Stormwater Self-Assessment
for
High-Risk-Runoff Facilities

Instructions and Forms

Stormwater Utility

Kansas City Water Services

September 2014

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1. Introduction

The Environmental Protection Agency adopted the National Pollutant Discharge Elimination System (NPDES) regulations under the Clean Water Act in 1990. Under these regulations municipalities, such as Kansas City, Missouri, are required to obtain an NPDES stormwater permit.

Kansas City's permit, issued by the Missouri Department of Natural Resources in 2004, requires the City to implement a number of programs that protect stormwater and the streams, rivers, and lakes to which stormwater drains. One of the required programs addresses the control of pollutants from facilities that have the potential to pollute stormwater runoff. In association with this program and, more importantly, to ensure the City's compliance with the NPDES permit, the City is requiring a Stormwater Self-assessment program for those facilities whose activities or materials are exposed to stormwater posing a potential risk for stormwater pollution. The program is sanctioned by the City's ordinance – Stormwater Discharge Control Regulations (Chapter 61, Article III, Sections 61-50 through 61-70). The program has four requirements for each affected facility: 1) To develop and implement a stormwater pollution prevention plan (SWPPP); 2) To complete a field evaluation checklist annually; 3) To conduct visual monitoring on quarterly basis, and 4) annual reporting.

A SWPPP describes a facility and its operations, identifies potential sources of stormwater pollution at the facility, identifies best management practices (BMPs) or pollution control measures used to reduce the discharge of pollutants in stormwater runoff, and serves as a record of the occurrence of the periodic review of the SWPPP. The Self Inspection Checklist helps a facility to implement its SWPPP by evaluating the types of activities at the facility and the BMPs that have been implemented to assure the activities are not contributing to stormwater pollution. Visual monitoring can help to generate a quick assessment of stormwater quality for each site and the result can be used to improve existing runoff management practices. Annual reporting by the facility to the City is required for the purposes of documentation.

This manual has been designed to guide each facility in implementing the self-assessment program. Sections 2.1 – 2.4) provide step-by-step instructions on how to prepare a SWPPP. Section 3 provides instructions on using a self checklist to evaluate the implementation of a SWPPP on a regular basis. Section 4 explains what visual monitoring information to record. A SWPPP template, a Self Inspection Checklist, a copy of visual monitoring record form, and a copy of reporting form are included in the appendices.

Before beginning the SWPPP template, checklist, or record form it is important to read the associated instructions.

2. Instructions for the SWPPP

A SWPPP requires the following information:

- General information about a facility
- A sketch of the facility including the direction of stormwater runoff and stormwater features
- Information on the materials used at the facility and activities performed on site
- Best management practices (BMPs) that have been and/or will be implemented to minimize stormwater pollution.

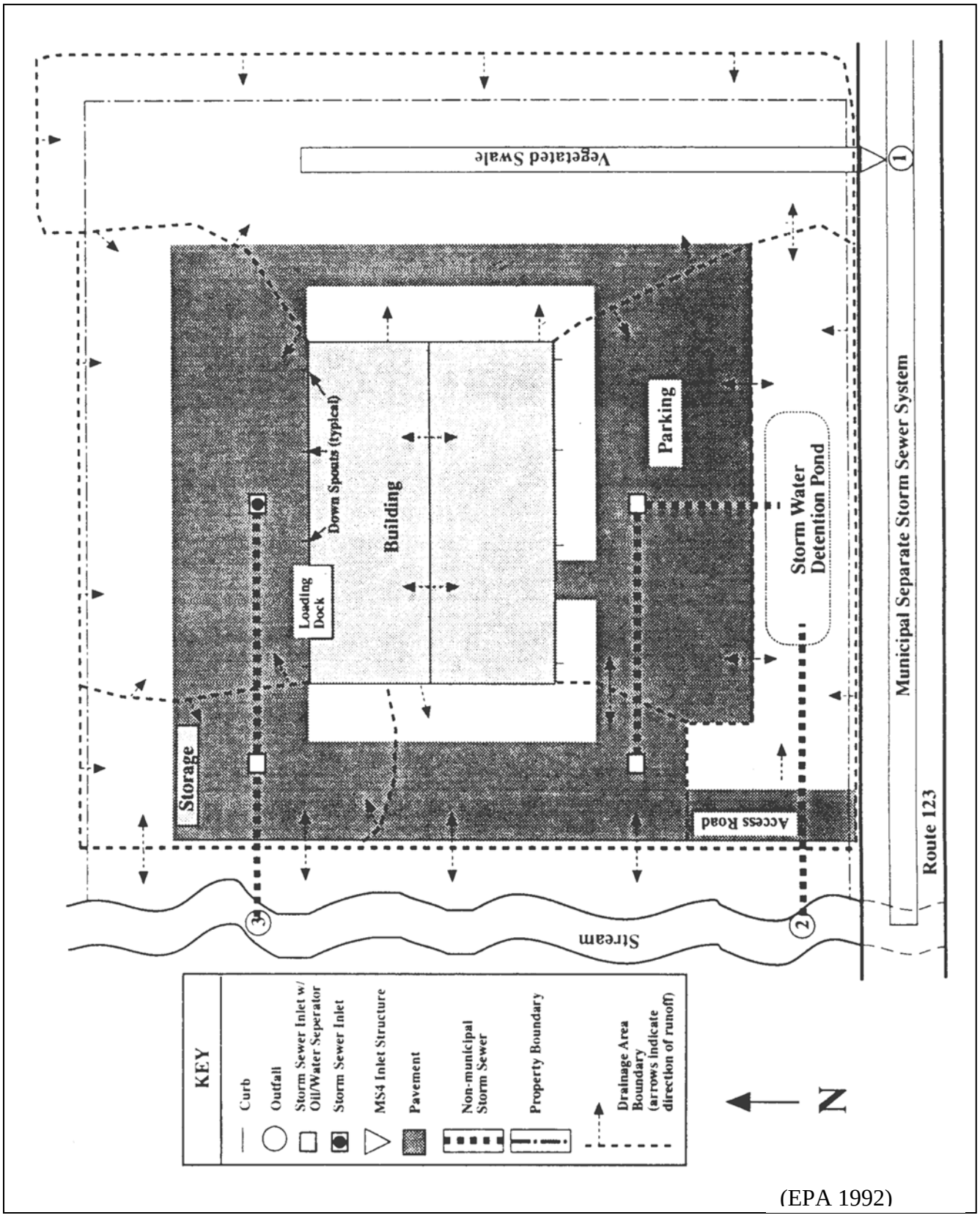
A SWPPP should be kept on site during the operational lifetime of a facility.

2.1 Site Map

The site map is an illustration of the overall site and its features as well as activities and materials at the site. Identifying these features will help you determine where potential stormwater pollutants are located, the direction stormwater flows, and how and where to implement best management practices to minimize stormwater pollution. Figures 1 and 2 illustrate examples of Site Maps. On a separate piece of paper, create a map(s) of your site with the following features:

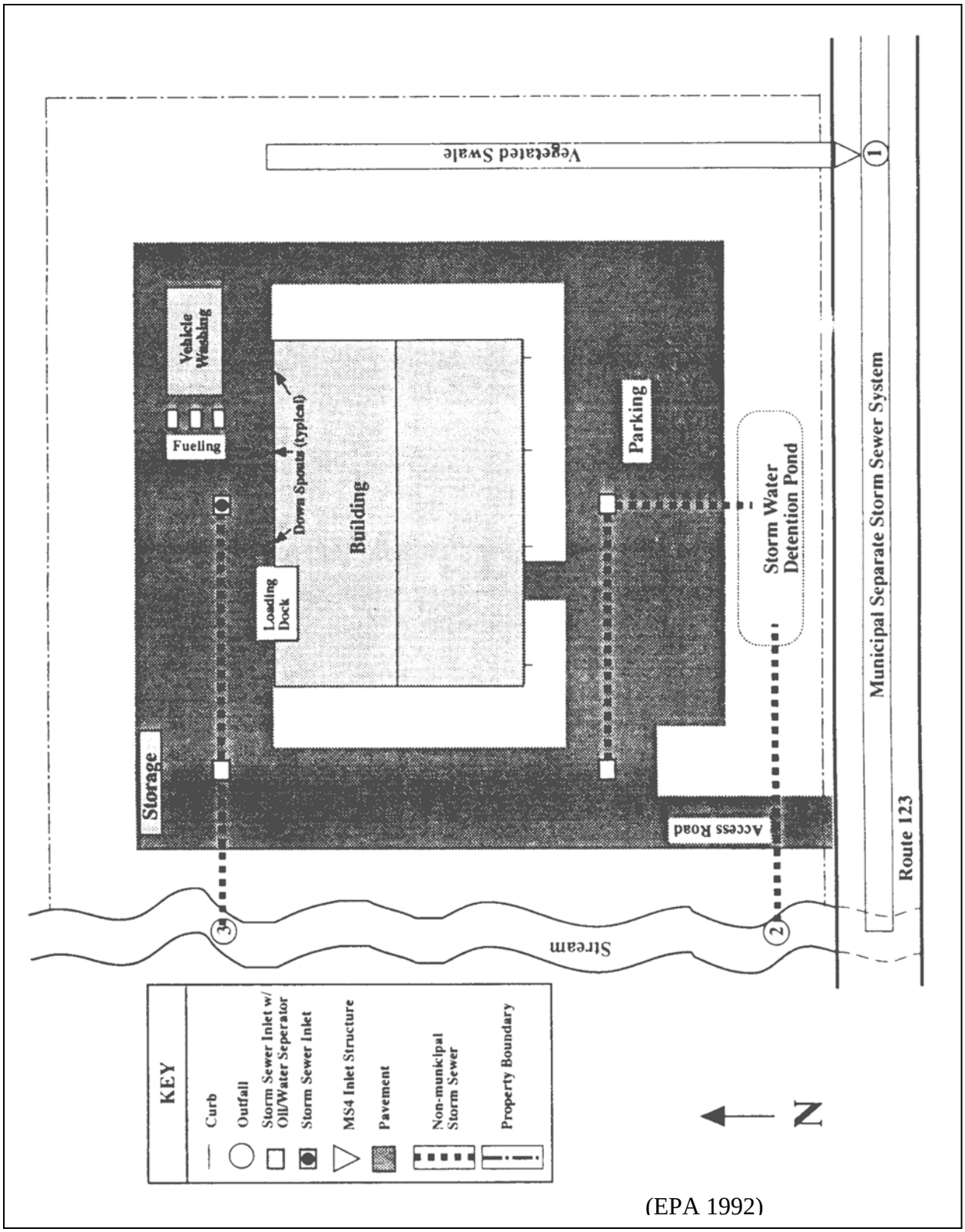
- Property boundaries
- Footprint of buildings and other permanent structures
- Locations where the following activities are exposed to stormwater:
  - ✓ Fixed fueling operations
  - ✓ Vehicle and equipment maintenance and/or cleaning area
  - ✓ Loading/unloading areas
  - ✓ Equipment operating areas
  - ✓ Storage areas (for chemicals, raw materials, liquid tanks)
  - ✓ Waste storage or disposal areas
  - ✓ Any other areas deemed appropriate
- Areas of (ground) surface condition:
  - ✓ Vegetation
  - ✓ Exposed and/or erodible soils
  - ✓ Impervious surfaces (roof tops, asphalt, concrete)
- Stormwater flows:
  - ✓ Flow direction or drainage pattern
  - ✓ Stormwater inlets (catch basins, drop inlets, etc.) and outfalls
  - ✓ Stormwater conveyances (ditches, pipes, swales, etc.)
  - ✓ Stormwater controls (dikes, berms, detention basins, etc.)
  - ✓ Receiving waters (ponds, streams, etc.) in the immediate vicinity of the facility
- Location of NPDES permitted discharges including both stormwater and non-stormwater
- Location of stormwater visual monitoring required under the City's Stormwater Self-assessment Program

Figure 1. Example Site Map – Stormwater Flow and BMPs



(EPA 1992)

Figure 2. Example Site Map – Materials and Activities



(EPA 1992)

2.2 Materials Inventory (Exposed Materials)

In your list of pollutants associated with your industrial activities, include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the three (3) years prior to the date you prepare your SWPPP. Areas of focus include:

- Loading and unloading areas
- Other material handling operations (fuel pumps, etc.)
- Outdoor storage areas
- Processes which generate dust or particulate matter
- Roof vents, stacks, and blowers
- Waste generating areas
- Waste disposal practices
- Maintenance and cleaning practices for vehicles and equipment
- Sites of environmental contamination
- Areas where spills of polluting materials (i.e., salt) have occurred in the past three years
- Any other areas deemed appropriate

Materials include, but are not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; hazardous substances; fertilizers; pesticides; and waste products such as ashes, slag, and sludge. Also include in the evaluation the outfalls or other points from which the materials may be discharged if a release should occur. Include the information addressed here in **Table 1** of Appendix I.

Table 1. Exposed Materials Inventory

Area (location)	Process/ Activity	Material	Outfall or other drainage system
Notes:			

2.3 Past Spills and Leaks

Include in **Table 2** of Appendix I a list of oil and other polluting materials that have been spilled or leaked over the past three years. Also include the date, volume of materials, the exact location of each release, and the actions taken to clean up the materials and/or prevent exposure of the materials to stormwater runoff or contamination of surface waters of the state. [If there have been no spills of polluting materials in this time period, state that in the Notes section.]

Table 2. Past Spills and Leaks

Date	Material	Volume	Location	Actions Taken
Notes:				

2.4 BMP Identification

Stormwater management controls, or best management practices (BMPs), are implemented to prevent the exposure of significant materials to precipitation and reduce the amount of pollutants in stormwater discharged from your facility.

2.4.1 Non-Structural Controls

Non-structural controls are practices that are specifically intended to reduce the amount of pollutants getting into surface waters. They are generally implemented to address the problem at the source. They do not require any structural changes to the facility. The following are types of non-structural controls that can be implemented at your site:

2.4.1.1 Good housekeeping

Good housekeeping practices are designed to maintain a clean and orderly work environment. This will reduce the potential for significant materials to come contact with stormwater.

Include in **Table 3** of Appendix I practices that are included in your good housekeeping routine. [Examples: keeping the pump areas clean, keeping an accurate inventory of materials, sweeping paved areas and floors, using drip pans in repair facilities or under pipes or pipe connections, cleaning up spills and leaks when loading/unloading materials, etc. Areas to address include storage areas, loading/unloading areas, repair facilities, fueling areas, etc.]

Table 3. Good Housekeeping Measures

Area/Equipment	Tasks	Frequency
Notes:		

2.4.1.2 Preventative Maintenance

Preventive Maintenance involves the regular inspection, testing, and cleaning of facility equipment and operational systems. These inspections will help to uncover conditions that might lead to a release of materials.

Include in **Table 4** of Appendix I equipment/activities that are included in the preventive maintenance program. [Examples: fuel pumps, storage tanks for waste fluids, all structural controls, etc.]

Table 4. Preventive Maintenance Measures

Equipment	Tasks	Frequency
Notes:		

2.4.1.3 Spill prevention and response

Spills and leaks together are the largest industrial source of stormwater pollution. Thus, these SWPPP template tables should include material handling procedures and storage requirements for significant materials. Equipment and procedures necessary for cleaning up spills and preventing the spilled materials from being discharged should also be identified. All employees should also be made aware of the proper spill prevention and response procedures.

Include in **Table 5** of Appendix I the procedures that have been developed for spill response for your facility. [Examples of areas to include: pumping station, maintenance and repair areas, wash areas, etc.]

Table 5. Spill Prevention Procedures

Area	Materials Present	Procedures
Notes:		

2.4.1.4 Employee Training

Employee training and supervision is a major component in ensuring the success of the facility's SWPPP including the prevention of spills and their environmental impacts. The more knowledgeable all employees are about the facility's SWPPP and what is expected of them, the greater the chance that the plan will be successful.

Include in **Table 6** of Appendix I a description of the employee training program implemented to inform appropriate personnel at all levels of responsibility of the components and goals of the SWPPP. [Examples: good housekeeping practices, spill prevention and response procedures, waste minimization practices, informing customers of facility policies, etc.]

Table 6. Employee Training Programs

Topic	Employees Included	Frequency
Notes:		

2.4.1.5 Preventative measures

Preventive measures are controls that are intended to prevent the exposure of stormwater to contaminants. Include in **Table 7** of Appendix I the preventive measures have been chosen for this facility. [Examples: signs and labels, safety posts, fences, a security system, coverings over areas of concern, measures implemented to prevent vandalism, etc.]

Table 7. Preventive Measures

Area	Material	Control Measure
Notes:		

2.4.2 Structural Controls

Structural control measures are necessary to control any pollutants that are still present in the stormwater after the non-structural controls have been implemented. These types of controls are physical features that control and prevent stormwater pollution. They can range from preventive measures to collection structures to treatment systems. Structural controls will require construction of a physical feature or barrier.

2.4.2.1 Sediment and erosion control

There may be certain areas at the facility that are prone to soil erosion. These areas need to be protected, and the soil needs to be kept out of the stormwater discharge. Include in **Table 8** of Appendix I the measures that have been put in place to minimize sedimentation and erosion. [If there are no areas prone to soil erosion state that in the Notes section.]

Table 8. Sediment and Erosion Control Measures

Area of Concern	Control Measures
Notes:	

2.4.2.2 Management of runoff

There are a wide variety of structural practices that manage runoff. They include diversion practices, which are structures (including grading and paving) that are used to divert stormwater away from high-risk areas and prevent contaminants from mixing with the runoff, or to channel contaminated stormwater to a treatment facility or containment area. Diversion practices can be implemented at storage areas, processing areas, areas of past spills, etc.

Additionally there are containment practices that contain stormwater to prevent contact with pollutants or to prevent contaminated stormwater from entering the storm sewer system. There are also practices that contain and treat pollutants on site. These structures can include large containment areas required for Spill Control and Countermeasures (SPCC) plans, containment around waste fluid storage areas, curbing around dismantling areas or parts storage areas, etc.

There are also pollution control practices that can be used on site to treat stormwater runoff from areas of concern. These include things like sumps, oil/water separators, sand filters, vegetative filters, basins (collection, retention, and detention), etc.

Include in **Table 9** of Appendix I the areas that are to be protected through the use of these structural practices (e.g., storage areas, processing areas, areas of past spills, etc.), the materials contained in those areas, and the control measure that is used to control stormwater flow (e.g., containment around waste fluid storage areas, curbing around dismantling areas or parts storage areas, etc.).

Table 9. Runoff Management

Area	**Material**	**Control Measure**
Diversion Practices		
Containment Practices		
Pollution Control Practices		
Notes:		

3. Self Inspection Checklist

A Self Inspection Checklist has been designed to list the elements associated with SWPPP requirements. It is intended to assist the facilities operators in their review of the implementation of the SWPPP in a simple and straight-forward manner. This review should occur annually or more frequently if activities or materials at the facility have changed. See Appendix II for a copy of High-Risk-Runoff Facility Self Inspection Checklist. The completed checklist shall be maintained with the SWPPP. The checklist shall be kept for five years.

4. Visual Monitoring

Stormwater monitoring results are often a good general indicator of facility housekeeping and may indicate the existence of pollution sources that were not observed or identified during an inspection. The results from this effort can provide the facility with a rapid, simple, and cost-effective assessment of its stormwater quality and SWPPP implementation. The facility should use these results to improve pollution prevention practices.

To assure compliance with the SWPPP, the operator must conduct visual monitoring of the facility on a quarterly basis. Visual Monitoring shall be performed according to the following protocols. Record the results in the **Appendix III** – Industrial Facility Quarterly Visual Monitoring Form. The form shall be kept on file at the facility for a period of five years from the date of the visual monitoring. Additionally, include in **Table 10 of the SWPPP** the locations at which visual monitoring will occur; and in **Table 11** the dates that visual monitoring has occurred at the facility.

4.1 Where will sampling occur?

- Stormwater samples collected for visual monitoring shall be taken at an outfall or a location where runoff collects from an area of industrial activity (storage area, material handing area, etc.). For example, if a chemical is used in processing activities that are exposed stormwater, then the sampling point should be selected at the outfall or discharge point immediately downstream of the area where the processing activities occur.
- The location of sampling point(s) should be identified in your SWPPP. If you are unsure where to sample, you can call the Stormwater Utility Division to discuss a location.
- All outfalls or discharge points that receive discharges impacted by activities or materials on site should be selected as sampling points.
- When a facility has two or more discharges that the facility reasonably believes discharge substantially identical effluents, the facility may sample one outfall and allow it to count as the sample for a substantially similar outfall. The facility must first document in its SWPPP how it determines that the outfalls are substantially similar.

4.2 When and how will sampling occur?

Samples that will be used for visual monitoring shall be collected according to the following:

- Grab samples shall be collected during "measurable" rain events for visual monitoring.
- A "measurable" rain event is defined as greater than 0.1 inches in magnitude, and that occurs at least 72 hours from the previous measurable (greater than 0.10 inch of rainfall) rain event. Rainfall information can be found at www.wunderground.com:
  - ✓ Enter the zip code of your site in the search bar at the top of the page
  - ✓ Under the "Weather Stations", select the station location that is closest to your site
  - ✓ Refer to "Precipitation" for the real time rain event amount
- A grab sample is defined as a single sample taken at one moment of time or a combination of several smaller samples of equal volume taken in less than a two-minute period.
- A minimum of one grab sample of the storm water discharge shall be taken at each of the pre-identified sites.
- A clear glass container should be used as a sample container.
- Grab samples shall be taken during the first 30 minutes of the discharge. If it is not practicable to take the sample during the first 30 minutes, the sample may be collected during the first hour of discharge and a description as to why it was impracticable to collect a grab sample during the first 30 minutes should be recorded on Visual Monitoring Form (Appendix III).

4.3 How will Visual Examinations be performed?

Once the sample(s) have been collected, a visual examination of each sample shall be conducted as follows:

- Each examination is to be performed in a well lit area by the facility operator.
- The sample shall be examined in-situ immediately.
- The sample shall be examined for color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, other obvious indicators of storm water pollution, and any noticeable odors. Documentation of these observations shall be made on the Visual Monitoring form (see

Appendix III).

- Visual examination should be carried out on a quarterly basis, and preferably by the same individual, where practicable, to assure consistency with evaluation of qualitative parameters.
- If no measurable rain event occurred during a monitoring quarter, the facility operator will be excused from visual monitoring for that quarter provided the documents in the monitoring records show that no qualifiable storm event occurred.

4.4 Recordkeeping and reporting

- Recordkeeping forms should be maintained with the facility's SWPPP on site
- The forms should be maintained for five years
- The facility should send its SWPPP to the following address before it starts to perform visual monitoring:
  MS4 High-Risk-Runoff Facilities Program
  Stormwater Utility Division,
  Kansas City Water Services
  4800 East 63rd Street
  Kansas City, MO 64130
- The facility should send an annual summary report the same address above on its implementation of the SWPPP and visual monitoring results by December 31st of each year.

5. References

Kansas City Water Services. 2008. Industrial Monitoring Program Plan.

Michigan Department of Environmental Quality. Sample SWPPP for General Facilities. http://www.deq.state.mi.us/documents/deq-swq-stormwater-samplan.doc

Environmental Protection Agency 1992. Storm Water Management for Industrial Activities – Developing Pollution Prevention Plans and Best Management Practices. EPA-833-R-92-002. http://www.epa.gov/npdes/pubs/owm0236a.pdf

Environmental Protection Agency 2009. Developing Your Stormwater Pollution Prevention Plan – A Guide for Industrial Operators. EPA-833-B-09-002. http://www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf

Appendix I. SWPPP Template

For the SWPPP template, you should:

- Complete line items throughout the template tables with appropriate facility information.
- Provide a sketch of the facility and the features identified in Section 4.1.
- Complete the topic table and check each item off upon completion:
- Use additional sheets of paper to record these elements as needed.

If a particular section is not applicable to your operations (i.e., you have no materials exposed to stormwater, etc.), explain this in the notes section of the applicable table.

Table of Contents (SWPPP)

Stormwater Pollution Prevention Plan (SWPPP) Template

Section. 1. Overview

This stormwater pollution prevention plan (SWPPP) covers the operations at _____ _____ [facility name]. It has been developed as required by the City of Kansas City, Missouri under Part III.A.5 of the City's National Pollutant Discharge Elimination System (NPDES) Stormwater Permit. This SWPPP describes this facility and its operations, identifies potential sources of stormwater pollution at the facility, identifies best management practices (BMPs) or pollution control measures used to reduce the discharge of pollutants in stormwater runoff, and provides for periodic review of this SWPPP.

This SWPPP becomes effective as of _____ [current date]. The non-structural controls will be implemented by _____ [name of operator]. Structural controls will be in place by _____ [date].

The operator will review the SWPPP on an annual basis. In addition to an annual review, the SWPPP will be updated whenever there is a change in design, construction, operation, or maintenance, all of which may have an effect on the potential for pollutants to enter the stormwater discharge from the facility. Modifications to the plan must be made within 30 days if notified by Kansas City Water Services that the plan does not meet the minimum requirements.

A signed copy of the SWPPP will be retained at the facility and be made available upon request.

Section 2. General Facility Information

Name of Facility: _____

Facility Address: _____

Nature of Facility: _____

Facility Contact:

Name: _____

Title: _____

Telephone: _____

Mailing Address: _____

_____

Number of Stormwater Outfalls: _____

Receiving Waters: _____

Emergency Contact:

Name: _____

Telephone: _____

Section 3. Topic Table

Topics	Complete √
Site Map	☐
Table 1– Exposed Materials Inventory	☐
Table 2 – Past Spills and Leaks	☐
Table 3 – Good Housekeeping Measures	☐
Table 4 – Preventative Maintenance Measures	☐
Table 5 – Spill Prevention Procedures	☐
Table 6 – Employee Training Programs	☐
Table 7 – Sediment and Erosion Control Measures	☐
Table 8 – Preventative Measures	☐
Table 9 – Runoff Management	☐

Section 4. Site Map

Sketch a map of the site (see instructions for items to include). Use additional paper if necessary.

Section 5. Sources of Pollution

Table 1. Exposed Materials Inventory

Include here the area of the facility (location) and the process/activity that is exposed, the material that is exposed at the site, and the outfall to which the site drains.

Area (location)	Process/ Activity	Material	Outfall or other drainage system
Notes:			

Table 2. Past Spills and Leaks

Include the material and the volume spilled, the location of the spill, the date it occurred and the actions taken to contain and clean up the spill.

Date	Material	Volume	Location	Actions Taken
Notes:				

Section 6. Non-Structural Controls

Table 3. Good Housekeeping Measures

Include the good housekeeping tasks that are undertaken for a particular area or equipment and the frequency of the task.

Area/Equipment	Tasks	Frequency
Notes:		

Table 4. Preventive Maintenance Measures

Include the preventative maintenance task, the equipment to which the maintenance is performed, and the frequency at which it is performed.

Equipment	Tasks	Frequency
Notes:		

Table 5. Spill Prevention Procedures

Include the spill prevention procedures for facility areas and the materials present in those areas to which the procedures are directed.

Area	Materials Present	Procedures
Notes:		

Table 6. Employee Training Program

Include the training program topics, the employees to which the training is directed [(individual names, or, if there is a large number of employees, the general employee type (i.e., maintenance staff)], and the frequency of the program.

Topic	Employees Included	Frequency
Notes:		

Table 7. Preventive Measures

Include preventative measures that have been installed (i.e., signs, fences, etc.) and the area and materials that these measures protect.

Area	Material	Control Measure
Notes:		

Section 7. Structural Controls

Table 8. Sediment and Erosion Control Measures

Include the erosion and sediment control measures for each area of concern.

Area of Concern	Control Measures
Notes:	

Table 9. Runoff Management

Include the structure as well as the area and material that the structures are protecting.

Area	Material	Control Measure
Diversion Practices		
Containment Practices		
Pollution Control Practices		
Notes:		

Section 8. Monitoring

Table 10. Visual Monitoring Locations

Include all the visual monitoring locations at the facility.

Visual Monitoring Locations

Table 11. Dates of Quarterly Visual Monitoring

Include the dates that quarterly visual monitoring has occurred at the facility.

Date	Date	Date
1.	5.	9.
2.	6.	10.
3.	7.	11.
4.	8.	12.
Notes:		

Section 9. Recordkeeping

Records of all preventive maintenance inspections, the semi-annual comprehensive site inspections, records of employee training sessions, and the annual report are retained at _____

_____ [facility name] for five years from the date of creation. These records are available, upon request.

Section 10. Certification of the SWPPP

I certify under penalty of law that this SWPPP has been developed in accordance with good engineering practices. To the best of my knowledge and belief, the information submitted is true, accurate, and complete. In addition, at the time this plan was completed no unauthorized discharges were present. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

_____ _____

(Signature of Authorized Representative) (Date)

_____

(Printed Name)

Retain a copy of this certification with the SWPPP and submit a copy with the original signatures to the Kansas City Water Services.

Appendix II. Stormwater Self Inspection Checklist

Stormwater Self Inspection Checklist for High-Risk-Runoff Facilities

Facility operators are required to use the following checklist to evaluate whether the activities and the best management practices are performed in accordance with the corresponding Stormwater Pollution Prevention Plans (SWPPP) for individual sites. The purpose for this requirement is to assure these activities are not contributing stormwater pollution and impacting receiving waters.

Before you begin the evaluation note the following differences:

ALLOWABLE discharges identified under the City's stormwater permit include:

- Water line flushing
- Landscape irrigation
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Footing drains
- Lawn watering
- Non-commercial car washing
- Street wash waters
- Fire fighting activities
- Uncontaminated pumped groundwater
- Irrigation water

Discharges **PROHIBITED** from entry into the stormwater sewer systems, streams, and lakes include:

- Oil and grease,
- Fleet-related fluids,
- Machinery-related fluids,
- Hazardous materials,
- Pesticides, herbicides, fertilizers,
- Salt,
- Sand, sediment,
- Trash, and
- Any other discharges that are other than allowable discharges and natural precipitation and snowmelt.

Use the checklist on a regular basis for stormwater self-inspection. Keep the checklist with your Stormwater Pollution Prevention Plan (SWPPP). The checklist is subject to review by environmental inspectors from Kansas City Water Services. It **does not** have to be submitted to Water Services unless requested.

If you have questions or comments, please contact:

Stormwater Utility
Kansas City Water Services
4800 East 63rd Street
Kansas City, MO 64130
Phone: 816-513-0371
Email: stormwater-facility@kcmo.org

Stormwater Self-Inspection Checklist

Instructions: *Conduct an inspection of your facility (at least yearly), sign this sheet and place it with your facility's Stormwater Pollution Prevention Plan.*

Facility name: _____

Site address: _____

Completed by: _____ (Print); _____(Signature)

Date: _____ Date of previous self-inspection:_____

Activities	Yes	No	NA	Comments
General Practices				
1. Stormwater Pollution Prevention Plan				
• The Plan is in effect.	☐	☐	☐	
• The Plan has been updated.	☐	☐	☐	
2. Employee Training				
• Appropriate employees have been trained in stormwater pollution prevention.	☐	☐	☐	
3. Site Housekeeping/Ground Surface Maintenance				
• Outdoor areas are free from excess dirt, debris, oil drips, and chemical residue.	☐	☐	☐	
• Outdoor areas are orderly and tidy.	☐	☐	☐	
• Vegetation does not show stress from pollution.	☐	☐	☐	
• There is no excessive soil erosion.	☐	☐	☐	
4. Stormwater Drainage System				
• Inlets, outfalls, ditches and detention ponds are free of debris, oil sheen, and stains of chemicals.	☐	☐	☐	
• Nearby creeks, ponds, lakes, and banks are free of debris, oily sheen, and suds.	☐	☐	☐	
Vehicle and Equipment				
5. Vehicle and Equipment				
• Maintenance is performed on a regular schedule.	☐	☐	☐	
• Maintenance is performed in a way that dripping or leakage is well captured.	☐	☐	☐	
• Dripping and leakage are captured timely.	☐	☐	☐	
• Washwater is disposed of appropriately.	☐	☐	☐	

Activities	Yes	No	NA	Comments
6. Fueling Island				
• Signs for spill prevention are posted.	☐	☐	☐	
• Instructions for spill response are posted.	☐	☐	☐	
• Spill kits are stocked and easily accessible.	☐	☐	☐	
• Secondary containment is maintained adequately - the structure is sound; there is no indication of liquid leakage, and accumulated water from precipitation is drained appropriately.	☐	☐	☐	
Material Handling				
7. Material Storage				
• Material is stored away from stormwater inlets, ditches, creeks, ponds and bank.	☐	☐	☐	
• Material is not mobilized by stormwater runoff.	☐	☐	☐	
• Storage containers are labeled appropriately.	☐	☐	☐	
• The structure of storage containers is sound.	☐	☐	☐	
• Secondary containment is installed where necessary.	☐	☐	☐	
• Secondary containment is maintained adequate- the structure is sound; there is no indication of liquid leakage, and accumulated water from precipitation is drained appropriately.	☐	☐	☐	
• Spills and leaks are detected timely and cleaned up promptly.	☐	☐	☐	
8. Waste Management				
• Waste is properly disposed of.	☐	☐	☐	
• Containers for regular trash are not overfilled.	☐	☐	☐	
• Containers for hazardous wastes are appropriately labeled, covered, and water-tight.	☐	☐	☐	
Other Operating Activities				
9. Loading Docks				
• Exposure of materials to precipitation is minimized.	☐	☐	☐	
• Spills or leaks are detected timely and cleaned up promptly.	☐	☐	☐	
10. Accesses				
• Spills or leaks are detected timely and cleaned up promptly.	☐	☐	☐	
11. Other Operating Areas				
• Exposure of operating activities to precipitation is minimized.	☐	☐	☐	
• Spills or leaks are detected timely and cleaned up promptly.	☐	☐	☐	
Addition Notes:				

Appendix III. High-Risk-Runoff Facility Quarterly Visual Monitoring Form

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Keep this form as part of your fulfilling Stormwater Self-assessment Program. No falsification. See KCMO ordinance Chapter 61

Kansas City Water Services

High-Risk-Runoff Facility Quarterly Visual Monitoring Form

Facility Name			City Stormwater Permit Number
Facility Address	City Kansas City	State MO	ZIP Code
Sampler's Name	☐ Rain	☐ Snowmelt	

Outfall ID (refer to site map)				
Outfall description (e.g., ditch, concrete pipe, grassed swales, etc.)				
Monitoring Date				
Est. time of rainfall start				
Time of sample collection				
Time of visual examination				
Color (e.g., clear, red, yellow, etc.)				
Odor (e.g., none, musty, sewage, rotten egg, etc.)				
Clarity (e.g., clear, cloudy, opaque, etc.)				
Oil sheen				
Floatables (e.g., none, foam, garbage, etc.)				
Suspended solids				
Settled solids (sediment, decayed plant matter, rust particles, etc.)				
Comments				

Sampler's Signature: _____ Date: _____

KCWATER SERVICES

CITY OF FOUNTAINS
HEART OF THE NATION
KANSAS CITY
MISSOURI

About Industrial/Commercial Visual Monitoring

Human activities can cause pollution of rainwater and snowmelt runoff. Pollutant-laden runoff threatens the health of our nation's rivers, lakes, streams, and coastal waters. To prevent and mitigate stormwater runoff pollution, the City of Kansas City, Missouri requires that industrial and commercial facilities with potentials of runoff pollution implement a facility self-assessment program. One element in this program requires that the facilities conduct a quarterly visual monitoring of runoff on their property. Monitoring results can be used not only as a good indicator of a facility's existing runoff management, but as guidance on how to improve pollution prevention practices.

WHO to **conduct** visual monitoring?

- Those facilities that are required by the City to have a stormwater self-assessment program.
- Where practicable, the same individual should conduct visual monitoring to keep consistent monitoring approach over the years.

WHEN to sample?

- Samples should be taken once every quarter and only in a measurable precipitation event.
- A measurable precipitation event is defined as greater than 0.1 inch rainfall and occurring at least 72 hours from the preceding measurable (>0.1 inch rainfall) precipitation event; The 72-hour interval is waived if the preceding precipitation event is less than 0.1 inch rainfall.
- Rainfall information can be found at: http://www.wunderground.com
  - Enter the zip code of your site in "find the weather for any city …" at the top of the page;
  - Under the weather stations, click on the station location that is closest to your site;
  - Refer to "Precipitation" for the real time rain event amount.

HOW to collect samples?

- Grab samples shall be taken during the first 30 minutes of the discharge, or (due to impracticality of doing so) less preferably, be collected during the first hour of discharge. In case of the latter, a description of the impracticality of sampling during the first 30 minutes should be recorded on Visual Monitoring Form (see Back page).
- A grab sample is defined as a single sample taken at one moment of time or a combination of several smaller samples of equal volume taken in less that a two-minute period.
- A clear glass container shall be used as a sample container.

HOW to visually examine the collected sample?

- Each examination shall be performed in a well lit area.
- Samples shall be examined on site immediately.
- Samples shall be checked for indications of discharge pollution as listed in the Visual Monitoring Form (see Back page)

Recordkeeping and reporting

- Monitoring results shall be recorded in the Visual Monitoring Form. The form shall be kept on site for 5 years.
- The facility shall evaluate the results and summarize them in its annual report for the stormwater self-assessment program.

WHERE to sample?

- Samples shall be taken at an outfall or a location where runoff collects from an area of industrial activity (storage area, material handing area, etc.).
- All outfalls or points that receive discharges impacted by activities or materials on site should be selected as sampling points, **EXCEPT THAT** when a facility has multiple sampling points that discharge substantially identical effluents, the facility may sample one point and allow it to count as the sample for those substantially similar outfalls.
- The location of sampling point(s) should be identified and the determination of substantially similar outfalls should be documented in your Stormwater Pollution Prevention Plan.

For More Information:

Contact: Stormwater Utility , Water Services Dept. 4800 E 63rd St.
Kansas City MO 64130
Phone: (816) 513-0371
Email: Stormwater-facility@kcmo.org

Appendix IV. High-Risk-Runoff Facility Annual Reporting Form

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to facilitate double-sided printing

Annual Reporting Form

General Information

Facility Name: _____

Facility Address: _____

Nature of Industrial Facility: _____

Facility Operator/Manager: _____ | Lead Inspector: _____

Phone: _____ | Phone: _____

Email: _____ | Email: _____

Stormwater Pollution Prevention Plan (SWPPP)

Has a SWPPP been developed for your facility? ☐ Yes ☐ No

Have updates been made to the SWPPP this reporting year? ☐ Yes ☐ No

If so, what did the modifications include? _____

_____

General Inspection Findings

Dates of Self-Inspection: _____

Have activities or materials changed at the site in the past year? ☐Yes ☐ No

If yes, has the Stormwater Self Inspection Checklist been used to evaluate these new activities and/or materials? ☐ Yes ☐ No

Have any issues been identified for any activity areas in the Self Inspection Checklist through the Self Inspection? ☐ Yes ☐ No

If yes, what are they? _____

_____

_____

What corrective actions have been taken? _____

_____

_____

What additional pollution prevention practices need to be addressed?

_____

_____

What is the timeframe for implementing these additional pollution prevention practices?

_____

_____

Visual Monitoring Findings (make a copy of this page if more than three locations have been monitored)

	Discharge Location 1	**Discharge Location 2**	**Discharge Location 3**
List Outfall ID			
Indication(s) of Stormwater Pollution Observed during any of the four quarterly monitoring events	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
If "No" was checked above for each location, proceed directly to the Certification Statement. If "Yes" was checked above for any of the locations, complete the following.			
Date/time (of sampling event when evidence of stormwater pollution was found)			
Observations (circle all that apply)	Suspended Solids Color Oily Sheen Odor Settled Solids Clarity Floatables Foam	Suspended Solids Color Oily Sheen Odor Settled Solids Clarity Floatables Foam	Suspended Solids Color Oily Sheen Odor Settled Solids Clarity Floatables Foam
Follow-up Actions			
If an indication of stormwater pollution was found at any of the Locations a SECOND TIME, summarize findings below. Make a copy of this form if additional monitoring events identified an indication of stormwater pollution.			
Date/time (of sampling event when evidence of stormwater pollution was found)			
Observations (circle all that apply)	Suspended Solids Color Oily Sheen Odor Settled Solids Clarity Floatables Foam	Suspended Solids Color Oily Sheen Odor Settled Solids Clarity Floatables Foam	Suspended Solids Color Oily Sheen Odor Settled Solids Clarity Floatables Foam
Follow-up Actions			

Certification Statement

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 property gathered and evaluated the information submitted. Based upon 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 penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Name of Authorized Representative: _____

Title: _____

Signature: _____ Date: _____

Form Submission

Submit form by April 30th of each year to:

Stormwater Self-Assessment
Stormwater Utility Division
Kansas City Water Services
4800 East 63rd St.
Kansas City, MO 64130

Or e-mail:
Stormwater-facility@kcmo.org