



CITY OF LOUISVILLE STORMWATER MANAGEMENT PLAN (SWMP) CONSTRUCTION ACTIVITIES

Name and Location of Project:

Operator: (Name, Address, and Phone Number)

Person Responsible for Implementing SWMP (SWMP Administrator):

Name, Address, Phone Number, and Email Address

City Permit Number: _____

CDPHE Stormwater Permit Number: _____

NOTE: A WORKING COPY OF THIS SWMP MUST BE KEPT AT THE CONSTRUCTION SITE OR BE LOCALLY AVAILABLE FOR REVIEW BY the CITY OF LOUISVILLE.

A COPY OF CDPHE'S STORMWATER GENERAL PERMIT FOR THIS PROJECT MUST BE ATTACHED TO THIS SWMP.

GUIDANCE FOR SELECTING AND IMPLEMENTING BMPs IS AVAILABLE IN THE CDPHE STORMWATER PERMIT REQUIREMENTS WEBSITE <http://www.colorado.gov/cs/Satellite/CDPHE-WQ/CBON/1251596875260> AND URBAN DRAINAGE AND FLOOD CONTROL DISTRICT'S DRAINAGE CRITERIA MANUAL, VOL. 3.

PLEASE NOTE, THIS TEMPLATE MAY NOT MEET ALL REQUIREMENTS OF THE CDPHE STORMWATER PERMIT.

ATTACH ADDITIONAL PAGES WHEN NECESSARY TO PROVIDE THE REQUIRED INFORMATION.

Table of Contents

I. Permit Certification Page	
II. Project Description	
III. Site Maps	
A. General Location Map	
B. Detailed Site Map	
C. Discharges Associated with Industrial Activity	
IV Stormwater Management Controls	
A. Identify Pollutant Sources	
B. Best Management Practices	
C. Spill Prevention and Response	
V. Final Stabilization and Long-term Stormwater Management	
VI. Inspection/Maintenance Procedures.....	
VII. Certification of Compliance	
A. Owner/Operator Certification Statement.....	
VIII. Copy of the State CDPS Construction Stormwater Permit	

II. PROJECT DESCRIPTION

Description of the Proposed Construction Activity																	
(e.g., low density residential, shopping mall, highway, etc.).																	
Intended Sequence of Major Soil Disturbing Activities																	
A description of phasing of construction activities to minimize the amount of land disturbance at one time, including a schedule which includes the sequence of construction (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the stormwater management practices or facilities to be employed during each operation of the sequence. Include an estimate of the anticipated start date and final stabilization date. <table border="0"> <tr> <td>1.</td> <td>9.</td> </tr> <tr> <td>2.</td> <td>10.</td> </tr> <tr> <td>3.</td> <td>11.</td> </tr> <tr> <td>4.</td> <td>12.</td> </tr> <tr> <td>5.</td> <td>13.</td> </tr> <tr> <td>6.</td> <td>14.</td> </tr> <tr> <td>7.</td> <td>15.</td> </tr> <tr> <td>8.</td> <td>16.</td> </tr> </table>		1.	9.	2.	10.	3.	11.	4.	12.	5.	13.	6.	14.	7.	15.	8.	16.
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Total Area of Site (acres)	Total Area to be Disturbed (acres)																
Pre-Project Runoff Coefficient																	
Post-Project Runoff Coefficient																	
Provide a description of the existing soil, land use, and/or water quality data of any discharges from the site. This information only needs to be included if it was used in development of the SWMP, such as for BMP design. Existing water for adjacent waterways that may receive discharges from the site is also recommended, if available.																	

Provide a description of the existing vegetation at the site and an estimate of the percent vegetative ground cover.

Receiving Water(s): Identify the name and location of the streams, rivers, ditches, drainages, lakes or wetlands (both perennial and intermittent) that will receive runoff from the construction site. If the site will drain to the municipal storm drain system, identify the receiving water to which the system discharges.

III. SITE MAPS

Attach A. General Location Map and B. Detailed Site Map. Note that site maps must be updated and revised as site conditions change and new BMPs are implemented.

The Detailed Site Map must indicate the following:

1. Construction site boundaries.
2. Existing and proposed topography and drainage patterns drawn to scale with north arrow.
3. Areas of soils that will be disturbed and areas that will not be disturbed.
4. Locations of structural and non-structural controls identified in SWMP (including individual lot controls when necessary)
5. The location and volume of structural BMPs, such as sediment ponds and stormwater management basins.
6. Areas of cut and fill.
7. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site.
8. Location of existing and planned buildings, roads, parking facilities, and utilities.
9. The location of permanent BMPs to be used to control pollutants in stormwater after construction has been completed.
10. Locations of areas designated for the storage or disposal of building materials, equipment, solid, sanitary, and toxic wastes (including dumpster areas), compounds such as fertilizers, lime, asphalt, or concrete and vehicle fueling, concrete truck washout, designated construction entrances, dedicated asphalt/concrete batch plants, in-stream activities including stream crossings.
11. Details for all BMPs used onsite.
12. Location and description of any discharge(s) associated with Industrial Activity other than construction, including any stormwater discharges from dedicated asphalt or concrete plants covered under General Permit.
13. Provide Maps on 24" x 36" paper.

IV. STORMWATER MANAGEMENT CONTROLS

A. Identify Potential Pollutants and Activities

Below is a comprehensive source list of potential sediment and pollutants associated with construction, which may reasonably be expected to affect the quality of stormwater discharges from the construction site. Add rows if additional potential sources of pollution are not included.

Identify and list all potential sources of pollution, which may reasonably be expected to affect the quality of stormwater discharges from the construction site. Identify if a potential pollutant source that is applicable to the construction site by double right clicking Yes/No then type "yes" or "no" in the applicable information.

Control measures must be properly selected, installed, and maintained in accordance with the manufactures specifications and good engineering practices. Controls must be inspected at least weekly and sediments must be removed from when the design capacity has been reduced to 50%. Construction materials, chemicals, wastes, litter and debris must be prevented from becoming a stormwater pollutant source. Offsite material storage areas used solely by the permitted project must also be addressed.

Potential Pollution Source	Potential on This Site?	Control Measures (Contractor to fill out measures for each pollution source identified as "Yes")	BMP Implementation
All Disturbed and Stored Soils - grading - spoils - stockpiles	Yes/No		1. Install BMPs prior to major construction. 2. Delineate protected areas prior to major construction. 3. Material management effective once material arrives on site. 4. Place trash receptacles on site prior to major construction. 5. Implement spill response procedures as needed. 6. Implement stockpile management controls as needed. 7. Delineate vehicle travel areas prior to major construction, adjust as needed.
Vehicle Tracking of Sediments - all permitted area vehicle traffic	Yes/No		1. Install BMPs prior to major construction. 2. Delineate vehicle travel areas prior to major construction, adjust as needed. 3. Install VTC BMP prior to construction. 4. Implement street sweeping in conjunction with start of major construction and as needed.

Potential Pollution Source	Potential on This Site?	Control Measures (Contractor to fill out measures for each pollution source identified as "Yes")	BMP Implementation
Management of Contaminated Soils - fluid spills	Yes/No		1. Implement hazardous materials management as needed. 2. Implement spill response procedures as needed. 3. Implement stockpile management controls as needed.
Loading and Unloading Activities - construction materials	Yes/No		1. Materials management effective once materials arrive on site and effective throughout the project. 2. Delineate vehicle travel areas prior to major construction, adjust as needed.
Outdoor storage activities - building materials - fertilizers - chemicals	Yes/No		1. Designate materials storage areas prior to the delivery of materials. 2. Materials left outdoors must be covered if they can become a pollutant when mixed with water. 3. Secondary containment must be used for hazardous materials.
Vehicle equipment maintenance and fueling - gas - diesel - oil - lubricants - hydraulic fluids	Yes/No		1. Implement spill prevention controls as needed. 2. Designate fuel storage area as needed. 3. Implement spill response and notification procedures as needed.
Dust Control - Wind Transport - Saw Cutting Activities	Yes/No		1. Implement dust control in conjunction with soil disturbing activities and as needed. 2. Implement temporary soil stabilization measures as soon as practical. 3. Implement street sweeping at the start of major construction and maintain as needed. 4. Delineate protected areas prior to major construction.
Routine maintenance activities - fertilizers - pesticides - detergents - fuels - solvents - oils, etc.	Yes/No		1. Designate materials storage areas prior to their arrival on site. 2. Practice hazardous waste management procedures during the storage of such materials. 3. Install sediment and erosion control BMPs prior to conducting landscape activities.

Potential Pollution Source	Potential on This Site?	Control Measures (Contractor to fill out measures for each pollution source identified as "Yes")	BMP Implementation
On-site waste management practices	Yes/No		1. Place trash receptacles on site prior to major construction. 2. Place designated watertight receptacles or washout area(s) prior to proceeding with an activity that is known to produce liquid waste. 3. Implement hazardous waste management procedures as needed.
Concrete truck/equipment washing	Yes/No		1. Install designated concrete washout(s) prior to commencement of concrete activities.
Dedicated asphalt and concrete batch plants	Yes/No		1. Install secondary containment BMPs prior to using dedicated batch plants. 2. Dedicated washout area must be established before construction begins. 3. Trash receptacles on site prior to major construction activities. 4. Material management effective once material arrives on site.
Non-industrial waste sources – worker trash and portable toilets	Yes/No		1. Place temporary sanitary facilities on site as needed and protect from off-site discharge. 2. Trash receptacles on site prior to major construction activities.
Waste from geo-technical testing, potholing, saw cutting, and utility borings for locates	Yes/No		1. Implement dust control in conjunction with soil disturbing activities and as needed. 2. Designate materials storage areas prior to their arrival on site. 3. Trash receptacles on site prior to major construction activities.
Fly Ash - concrete - flow fill	Yes/No		1. Install designated concrete washout(s) prior to commencement of concrete activities. 2. Implement hazardous waste management procedures as needed.
Demolition of Structures - concrete - asphalt - steel	Yes/No		1. Implement dust control in conjunction with soil disturbing activities and as needed. 2. Trash receptacles on site prior to major construction activities.
Other areas or procedures where potential spills can occur	Yes/No		1. Implement hazardous waste management as needed. 2. Implement spill response and notification procedures as necessary.

Potential Pollution Source	Potential on This Site?	Control Measures (Contractor to fill out measures for each pollution source identified as "Yes")	BMP Implementation
Construction Dewatering	Yes/No		* Construction Dewatering water can NOT be discharged to surface waters or to storm sewer systems without separate permit coverage. The discharge of Construction Dewatering water to the ground, under specific conditions, may be allowed by the Stormwater Construction Permit when appropriate BMPs are implemented. Additional information on this subject is available in the Stormwater Fact Sheet – Construction, available from the Division’s web site at http://www.colorado.gov/cs/Satellite/CDPHE-WQ/CBON/1251596875260
Process water from power washing of buildings, streets, sidewalks, driveways, etc	Yes/No		
Insert any additional pollutant sources associated with construction that are not listed above here. (add rows as necessary)			

Potential hazardous material/chemical pollutants, to stormwater runoff:

Potential On This Site	Material/ Chemical	Physical Description	Stormwater Pollutants	Location
Yes/No	Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Yes/No	Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	Staging areas
Yes/No	Asphalt	Black solid	Oil, petroleum distillates	Streets
Yes/No	Concrete and Grout	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, sidewalk, building construction
Yes/No	Curing compounds	Creamy white liquid	Naphtha	Curb and gutter, sidewalk, driveways, concrete slabs
Yes/No	Hydraulic oil/ fluids	Brown, oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Yes/No	Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment/staging area
Yes/No	Antifreeze/ coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment or vehicles
Yes/No	Sanitary toilets	Various colored liquid	Bacteria, parasites, and viruses	Staging areas
Insert any additional hazardous material/chemical pollutants that are not listed above here. (add rows as necessary)				

B. Description of Best Management Practices

Provide a description of the temporary structural BMPs (e.g. temporary diversion dikes, silt fences, fiber rolls, check dams, sediment traps, storm drain inlet protection, etc.) that will be used during construction to divert or filter flows from exposed soils, reduce flow velocities or temporarily store flows and limit runoff from the exposed areas of the site. All sediment basins must be designed to meet most recent City of Louisville Construction and Design standards and/or Urban Drainage and Flood Control Manual, most recent volume, approved or referenced by the CDPHE.

Multiple structural BMPs are used during each phase of construction to minimize erosion and the transport of sediment. Describe the BMPs that will be implemented to control pollutants in stormwater discharges. For each major activity identified, complete the following:

- ✓ Clearly describe appropriate control measures.
 - ✓ Describe the maintenance and inspection procedures that will be used for that specific BMP.
 - ✓ Include protocols, thresholds, and schedules for cleaning, repairing or replacing damaged or failing BMPs.
- Included below is the main BMP description *Expected Level of BMP Information* that addresses the following:
- ✓ What BMPs will be installed? (Phase of Implementation)
 - ✓ When will the BMPs be implemented and/or removed?
 - ✓ Where will the BMPs be implemented?
 - ✓ How will the BMPs be maintained?

Example:

1. BMP: Silt Fence (SF)

What: A woven geotextile fabric attached to wooden posts and trenched into the ground. It is used to intercept sheet flow runoff from disturbed areas.

When/Installation Schedule: Silt fence shall be installed prior to all land disturbing activities.

Where: Silt fence shall be installed at the locations identified on the accepted SWMP. It is typically installed along the contour of slopes.

Installation, Inspection, and Maintenance: Silt fence shall be installed per the silt fence detail provided on the plan. The Permittee shall inspect and maintain all silt fence throughout construction. Any section of silt fence that has a tear, hole, slumping, undercutting or has been bypassed should be replaced with a new section. Accumulated sediment should be removed before it reaches a depth of 50% the height of the silt fence.

2. BMP :

What:

When/Installation Schedule

Installation, Inspection, and Maintenance:

3. BMP :

What:

When/Installation Schedule

Installation, Inspection, and Maintenance:

4. BMP :

What:

When/Installation Schedule

Installation, Inspection, and Maintenance:

5. BMP :

What:

When/Installation Schedule

Installation, Inspection, and Maintenance:

6. BMP :

What:

When/Installation Schedule

Installation, Inspection, and Maintenance:

7. BMP :

What:

When/Installation Schedule

Installation, Inspection, and Maintenance:

Attach additional sheets as necessary.

C. Spill Prevention and Response

Describe the response measures that will be provided if a spill occurs- include emergency contacts and telephone numbers, and directions on how to properly dispose of toxic or hazardous wastes.

The following information specific to the City of Louisville should be included:

Reporting Spills

Any spill or discharge of any pollutant (ex: oil, paints, fuels, hazardous liquids, sediment, or super-chlorinated water) that reaches storm drains or enters “Waters of the State” must be reported to the CDPHE Emergency Spill Reporting line at 1-877-518-5608. If a spill or leak is of a hazardous substance that exceeds 1 pint or is of an unknown substance of any amount, call 911 and notify the Colorado Department Public Health and Environment (CDPHE) 24-hour emergency spill notification hotline at 1- 877-518-5608, immediately. If the spill is more than 25 gallons of a petroleum product from a regulated storage tank or delivery truck or any amount that causes a sheen on nearby surface water, it must be reported to the Division of Oil and Public Safety at the Colorado Department of Labor and Employment within 24 hours at (303) 318-8547 or to CDPHE Emergency Spill Reporting line at 1-877-518-5608 – if after normal business hours. If cleanup cannot be accomplished within 24 hours, the Division of Oil and Public Safety must be notified immediately.

For non-emergency spills, call 303-441-4444 and page Boulder County Public Health Environmental Emergency Response Team to assist with cleanup.

Report spills to the Site Supervisor (Name): _____ Phone
(____)_____

Report spills that reach storm drains or waterways to your city’s Stormwater Coordinator:
Cameron Fowlkes, (303) 335-4611

V. Final Stabilization and Long-term Stormwater Management

A. Final Stabilization and Long-term Stormwater Management

Describe the permanent stabilization (e.g. permanent revegetation and/or rolled erosion control products) that will be provided on disturbed portions of the site where construction activities have permanently ceased. Final stabilization with vegetation must achieve a uniform cover with a minimum density of 70% of what was on the site prior to commencement of construction activities. Permanent stabilization must be achieved prior to CDPHE issuing an **INACTIVATION NOTICE**.

Include a description of the practices that will be used to achieve final stabilization of all disturbed areas at the site, including, but not limited to:

- Seed mix selection and methods of seed application
- Soil preparation and amendments
- Straw, hydromulch, rolled erosion control products
- Sediment control BMPs to be maintained until final stabilization is achieved

(continued from previous page)

VI. INSPECTION/MAINTENANCE PROCEDURES

The contractor or his qualified agent is required to inspect all disturbed areas, areas used for storage of materials and equipment that are exposed to precipitation, including vehicle entrance and exit locations and all erosion and sediment control BMPs. Inspections shall occur EVERY 14 days, and after any actual precipitation or snowmelt event that causes surface erosion.

A. Inspection and Maintenance of Stabilization and Structural Practices

Provide a description of the practices that will be used to inspect and maintain all Temporary and Permanent Stabilization Practices described in Section IV. Stormwater Management Controls,

VII. CERTIFICATION OF COMPLIANCE

- A. This SWMP must be certified that it is consistent with all applicable Federal, State and Local regulations, or other approved site plans or permits. It is to be prepared in accordance with the CDPHE Stormwater Management Plan regulations and requirements. This SWMP must be updated as necessary to remain consistent with changes in other site plans that effect soil disturbing activities, site drainage patterns or any other activity that may impact stormwater runoff quality.
- B. Minor modifications to SWMP: Based on inspections performed by the owner or by city personnel, modifications to the SWMP will be necessary if at any time the specified BMPs do not meet the objectives of this chapter of the Municipal Code or equivalent or better BMPs are implemented. All minor modifications shall be implemented immediately and shall be recorded on the owner's copy of the SWMP which shall be located on site at all times.
- C. Major modifications to SWMP: Whenever there is a significant change in design, construction, operation, or maintenance, which has a significant effect on the hydrology or potential for discharge of pollutants to the MS4 or receiving waters, a revised SWMP shall be submitted to the city for review and approval.

OWNER/OPERATOR 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 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.

Certification:

Print Name

Title

Signature

Date

Print Name

Title

Signature

Date

VIII. Copy of the State CDPS Construction Stormwater Permit