply with the rules and regulations of the Metropolitan Sewer District of Greater Cincinnati. Discharges of pool water from private swimming pools into the MS4 must comply with state Water Quality Criteria for the protection of aquatic life, contained in Ohio Administrative Code 3745-1-07. Chlorinated pool water must sit for at least two days (48 hours) after the addition of chlorine, or until the chlorine level is below 0.1 milligrams per liter (mg/L). Chlorine can be tested using a standard pool chlorine test kit. The pH of the pool water, which is a measure of acidity, must neither be less than 6.5 nor greater than 8.5 prior to or during discharge.

(I) Enforcement.

(1) Whenever the city finds that a person has violated a prohibition or failed to meet a requirement of this section, the city may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

(a) The performance of monitoring, analyses, and reporting,

(b) The elimination of illicit connections or discharges,

(c) That violating discharges, practices, or operations shall cease and desist,

(d) The abatement or remediation of illicit discharge or contamination hazards, and the restoration of any affected property, and

(e) Payment of a fine to cover administrative and remediation costs, and

(f) The implementation of control measures required by the city.

(2) If abatement of a violation and/or restoration of affected property is/are required, the notice shall set forth a deadline, based on the scope of the problem that requires correction, within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be accomplished by the city or a contractor and the expense thereof shall be charged to the violator.

(J) Appeal of notice of a violation. Any person receiving a notice of violation may appeal the determination of the issuing department. The notice of appeal must be received within ten working days from the date of the notice of violation. Hearing on the appeal before the Springdale Board of Health or their designee shall take place within 15 working days from the date of receipt of the notice of appeal. The decision of the Springdale Board of Health shall be a final decision and may be appealed to the Hamilton County Court of Common Pleas pursuant to R.C. Chapters 2505 and 2506.

(K) Enforcement measures after appeal. If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, or in the event of an appeal, within 30 working days of the decision of the Springdale Board of Health, upholding the notice, then representatives of the city shall enter upon the subject premises and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the local authorized enforcement agency to enter upon the premises for the purposes set forth above.

(L) Cost of abatement of the violation. Within ten working days after abatement of the violation, the owner of the premises will
be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within 10 days. If the amount due is not paid within a timely manner as determined by the decision of the Springdale Board of Health or within 30 days of invoice, if no appeal is filed, or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment.

(M) Injunctive relief. It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this section. If a person has violated or continues to violate the provision of this section, the city may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

(N) Violations deemed a public nuisance. In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this section is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored by the city at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

(O) Penalty. Whoever violates or fails to comply with any provision of this section is guilty of a misdemeanor of the fourth degree and shall be fined not more than $250 or imprisoned not more than 30 days or both. Each day of a continuing violation shall constitute a separate offense.

(P) Remedies not exclusive. The remedies listed in this section are not exclusive of any other remedies available under any applicable federal, state, or local law and it is within the discretion of the city to seek cumulative remedies.

(Ord. 68-2006, passed 10-4-06)

§ 95.99 PENALTY.

Any person, firm, or corporation found guilty of violating this section shall be guilty of a minor misdemeanor. Each day that the violation continues shall be deemed a separate offense.

(Ord. 56-1987, passed 10-21-87)
Appendix B
Chapter 151 of City’s Codified Ordinances
(Storm Water Management)
CHAPTER 151: STORM WATER MANAGEMENT

Section

151.01 Definitions
151.02 General provisions
151.03 Performance principles and standards
151.04 Stormwater management provisions
151.05 Approval procedures
151.06 Suspension and Penalties

§ 151.01 DEFINITIONS.

For the purpose of this chapter, the following words and phrases shall have the following meanings ascribed to them respectively.

BUILDING INSPECTOR. A person designated by and representing the City of Springdale, also referred to as the Inspector for purposes of this chapter.

BUILDING OFFICIAL. The Building Official of the City of Springdale, Ohio.

CITY. The City of Springdale, Ohio, and its authorized agents.

CITY ADMINISTRATOR. The City Administrator of the City of Springdale, Ohio.

CITY ENGINEER. A professional engineer designated by and representing the City of Springdale, Ohio, or his authorized agent.

COUNCIL. The City Council of the City of Springdale, Ohio.

CUT. See Excavation.

DETENTION BASINS. Dry surface stormwater storage areas created by natural contours or by constructing an excavated or embankment basin or by installing underground structures such as concrete pipes or chambers.

DEVELOPER. Person or company performing construction work of any kind in the Project Area.

DEVELOPMENT. A change in the use of a parcel of land which will alter the natural or existing state of the property.

EMBANKMENT. A fill. Any act by which earth, sand, gravel, rock, or any other material is placed, pushed, dumped, pulled, transported or moved to a new location above the natural surface of the ground or on top of the stripped surface or Cut and shall include the conditions resulting therefrom. The difference in elevation between a point on the original ground and a designated point of higher elevation on the final grade. The material used to make a Fill.

EROSION. The wearing away of the land surface by the action of wind, water or gravity.

EXCAVATION. A Cut. Any act by which earth, sand, gravel, rock or any other similar material is dug into, cut, guarried, uncovered, removed, displaced, relocated, or bulklozed and shall include the conditions resulting therefrom. The difference between a point on the original ground and a designated point of lower elevation on the final grade. The material removed in Excavation.

FILL. See Embankment.

GRADING. Any stripping, cutting, filling, stockpiling, or any combination thereof and shall include the land in its cut or filled condition.

JURISDICTIONAL WETLANDS. Wetlands (as defined in Section 404 of the Clean Water Act) that are under the regulation of
the U.S. Army Corps of Engineers and/or Environmental Protection Agency.

**MULCHING.** The application of suitable materials on the soil surface to conserve moisture, hold soil in place, and aid in establishing plant cover.

**NATURAL VEGETATION.** The ground cover in its original state before any grading, excavation or filling.

**ODNR.** Ohio Department of Natural Resources.

**ODOT.** Ohio Department of Transportation.

**PERMANENT VEGETATION.** Producing long term vegetative cover, i.e. bluegrass, tall fescue, crown vetch, etc.

**PLAN.** The Water Management and Sediment Control Plan.

**PROJECT AREA.** The land lying within the geographical limits of the tract(s) or parcel(s) under consideration and on which the work is to be performed.

**PUBLIC WORKS INSPECTOR.** A person designated by and representing the City of Springdale, also referred to as the P.W. Inspector for purposes of this chapter.

**REDEVELOPMENT.** Any alteration to an existing building or site usage which will require Planning Commission or Building Department Approval.

**RETENTION POND.** Permanent ponds where additional storm-water storage capacity is provided above the normal water level.

**SEDIMENT.** Solid material both mineral and organic, that is in suspension, is being transported, or has been moved from its original site or origin by air, water, or gravity as a product of erosion.

**SEDIMENT BASIN.** A barrier or dam built across a waterway or at other suitable locations to retain rock, sand, gravel, or silt or other materials.

**SLOPE.** The face of an embankment or cut section; any ground whose surface makes an angle with the plane of the horizon. Slopes are expressed in a percentage based upon vertical difference in feet per 100 feet of horizontal distance or as a ratio of horizontal distance to vertical distance, e.g. 3:1 means three feet horizontal distance to one foot in elevation change.

**STORM WATER MANAGEMENT PLAN.** Application, maps, plans, calculations and all other material required by this chapter or the Land Development Regulations.

**STORM WATER MANAGEMENT SYSTEM.** The combination of land grading, pavement slope, open channels, underground conduits (storm sewers, culverts, underdrains), catch basins, manholes, dams, detention/retention facilities, etc., designed according to acceptable engineering practice to properly transport, detain, store or dispose of storm water. The storm water management system shall also include storm water quality best management practices. Post-construction storm water management practices treat runoff from a development site after construction is complete. Their objectives range from capturing and treating pollutants in runoff to managing the increased frequency, volume and energy of storm water runoff so that water resources are not degraded.

**SUBDIVISION.** The division or redivision of a lot, tract or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, for lease, transfer of ownership or building or lot development. The name given to an area of land divided into lots including streets, walkways, easements, etc.

**SWALE.** A low-lying stretch of land which gathers or carries surface water runoff.

**TEMPORARY VEGETATION.** Short term vegetative cover used to stabilize the soil surface until final grading and installation of permanent vegetation, e.g. oats, rye or wheat.

**TOPSOIL.** Surface soils and subsurface soils which presumably are fertile soils and soil material, ordinarily rich in organic matter or humus debris. Topsoil is usually found in the uppermost soil layer.

**WATER MANAGEMENT AND SEDIMENT CONTROL PLAN.** Application, maps, plans, calculations and all other material required by this chapter or the Springdale Subdivision Regulations.

**WATERCOURSE.** A permanent stream, intermittent stream, river, brook, creek, channel or ditch for water whether natural or
§ 151.02 GENERAL PROVISIONS.

It is the general intent of the City that when development or redevelopment takes place within the City that the development shall not cause any storm water or erosion problems either up stream or downstream from the development site and more specifically that the amount of stormwater discharged off the site shall not be greater after development than allowed under this chapter, and that water quality be addressed such that water resources are not degraded.

A) Before a parcel is cleared, graded or otherwise disturbed by the movement of earth by any person, partnership, or corporation, a Storm Water Management Plan describing the proposed earth movement shall be approved by the Planning Commission, unless such development is exempted there from by subsection B of this section:

B) Storm Water Management Plan shall not be required for any of the following conditions:

1. Excavations below finished grade for drain fields, tanks, vaults, tunnels, equipment, basements, swimming pools, cellars, or footings of buildings or structures for which a building permit shall have been issued by the City, unless the Excavation is part of the work within a Project Area which required such a permit;

2. Excavation or removal of vegetation in public utility easements by public utility companies for the purpose of installing underground utilities - unless required by the City Engineer;

3. Tilling of the soil for fire protection purposes;

4. When the Planning Commission rules that no Storm Water Management Plan permit is required;

5. Any construction work designed, bid and inspected by or under control of the City unless specifically required by the City.

§ 151.03 PERFORMANCE PRINCIPLES AND STANDARDS.

A) Erosion control shall be practiced whenever a parcel is cleared, graded or otherwise disturbed by the movement of earth, regardless of exemptions outlined in § 151.02(B). The following principles are effective in minimizing erosion and sedimentation and shall be included where applicable in the Storm Water Management Plan:

1. Stripping of vegetation, regrading or other development shall be done in such a way that will minimize erosion. Whenever feasible, natural vegetation shall be retained, protected and supplemented;

2. Development plans shall preserve salient natural features, keep Cut-Fill operations to a minimum, and ensure conformity with topography so as to create the least erosion potential;

3. The smallest practical area of land shall be exposed at any one time and the duration of exposure shall be kept to a practical minimum. The topsoil shall be preserved and returned to the surface of areas to be revegetated, or new topsoil will be provided, or the surface shall be covered with sod;

4. Disturbed soils shall be stabilized as quickly as practical with temporary vegetation or mulching to protect exposed critical areas during development;

5. The permanent final vegetation and structural erosion control and drainage measures shall be installed as soon as practical in the development;

6. (a) Provisions shall be utilized in the design to minimize changes to the surface conditions which increase the percentage of impervious surface.

(b) Provisions shall be made to effectively mitigate the increased runoff rates caused by changed soil and surface conditions in addition to addressing water quality measures during and after development. Where necessary, Detention/Retention Basins shall be provided according to the requirements of this chapter as well as water quality measures.
(7) Sediment in the runoff water shall be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized.

(B) The following standards shall be followed in preparing the Storm Water Management Plan;

(1) All lots, tracts, or parcels shall be graded to provide proper drainage away from the building and dispose of it without ponding. Each lot shall be graded such that water from the lot drains to a natural stream, swale, storm sewers or other watercourse. New storm water outfalls shall not discharge undetained and/or untreated storm water into jurisdictional wetlands, aquifers, or sensitive areas.

(2) All drainage provisions shall be of such design to adequately convey quantity and preserve quality of the surface runoff.

(3) Concentration of surface water runoff shall only be permitted in swales or watercourses;

(4) The installation of the specific Storm Water Management Plan measures shall be accomplished in accordance with the standards and specifications contained in the City Regulations and the latest edition of the ODNR Rainwater and Land Development Manual or ODOT Location and Design Manual - Volume 2 - Drainage Design;

(5) The installation of post construction best management practices shall be accomplished in accordance with the standards and specifications contained in the City Regulations (see the Building Official for current list of "City of Springdale Post-Construction Best Management Practices").

(6) The Building Department shall enforce compliance with the approved plans.

(C) The approved Storm Water Management Plan required of the landowner or his agent shall include, but not be restricted to the following:

(1) A vicinity sketch and boundary line survey of the Project Area;

(2) Location of all existing buildings, structures, utilities, storm and sanitary sewers and waterlines in the Project Area.

(3) Location of all trees with a trunk diameter of greater than six inches measured at a point five feet from the ground or a report on the trees in a form acceptable to the City from an arboriculturist certified by the City. If there are no trees, a note so stating shall be placed on the plans;

(4) Location of any building or structure - on land of adjacent property owners - within 100 feet of the Project Area;

(5) Elevations, contours, dimensions, locations, and extent of all work proposed to be done within and outside the Project Area, the existing elevations and contours of the land all in increments of two feet, and soil type and proposed ground cover for areas not covered by buildings, structures or pavement;

(6) A certification of the quantity of Cut and Fill involved:

(7) Detailed plans of all proposed storm water provisions, retaining walls, vegetative practices, erosion and sediment control measures, location of fences around Sediment Basins, Detention/Retention Basins, steep excavations, post-construction storm water quality best management practices, and other protective measures to be constructed in connection with, or as a part of the proposed work;

(8) Provisions for maintenance of control facilities and other measures (including easements) to insure short as well as long term Erosion Prevention, Sediment Control, and general water quality treatment.

(9) Maintenance methods and schedule for post-construction storm water quality best management practices shall be provided. An Operation and Maintenance Plan shall be submitted outlining a plan for inspection and maintenance of Post-Construction Water Quality BMP(s).

(10) A map showing the drainage area of land tributary to the Project Area and estimated runoff of the area served by any drainage structure or Watercourse, computed in accordance with criteria as outlined in this chapter.

(11) The estimated cost of all the required Water Management and Sediment Control items.

(Ord. 25-1987, passed 3-18-87; Am. Ord. 77-1996, passed 10-16-96; Am. Ord. 40-2010, passed 12-15-10; Am. Ord. 29-2012, passed 9-5-12)
§ 151.04 STORMWATER MANAGEMENT PROVISIONS.

(A) Introduction

1) Every Subdivision and land development shall be provided with a Storm Water Management System which is adequate to serve the area and meets the requirements of this chapter and other criteria of the City. Any unsubdivided parcel less than 1 AC. in size is exempt from the detention requirement per § 151.04(D) of these regulations.

2) Regarding storm water quantity, developers are required to design improvements in accordance with § 151.04(D)(2)(d) of these regulations.

Where an existing site is being partially or totally redeveloped all requirements of this chapter will be in full force and effect. If conditions warrant on partially redeveloped sites and the developer can show that the application of all requirements would cause hardship, he may request partial relief from Planning Commission.

3) The Planning Commission may waive requirements for an individual Detention/Retention Basin if a common or regional Detention/Retention Basin of adequate design is available or if the City is reasonably certain one will be constructed and if the major drainage system from the Project Area to the common or regional Detention/Retention Basin is such that the public health, safety, and welfare will not be in jeopardy.

If this option is exercised, the Developer must agree in writing to participate in the cost of the common or regional Detention/Retention Basin whether already constructed or planned. The amount of participation and method of collection will be determined by the City.

4) Improvements shall be designed such that, at a minimum, all developed areas are treated with an acceptable post-construction storm water quality best management practice. Practices chosen must be sized to treat the water quality volume (WQv) and to ensure compliance to the maximum extent practicable with Ohio EPA Water Quality Standards (Ohio Administrative Code Chapter 3745-1) and Ohio EPA Construction General Storm Water NPDES discharge permit requirements applicable to the property. The WQv shall be equal to the volume of runoff from a 0.75 inch rainfall.

Sites that have been previously developed where no Post-Construction BMP's were installed are required to provide:

a) A 20 percent net reduction of the site's current impervious area, achieved by either the use of pervious pavement or removing the impervious surface.

b) Treatment of at least 20 percent of the WQv.

c) A combination of (a) and (b).

The City accepted post-construction storm water quality best management practices can be found in the list of "City of Springdale Post-Construction Best Management Practices", available from the Building Department.

5) Although the submission requirements are specific, they are also the minimum requirements. The City Engineer may recommend to Planning Commission a higher degree of protection than specified if the design results do not appear adequate to protect the health, safety, and welfare of the community.

6) Stormwater management Systems shall be designed for the ultimate use of the land.

7) Continued maintenance.

a) Once a Storm Water Management Plan has been approved and constructed it shall be the responsibility of the property owner to maintain the facility as designed and constructed and to ensure its proper operation to meet the intent and requirements of this chapter at all times.

b) An Inspection and Maintenance Agreement shall be made between the property owner and the city ensuring that the Post-Construction Stormwater BMP(s) are inspected and properly maintained. Such agreement shall be in the form of a covenant to run with the land and shall be recorded with the Hamilton County Recorder. A template of such an agreement is available from the city.

(B) Stormwater Management System

1) The development of a comprehensive Stormwater Management System requires providing two separate and distinct drainage systems, the minor system and the major system, and providing adequate post-construction storm water quality best management practices.
(a) The minor drainage system is for collecting and transporting runoff from frequently occurring storms (both for water quantity and water quality measures). It includes open channels, street curbs and gutters, and underground storm sewers, manholes, catch basins, and culverts. This system's purpose is to lessen or eliminate inconveniences and safety and health hazards associated with frequent storms. Except where indicated otherwise, design criteria and requirements of this chapter are directed to the minor drainage system.

(b) The major drainage system is to insure that stormwater runoff which exceeds the capacity of the minor drainage system has a route to follow to the retention basin. It must be recognized that the major drainage system exists even when it is not planned and whether or not physical facilities are intelligently located in respect to it.

(2) Submission requirements for development. Plans, profiles, and supporting documentation to verify conformance with this chapter shall be submitted along with the usual plan submissions required in Land Development Rules and Regulations.

(a) Preliminary Plans. In addition to the Land Development Rules and Regulations requirements, a plan showing the total area contributing runoff to the Project Area being considered shall be submitted with the preliminary plans. This plan shall contain, but is not limited to, the following information:

1. A contour plan showing the outline of all areas outside the project area that contributes runoff to it;
2. Estimated runoff (Q) before and after development for terminal points along natural streams, proposed open channels, and other strategic points such as existing storm sewers or culverts;
3. Location of proposed Detention/Retention areas;
4. Location of all post-construction storm water quality best management practices.
5. Any other information required by the City to clarify intent.

(b) Improvement Plans. In addition to the Land Development Rules and Regulations, the improvement plan for the project area shall contain, but is not limited to, the following information:

1. Diameter, length, slope, type pipe, and class of all storm sewers, culverts, and subsurface drainage;
2. Invert elevations on profiles of all pipes at terminal points such as manholes, inlets, catch basins, and headwalls;
3. Top of grate elevations of manholes and grate flowlines of catch basins and inlets;
4. Type of catch basin, inlet and manhole (ODOT or provide detail);
5. Headwall type (ODOT or provide detail);
6. Actual existing and proposed cross sections of open channels showing width of bottom, depth of water, erosion control measures and limits, and side slopes at each point of design along with a profile indicating the longitudinal slope and bottom elevations at the terminal points of design;
7. High and low points indicating the direction of runoff flow along the profile of the roadway;
8. Structural details and design data for Detention/Retention facilities;
9. Details of construction for all structures not included in the ODOT or City standard construction drawings;
10. Easements;
11. Detention/Retention facilities;
12. Location of all post-construction storm water quality best management practices.
14. Any other information required by the City Engineer to clarify intent or design features.

(c) Drainage and grading plans. In addition to the development plan, a drainage plan shall be submitted. This plan may be the required development plan or a similar plan at a scale not less than 1 inch = 20 feet showing at least the following additional information:

1. Contours indicating the existing and final grading at vertical increments of no more than 2 feet;
2. Discharge (Q), coefficient of runoff (c) and drainage area (A) along with the outline of the drainage area for each inlet, catch basin, culvert, open channel, and post-construction storm water quality best management features, and other locations designated by the City Engineer. Drainage areas that lie partially outside the limits of the drainage and grading plan may be delineated on any contour map acceptable to the City Engineer;

3. Discharge (Q) before and after development at strategic points within and at extremities of the Project Area;

4. Delineation of the boundaries and contour elevation, along with the track, of the major drainage system through downstream areas to an adequate outlet even though the outlet may be outside the Project Area.

5. Delineation of the horizontal limits of ponding areas at low points (sags) in the street profile and low points outside the street right-of-way including, but not limited to, culvert headwater, natural stream water surfaces, and sump type inlets for storms with frequencies of 25 years and 100 years;

6. High and low water horizontal limits and contour elevation of Detention/Retention/Sedimentation/Water Quality facilities along with water surface and control weir elevations, outlet structures, etc.;

7. Areas outside of the Project Area susceptible to Sediment deposits or to Erosion caused by accelerated runoff;

8. Location of soils that may be limited for the proposed use;

9. All requirements of this chapter;

10. Any other information required by the City Engineer to clarify intent, specified requirements, or design features.

(d) Supporting data. All data and design information used for the design of drainage facilities and for determining downstream runoff information shall be submitted with the drainage and grading plan. To facilitate review and avoid confusion, legends, descriptions, and structure numbering used on design forms or other calculations shall be identical to those used on the improvement plans and the drainage and grading plan. This data shall include but are not limited to:

1. Weighted runoff coefficient calculations for each contributing area;

2. Pavement drainage computations;

3. Storm sewer computations;

4. Culvert design computations;

5. Open channel computations;

6. Detention/Retention facilities computations;

7. Inlet capacity computations.


9. Sediment and Erosion Control supporting calculations.

10. Any other information required by the City Engineer to clarify intent or design features.

(e) As-built plans. Amended improvement plans specifying the locations, dimensions, elevations, and capacities of all facilities as constructed shall be submitted to the City on construction completion of the project. These shall include all required design features except those waived by the City Engineer. All revisions to the approved plans must be approved by the City prior to construction.

See Building Official for "As-Built Plan Requirements".

(C) Stormwater Runoff Analysis. See § 150.34 of the Springdale Land Development Rules and Regulations.

(D) Detention/Retention Basins.

(1) Introduction. Detention/retention of stormwater refers to storage of excess runoff on the site of a development area or redeveloped area and gradual release of the stored runoff at an acceptable rate. The detention facility may be a dry surface structure, a pond or lake with additional freeboard or underground structure. The parking lot may not be used to provide for any of the detention requirements.

(2) Design.
Supporting calculations will be required by the City Engineer. Any computer analysis method should be confirmed as acceptable with the City Engineer prior to design commencing. Computer Analysis systems for detention volume may be acceptable at the discretion of the City Engineer. The following items (a - h) need to be included in a summary sheet of the support information, with references to the applicable page where the corresponding calculation is noted. All information must be submitted in a summary form.

1. Pre-developed 10-year Q, allowable Stage 1 discharge (in the situation where offsite tributary area is involved use only on-site area).
2. Post-developed 10-year Q and required Stage 1 detention volume.
   a. Required Stage 1 Detention Volume (CF) = (Q_{10-post} - Q_{10-PRE}) \times (25 \text{ minutes}) \times (60).
3. Pre-developed 25-year Q, allowable Stage 2 discharge (in the situation where off-site tributary area is involved use only on-site area).
4. Direct runoff (non-detained) 100-year, post-developed, flow subtracted from allowable discharge.
5. Post-developed 100-year Q, and stage 2 required detention/retention volume.
   a. Required Stage 2 Detention Volume (CF) = (Q_{100-post} - Q_{25-PRE}) \times (25 \text{ minutes}) \times (60).
6. 100-year flow from off-site tributary areas to be added to allowable discharge to provide direct pass through from off-site drainage (this is not utilized in the volume determination).
   a. If the pass-thru flow is equal to, or greater than, the on-site developed 100-year peak flow, the City Engineer may require that hydrographs be prepared and both areas be routed through to the detention basin for design.
7. A stage/storage/release table, which also specifically notes Actual discharge from outlet structure at stage 1 and stage 2 storage volumes.

Allowable discharge.
1. The volume and peak rate of runoff from an area after full development shall not exceed the volume and peak rate of runoff from the same area before development for each design frequency storm, or as noted in § 151.04(D)(2)(d), whichever is more restrictive.
2. For those areas where a study of the downstream area indicates the extended time of high discharge or velocity due to restricted release rate and storage may cause flooding or excessive erosion, the City Engineer may recommend that additional controls be required.

Detention Volume. The detention of storm water shall occur in 2 stages.
1. Stage 1 shall allow the discharge of the 10 year pre-developed storm flow and provide for the detention of a volume equal to the 10 year storm flow, post-development, less the 10 year pre-developed discharge.
   a. If the Detention (Water Quantity Basin) is being utilized as a water quality pond, then an additional initial stage for the Water Quality Volume (WQV) will be required.
2. Stage 2 shall allow the discharge of the 25 year pre-developed storm flow and provide for the detention of a volume equal to the 100 year storm flow, post-development, less the 25 year pre-developed discharge. The detention volume shall be determined by multiplying the above difference by 25 minutes.
3. Outlet flow control devices shall be multistage.
4. Other requirements may be imposed for specific cases.
5. All detention systems must include an emergency overflow to control the post-developed 100-year storm water flow when maximum storage capacity is surpassed.
6. No on-site storm drainage shall outlet downstream of the main retention facility without providing supplemental retention as per the above criteria.

Major Storms - Water Control.
(1) Introduction. Planning for the major storm is to insure that stormwater runoff which exceeds the capacity of the drainage system has a route to follow that will not cause loss of property or any loss of life. This system exists whether or not it is planned.

(2) Criteria.

(a) Storm frequencies. Surface runoff for the major drainage system shall be determined using a storm with a frequency of 100 years.

(b) Total runoff. The peak discharge of storm water will be determined as previously outlined in this chapter. The peak discharge may be reduced by an amount equal to the flow in the minor storm system as designed.

(3) Points of Consideration.

(a) All open channels, street cross sections, low points, and culvert entrances will be considered as possible flood areas due to the 100-year storm and will be included as part of the major storm investigation. The investigation may include downstream facilities to a point designated by the City Engineer whether or not these facilities are contained within the project area or controlled by the land developer requesting approvals.

(b) All calculations will be submitted with the drainage plan.

(F) Inspection of Stormwater Control Facilities and Post Construction Stormwater Quality BMP(s).

(1) Inspection Requirements. All detention/retention and Post Construction BMP(s) shall be routinely inspected as determined by the city.

(a) All underground detention chambers shall be inspected by the property owner to insure that the detention chambers are in compliance with the approved water management and sediment control plan and the city's regulations. Such inspections shall be conducted at a minimum of every three years for underground detention chambers which are 10,000 cubic feet in size or greater, and every four years for underground detention chambers which are less than 10,000 cubic feet. The inspection shall be conducted in compliance with applicable law and regulations concerning confined space entry and shall be videotaped, a copy of which shall be provided to the city Building Department for its review. The property owner of an underground detention chamber shall be responsible to perform any maintenance or repairs which are discovered as a result of the inspection. If the detention facility also functions in whole or in part as a stormwater quality BMP, such facility shall be inspected annually.

(b) Post Construction BMP(s) shall be inspected annually to insure that BMP(s) are in compliance with the approved water management and sediment control plan and to identify and facilitate the removal of any pollutants. Inspection reports shall be submitted to the city no later than 30 days after the inspection. Templates of inspection reports are available from the city.

(2) Correction of Identified Deficiencies. If inspections identify corrections which need to be performed to return the facilities to proper function in accordance with the approved water management and sediment control plan, such corrections shall be made by the owner at his expense within 30 days of discovering such deficiencies. If inspections of Post Construction Stormwater Quality BMP(s) identify pollutants which must be removed, they must be removed and disposed of by the owner at his expense in accordance with city, state, and federal guidelines within 30 days.

(3) Failure to Inspect or Correct Deficiencies. If a property owner fails or refuses to conduct an inspection as required by this section, the city shall cause an inspection to be conducted and all costs that the city incurs in performing the inspection shall be the responsibility of the property owner. If the property owner fails or refuses to perform the maintenance and repairs within the time specified by the city, the city shall cause the maintenance or repairs to be performed and the cost shall be the responsibility of the property owner. In addition, the failure or refusal of a property owner to conduct an inspection or make correction/repairs as required by this section shall be deemed to be a misdemeanor and punishable as provided in § 151.06(B). Costs shall be assessed in the same manner as provided for in §§ 155.064 and 155.065.

(Ord. 25-1987, passed 3-18-87; Am. Ord. 77-1996, passed 10-16-96; Am. Ord. 40-2010, passed 12-15-10; Am. Ord. 29-2012, passed 9-5-12)

§ 151.05 APPROVAL PROCEDURES.

(A) The building permit review process shall not begin until the Storm Water Management Plan, together with other submissions required by this chapter are approved by the City Engineer.

(B) Three copies of complete plan and supporting data shall be filed with the Building Department in accordance with the
submission schedule of the Planning Commission. The City Engineer or his representative shall review and recommend such changes or modifications as are deemed necessary to the Planning Commission.

(C) The Planning Commission shall review these plans as submitted, together with the recommendations of the City Administrator, Building Official, and City Engineer. If the Commission approves the plans, it shall so advise the Building Official who shall insure compliance by the applicant with the plans as finally approved.

(D) Every Storm Water Management plan approval shall expire and become null and void if the work authorized has not commenced within 120 days, or is not completed within two years from date of issue. The Planning Commission may grant a reasonable extension of time if the permit holder presents satisfactory evidence that unusual difficulties have prevented work being started or completed within the specified time limits and if written application is made before the expiration date of this permit.

(E) In order to insure that emergency measures could be taken by the City if the water management and sediment control measures were not implemented according to the agreed upon plan and schedule, a performance bond in the amount of the cost of the Storm Water Management Plan measures shall be required to be filed with the City Finance Director. This bond shall include post-construction best-management practices. Said performance bond shall authorize immediate payment to the City of Springdale upon certification by the City Administrator with the concurrence of the Planning Commission, that necessary emergency work must be done immediately to insure proper water management and sediment control as a result of the landowner's failure to complete or adhere to the approved Stormwater Management Plan.

(F) The Planning Commission and the City Administrator shall make a continuing review and evaluation of the methods used and overall effectiveness of the storm water management and sediment control program.

(Ord. 25-1987, passed 3-18-87; Am. Ord. 40-2010, passed 12-15-10)

§ 151.06 SUSPENSION & PENALTIES.

(A) In the event any person holding an approved Storm Water Management Plan pursuant to this chapter violates the terms of the plan and/or any provisions of this chapter, or conducts or carries on the site development in such a manner as to materially adversely affect the health, welfare, or safety of persons residing or working in the neighborhood of the Project Area, or conducts or carries on the site development so that it is materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the City Building Official shall give notice of such violation to the person responsible and order compliance with the approved Storm Water Management Plan and/or provisions of this chapter.

(B) Any person, firm, or corporation violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor of the fourth degree. Each day such violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such hereunder.

(Ord. 25-1987, passed 3-18-87; Am. Ord. 40-2010, passed 12-15-10)