

Best Management Practices in Stormwater Pollution Planning and Development

UNDERSTANDING MS4 PERMITS & TMDLS



What is Stormwater?

- Stormwater runoff is water from rain that flows off the land surface from impervious surfaces or that cannot be absorbed by the soil.
- As stormwater runoff flows over the land surface, it often picks up pollutants such as sediment, nutrients, pathogens, organic materials, and debris.







Impacts of Stormwater

- Sediment and debris
- Oil and grease
- Erosion

Stormwater Permits

- The LPDES stormwater permit program requires operators of construction projects to obtain authorization to discharge stormwater under an LPDES construction stormwater permit.
- Since 1990, any project over 5 acres has been covered.
- Since March 2003, any project from 1 to 5 acres is also covered.

Some vocabulary...

- Larger Common Plan of Development or Sale – A situation in which multiple construction activities are occurring in a contiguous area. The activities could be taking place at different times and on different schedules and even use different contractors – but the key is that these different construction activities are part of one common plan of development.

More...

- Operator – An operator is someone who has control over and the ability to modify construction plans and specifications (such as the owner, developer, and/or general contractor) OR someone who has control over the day-to-day operations at a site that are necessary to ensure compliance with the permit requirements.

And more...

- Best Management Practices (BMPs) – a BMP is a method used to prevent or control stormwater runoff and the discharge of pollutants, including sediment, into local water bodies. Silt fences, inlet protection, and site-stabilization techniques are typical BMPs on a construction site.

Do you need a permit?

- Are you a construction site of 1 acre or greater?
- Are you a construction site of less than one acre, but part of a larger common plan of development (a subdivision)?

Getting the permit...

- The first step is – determine which permit you need.
- Is your site between one and five acres in size?
- If so, you would need the ***Stormwater General Permit for SMALL Construction***

Getting the permit...

- Is your construction site greater than 5 acres?
- Or is it a small construction site within a larger common plan of development?
- If so, you need ***Stormwater General Permit for Construction Activities.***

So now that you know which permit you need...

- Do your homework – **READ** the permit on the LDEQ's website:
www.deq.louisiana.gov
- Click on *permits*, then click on *LPDES Water Discharge General Permits*.

Notice of Intent (NOI)

- Now that you know which permit you will need, submit your Notice of Intent to the LDEQ.
- This form must be submitted at least 48 hours prior to commencing construction.
- The NOI is also on the LDEQ's website.

Who submits the NOI?

- The NOI should be submitted by:
 - The party having operational control over construction plans and specifications; and/or
 - The party having day-to-day operation over those activities at a project site which are necessary to ensure compliance with the stormwater pollution prevention plan or other permit conditions.

What info is in the NOI?

- Facility information
- **SWPPP information**
- Discharge information
- Other permits...
- Compliance history
- Site history
- CERTIFICATION
- <http://www.deq.louisiana.gov/permits/lpdes/csw-g.doc>

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF PERMITS AND COMPLIANCE
Baton Rouge, LA 70824-4111
PHONE: (504) 225-1311

LEDES NOTICE OF INTENT (NOI) TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY GREATER THAN 5 ACRES
(General additional permit - Form 601)

Submittal of this Notice of Intent constitutes notice that the party identified in Section 1 of this form desires to be authorized to use a stormwater management plan for stormwater discharge associated with construction activity in Louisiana. Submission of this Notice of Intent also constitutes the representation of the Storm Water Pollution Discharger that material under the general permit will begin at the time the permittee commences work on the construction project identified in Section 1 of this form.

SECTION 1 - FACILITY INFORMATION

A. Permit to be issued to the following (must have operations issued prior to facility opening - see LAAC 505:2702, 505:2703, 505:2704, 505:2705, and 505:2706)

1. Legal Name of Applicant/Owner
(Company, Partnership, Corporation, etc.) _____
Facility Name _____
Mailing Address _____ Zip Code _____
If applicant cannot provide an exact street name, state nearest street, phone or PO address _____

Please check status: Public Non-Public Non-Public Other _____

2. Location of Facility. Please provide a specific street, road, highway, railroad, or other State Route Number of the facility for which the NOI is being submitted.

City _____ Parish _____
First Date Construction _____
Latitude _____ Longitude _____
Method of Discharge Description _____
Is the facility located on Indian Land? Yes No

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Your SWPPP

- Read carefully...Your NOI says “Submission of this NOI also constitutes that implementation of the SWPPP required under the general permit will begin at the time the permittee commences work on the construction project identified in Section II below.”

Some basic info...

- Your SWPPP needs to be done BEFORE you start a project!
- Make sure it's signed.
- Post a notice.
- Keep it current.
- Keep a copy of your permit with your SWPPP.

Basic Components of a SWPPP

- Site Description
- Site Assessment
- Controls – Maintenance & Inspections
- Certifications

Site Description

- Nature of project;
- Major activities;
- General map;
- Receiving water(s);
- Endangered species;
- National Historic Register.

Site Assessment

- Total area of site & area of disturbed site;
- Drainage patterns;
- Runoff coefficient (pre- & post-construction)

What is a runoff coefficient?

- The runoff coefficient (C) is the partial amount of the total rainfall which becomes runoff.
- The less rainfall that is absorbed into the ground, evaporates, or is otherwise absorbed on site, the higher the C value.
- The C value which you are being asked to calculate is the one that represents the final condition of the site after construction is complete.

Table of C Values

TABLE 2.1 TYPICAL "C" VALUES (ASCE 1960)

Description of Area	Runoff Coefficients
Business	
Downtown Areas	0.70-0.95
Neighborhood Areas	0.50-0.70
Residential	
Single-family areas	0.30-0.50
Multiunits, detached	0.40-0.60
Multiunits, attached	0.60-0.75
Residential (suburban)	0.25-0.40
Apartment dwelling areas	0.50-0.70
Industrial	
Light Areas	0.50-0.80
Heavy areas	0.60-0.90
Parks, cemeteries	0.10-0.25
Playgrounds	0.20-0.35
Railroad yard areas	0.20-0.40
Unimproved areas	0.10-0.30
Streets	
Asphalt	0.70-0.95
Concrete	0.80-0.95
Brick	0.70-0.85
Drives and walks	0.75-0.85
Roofs	0.75-0.95
Lawns - coarse textured soil (greater than 85% sand)	
Slope: Flat, 2%	0.05-0.10
Average, 2-7%	0.10-0.15
Steep, 7%	0.15-0.20
Lawns - fine textured soil (greater than 40% clay)	
Slope: Flat, 2%	0.13-0.17
Average, 2-7%	0.18-0.22
Steep, 7%	0.25-0.35

Controls – Maintenance & Inspections

- Consider the Parish's and the City's particular requirements.
- Select Erosion & Sediment Controls
- Other controls
- Select Storm Water Management Controls
- Indicate the location of controls on the site map
- Prepare an inspection & maintenance plan
- Prepare a description of controls
- Prepare a sequence of major activities

Erosion & Sediment Controls

- Short & Long term goals and criteria:
 - Stabilization – temporary seeding; permanent seeding; mulching.
 - Structural practices – diverting flows, silt fences, earth dikes, etc...

Soil Erosion Control Tips

- Design the site to infiltrate stormwater into the ground and to keep it out of storm drains
- Minimize the amount of exposed soil on site.
- Reduce the velocity of stormwater both onto and away from the project area.
- Protect defined channels immediately with measures adequate to handle the storm flow expected.
- Keep sediment on site
- Maintaining all BMPs is critical to ensure their effectiveness during the life of the project.

Other Controls

- General housekeeping of site
- Waste disposal, sanitary sewer
- Discharges from cement truck washout, etc.
- Spill prevention plans
 - Your SWPPP should contain a list of possible pollutants on site (gasoline, oil, etc.)
 - Report releases of reportable quantities (emergency notification (225) 925-6595 or online @ D.E.Q.'s website)

Stormwater Management Controls

- A description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed must be included in the SWPPP.
- These controls include retention ponds, detention ponds, infiltration measures, vegetated swales, and natural depressions.







Stormwater Management cont'd

- After construction is completed, stormwater BMPs that discharge pollutants from point source may need authorization under a separate LDPEs permit.

Maintenance

- A description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and to determine that other protective measures identified in the site plan are effective and in good operating condition must be provided.



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11 10:57 AM



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11 10:02 AM



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UNDERSTANDING MS4 PERMITS & TMDLS



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ENVIRONMENTAL QUALITY







Inspections

- You must specify in your SWPPP which schedule will be followed:
 1. At least every 7 days, or
 2. At least once every 14 calendar days, before anticipated storm events (or series of storm events such as intermittent showers over one or more days) and within 24 hours of the end of a storm event of .5 inches or greater.

Inspections continued

- Where sites have been temporarily stabilized but not finally stabilized, the inspection frequency may be reduced to at least once every month until final stabilization occurs.
- DOCUMENT these inspections.

3 main things to look for during an inspection

- 1. Whether or not the measure was installed or performed correctly;
- 2. Whether or not there has been any damage to the measure since it was installed or performed;
- 3. What should be done to correct any problems with the measure.

Allowable Non-Stormwater Discharges

- Discharges from fire fighting activities
- Fire hydrant flushings
- Waters used to wash vehicles, external building washdown, and pavement washwaters where detergents are not used.
- Waters used to control dust
- Air conditioning condensate
- Landscape irrigation.

Contractor & Subcontractor Responsibilities

- Contractors & Subcontractors IMPLEMENTING stormwater control measures – the SWPPP must clearly identify for each control measure included in the plan, the party that will implement the measure.
- Contractors & Subcontractors IMPACTING stormwater control measures – the permittee shall ensure that contractors/subcontractors who will conduct activities which might impact the effectiveness of control measures, but who do not meet the definition of “operator” are identified in the plan and which control measures might impacted.

Certification & Notification

- The plan should identify an Authorized representative for each operator to sign the plan. The authorized representative must be someone at or near the top of the management chain (or someone who has been delegated to have authority to sign).
- Short term contractors & subcontractors responsible for implementing measures in the SWPPP be listed in the plan with the measures for which they are responsible and that they sign a certification statement that they understand the permit requirements.

Fitting it all together...

- Evaluate your site & the activities at your site;
- Compile a SWPPP;
- Submit your NOI;
- Wait 48 hours and begin your construction.

Remember...

- Keep your plan current – update it when you change contractors, areas have been stabilized, and when major activities have occurred.
- Document everything! And maintain these records for 3 years.

Now that the project is done...

- You need to cancel your permit.
- Submit a Notice of Termination (N.O.T.)
- You can obtain this form at:

<http://www.deq.louisiana.gov/permits/lpdes/csw-t.doc>

Small Construction Sites

- For sites between 1 and 5 acres that are not part of a larger common plan of development:
 - 1. Do NOT submit an NOI
 - 2. Still required to have a SWPPP
 - 3. When your project is completed you must submit a Completion Report

Completion Report

- The completion report is due no later than January 28th in the year after you have completed your small construction project.
- The completion report can be obtained at:
[http://www.deq.louisiana.gov/permits/lpdes/SCA
CR.doc](http://www.deq.louisiana.gov/permits/lpdes/SCA_CR.doc)

When LDEQ shows up...

- 99% of storm water inspections are complaint related.
- We will want to see your BMPs in place and that your SWPPP is being implemented properly.

LDEQ Contacts

- Dionne Magness, Inspections Division
 - (504) 736-7744
- Small Business Assistance Program
 - (504) 736-7701

Useful Websites

- EPA www.epa.gov
- LA DEQ. www.deq.louisiana.gov
- Construction Industry Compliance Assistance Center www.cicacenter.org