

# ☀ Stormwater Pollution Prevention Guidelines and Regulations



Storm Water  
Industrial  
Permitting

SWPPP  
Guidelines & Regulations

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### Storm vs. Sanitary Sewers

- Sanitary sewer (wastewater) runs to a wastewater treatment facility before discharge to a creek or river
- Storm sewer (rain water runoff) runs directly to a creek, river, lake, or other water body – usually without treatment



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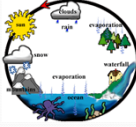
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### Storm Water Runoff

- Storm water runoff is part of the natural hydrologic cycle.
- Human activities, particularly urbanization, can alter natural drainage patterns and add pollutants to the rainwater and snowmelt that run off the earth's surface and enter our waterways.
- Recent studies have shown that storm water runoff is a major source of the pollutants that are:
  - Damaging our sport and commercial fisheries,
  - Restricting swimming, and
  - Affecting the navigability of many of our Nation's waters.



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**Purpose**

- To have fishable, swimmable waterways.
- The Goal: **rain water ONLY** into the storm sewer system.
- Our Mission:  
“To protect, maintain, and enhance the environment of the City of Oklahoma City by controlling discharges of pollutants to the City’s storm water system and to maintain and improve the quality of community lakes, rivers, streams, and ponds.”



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**SWPPP Required**

- Under the NPDES General Permit for Storm Water Discharges Associated with Industrial Activity,
  - EPA requires the development and implementation of a pollution prevention plan (SWPPP),
  - Designed to reduce pollution at the source,
  - Before it can cause environmental problems that cost the public and private sectors in terms of lost resources and expensive environmental restoration activities.



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# ☀ Stormwater Pollution Prevention Guidelines and Regulations

## 5 Major Phases

For Developing And Implementing an Industrial SWPPP



- PLANNING AND ORGANIZATION**
  - Form Pollution Prevention Team
  - Review other plans
- ASSESSMENT**
  - Develop a site map
  - Inventory & describe exposed materials
  - List significant spills and leaks
  - Test for non-storm water discharges
  - Evaluate monitoring data
  - Summarize pollutant sources and risks
- BMP SELECTION AND PLAN DESIGN**
  - Baseline BMPs
  - Select activity and site specific BMPs
- IMPLEMENTATION**
  - Implement BMPs
  - Train employees
- EVALUATION AND MONITORING**
  - Conduct annual site inspection / BMP evaluation
  - Conduct record keeping and reporting
  - Review and revise plan

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## SWPPP Requirements



- Pollution prevention plan requirements provide you with a step-by-step process for ensuring that pollutants are not making their way into the storm water discharges from your site.
- You must develop and implement the SWPPP, which is designed to prevent pollution sources before environmental damage occurs.
- You are required by law to submit an SWPPP with your permit application and designated fee to obtain your facility's Industrial Storm Water Quality Permit.

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## SWPPP Requirements



- The pollution prevention plan requires that you select and implement those procedures and devices that you will use to reduce the pollutants in storm water discharges from your facility (Best Management Practices – BMPs).
- BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution in runoff from your site.

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# ✧ Stormwater Pollution Prevention Guidelines and Regulations

## SWPPP Requirements



- Your SWPPP must:
  - Be prepared in accordance with good engineering practices, though the permit does not require use of a registered professional engineer.
  - Identify all sources of pollution that may reasonably be expected to affect the quality of storm water discharges from your facility.
  - Include appropriate elements to assure compliance with the terms and conditions of this permit.
- Keep your Permit documentation, a copy of your current Application, the SWPPP and inspection records in a common file or binder, readily available to inspectors, workers, and the public upon request.

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## SWPPP Requirements

- Deadlines for Plan Development and Implementation**  
Industries have forty-eight (48) hours *prior* to commencement of discharge, upon submittal of Notice of Intent (NOI).
- Required Signatures**  
As with the Notice of Intent (NOI), your plan *must* be signed by an "authorized representative," who is a person at or near the top of your facility's management chain (the president, vice president, or a production manager) who has been delegated the authority to sign and certify this type of document.
- Director-Required Plan Modifications**  
Upon reviewing your plan, the permitting authority may find that it does not meet one or more of the minimum standards established by the pollution prevention plan requirements or the minimum requirements established in The City of Oklahoma City ordinance's. In this case, the permitting authority will notify you of the changes that you *must* make to improve the plan.

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## Paper Work Necessity

As of late, the emphasis on continuously updating your SWPPP has not been strongly enforced. Now, ODEQ has a set of **Significant Non-Compliance Rules**:

Storm Water SNC Criteria
A significant unauthorized discharge
Any significant unauthorized discharge at a site with a small construction waiver or conditional exclusion for no exposure.
Significant violations of permit requirements. Examples of such violations include, but are not limited to: <ul style="list-style-type: none"> <li><b>Lack of or a substantially inadequate SWPPP or SWMP,</b></li> <li>Substantial failure to implement or maintain BMPs,</li> <li>Substantial failure to perform required monitoring, and</li> <li>Substantial failure to implement the MS4 requirements.</li> </ul>
Failure to obtain permit coverage as required where there is a discharge.
Failure to meet the major milestones required in an administrative or judicial order or in a permit by 90 days or more.
Failure to submit required report (including failure to respond to an information request), or report is late by 90 days or more.

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# ☀ Stormwater Pollution Prevention Guidelines and Regulations

## Pollution Prevention Team

- Team Leader
- Team Member(s)
- Include list of stormwater-related responsibilities/tasks
- Have a **TRAINED** backup person for each required task!



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## Site Map



- Many items are required on your site map.
- Check the guideline and make certain each of the required items is listed on your site map.
- Example of required items:
  - Receiving water bodies within one mile of your facility;
  - Directions of storm water flow and drainage areas;
  - All outfalls and discharge points of storm water from your facility;
  - Location of all storm drains on your property;
  - Etc.
- Site maps can be generated from drawings, aerial photos, or satellite images.

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## Baseline BMPs



1. Good Housekeeping
2. Minimizing Exposure
3. Preventive Maintenance
4. Spill Prevention and Response Procedures
5. Employee Training
6. Routine Facility Inspections
7. Quarterly Visual Monitoring
8. Annual Comprehensive Site Evaluation Report
9. Sediment and Erosion Control
10. Management of Run-Off
11. Solid Materials and Floatable Debris
12. Maintenance of Non-structural BMP's

**You must also define site-specific BMPs!**

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# ☀ Stormwater Pollution Prevention Guidelines and Regulations

## Site Inspections



- Select a frequency that will enhance your company's compliance.
- Document each site inspection.
- When you find leaking equipment or other problems, don't just clean it up – REPORT IT to get the situation corrected.
- Problems must be corrected within fourteen (14) days of discovery and before the next anticipated rain event.

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## Quarterly Visual Monitoring

- Must be documented each calendar quarter.
  - Provide documentation to support lack of qualifying rain events, if applicable
- Must collect qualifying runoff events.
- Fill in all the blanks on your reporting form.
- Review the requirements with your team members and make sure they are understood.
- Ask your inspector if you have questions.



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## Employee Training

- Can be the best tool to keep all other BMPs in good working order.
- Keep employees aware of requirements and company policies and procedures.
- Work as a team to help the company and the environment.
- Take pride in your workplace!



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### Special Considerations

- Facilities subject to reporting requirements under EPCRA Section 313 for chemicals classified as a “water priority chemical” are considered “High-Risk” facilities.
- Salt Storage piles must be covered.
- Additional requirements based on type of business (Sector)...
- Print out and refer to the State’s MSGP: Available at: [www.deq.state.ok.us](http://www.deq.state.ok.us)

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### Don't Forget...



- Keep all records three (3) years.
- Review SWPPP and BMPs annually.
- The SWPPP is a living document – make changes in it as changes occur at your facility.
- Employees must know where the SWPPP is kept.
- Complete annual report (ACSCER) for each CALENDAR year – due March 1<sup>st</sup>.
- ASK QUESTIONS!

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### Sector-Specific Requirements



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**Sector-Specific Requirements**

- There are specific instructions and requirements for each individual sector (business type), in addition to the general requirements.
- If you have co-located industrial activities on-site that are described in a sector other than your primary sector, you must comply with all other applicable sector-specific conditions.
- The extra sector-specific requirements are applied only to those areas of your facility where the extra-sector activities occur.
- An activity at a facility is not considered co-located if the activity, when considered separately, does not meet the description of a category of industrial activity covered by the storm water regulations.
- If runoff from co-located activities commingles, the discharge must be monitored as per the requirements of all applicable sectors (regardless of the actual location of the discharge).

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**Example...**

**Sector-Specific Requirements**

- Sector A: Timber & Wood Products
  - SIC Codes 2411-2499
  - Must prevent rain exposure to chemically treated wood products, treatment areas, treatment chemical storage areas, etc.
  - Good housekeeping to address wood debris and dust
  - Analytical monitoring required (SIC code 2411) for pH and debris

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**Example...**

**Sector-Specific Requirements**

- Sector C: Chemical & Allied Products Mfg
  - SIC Codes 2812-2899 & 3952
  - No discharge of spills or washwater
  - Additional map and BMP requirements
  - Analytical monitoring required (SIC Code 2874) for phosphorous and fluoride

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### Sector-Specific Requirements

- All other types of businesses are listed
- Read the permit to find out what additional State requirements exist for your facility

Remember:  
Print out and refer to the State's MSGP:  
[www.deq.state.ok.us](http://www.deq.state.ok.us)

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### Practical Application and Helpful Hints



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### Rain Gauge Log

- A consistent, well-maintained log of rain events at your facility.
- Documentation to indicate compliance with Visual Monitoring.
- Include Date, Time, and Rain Amount at the time of measurement.
- Include comments & observations in log (Ex: "rained overnight").



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# ☀ Stormwater Pollution Prevention Guidelines and Regulations

## Storage Areas – Parts & Small Equipment



- Must be clean (no oil, grease, or other substances exposed to precipitation).
- Drain fluids for long-term storage.
- Regularly check for leaks & drips.
- Cover (tarp, awning, or move indoors), and use tarp or drip pan underneath.



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## Storage Areas – Vehicles & Large Equipment

- Wash off dirt, mud **before** parking
- Check for exposed oil, grease, etc.
- Drain fluids for long-term storage
- Watch for drips & leaks underneath
  - Cleanup immediately
  - Use drip pans, tarps
  - Repair ASAP



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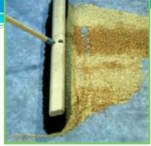
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## Spills & Leaks

- Dirt, mud, gravel, salt, food, trash, etc.
  - Employee awareness
  - Employee action
  - Routine lot sweep???
- Oil, fuel, tar, chemical, etc.
  - Spill Kits (Stocked & Ready for use)
  - Employee training on spill kit location & usage
- Protect storm drains and outfalls
- Reportable?



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### Spills & Leaks

- **SWEEP UP ALL ABSORBENT MATERIALS** (oil dry, floor sweep, Sphag Sorb, etc.)...

**IMMEDIATELY!**

Important questions – ALL employees should know these answers:

- What is a “Spill Kit”?
- Where are spill kits kept at my facility?
- What do I need to do if I see a spill or leak?



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### Cleaning



- Outdoor washing (cosmetic cleaning)
  - Must be filtered and/or directed to sanitary sewer
  - BMPs must be listed in your SWP<sub>3</sub>
  - **USE A WASH BAY!**
- Mops & mop water
  - Not stored or dumped outdoors
- Litter / Trash
  - Don't litter
  - Routine litter pickup on site by employees

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### Waste Containers



- Trash dumpsters
  - Closed & Leakproof
  - Serviced routinely by contracted company
- Rolloff (open top) containers
  - No liquids or oily, greasy residues (or the container must be leakproof)
  - No blowables (or the container must be covered)
  - Recommend covered AND leakproof!

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# ☀ Stormwater Pollution Prevention Guidelines and Regulations

## Lawn Maintenance



- Keep grass clippings out of storm drains, creeks, etc.
- Don't blow grass clippings into the street (mow "inward," mulch or bag them). Or simply sweep up!
- Grass, leaves and yard clippings that are repeatedly swept into catch basins can clog drains, causing flooding and the potential for becoming a breeding ground for rodents and insects.
- Seeds that end up in storm drains/catch basins may sprout and destroy the infrastructure.
- Once in the waterway, grass and leaves decompose. This will encourage excessive growth of algae which can deprive fish of adequate oxygen.

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## How Effective is Your Program?



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## Take Action

- When there is a problem found in your storm water runoff, it must be tracked back to the source.
- Adjust BMPs to address the pollutants found in the samples.



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# ☀ Stormwater Pollution Prevention Guidelines and Regulations

## Great BMPs



The slide features three photographs. The top-left photo shows a grassy area with a tree and a fence. The top-right photo shows a grey dumpster with a recycling symbol. The bottom photo shows a person in a dark uniform cleaning a red dumpster with a broom.

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## Great BMPs



The slide features two photographs. The top photo shows a large, long metal structure with a corrugated metal roof. The bottom photo shows a green dumpster with a recycling symbol.

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## The Ultimate Goal

- The goal of any environmental program is to reduce the amount of pollutants entering the environment, which ultimately protects human health, enhances the quality of life, and secures a long-term future for the community.



The slide features a photograph of a river with a bridge and buildings in the background.

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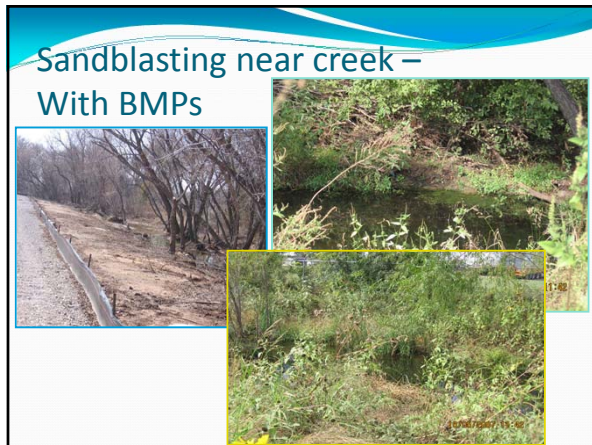
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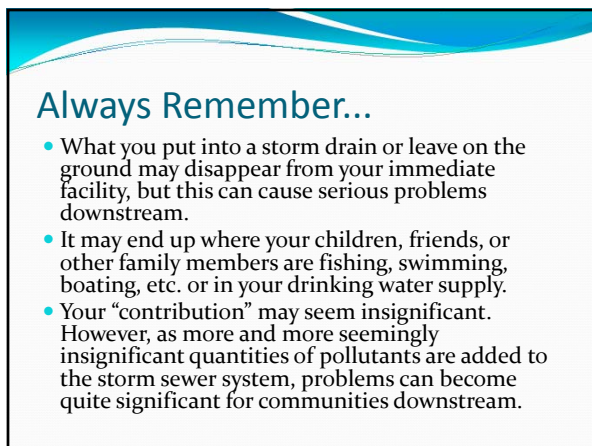
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# ✧ Stormwater Pollution Prevention Guidelines and Regulations



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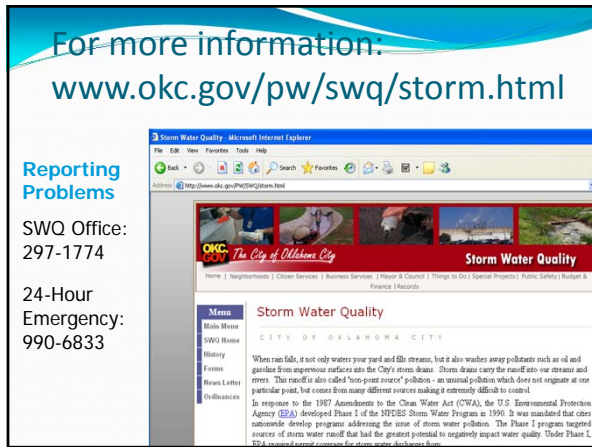
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**New EPA Requirements –  
Routine Site Inspections**

- Routine facility inspections must be conducted **at least quarterly** (i.e., once each calendar quarter) although in many instances, more frequent inspection (e.g., monthly) may be appropriate for some types of equipment, processes, and control measures or areas of the facility with significant activities and materials exposed to stormwater.
- Perform these inspections during periods when the facility is in operation.
- These routine inspections must be performed by qualified personnel, **with at least one member of your stormwater pollution prevention team** participating.
- At least **once each calendar year**, the routine facility inspection must be **conducted during a period when a stormwater discharge is occurring**.

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**New EPA Requirements –  
Routine Site Inspections**

- At a minimum, your documentation of each routine facility **inspection** must include:
  - The inspection date and time;
  - The name(s) and signature(s) of the inspector(s);
  - **Weather information and a description of any discharges occurring at the time of the inspection;**
  - Any previously unidentified discharges of pollutants from the site;
  - Any control measures needing maintenance or repairs;
  - Any failed control measures that need replacement;
  - Any incidents of noncompliance observed; and
  - **Any additional control measures needed to comply with the permit requirements.**

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**New EPA Requirements –  
Quarterly Visual Monitoring**

- All required monitoring must **be performed on a storm event that results in an actual discharge** from your site (“**measurable storm event**”) that follows the preceding measurable storm event by at least 72 hours (3 days).
- **Samples must be collected within the first 30 minutes of a measurable storm event.**
  - If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample must be collected as soon as practicable after the first 30 minutes and **documentation must be kept with the SWPPP explaining why it was not possible to take samples within the first 30 minutes.**

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**New EPA Requirements –  
Quarterly Visual Monitoring**

- For each monitoring event, except snowmelt monitoring, you must **identify the date and duration (in hours)** of the rainfall event, rainfall total (in inches) for that rainfall event, and **time (in days) since the previous measurable storm event**.
  - For snowmelt monitoring, you must identify the date of the sampling event.

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**New EPA Requirements –  
Quarterly Visual Monitoring**

- **Areas Subject to Snow:** In areas subject to snow, **at least one quarterly visual assessment must capture snowmelt discharge**.
- **Substantially identical outfalls:** If your facility has two or more outfalls that you believe discharge substantially identical effluents, you may conduct quarterly visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s) – provided that you **perform visual assessments on a rotating basis of each substantially identical outfall** throughout the period of your coverage under this permit.

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**New EPA Requirements –  
Quarterly Visual Monitoring**

- At a minimum, your **documentation** of quarterly visual monitoring must include:
  - Sample location(s);
  - Sample collection date and time, and visual assessment date and time for each sample;
  - Personnel collecting the sample and performing visual assessment, and their signatures;
  - Nature of the discharge (i.e., runoff or snowmelt);
  - Results of observations of the stormwater discharge;
  - **Probable sources of any observed stormwater contamination;** and
  - **If applicable, why it was not possible to take samples within the first 30 minutes of discharge from a qualifying event.**

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### New EPA Requirements – Corrective Action

- Within 24 hours of discovery of any significant deficiencies, you must document the following information :
  - Identification of the condition triggering the need for corrective action review;
  - Description of the problem identified; and
  - Date the problem was identified.
- Within 14 days of discovery of any significant deficiency, you must document the following information :
  - Summary of corrective action taken or to be taken;
  - Notice of whether SWPPP modifications are required as a result of this discovery or corrective action;
  - Date corrective action initiated; and
  - Date corrective action completed or expected to be completed.
- You must submit this documentation in an annual report and retain a copy onsite with your SWPPP.

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### EPA Multi-Sector General Permit

Effective 9/29/08 – 9/29/13  
[www.epa.gov/npdes/pubs/msgp2008\\_finalpermit.pdf](http://www.epa.gov/npdes/pubs/msgp2008_finalpermit.pdf)

**Note:** These new regulations have NOT yet been adopted by the State of Oklahoma.  
(OKR05 expires May 2, 2011)

A committee is being formed to begin creation of the new Oklahoma Multi-Sector General Permit.

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### “Significant Deficiencies”

- In the Corrective Action section:
  - “Significant Deficiencies” means any condition listed in parts 3.1 & 3.2

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### 3.1 Conditions Requiring Review and Revision to Eliminate Problem

- If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated in the future:
  - an unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility;
  - a discharge violates a numeric effluent limit;
  - you become aware, or EPA determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
  - an inspection or evaluation of your facility by an EPA official, or local, State, or Tribal entity, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
  - you find in your routine facility inspection, quarterly visual assessment, or comprehensive site inspection that your control measures are not being properly operated and maintained.

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### 3.2 Conditions Requiring Review to Determine if Modifications Are Necessary

- If any of the following conditions occur, you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit:
  - construction or a change in design, operation, or maintenance at your facility significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharged; or
  - the average of 4 quarterly sampling results exceeds an applicable benchmark. If less than 4 benchmark samples have been taken, but the results are such that an exceedence of the 4 quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than 4 times the benchmark level) this is considered a benchmark exceedence, triggering this review.

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