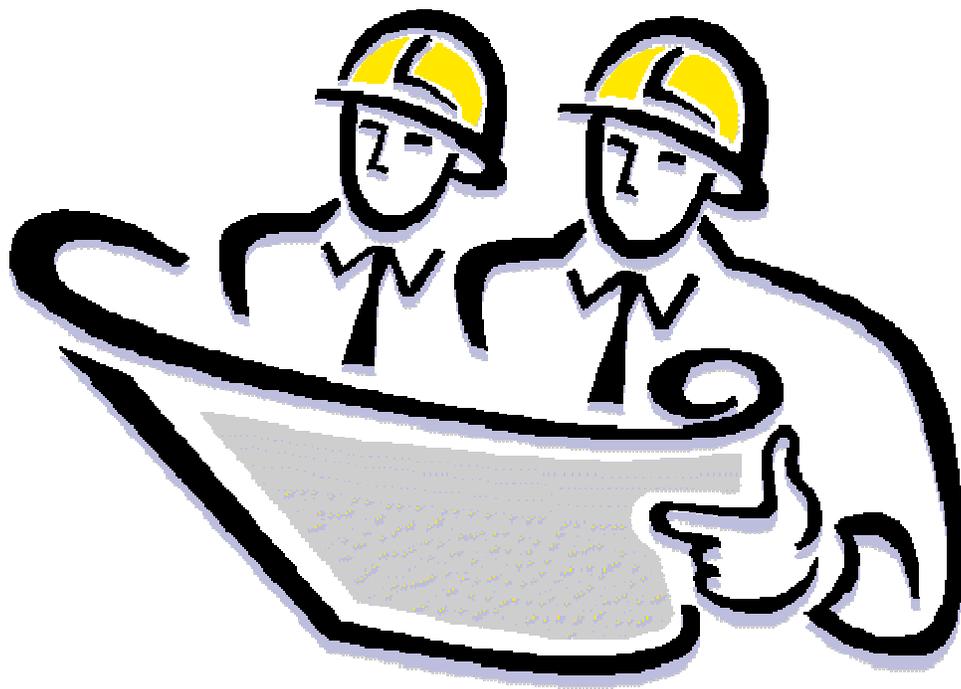


**CITY AND COUNTY OF DENVER  
CONSTRUCTION ACTIVITIES STORMWATER MANUAL**



**Wastewater Management Division  
Department of Public Works**

**City and County of Denver  
Revised June, 2010**

# Table of Contents

<b>PREFACE .....</b>	<b>4</b>
<b>SECTION 1 - Introduction.....</b>	<b>5</b>
<b>Construction Sites Program Goals.....</b>	<b>5</b>
<b>Performance Standards .....</b>	<b>6</b>
<b>Construction Related Permits .....</b>	<b>7</b>
<b>Table 1 - Construction/Demolition Related Permits .....</b>	<b>8</b>
<b>SECTION 2 - When is a Construction Activities Stormwater Discharge Permit (CASDP) Required? 10</b>	
<b>Estimating Area of Disturbance .....</b>	<b>10</b>
<b>Sites Requiring Construction Activities Stormwater Discharge Permit (CASDP) .....</b>	<b>10</b>
CASDP Exemption Criteria.....	10
Utility Projects.....	11
<b>Who Applies for Permit Coverage .....</b>	<b>11</b>
<b>Permitting for Developments with Multiple Owners and/or Operators .....</b>	<b>12</b>
Amending the Existing CASDP .....	12
Transfer of Existing CASDP.....	12
Issuing a New CASDP .....	12
<b>Permit Expiration and Re-submittal Requirements.....</b>	<b>12</b>
<b>Amending an Existing Management Plan and Permit .....</b>	<b>13</b>
Major Modifications .....	13
Minor Modifications.....	13
<b>Other Denver Permit Requirements.....</b>	<b>14</b>
<b>SECTION 3 - Stormwater Management Plan Development .....</b>	<b>15</b>
<b>Management Plan Requirements.....</b>	<b>15</b>
<b>Professional Engineer Requirements .....</b>	<b>15</b>
<b>Management Plan Design Criteria .....</b>	<b>16</b>
<b>Narrative Report Information Worksheet.....</b>	<b>17</b>
<b>Site Drawings and Installation Details .....</b>	<b>17</b>
<b>Supporting Technical Information and Documents .....</b>	<b>18</b>
<b>SECTION 4 – Required Minimum Best Management Practices .....</b>	<b>19</b>
<b>Minimum Site BMP Requirements .....</b>	<b>19</b>
<b>Site Specific BMP Requirements.....</b>	<b>20</b>
Potential for High Flow Conditions .....	20
<b>Steep Slopes .....</b>	<b>20</b>
On-site Drainageway .....	20
Contaminated Site.....	20
<b>Permittee SWMP Inspections .....</b>	<b>21</b>
<b>BMP Maintenance .....</b>	<b>21</b>

**SECTION 5 - Required Standard Notes..... 23**

**SECTION 6 – Active Site Compliance ..... 25**

    Documentation ..... 25

    Field Inspection Sequence..... 26

    BMP Maintenance ..... 27

**SECTION 7 - Compliance Assistance and Enforcement ..... 28**

    Compliance Objective ..... 28

    Enforcement Types..... 28

**Attachment A – SWMP Pre-Submittal Check List..... 30**

**Attachment B – SWMP Narrative Report Information Worksheet ..... 33**

**Attachment C - Notice of Permit Transfer and Acceptance Form ..... 42**

**Attachment D - CASDP Inactivation Request Form..... 45**

## PREFACE

This document establishes formatting and minimum plan design criteria, standards and requirements used to regulate stormwater plan preparation, permitting, field implementation, and enforcement of the City and County of Denver (**Denver or City**) Stormwater Criteria for Construction Activities. These criteria establish minimum standards to comply with permitting requirements based on preparation and approval of Stormwater Management Plans (**SWMP or Management Plan**) for active land development and significant redevelopment within the Corporate Boundaries of the Denver. These Management Plans shall be submitted for review and approval to ensure that minimum design standards are met to reduce potential stormwater pollutants from demolition and construction activities from entering Denver's Municipal Separate Storm Sewer System (**MS4**). The approved Management Plan is used in the issuance of the Construction Activities Stormwater Discharge Permit (**CASDP**). A CASDP constitutes the authorization to discharge treated stormwater from an active demolition or construction-site and is required prior to beginning any infield activities for the proposed project. Project characteristics or conditions that require the CASDP are defined under Section 2.0 of this document. Compliance with CASDP requirements and this criterion is mandatory. Failure to comply with the CASDP or Denver rules and regulation may result in escalating enforcement resulting in civil or criminal penalties, respectively.

*This criterion is subject to revision at any time and it is the permittees responsibility to insure compliance with the current regulation, criteria and industry standards. Contact the Water Quality/NPDES Section of the Department of Public Works Wastewater Management Division (WMD) at 2000 West 3rd Avenue, Denver Colorado 80223, to obtain information on recent revisions at (303) 446-3400, 311 for calls originating in Denver, or <http://www.denvergov.org> .*

## SECTION 1 - Introduction

The City and County of Denver Stormwater Criteria for Demolition and Construction Activities (**Manual**) establishes minimum design standards and required format for development of Stormwater Management Plans (**SWMP or Management Plans**) to minimize potential pollutant impacts to stormwater during all phases of construction within the corporate boundaries of Denver. These criteria were established to help mitigate potential soil erosion, off-site sediment transport, and other potential stormwater pollutant sources associated with construction related activities from impairing, fouling, or choking of the Municipal Separate Storm Sewer System (**MS4**) and receiving waters. These criteria are enforced during the period of construction from just prior to the start of earth disturbance until final site stabilization. Management Plans for demolition and construction activities must be developed and submitted to the Denver's permitting agency for review and approval prior to issuance of a Construction Activities Stormwater Discharge Permit (**CASDP**). Project specific criteria defining when a Management Plan and CASDP are required is provided in Section 2 of this document.

*General Principles – Applicability.* Water quality must be addressed in the very beginning of the site development process to ensure that structural and non-structural erosion control and pollution prevention best management practices (**BMPs**) are incorporated into the site design, demolition, and construction phasing. Benefits of this practice include better site designs, more cost-effective BMPs selection, and reduced maintenance costs. Site planning and drainage planning should, whenever possible, occur concurrently with preparation of Management Plan, and post-construction water quality control design.

The permittee is the primary responsible party for day to day compliance with Denver's CASDP. The CASDP is to be considered a legally binding agreement between the permit holder and the City, subject to compliance inspection and enforcement. Escalating enforcement can result in compliance assistance, warnings, corrective orders, cease and desist orders, stop work orders, and administrative hearings to assess civil penalties. These infractions are also subject to potential referral to the Colorado Department of Public Health and Environment's Water Quality Control Division.

Because active construction is considered dynamic in nature, the permittee is responsible for BMP selection, BMP modification, and Management Plan revision and amendment to insure the suitability and effectiveness of both structural and non-structural stormwater BMPs to mitigate erosion potential, sediment migration, and reduce site specific pollutant sources from affecting stormwater quality prior to entering the MS4. A SWMP specific to each development or significant redevelopment project is required. In addition, the initially approved Management Plan is reviewed to ensure compliance with minimum criteria standards and should the approved plan not function as intended, as evidenced by the permittee's self inspections or as determined by the City's findings of fact, additional or revised measures shall be implemented immediately. The permittee is required to implement and document these field changes with BMPs that are technically equal to or greater than those found in the most up to date criteria established by Denver and those found in the Urban Drainage Flood Control District's, Urban Storm Drainage Criteria Manual, Volume III.

### Construction Sites Program Goals

This criteria manual has been developed in response to the "Construction Sites Program" requirements of the State of Colorado CDPS Permit # COS-000001, issued to the City and County of Denver, with the following goals in mind.

#### Program Goals:

1. Protect Denver's MS4, receiving waters and wetlands from damage caused by erosion, sedimentation, chemical wastes, or other pollutants arising from construction activity.
2. Improve the water quality of storm runoff to the maximum extent practicable discharging from active

- construction sites.
3. Prevent accumulation and clogging, from sediment and debris, originating from construction activity, of Denver's MS4.
  4. Prevent discharges of chemicals, chemical wastes, solid waste and other pollutants from construction sites.
  5. Prevent migration of construction debris off site.
  6. Prevent damage to properties adjacent to construction sites arising from sediment, debris, chemical wastes, or other pollutants.
  7. Reduce unintentional soil loss from all construction sites to the maximum extent practicable.

**Goal Attainment Policies:**

1. All development, re-development, street, utility, pipeline, transmission line, and oil exploration projects meeting the criteria for permitting are required to address erosion, sediment control, and potential chemical water quality issues by submitting a Management Plan to the Department of Public Works or its delegate for review and approval.
2. All construction projects, whether required to obtain a permit or not, are subject to inspection and escalating enforcement action by the Denver Public Works Department, Wastewater Management Division (**WMD**) from the beginning of site demolition or site grading until the site has achieved final stabilization and any required permits are closed.
3. Require the use of "Minimum Impact Design" concepts in all stages of project development and construction.
4. All plan reviews and subsequent approvals associated with a project are to be completed before approval of the Management Plan and issuance of the CASDP.

**Performance Standards**

The performance standards for erosion and sediment control work shall be as follows:

1. All regulated land disturbance activities shall be conducted in such a manner as to effectively reduce accelerated soil erosion, and reduce the movement or deposition of sediment off site.
2. All regulated land disturbance activities shall be designed, constructed, and completed in such a manner that disturbed land shall be exposed for a minimum period of time.
3. Soil stabilization measures shall be implemented within fourteen (14) days following completion of grading activities. Stabilization of disturbed areas adjacent to receiving waters or with slopes 3 to 1 and greater shall be completed within seven (7) days following completion of grading activities. Note: Federal and State regulations may soon require stabilization within seven (7) days of completion of grading activities. In such cases, the shorter timeframe shall apply to projects within Denver as well.
4. All sediment resulting from accelerated soil erosion and sediment transport shall be removed to the maximum extent practicable from storm or surface runoff prior to leaving the permitted site area and its associated points of compliance.
5. All temporary facilities for conveying water around, through, or from land disturbed by construction activity shall be designed and constructed so as to limit flows to non-erosive velocities.
6. All temporary erosion and sediment control BMPs shall be removed and locations permanently stabilized when land disturbing activities are completed.
7. Final landscape or other stabilization of disturbed land shall take place as soon as practicable upon completion of construction activity in that part of the development.
8. All construction wastes, fuel, lubricants, chemical storage, trash, or debris shall be contained on-site and protected from contact with rainfall or surface runoff.
9. All chemical wastes, sanitary waste, trash, debris, or contaminated soil shall be periodically removed from the construction site and disposed of properly.

## Construction Related Permits

Below is a chart of common construction activities, types of permits, and references to informational links to support obtaining of these permits. The list provided is for informational purposes and to assist with planning, scheduling, and completing construction projects in Denver. It is not intended to be a complete list of all regulated activities or permits that may be required for your project. If your proposed activity is not listed on the following table it does not necessarily mean that the activity is not regulated.

**Table 1 - Construction/Demolition Related Permits**

Activity	Type of Permit	Contact Information	References
<b>Construction or demolition of any building</b>	Building Permit	Building Department Phone: 720-865-2705 Fax: 720-865-2880	<a href="http://www.denvergov.org/dep/home.asp?depid=416">http://www.denvergov.org/dep/home.asp?depid=416</a>
	Sewer Use and Drainage Permit (SUDP)	Public Works Permit Operations Phone: 303-446-3759 Fax: 303-446-3755	<a href="http://www.denvergov.org/Permit_Operations/default.asp">http://www.denvergov.org/Permit_Operations/default.asp</a>
<b>1 Acre or larger (re) development or sale plan</b>	Construction Activities Stormwater Discharge Permit (CASDP)	Public Works Permit Operations Phone: 303-446-3759 Fax: 303-446-3755	<a href="http://www.denvergov.org/Permit_Operations/default.asp">http://www.denvergov.org/Permit_Operations/default.asp</a>
	Stormwater Construction Permit (CDPS)	Colorado Department of Public Health and Environment Water Quality Control Division Phone: 303-692-3500	<a href="http://www.cdphe.state.co.us/wq/PermitsUnit/PERMITS/SWpermit srats/SWConstructionPermit.pdf">http://www.cdphe.state.co.us/wq/PermitsUnit/PERMITS/SWpermit srats/SWConstructionPermit.pdf</a>
<b>Sites part of a 1 acre or larger development or sale plan</b>	Construction Activities Stormwater Discharge Permit (CASDP)	Public Works Permit Operations Phone: 303-446-3759 Fax: 303-446-3755	<a href="http://www.denvergov.org/Permit_Operations/default.asp">http://www.denvergov.org/Permit_Operations/default.asp</a>
	Stormwater Construction Permit (CDPS)	Colorado Department of Public Health and Environment Water Quality Control Division Phone: 303-692-3500	<a href="http://www.cdphe.state.co.us/wq/PermitsUnit/PERMITS/SWpermit srats/SWConstructionPermit.pdf">http://www.cdphe.state.co.us/wq/PermitsUnit/PERMITS/SWpermit srats/SWConstructionPermit.pdf</a>
<b>Significant potential for erosion, based on-site characteristics including topography</b>	Construction Activities Stormwater Discharge Permit (CASDP)	Public Works Permit Operations Phone: 303-446-3759 Fax: 303-446-3755	<a href="http://www.denvergov.org/Permit_Operations/default.asp">http://www.denvergov.org/Permit_Operations/default.asp</a>

**Table 1 - Construction/Demolition Related Permits  
(cont.)**

Activity	Type of Permit	Contact Information	References
<b>Site disturbing contaminated soils</b>	Construction Activities Stormwater Discharge Permit (CASDP)	Public Works Permit Operations Phone: 303-446-3759 Fax: 303-446-3755	<a href="http://www.denvergov.org/Permit_Operations/default.asp">http://www.denvergov.org/Permit_Operations/default.asp</a>
	Sewer Use and Drainage Permit (SUDP)	Public Works Permit Operations Phone: 303-446-3759 Fax: 303-446-3755	<a href="http://www.denvergov.org/Permit_Operations/default.asp">http://www.denvergov.org/Permit_Operations/default.asp</a>
<b>Site Disturbing or placing fill in Waters of the US</b>	Construction Activities Stormwater Discharge Permit (CASDP)	Public Works Permit Operations Phone: 303-446-3759 Fax: 303-446-3755	<a href="http://www.denvergov.org/Permit_Operations/default.asp">http://www.denvergov.org/Permit_Operations/default.asp</a>
	Wetlands - 404	Army Corps of Engineers Denver Regional Office Phone: 303-979-4120	<a href="https://www.nwo.usace.army.mil/html/od-tl/introductionto404.html">https://www.nwo.usace.army.mil/html/od-tl/introductionto404.html</a>
<b>Construction dewatering</b>	Minimum Industrial Discharge Permit	Colorado Department of Public Health and Environment Water Quality Control Division Phone: 303-692-3500	<a href="http://www.cdphe.state.co.us/wq/PermitsUnit/PERMITS/GeneralPermits.htm">http://www.cdphe.state.co.us/wq/PermitsUnit/PERMITS/GeneralPermits.htm</a>
<b>Projects disturbing 25 or more acres</b>	Air Pollutant Emission Notice	Colorado Department of Public Health and Environment Air Pollution Control Division Phone: (303) 692-3100	<a href="http://www.cdphe.state.co.us/ap/conperm.html#Applying%20for%20a%20Colorado%20Air%20Permit">http://www.cdphe.state.co.us/ap/conperm.html#Applying%20for%20a%20Colorado%20Air%20Permit</a>
<b>Projects disturbing less than 25 acres lasting more than 6 months in duration</b>	Air Pollutant Emission Notice	Colorado Department of Public Health and Environment Air Pollution Control Division Phone: (303) 692-3100	<a href="http://www.cdphe.state.co.us/ap/conperm.html#Applying%20for%20a%20Colorado%20Air%20Permit">http://www.cdphe.state.co.us/ap/conperm.html#Applying%20for%20a%20Colorado%20Air%20Permit</a>

Note: Please contact Denver's Public Works Permit Operations and Community Planning and Development Departments at [www.denvergov.org](http://www.denvergov.org) for more information, related to your specific situation.

## SECTION 2 - When is a Construction Activities Stormwater Discharge Permit (CASDP) Required?

Denver requires a Construction Activities Stormwater Discharge Permit (**CASDP**) for all clearing, grading, grubbing, demolition, and construction activities within the City and County of Denver that will exceed 1 acre of disturbance. Sites under one acre *may* also require a CASDP if they do not meet specific exemption requirements.

### Estimating Area of Disturbance

Denver uses the following definitions for “area of disturbance” when assessing the need for a CASDP. The following excerpt was taken from the *State of Colorado Stormwater Fact Sheet – Construction, Updated 6/2005*:

**“What is the total estimated area of disturbance?”**

*The area of disturbance is the total area at the site where any construction activity is expected to result in disturbance of the ground surface. This includes any activity that could increase the rate of erosion, including, but not limited to, clearing, grading, excavation, and demolition activities, as well as haul roads and areas used for staging where traffic will result in the disturbance of the ground surface. Construction does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.”*

For example, a CASDP is not required for a roadway resurfacing project that requires milling and overlay; however a CASDP is required for roadway reconstruction projects that require removal, grading and pavement reinstallation to complete the project.

### Sites Requiring Construction Activities Stormwater Discharge Permit (CASDP) (One Acre and Larger and Non-Exempt Smaller Sites)

A Construction Activities Stormwater Discharge Permit (**CASDP**) is required for all construction, demolition, clearing, and grading operations within the City and County of Denver that disturb one (1) acre or more of land. Sites with less than one acre of total disturbance are currently exempt from the CASDP requirements providing they meet *all* of the following site specific criteria:

#### CASDP Exemption Criteria

1. The site is not part of a 1 acre or larger development or sale plan.
2. The site has not been identified by the public works plan reviewer as having a significant potential for erosion, based on site characteristics including steep topography.
3. The site is not known to contain contaminated soils or pre-existing environmental impairment.
4. The site is not directly adjacent to receiving waters (i.e. creek, stream, river, pond, lake, etc.).

A site disturbing less than one (1) acre and not meeting all criteria listed above does not qualify for the CASDP exemption and is required to obtain a CASDP prior to beginning any demolition or construction activities.

Underground utilities, street reconstruction, drainage-way improvement, and landscaping construction projects shall obtain a CASDP if the entire project will impact an area of 1 acre or more.

Some examples of non-exempt site conditions are: properties located in direct or close proximity to drainage features, properties with significant elevation changes across the site, projects that are part of a larger sale plan or filing that requires a CASDP, etc. Please contact Denver's permitting office if you have questions as to whether a CASDP is required for your particular situation. Payment of permit fees is required upon both submission of the Management Plan and issuance of the CASDP.

## Utility Projects

The following methods shall be used to determine the area of disturbance for utility projects that do not meet the standard criteria listed above:

1. If the project encompasses the entire width of public Right-of-Way (R.O.W.) or is not covered by an existing CASDP:
  - a. Define the construction limits of the project.
  - b. Include all construction areas involved with the project.
  - c. Include all area to be used for equipment ingress, egress, lay down and material storage areas.
  - d. Indicate the calculated disturbance area enclosed by the construction limits.
2. If the project is contained in a portion of public R.O.W., the area is calculated as follows:  
Area = (1/2 R.O.W. Width x Project Length) + areas used for ingress, egress, lay down and stock pile.

**The CASDP permit is required in addition to any similar permits issued by the State of Colorado under its Colorado Discharge Permit System (CDPS). It is not "in lieu" of the State Permit and is required even though a State issued permit may already be in place.**

## Who Applies for Permit Coverage

The **permittee** must be a legal entity that meets the definition of either the owner and/or contractor and/or their authorized agent of the construction site in order for this request for permit to legally cover the activities occurring at the site. The permittee must have day-to-day control over demolition and construction activities at the site and is responsible for implementation of the SWMP as discussed in Section 3. Although it is acceptable for the Permittee to meet this requirement through the actions of a contractor, as discussed in the examples below, the Permittee remains liable for violations resulting from the actions of their contractor. Examples of acceptable permittees include:

1. **Owner** - An owner or developer who is operating as the site manager or otherwise has supervision and control over the site, either directly or through contract with an entity such as those listed below.
2. **Contractor** - A contractor or operator with contractual responsibility and operational control (including Management Plan acquisition and implementation) to address the impacts construction activities may have on stormwater quality.
3. **Authorized Agent** - Other agents, such as a consultant acting as construction manager under contract with the owner or operator or developer, with contractual responsibility and operational control to address the impacts construction activities may have on stormwater quality (including Management Plan implementation).

An entity engaged in construction activities may be held liable for operating without the necessary permit coverage if a site does not have a CASDP in place that is issued to either an owner and/or operator. For example, if a site (or

portion of a site) is sold or the contractor at site changes, so that the site's CASDP is then held by a permittee that is no longer either the owner or operator (such as the previous owner or contractor), that permit will no longer cover the new operator's activities and a new CASDP must be issued, or the current permit amended. A separate CASDP is not needed for subcontractors, such as utility service line installers, whose activities result in earth disturbance, but where the permittee is identified as having the operational control to address the potential impacts their activities may have on stormwater quality.

## **Permitting for Developments with Multiple Owners and/or Operators**

For situations where multiple entities meet the definition of owners and/or operators for different portions of a development (e.g., a single development with multiple lots being owned and operated by separate entities), it is essential that the permittees, owners, and operators at the site correctly follow the guidance on which entity may obtain coverage under the CASDP.

When a portion of a permitted site is sold to a new owner, a CASDP must be in place that is held by an entity meeting the definition of owner and/or operator of that sold lot.

This may be accomplished in one of the following ways:

### **Amending the Existing CASDP**

Activities at the sold lot may be covered under an existing CASDP for the project if the current permittee meets the definition of operator for the sold lot. To meet the definition of operator, the permittee must have contractual responsibility and operational control to address the impacts that construction activities at the sold lot may have on stormwater quality (including implementation of the Management Plan for the lot). Therefore, a contract must exist assigning this responsibility to the permit holder on behalf of the new owner and/or operator. Contractual revision for transfer of responsibility is common in cases where the primary contractor at site changes over time, such as when one contractor is responsible for overlot grading and another for building construction.

### **Transfer of Existing CASDP**

A new owner and/or operator of a permitted site may accept full responsibility for the Construction Activities Stormwater Discharge Plan on file by way of "Transfer and Acceptance of Terms of a Construction Activities Stormwater Discharge Permit." The existing permittee and the new owner and/or operator complete a form of transfer (include in Attachment C) acknowledging a change in responsibility for the conditions of the permit and approved management plan. Once signed by both parties and on file with the proper regulating authority, responsibility for all activities covered by the original management plan and permit become the responsibility of the new permittee.

### **Issuing a New CASDP**

A new CASDP may be issued to the new owner and/or operator of the sold lot. The existing permittee and the new owner and/or operator complete an amendment request and revised Management Plan to remove the lot from the existing CASDP and cover it under a new CASDP issued to the owner and/or operator of the sold lot.

## **Permit Expiration and Re-submittal Requirements**

Management Plans expire if construction has not commenced within twelve (12) months of the approval of the plan. Permits issued based on an approved Management Plan shall become void if a period of twelve (12) months shall transpire without any construction related activities occurring on-site. Failure to pay any required one time or annual

permit renewal fees shall also result in the immediate suspension / revocation of the CASDP. Termination of the CASDP for reasons of inactivity will not relieve the permittee of any responsibility for maintenance, site stabilization, or removal of existing BMPs.

Previously accepted Management Plans must be resubmitted to Denver's permit agency when any of the following occur:

1. A change in ownership of the property to be disturbed.
2. Proposed development changes are planned.
3. Proposed grading revisions.

## **Amending an Existing Management Plan and Permit**

Permittees are required to amend, adapt, and adjust their Management Plan to accurately reflect phased construction changes and current conditions at site. Plan modifications are broken into major and minor modifications which have differing requirements.

### **Major Modifications**

Changes to the original Management Plan that remove or add additional area to the project, modify the final hydrology or drainage of the final design, replace approved Management Plans, or otherwise expand or contract the scope of the original project shall require the submission of plans to the Department of Public Works for review and approval.

*Example: A homebuilder with an active permit chooses to purchase and develop ten additional lots across the street from an already permitted project. Rather than develop a new Management Plan and submit for a new permit to cover the additional area, the permittee may apply for an amendment to the existing permit allowing the new lots to be covered under the original permit and controlled with the same procedures deemed appropriate for the original activities. The written request for amendment would follow the same submission guidelines and review procedure as the original permit with the submission of revised drawings, additional details (as needed) and payment of additional review and acreage fees.*

### **Minor Modifications**

Modifications to the original Management Plan that do NOT increase the scope or change hydrology of the project but: modify/improve specific BMPs in use at site, indicate progression in phasing of the project, or specify relocation of previously approved BMPs within the project shall be made in the field by the permittee and thoroughly documented in the permittee's Management Plan narrative and drawings. Such changes are subject to approval by the Manager of Public Works (**Manager**) or his/her duly authorized agent. Should the Manager or his/her agent deem minor field modifications inadequate, permittee may be required to a) make specific modifications as requested by the duly authorized individual in the field or b) return to the original approved design specifications. Minor modifications are allowed, covered under the original permit, and required as part of standard maintenance and operation.

*Example: A permittee is having maintenance difficulty at site with an installed inlet protection BMP due to cars running over the device. Permittee chooses to replace the inlet protection with a device that is contained entirely below ground to minimize maintenance and ensure adequate protection. Such a change would be made in the field, noted on the plan drawings and in the installation details of the plan and approved in the field by the water quality investigator inspecting the site. It would NOT require formal review or payment of additional review fees.*

## **Other Denver Permit Requirements**

### **(<One Acre and Exempt from Construction Activities Discharge Permit)**

Sites less than one (1) acre in size and exempt from CASDP requirements are handled using standard language that is incorporated into the body of a Sewer Use and Drainage Permit (SUDP) or other building permit. Generally, exempt sites under one (1) acre will have stormwater pollution prevention permit conditions as part of the associated permits issued for the following construction related activities:

1. Construction of private sanitary or storm sewer systems
2. Groundwater remediation
3. Interior commercial tenant finish work
4. Construction related to both permanent and temporary structures
5. Single and multi-family residential redevelopment

These permits contain both site specific and standard permit conditions. These conditions require the property owner, developer, or authorized agents to implement good housekeeping measures to minimize potential impacts to stormwater runoff and clogging or fouling of the storm sewer system. These permit conditions are also enforceable by levying of civil penalties of up to \$10,000 a day, pending the severity of the infraction.

An example of standard permit language that may apply:

"The Owner, Site Developer, Contractor, and/or their authorized agents shall remove, to the maximum extent practicable, sediment, mud, construction debris, or other potential pollutants that may have been discharged to or, accumulated in the flow lines, storm sewer appurtenances, and public right of ways of the City and County of Denver as a result of construction activities associated with this permit. All removals shall be conducted daily to prevent adverse impacts to the Municipal Separate Storm Sewer System and receiving waters."

## SECTION 3 - Stormwater Management Plan Development

All (re)development projects including demolition projects, meeting the criteria listed in Section 2 that are located within the corporate boundaries of the City and County of Denver are required to address water quality impairment of precipitation induced runoff from the project site. The level of effort and technical response identified in the Stormwater Management Plan (**SWMP or Management Plan**) requirements will vary depending on the type and size of project. The applicant is required to submit a Sewer Use and Drainage Permit application accompanied by a Management Plan to obtain a Construction Activities Stormwater Discharge Permit (**CASDP**). **No** clearing, grading, demolition, or other construction activities are allowed until the CASDP is issued and Wastewater Management Division has performed an initial inspection of the construction site ensuring compliance with the approved Management Plan.

### Management Plan Requirements

All permitted construction projects are required to address sediment and erosion control through development and implementation of a Management Plan to minimize stormwater pollution to the maximum extent practicable. This requirement applies to all private or public new development or re-development construction projects where there is to be any excavation, trenching, or other disturbance of the existing ground surface.

The Management Plan consists of the following requirements:

1. Narrative Report Worksheet, Attachment B.
2. Proposed site drawings and Best Management Practice (BMP) installation details as they apply to the site conforming to the URBAN STORM DRAINAGE CRITERIA MANUAL, Vol. 3, "Best Management Practices", 1992, (last revised 2008) Urban Drainage and Flood Control District (UDFCD Vol. III) or those established by the City's Department of Public Works.
3. Supporting documentation related to proposed BMPs that are not currently identified in UDFCD Vol. 3 or as published by the City.

The Narrative Report, phased construction plans, installation details and supporting documents should fully address the methods to be used to prevent sediment, debris, and other pollutants from entering the Municipal Separate Storm Sewer System (**MS4**) in and around the project area. Proposed structural and non-structural BMPs should be described with sufficient implementation detail to insure that the logical phases of the proposed construction project meet the performance standards listed in Section 1 of this manual. **Further, it is recommended that applicants take care to ensure that all plans submitted to the City and County of Denver also meet currently established criteria of the Colorado Department of Health and Environment (CDPHE) as all Stormwater Management Plans must meet not only local but State and Federal requirements.**

After reviewing the proposed Management Plan for conformance with minimum standards, the City's plan reviewer will either issue the CASDP or will provide comment regarding needed modifications to the Management Plan. The permit outlines any site specific compliance conditions and serves as a conditional authorization to discharge treated stormwater from a construction site.

### Professional Engineer Requirements

Due to the technical nature of the design of erosion and sediment controls Management Plans are to be prepared by or under the responsible charge of a Professional Engineer registered in the State of Colorado. Non-Professional Engineers with experience in erosion and sediment control may assist in the development of a Management Plan, but they must conduct their work under the supervision of the Professional Engineer. It is the responsibility of the

Professional Engineer to use professional judgment in the development of the Management Plan. If the Professional Engineer determines that any requirements, as applied to their specific project, pose a safety hazard, it is the Engineer's responsibility to notify the permit reviewer of these issues, as well as to recommend an approach to alleviate the concerns.

## Management Plan Design Criteria

**Minimum Impact Design** involves the planning and design of development projects so that construction activities will not adversely affect adjoining property, wetlands, drainage facilities, or "state waters." Management Plans are to incorporate design elements that will minimize the impact of site runoff to the water quality of downstream waters. When dealing with erosion control and sedimentation issues Minimum Impact Design considerations include disturbing a minimum amount of area for a minimum amount of time.

Some aspects of Minimum Impact Design that relate to erosion and sediment control and water quality include:

1. Grading, excavation, or clearing and grubbing operations should disturb the smallest practical area of vegetated, stable soil. Those parts of the site that are not going to be built on immediately should stay in a natural state until grading is necessary.
2. Natural on-site vegetation should be used as part of the "Best Management Practices" used to control erosion, sedimentation, and to improve water quality. Naturally vegetated stable soil is the best defense against erosion. Use of existing vegetation for buffer strips is also more cost effective than attempting to re-establish a vegetated surface.
3. When grading begins and where present, topsoil shall be stripped off and stockpiled during the grading operations for the purpose of redistribution on the site. When topsoil is not present, soil amendment is required as part of the final stabilization approach for the project. The goal is to place original organic materials and growth nutrients where it can best be used to establish a good seedbed for re-vegetation operations.
4. When possible, development of the site should fit the existing topography so that grading can match existing contours and existing natural drainage can be preserved. This allows earth moving activities to be kept to a minimum, preserving the topsoil. This also minimizes the need for temporary sediment entrapping methods.
5. Large sites should be "phased" in such a way that grading, construction, and stabilization are completed with each phase reaching an acceptable level of stabilization before grading begins on the next adjoining phase. Acceptable phased stabilization is achieved when the density of the vegetation cover has reached 70% of pre-developed levels or acceptable levels of mulch, seed and tackifiers to address the site specific conditions to achieve both temporary and final stabilization requirements.
6. Construction schedules should be as specific as possible; and take into account:
  - a. Minimizing the time between grading startup and application of seed and mulch after final grade is reached. Mulching or other stabilization of the site should be completed within 14 calendar days after grading operations are finished in any area even if the area is going to be built on or landscaped in the near future.
  - b. Time of the year: every effort should be made to minimize site exposure during the peak rainy period of April 15 through September 15.
  - c. Growing season: in order to allow for the best possible seeding success and vegetation growth to achieve either temporary or final stabilization.
  - d. Paving streets: with the selected paving material or a temporary stabilization material as soon as possible after street profiles have reached per-paving grades.
7. Re-vegetation of graded areas is the first best possible means of stabilizing soil. Seeding, surface roughening, mulching, applying tackifier, or use of geotextiles and matting are practices to be used as soil stabilization BMPs and shall be implemented within fourteen (14) days following completion of

- grading activities. Stabilization of disturbed areas adjacent to receiving waters or with slopes 3 to 1 and greater shall be completed within seven (7) days following completion of grading activities. Note: Federal and State regulations may require stabilization within seven (7) days of completion of grading activities. In such cases, the shorter timeframe shall apply to projects within Denver as well.
8. Fill areas requiring minimum compaction to 90% Proctor or higher should be kept to a minimum in proposed landscape areas as re-vegetation will be more difficult in compacted soil.
  9. Soil stockpiles that will remain for more than thirty (30) days or are close to existing receiving waters need to have perimeter containment measures installed prior to beginning stockpile construction and require stabilization within fourteen (14) days of stockpile construction. All stockpile areas shall be shown on the field Management Plan. As discussed in item 3 of this section, topsoil stripping, stockpiling, and re-spreading in areas to be vegetated shall be a mandatory practice and identified in the Management Plan submitted for review. Adequate “footprints” for topsoil stockpiles, stockpiles of excess excavated material, and stockpiles for imported materials shall be shown on field Management Plans. Perimeter controls are not required if stockpile slopes are less than 3 to 1 and are more than 100 feet from a receiving waters or the protected perimeter of the project boundary. Stockpiles shall not be shown outside the limits of construction.
  10. Sites should be designed with specific areas set aside for equipment maintenance and fueling as well as designated areas for chemical, fuel and oil, construction materials, and waste storage that minimize the contact between stored materials and rainfall or runoff. Spill prevention, containment, and cleanup protocols should be prepared and enforced.

For Minimum Impact Design to be most effective, the concepts need to be applied to the earliest design phases of a development. It must also be remembered that the construction process is not a static process. As such, the Minimum Impact Design concepts used must evolve as the design and construction of the project evolves.

## Narrative Report Information Worksheet

The Narrative Report Information Worksheet (**Worksheet**) must be completed and submitted as part of the Management Plan. This Worksheet is found in **Attachment B** of this document. It can be used as the narrative portion of the Management Plan for simple projects or as an outline for more detailed written narrative reports associated with larger more complex projects.

The Worksheet information should be used to identify the types and locations of BMPs that may be needed on-site to deal with specific problem areas or conditions. This information should also be used in planning the phased placement of appropriate BMPs.

## Site Drawings and Installation Details

The map(s) shall use one of the following scales; 1"=20', 1"=30', 1"=40', 1"=50' or 1"=100'. The scale selected must be suitable for practical use and readability. The contour interval for these plans shall be two (2) foot. The information listed below shall be included on one or multiple site maps:

1. Existing and Proposed Topography
2. Topographic sections across the site showing both existing and proposed grades
3. Clearly marked existing and proposed grading contours (legible with elevations)
4. Two (2) foot contour intervals
5. Contours 100 feet beyond the project boundaries
6. Location of existing structures on-site

7. Structures subject to demolition are to be clearly located in Management Plan drawings
8. Location of structures and natural features within 100' of site boundary
9. Proximity of nearby floodplains and receiving water
10. Locations of proposed structures
11. Denote proposed phased limits of grading and clearing
12. Locations of storage areas including:
  - 12.1. Equipment
  - 12.2. Fuel/lubricants
  - 12.3. Construction materials
  - 12.4. Chemicals and waste storage
  - 12.5. Sanitary facilities
  - 12.6. Equipment maintenance and fueling locations
  - 12.7. Soil stockpiles
  - 12.8. Borrow pits
13. Locations of contaminated areas
14. Locations of construction entrances
15. Locations for all storm runoff discharge points at site boundaries or internal to site if a drainage way is located on-site.
16. Locations for all proposed BMPs
17. Locations for all containment areas for chute washout
18. All applicable NPDES Standard Notes
19. Installation Details of all proposed BMPs
20. Details for all proposed structural permanent water quality BMPs
21. Professional Engineer's stamp and signature

## Supporting Technical Information and Documents

Copies of the following plans or technical materials must be available for review upon request. If reports have not been prepared at the time of application, submittal should occur when plan is developed.

Issuance of a Construction Activities Stormwater Discharge Permit may be delayed until these plans have been reviewed:

1. Drainage Report
2. Soils/Geotechnical Studies
3. Environmental Audits (for sites under environmental remediation)
4. Copies of applications for CDPS Permits
  - 4.1. Stormwater Discharge Associated with Construction Activity
  - 4.2. Minimal Discharge Industrial Wastewater Permit
  - 4.3. Construction Dewatering Permits
5. Air Pollution Emission Notification - Fugitive Dust or other Air Pollution Permits
6. Copies of correspondence with other governmental jurisdictions
  - 6.1. Wetlands
  - 6.2. Floodplains
  - 6.3. Waterways
  - 6.4. Discharges to or from other jurisdictions
7. Copies of temporary access agreements with adjacent land owners
  - 7.1. Use of land for material storage or lay down
  - 7.2. Stabilization and restoration of disturbed areas
  - 7.3. Acceptance of flow to or from adjacent sites

## SECTION 4 – Required Minimum Best Management Practices

The following represents the minimum best management practices (**BMPs**) requirements for a permitted demolition or construction site in Denver. Additional BMPs may be required by Denver, on a site by site basis.

### Minimum Site BMP Requirements

The following BMPs are required for **all** permitted construction sites:

1. **Vehicle Tracking Control:** This BMP is required at all access points to a construction site that are used by vehicular traffic or construction equipment.
2. **Inlet Protection:** This BMP is required on all existing or proposed storm sewer inlets in the vicinity of the construction site that may receive site runoff. The BMP must be appropriate to the type of storm inlet and appropriate for the ground surface at the inlet.
3. **Site Stabilization:** This BMP is required to provide a measure for preventing the discharge of sediment from construction sites where overlot grading of the site has occurred. This BMP is particularly necessary on sites where construction activities will be limited to small areas of the graded site. Acceptable BMPs include:
  - a. Preserving existing vegetation.
  - b. Seeding and planting.
  - c. Mulching.
  - d. Mulching and seeding.
  - e. Temporary/Permanent re-vegetation operations.
  - f. Chemical soil stabilizer application (requires WMD approval).
4. **Spill Prevention/Containment:** This BMP defines the measures proposed for preventing, controlling, or containing spills of fuel, lubricants, temporary sanitary toilets, or other pollutants and protecting potential pollutants from contact with precipitation or runoff.
5. **Chute Washout Containment:** This BMP requires that a containment area be designated for the washout of cement truck delivery chutes. This containment area is bermed so that wash water is totally contained. Water discharged into the containment area is allowed to infiltrate or evaporate. The dried cement waste is removed and properly disposed.
6. **Street Sweeping:** This BMP requires that paved surfaces which are adjacent to construction sites be swept by the close of that business day (and during the day as needed) when sediment and other materials are tracked or discharged onto them. Either sweeping by hand or use of Street Sweepers is acceptable. Street sweepers using water while sweeping is preferred in order to minimize dust. Flushing off paved surfaces with water is prohibited.
7. **Perimeter Control:** This BMP requires that a construction site install a perimeter control measure along the edge of the construction site to prevent, or filter surface runoff leaving the construction site. The type of perimeter control used shall be determined based on site and location. Maintenance and repair of the control measure shall occur as needed and as soon as practicable following discovery.
8. **Structural controls:** Development sites that are required to provide detention and water quality enhancement facilities for storm runoff need to install the detention facilities early in the construction build-out of the site. Projects that are using underground detention are required to install a pretreatment structure or sedimentation basins as a means of treating potentially polluted stormwater prior to entering the detention structure. Use of these structures is required for entrapping sediment and construction debris during the active construction phase of the project. The narrative section of the Management Plan is also required to address operation and maintenance of the structural controls being used as an active construction BMP.

## Site Specific BMP Requirements

Individual construction sites may have site characteristics that require the application of specific BMPs for erosion and sediment control. These site-specific BMP requirements are in addition to those previously listed.

### Potential for High Flow Conditions

Construction sites that are located directly adjacent to a receiving water, or have areas tributary to the site which may generate large volumes of runoff, need to be protected by BMPs that provide flow control and diversion. Acceptable BMPs include: slope drains, temporary swales and channels, diversion dikes, coffer dams, sand bag barriers, etc.

### Steep Slopes

Construction sites that have slopes 3:1 or steeper will require the use of a BMP to prevent or minimize slope erosion. The following BMPs are applicable to this situation:

1. Geotextiles and Matting: This BMP uses fabric, jute matting and other materials to provide a surface cover on slopes to minimize erosion from raindrop impact or sheet flow runoff. Geotextiles and matting typically require measures to attach the material to the slope.
2. Slope Roughening/Terracing: Slope roughening is similar to the agricultural erosion measure known as contour plowing where furrows are plowed along elevation contours. Care must be taken to prevent foot or vehicular traffic across areas where this BMP is used as even minimal traffic can destroy the BMP's effectiveness.
3. Chemical Soil Stabilizer Application: Polyacrylamide and other chemical soil stabilizers may be used providing data has been submitted to verify that the product is effective for the intended use, and is environmentally safe with low toxicity.

### On-site Drainageway

Construction sites that are adjacent to drainageways, have a drainageway within the site, or are constructing a drainageway within the site need to provide BMPs for the following:

1. Instream Velocity Reduction/Sediment Entrapment: This would involve the use of Check Dams, Sediment Traps or similar measures to reduce the velocity of flow and entrap sediment. Drainageways, waterways, flood plains, streams, state waters, etc. should not be used as sediment collection facilities. BMPs should be used to control sediment from entering these areas.
2. Temporary Stream Crossing: This type of BMP is required where repeated crossing of a drainageway by construction equipment may be necessary and may require permits from the Army Corps of Engineers.
3. Flow characteristics of the drainageway: When evaluating BMPs, crossings, and diversions for onsite drainageways, the Management Plan developer is required to determine the flow characteristic for both the 2 and 10 year rainfall events. The results of these calculations are to be used when designing the above elements for projects.

### Contaminated Site

Developers or contractors proposing construction on sites where there is known contamination by toxic, radioactive, or other hazardous material need to provide discussions of the measures proposed for contaminated material management, groundwater remediation, and construction management for the site, including BMPs for:

1. Stockpile Protection and site stabilization.
2. Groundwater management and remediation handling.
3. Contaminated materials Management Plan.

## **Permittee SWMP Inspections**

The Narrative Report must include a description of procedures to inspect the vegetation, erosion and sediment control measures, and other protective measures identified in the plan. At a minimum the routine Management Plan compliance inspection is required to meet or exceed the standards established in Section 6 of this Manual. For sites where construction has not been completed, the owner/developer or their representative shall make a thorough inspection of their stormwater management system at least every seven (7) days and after any precipitation or snowmelt event with the potential to cause surface erosion. These inspections shall be kept on-site in a written or previously approved format and conducted during the progress of the work, during work suspensions, and until final acceptance of site stabilization by the Wastewater investigator. The person making these inspections must have successfully passed an Erosion Control Supervisor Training Course in the state of Colorado. Please call The City's Wastewater NPDES Section at (303) 446-3400 for a list of qualified training programs.

1. The construction site perimeter, disturbed areas, and areas used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly.
2. The description of potential pollutant sources, and the pollution prevention and control measures identified in the Management Plan, shall be revised and modified as appropriate based on the results of the inspection as soon as practicable after such inspection. Modification to the SWMP shall be implemented in a timely manner and in accordance with State requirements.
3. The operator shall keep a record of inspections. Uncontrolled releases of sediment or polluted storm water or measurable quantities of sediment found off the site shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measures taken to clean up the sediment that has left the site. Inspection records shall be made available to the City upon request. Note: documentation of uncontrolled releases at site DOES NOT alleviate any State or Federal requirements for reporting of discharges or upset conditions. Care should be taken to ensure compliance with all regulatory requirements at site.
4. Seven (7) day inspections are required during construction and at all times until Final Stabilization has been achieved. Seeding and mulching of disturbed areas does NOT count as final stabilization until such time as 70% pre disturbed vegetative cover has been achieved. Sites with growth in place sufficient to deter erosion that have not yet achieved final stabilization may petition the City to grant an alternative inspection schedule while awaiting additional growth for final stabilization. These inspections must be conducted in accordance with the above paragraphs.

## **BMP Maintenance**

The Permittee is required to provide detailed documentation of the BMP installation methods, inspection procedures, and maintenance strategies that will be used to:

1. Document inspections and required BMP maintenance activities,
2. Insure both temporary and final stabilization of disturbed areas,
3. Remove and dispose waste materials and sediment from the BMPs,
4. Track BMP maintenance, repair, or replacement.

The Management Plan maintenance strategies shall include a process for continuous maintenance of erosion and sediment control BMPs to ensure they function properly during construction and work suspensions until the project is fully stabilized, accepted by the City, and the CASDP is closed.

## **SECTION 5 - Required Standard Notes**

The following are a series of required Standard Notes that have been developed to minimize the potential for accelerated erosion, sediment transport, and water quality pollutant from impacting Denver's MS4 and receiving waters. These Standard Notes are required to be included as part of the Management Plan site drawings, construction drawings, utility construction plans, and grading plans submitted for review and approval.

Alternative language for these notes will require the prior approval of the Denver plan reviewer.

### **STANDARD NOTE # 1**

"The Permittee and/or Contractor shall remove all sediment, mud, construction debris, or other potential pollutants that may have been discharged to or, accumulate in, the flowlines, storm drainage appurtenances, and public rights of ways of the City and County of Denver as a result of construction activities associated with this site development or construction project. Said removal shall be conducted in a timely manner."

### **STANDARD NOTE # 2**

"The Contractor shall prevent sediment, debris and all other pollutants from entering the storm sewer system during all demolition, excavation, trenching, boring, grading, or other construction operations that are part of this project. The Contractor shall be held responsible for remediation of any adverse impacts to the Municipal Separate Storm Sewer System, receiving waters, waterways, wetlands, and or other public or private properties, resulting from work done as part of this project."

### **STANDARD NOTE # 3**

"Soil stabilization measures shall be implemented within fourteen (14) days following completion of grading activities. Stabilization of disturbed areas adjacent to receiving waters or with slopes 3 to 1 or greater shall be completed within seven (7) days following completion of grading activities. Note: Federal and State regulations may soon require stabilization within seven (7) days of completion of grading activities. In such cases, the shorter timeframe shall apply to projects within Denver as well."

### **STANDARD NOTE # 4**

"The Developer, General Contractor, Grading Contractor and/or their authorized agents shall insure that all loads of cut and fill material imported to or exported from this site shall be properly covered to prevent loss of the material during transport on public rights of way." (Sec.49-552; Revised Municipal Code)

### **STANDARD NOTE # 5**

"The use of rebar to anchor best management practices is **prohibited**." Steel fence posts may be used on a case by case basis and requires approval from the City and County of Denver SWMP reviewer or the stormwater enforcement investigator prior to installation."

### **STANDARD NOTE # 6**

"Soils that will be stockpiled for more than thirty (30) days shall be protected from wind and water erosion within fourteen (14) days of stockpile construction. Stabilization of stockpiles located within 100 feet of receiving waters, or with slopes 3 to 1 or greater shall be completed within seven (7) days following stockpile construction. Stabilization and protection of the stockpile may be accomplished by any of the following: Mulching, Temporary/Permanent Revegetation Operations, Chemical Soil Stabilizer Application (requires Denver Public Works approval), or erosion control matting/Geotextiles. If stockpiles are located within 100 feet of receiving waters, a drainageway or the site perimeter, additional sediment controls such shall be required."

**STANDARD NOTE # 7**

“Approved erosion and sediment control ‘Best Management Practices’ shall be maintained and kept in good repair for the duration of this project. At a minimum, the Permittee or contractor shall produce and retain weekly written inspection records for all BMPs and after significant precipitation events. All necessary maintenance and repair shall be completed immediately. Additionally, street sweeping is to be completed by the close of the business day or (and) on an as needed basis throughout the day.

**STANDARD NOTE # 8**

“Water used in the cleaning of cement truck delivery chutes shall be discharged into a predefined, concrete washout area on the job site. Bermed containment or commercially available concrete washout devices that fully contain all wash water are acceptable. Wash water discharged into the containment area or device shall be allowed to infiltrate, evaporate, and or be disposed of in accordance with all applicable regulations. Dried cement waste is to be removed from the containment area and properly disposed.

Should the use of a predefined bermed containment area or approved washout device be technically infeasible due to the project size, or lack of an area with a suitable ground surface for establishing containment, proper disposal of concrete washout and wash water at the job site shall conform to the approved techniques and practices identified in the Colorado Department of Public Health & Environment’s training video entitled ‘**Building For a Cleaner Environment, Ready Mix Washout Training**’ and its accompanying manual entitled, ‘**Ready Mix Washout Guidebook, Vehicle and Equipment Washout at Construction Sites.**’

The direct or indirect discharge of water containing waste cement to the storm sewer system is **prohibited.**” (Sec.56-102a, c; Revised Municipal Code, City and County of Denver).

**STANDARD NOTE # 9**

“The Contractor shall protect all storm sewer facilities adjacent to any location where pavement cutting operations involving wheel cutting, saw cutting, or abrasive water jet cutting are to take place.

The Contractor shall remove and properly dispose of all waste products generated by said cutting operations on a daily basis or as needed throughout the work day.”

The discharge of any water contaminated by waste products from cutting operations to the storm sewer system is **prohibited.**” (Sec.56-102a, c; Revised Municipal Code, City and County of Denver)

**STANDARD NOTE # 10**

“Paved and impervious surfaces which are adjacent to construction sites must be swept on a daily basis and as needed during the day when sediment and other materials are tracked or discharged onto them. Either sweeping by hand or use of Street Sweepers is acceptable. Street sweepers using water while sweeping is preferred in order to minimize dust. Flushing off paved surfaces with water is **prohibited.**” (Sec.56-102a, c; Revised Municipal Code, City and County of Denver)

## SECTION 6 – Active Site Compliance

The Erosion Control Supervisor (**ECS**) is a person who is critical in making sure stormwater quality is protected at all times at the construction site. It is necessary to have proper documentation, complete inspections, timely BMP maintenance, and employee/contractor training relevant to stormwater protection practices for a particular site. The Erosion Control Supervisor is a vital asset in the success and implementation of Stormwater Management Plans (**SWMP or Management Plan**) and is responsible for:

1. Ensuring compliance with all water quality permits and requirements in effect during the construction work, and
2. Administering and amending the SWMP, making sure that the plan is followed and reflects construction site conditions at all times.

The Erosion Control Supervisor should consider five questions in determining compliance:

1. Does this project have a Denver approved SWMP, CASDP, and state permits?
2. Are the erosion and sediment control measures installed as shown on the Management Plan?
3. Is the Management Plan reflective of the BMPs installed in the field?
4. Is erosion being controlled on the site?
5. Are sediment and pollutant sources being contained on the site?
6. Are any adjacent properties or state waters being impacted?

### Documentation

The site must have all the necessary permits secured and approved before any work begins. Some of these are listed in Section 1, Table 1 of this document.

1. The Management Plan is required to be on-site from the date of project initiation to the date of final stabilization unless the City approves another location, requested by the Permittee. The Management Plan needs to have the narrative report, site plans indicating BMP locations, and installation details. The SWMP must be kept current and amended in accordance with criteria listed in Section 2 of this manual.
2. All field inspections must be documented through an inspection report detailing site conditions, status of the required BMPs, and all other maintenance issues at the site that need to be addressed. These reports must be kept on-site in an organized fashion; along with the approved plans, copy of permits and contacts for the particular site, unless the City approves another location requested by the Permittee. ***It is recommended that applicants take care to ensure that all inspection reports meet Colorado Department of Health and Environment (CDPHE) minimum inspection requirements.***
3. The site should be photo documented to the maximum extent practicable. It is recommended that the permittee take photos of the site before construction, during clearing, and during construction. Pictures to document the installation (or non-installation) of the required BMPs, the condition of the BMPs, and those BMPs requiring maintenance should also be maintained. It is also useful to photo record the outflow pipes discharging runoff from the site and the conditions of existing creeks that receive runoff from the site. All photos must also be kept in an organized manner.
4. All records detailing meetings, training efforts, and orders/requests for installation and maintenance of BMPs must be kept.
5. Complaints regarding a project must also be documented including all the actions that the enforcing official has taken in response to the complaint.
6. Phone calls and site conversations/meetings that are part of the compliance process must also be documented.

Note: It is important to note that these documents may become public record and should be treated as such.

## Field Inspection Sequence

1. Pre-inspection Research:
  - a. Evaluate Project Phasing
  - b. Review Management Plan
  - c. Review inspection and maintenance files
  - d. Contact City Inspector for pre-construction inspection
2. Weekly or Post-Precipitation Field Inspection
  - a. Construction Exits and Entrances
    - i. Identified on Plan
    - ii. Installed correctly
    - iii. Properly maintained
    - iv. Proper Utilization
    - v. Tire wash area
    - vi. Sediment leaving site and entering adjacent properties or roadways
3. Are BMPs effective and are modifications necessary
4. Walk the perimeter of the site
5. Observe terrain and perimeter controls
  - a. Note type of sediment controls
    - i. Installed correctly
    - ii. Properly maintained
    - iii. According to Plan
  - b. Sediment leaving site and entering adjacent properties or roadways
  - c. BMPs effective and are modifications necessary
6. Inspect active construction areas
  - a. Documented in Management Plan
  - b. Mulch or other temporary stabilization should be applied to all exposed areas within seven (7) or fourteen (14) days of disturbance in accordance with the SWMP
  - c. Note type of controls
    - i. Installed correctly
    - ii. Properly maintained
7. Inspect non-active disturbed areas
  - a. Areas left idle for more than thirty (30) days should be stabilized
  - b. Note type of controls
    - i. Installed correctly
    - ii. Properly maintained
    - iii. Documented in Management Plan
    - iv. Are BMPs effective and are modifications necessary
8. Inspect discharge points, Structural Controls and adjacent off-site areas for impact
  - a. If sediment is leaving site and impacting adjacent properties or roadways
  - b. Document downstream impacts
  - c. Remediate potential downstream damages
  - d. Identify and implement more effective BMPs
9. Final Stabilization Inspections
  - a. Perimeter controls intact
  - b. Installed correctly
  - c. Properly maintained
  - d. Documented in Management Plan
  - e. Mulch cover
    - i. Estimate application density
  - f. Properly secured or crimped

10. Contact your Denver Water Quality Investigator for compliance assistance and Final Inspection requests.

## **BMP Maintenance**

The description of potential pollutant sources, and the pollution prevention and control measures identified in the plan, shall be revised and modified as appropriate based on the results of the inspection as soon as practicable or immediately after such inspection. The maintenance and corrective actions are to be recorded and available for review by permitting agency compliance assistance and enforcement representatives. It is understood that construction is a dynamic process and that the Management Plan is required to be modified and updated to reflect actual project conditions. Inspection records, corrective action logs, and Management Plan revisions are considered a first line BMP ensuring that compliance with stormwater regulations are being met. Revisions and amendments to the Management Plan are to be completed in accordance with Section 2 of this Manual.

## SECTION 7 - Compliance Assistance and Enforcement

Denver provides compliance assistance and performs investigatory activities, including site inspections. Denver may, depending upon the results of its investigations, initiate enforcement actions. DPW's compliance assistance and enforcement actions achieve multiple objectives including: achieving compliance at the outset, documenting instances of non-compliance, ensuring that permittees return to compliance, and assessing penalties, as appropriate. Most importantly, DPW's compliance assistance and enforcement actions are provided/pursued to reduce the discharge of pollutants from public and private construction sites.

### Compliance Objective

The objectives of the MS4 Construction Sites Program, Compliance Assistance and Enforcement Policy are:

1. To achieve and maintain voluntary compliance at permitted public and private construction sites at the outset by the establishment of consistent permitting standards to ensure stormwater pollution prevention;
2. To achieve voluntary compliance throughout the duration of construction project;
3. To demand and whenever necessary, compel through the enforcement process, compliance with the terms and conditions of the CASDP and other requirements and;
4. To establish a credible, fair, and equitable "Compliance Assistance and Enforcement Presence" in the mind of the regulated community so that non-compliance is deterred.

### Enforcement Types

In the event of noncompliance with the terms and conditions of a CASDP, one or more of the following compliance assistance or enforcement actions may be taken:

1. Verbal Warning which is considered to be advisory in nature. A file notation shall be made of the warning.
2. Compliance Advisory, that includes written recommendation(s) and/or requirement(s) to remedy potential non-compliance(s) that are non-egregious in nature but may result in impairment to waters of the State or minor discharge of sediment with a potential to exceed effluent limit guidelines (ELGs) established by the Colorado Water Quality Control Division. In the event that ELGs are not imposed, determination of the significance of the discharge is relegated to DPW. Compliance advisories are considered in the determination or establishment of recalcitrant or chronic violators/violations.
3. Notice of Violation (NOV) with Corrective Order directs field correction of an identified permit violation. The NOV with Corrective Order may be issued for a violation that results in significant potential and/or observed discharges to the MS4 which are non-egregious to egregious in nature<sup>1</sup>. An NOV with Corrective Order should be issued when a permittee is considered to have permit violations that result in overall site conditions that present potential for significant discharge to the

---

<sup>1</sup> "Egregious" is defined as a situation resulting in significant potential for impairment to waters of the State and/or have resulted in discharges of sediment exceeding Effluent Limit Guideline(s) established by the Colorado Water Quality Control Division. In the event that Effluent Limit Guideline(s) have not been established, determination of the significance of the discharge is relegated to the DPW.

MS4 and/or observed discharges to the MS4 that require reasonable remedial action to restore the impaired segment of the MS4.

4. Notice of Violation (NOV) with Stop Work Order, is an order to halt all construction activity on-site except for those activities associated with bringing the project into compliance with the terms and conditions of the permit. The NOV/Stop Work Order may be issued if/when the requirements of an NOV with Corrective Order have not been timely satisfied, site conditions present significant potential for discharge to the MS4, actual discharges to the MS4 are observed, and/or site operators have begun work prior to obtaining a CASDP. Additionally, DPW may place holds on approvals of permits and/or other inspections pending receipt of proof that the permitted project has been returned to compliance.
5. Notice of Violation (NOV) with Referral, may be issued to permittees with single or multiple permitted projects under active construction, that are alleged to be knowingly or willfully operating in non-compliance with the terms and conditions of their CASMP, or when observed discharges are egregious in nature (see footnote 2). *Pursuant to Section 56-107 (b) of the Revised Municipal Code of the City and County of Denver*, the City may impose a civil penalty of not more than ten thousand dollars (\$10,000.00) per day during which violation of the conditions and requirements of the permit may occur and will be assessed after a hearing before the Manager. The hearing shall be conducted in accordance with Public Works Rules and Regulations Governing Hearings Before the Manager of Public Works.

## **Attachment A – SWMP Pre-Submittal Check List**

## **Construction Stormwater Management Plan Pre-Submittal Review Checklist**

### **Narrative Report Worksheet (3 stamped sets required)**

Name, Address, and Phone Number of Applicant  
Name, Address, and Phone Number of Local Contact/Project Manager  
Name, Address, and Phone Number of Consultant  
Project location  
Project description  
Site description  
Current site conditions  
Description of adjacent areas  
Description of all potential pollutant sources  
Description of erosion and sediment control BMPs  
Description of chemical storage and waste management BMPs  
Placement of post-construction water quality BMPs  
Description and design for proposed permanent water quality BMPs  
Temporary stabilization  
Permanent stabilization  
Inspection procedures  
Maintenance schedule for both temporary, structural and non-structural BMPs  
Certification Note signed by property owner (NPDES Standard Note #2)  
Professional Engineer's statement and stamp

### **Drawings (3 stamped sets required)**

Existing and Proposed Topography extended 100 ft beyond the property boundary  
Location of existing structures on-site  
Location of structures or natural features within 100' of site boundary  
Locations of nearby floodplains  
Locations of proposed structures  
Limits of grading and clearing  
Limits of construction site boundaries  
Locations of storage areas  
Locations of contaminated areas  
Locations of construction entrances  
Locations for all storm runoff discharge points at site boundaries or onsite drainage ways  
Locations for all proposed BMPs  
Locations for all for concrete chute washout areas  
All applicable NPDES Standard Notes  
Installation Details of all proposed BMPs  
Structural details for all proposed permanent water quality BMPs  
Professional Engineer's stamp and signature

### **Supporting Technical Information and Documents (1 copy when required)**

Copies of the following plans or technical references may be requested to support review of the Management Plan or as part the site compliance inspections:

1. Drainage Report
2. Soils/Geotechnical Studies

3. Environmental Audits (for sites under environmental remediation)
4. Copies of applications for CDPS Permits
  - 4.1. Stormwater Discharge Associated with Construction Activity
  - 4.2. Minimal Discharge Industrial Wastewater Permit
  - 4.3. Construction Dewatering Permits
5. Air Pollution Emission Notification - Fugitive Dust or other Air Pollution Permits
6. Copies of correspondence with other governmental jurisdictions
  - 6.1. Wetlands
  - 6.2. Floodplains
  - 6.3. Waterways
  - 6.4. Discharges to or from other jurisdictions
7. Copies of temporary access agreements with adjacent land owners
  - 7.1. Use of land for material storage or lay down
  - 7.2. Stabilization and restoration of disturbed areas
  - 7.3. Acceptance of flow to or from adjacent sites

## **Attachment B – SWMP Narrative Report Information Worksheet**

**Narrative Report Information Worksheet**  
City and County of Denver, Demolition and Construction Activities  
Stormwater Management Plan (SWMP)  
Revised 5/21/10

**A. PROJECT LOCATION**

Name of Project or Development:

\_\_\_\_\_

CCD Master No. (if known): \_\_\_\_\_ CCD EC No. (If known): \_\_\_\_\_

Street Address\*:

\_\_\_\_\_

\_\_\_\_\_

\*\*Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section: \_\_\_\_\_ Quarter Section: \_\_\_\_\_

\*\*Latitude (+/- 15"): \_\_\_\_\_, Longitude (+/- 15"): \_\_\_\_\_

Metropolitan District:

\_\_\_\_\_

\*Submission of an Address Assignment Slip issued by the City Engineer's Office is required.

\*\* Required if Street Address is unavailable.

**B. PERMITTEE** (Responsible party for day to day supervision and control of the MANAGMENT PLAN)

Company Name:

\_\_\_\_\_

Mailing Address:

\_\_\_\_\_

City, State, Zip Code:

\_\_\_\_\_

Phone Number: (\_\_\_\_\_) \_\_\_\_\_ FAX Number (\_\_\_\_\_) \_\_\_\_\_

Name of Contact:

\_\_\_\_\_

Email:

\_\_\_\_\_

**C. OWNER**

Name:

\_\_\_\_\_

Mailing Address:

\_\_\_\_\_

City, State, Zip Code:

\_\_\_\_\_

Phone Number: (\_\_\_\_\_) \_\_\_\_\_ FAX Number (\_\_\_\_\_) \_\_\_\_\_

\_\_\_\_\_

Name of Contact:

---

Email:

---

**D. PLAN ENGINEER (prepared MANAGMENT PLAN)**

Company Name:

---

Mailing Address:

---

City, State, Zip Code:

---

Phone Number: (\_\_\_\_\_) \_\_\_\_\_ FAX Number (\_\_\_\_\_) \_\_\_\_\_

Name of Engineer:

---

Email:

---

**E. SITE SUPERVISOR (If known)**

Company Name:

---

Mailing Address:

---

City, State, Zip Code:

---

Phone Number: (\_\_\_\_\_) \_\_\_\_\_ FAX Number (\_\_\_\_\_) \_\_\_\_\_

Name of Site Supervisor:

---

Email:

---

**F. TYPE OF CONSTRUCTION**

Check the appropriate description(s) or provide a brief description that indicates the general nature of the proposed construction. A full description of activities must be included in the Stormwater Management Plan. (see Section G below)

- Single Family Residential Development
- Multi-Family Residential Development
- Commercial Development
- Oil and Gas Production and/or Exploration (including pad sites and associated infrastructure)
- Highway/Road Development (not including roadways associated with commercial or residential Development)
- Other, Describe: \_\_\_\_\_

---

**G. SITE DESCRIPTION**

1. Acreage

- a. Total Site Acreage: \_\_\_\_\_
- b. Acreage Subject to Disturbance: \_\_\_\_\_
- c. Acreage Determination (Public Utility Projects): \_\_\_\_\_

Area bounded by predefined construction limits: \_\_\_\_\_

*Calculations shall include all areas proposed for contractor laydown, materials storage, equipment storage, areas where equipment repair and fueling will occur, ingress, and egress (include haul roads and borrow pits.)*

2. Site Conditions:

a. Historical Land Use: (may be for partial site)

Known Landfill site: YES \_\_\_\_\_ NO \_\_\_\_\_

Has any of the following activities occurred on-site:

- Metal Refining YES \_\_\_\_\_ NO \_\_\_\_\_
- Petroleum Refining YES \_\_\_\_\_ NO \_\_\_\_\_
- Petroleum Storage YES \_\_\_\_\_ NO \_\_\_\_\_
- Chemical Manufacturing YES \_\_\_\_\_ NO \_\_\_\_\_
- Pesticide/Fertilizer Manufacture/Storage YES \_\_\_\_\_ NO \_\_\_\_\_
- Rail Yard YES \_\_\_\_\_ NO \_\_\_\_\_

If the response to any of the above is YES, Please describe:

---

---

---

b. Possible Site Contamination: Is the site part of any of the following:

- Known Denver Radium Site YES \_\_\_\_\_ NO \_\_\_\_\_
- Known Denver LUST Site YES \_\_\_\_\_ NO \_\_\_\_\_
- Known Superfund Site YES \_\_\_\_\_ NO \_\_\_\_\_
- Known CERCLA Site YES \_\_\_\_\_ NO \_\_\_\_\_
- Known RCRA Site YES \_\_\_\_\_ NO \_\_\_\_\_

If the response to any of the preceding is YES, Please describe:

---

---

---

Describe any other known site contamination:

---

---

---

c. Current Land Use:

Describe existing use: \_\_\_\_\_

Are there any building/structures on-site? YES \_\_\_\_\_ NO \_\_\_\_\_

d. Existing and Proposed Topography (minimum 2 foot contours)

Description: \_\_\_\_\_

Highest Elevation: \_\_\_\_\_ Lowest Elevation: \_\_\_\_\_

Steepest Slope: \_\_\_\_\_ Average Slope: \_\_\_\_\_

Direction \_\_\_\_\_

e. Vegetation

Identify the types of vegetation found on-site:

---

---

---

Estimate the existing density of vegetation:

---

---

---

*Submittal of Photographs is not required but highly recommended*

f. Drainage:

Identify all adjacent surface water flows (run-on) that may impact and/or runoff from the subject site:

Identify the State Receiving Waters:

Describe the flow routing from the site to the Receiving Waters:

Are there any springs or seeps located on-site?      YES \_\_\_\_ NO \_\_\_\_  
Are there any defined drainage channels on-site?      YES \_\_\_\_ NO \_\_\_\_  
Does the site fall within a Regulatory Floodplain?      YES \_\_\_\_ NO \_\_\_\_

If the answer is YES, a Floodplain Development Permit issued by the Public Works Department may be required.

g. Wetlands: Define the dimensions/surface areas for each identified wetland and its location relative to the site.

Identify all on-site wetlands/wetlands channels:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Tributary or adjacent Wetlands Areas

Upstream of the site?      YES \_\_\_\_ NO \_\_\_\_  
Downstream of the site?      YES \_\_\_\_ NO \_\_\_\_  
Will the proposed construction work impact any of the on-site wetland areas?      YES \_\_\_\_ NO \_\_\_\_

If the answer is YES, attach copies of correspondence with the State of Colorado and U.S. Army Corps of Engineers concerning permits and approvals for the work.

h. Soils:

Identify the predominant Hydrologic Soil Group found on-site. A \_\_\_\_ B \_\_\_\_ C \_\_\_\_ D \_\_\_\_  
What is the runoff coefficient for the undeveloped site?

Describe the soil texture found on-site

Is there any outcropping of bedrock on-site?      YES \_\_\_\_ NO \_\_\_\_

Will grading or excavation on-site reach bedrock? YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, what is the depth of the bedrock? \_\_\_\_\_

Will grading or excavation penetrate the Water Table? YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, what is the depth of the Water Table? \_\_\_\_\_

i. Erosion Potential:

Provide estimates of the potential annual soil loss from the site for the following conditions: Erosion by water from an unprotected site \_\_\_\_\_ tons per acre per year.

Erosion by water from a protected\* site \_\_\_\_\_ tons per acre per year

Identify the procedures/formulas used to produce these estimates. *If the Universal Soil Loss Equation (USLE) has been used, provide the values used for the following:*

R (Annual Erosion Index) \_\_\_\_\_

K (Soil Erodibility Factor) \_\_\_\_\_

LS (Length/percent Slope Factor) \_\_\_\_\_

C (Soil Cover Factor) \_\_\_\_\_

Provide estimates of the potential annual soil loss from the site for the following conditions:

Erosion by wind from an unprotected site \_\_\_\_\_ tons per acre per year.

Erosion by wind from a protected\* site \_\_\_\_\_ tons per acre per year

Identify the procedures/formulas used to produce these estimates.

Protected site: calculations shall be based on the BMPs proposed for use on the site

**H. PROJECT DESCRIPTION – CONSTRUCTION ACTIVITIES**

1. Proposed Construction Activities

Identify which of the following activities will occur during development of the site:

a. Clearing and Grubbing YES \_\_\_\_\_ NO \_\_\_\_\_

b. Mass Overlot Grading YES \_\_\_\_\_ NO \_\_\_\_\_

c. Cut Operations YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, estimate volume of cut (cubic yards) \_\_\_\_\_

d. Fill Operations YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, estimate volume of fill (cubic yards) \_\_\_\_\_

e. Building Demolition YES \_\_\_\_\_ NO \_\_\_\_\_

f. Foundation Excavation YES \_\_\_\_\_ NO \_\_\_\_\_

g. Utility Construction YES \_\_\_\_\_ NO \_\_\_\_\_

h. Street Construction and Paving YES \_\_\_\_\_ NO \_\_\_\_\_

i. Building Construction YES \_\_\_\_\_ NO \_\_\_\_\_

j. Parking Lot Construction/Paving YES \_\_\_\_\_ NO \_\_\_\_\_

k. Landscaping YES \_\_\_\_\_ NO \_\_\_\_\_

Will Private Storm and Sanitary Sewer systems be constructed? YES \_\_\_\_\_ NO \_\_\_\_\_

Will Private Storm and Sanitary Sewer systems be constructed? YES \_\_\_\_\_ NO \_\_\_\_\_

If YES, identify the SP or PR Project Numbers assigned\* by WMD for each project

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If sewers are private or being constructed by a governmental agency other than Public Works, list the agency and associated Project number(s) \_\_\_\_\_

\*if Public Works Project Numbers have not been assigned but will be in the future, please indicate as "Not Assigned."

2. Construction Scheduling ( Corresponds with Construction Phasing below)

a. Site Preparation / Grading Operations

Proposed Start Date: \_\_\_\_\_

Proposed Completion Date: \_\_\_\_\_

b. Utility / Infrastructure / Building Construction

i. Utilities:

Proposed Start Date: \_\_\_\_\_

Proposed Completion Date: \_\_\_\_\_

ii. Building Construction:

Proposed Start Date: \_\_\_\_\_

Proposed Completion Date: \_\_\_\_\_

iii. Building Construction:

Proposed Start Date: \_\_\_\_\_

Proposed Completion Date: \_\_\_\_\_

c. Landscaping/Site Stabilization

Proposed Start Date: \_\_\_\_\_

Proposed Completion Date: \_\_\_\_\_

3. Construction Phasing - Denver recognizes 3 basic phases for all construction sites as outline below.

(Note: A map or drawing for each phase is required, showing required BMPs for that phase Address the installation and maintenance of all proposed erosion control measures, sediment/pollutant control measures, and site stabilization measures for each phase. Add additional sheets to the worksheet if needed.)

a. Site Preparation/Grading

i. Describe the types and placements of proposed BMPs for use during clearing, grubbing, demolition, and grading operations.

\_\_\_\_\_

\_\_\_\_\_

ii. Describe all measures proposed for interim site stabilization.

\_\_\_\_\_

\_\_\_\_\_

iii. Describe the inspection and maintenance schedule proposed for BMPs on-site.

\_\_\_\_\_

\_\_\_\_\_

b. Utility/Infrastructure/Building Construction

i. Describe the types and placements of proposed BMPs for use during utility construction, roadway construction, building construction and paving operations.

\_\_\_\_\_

\_\_\_\_\_

ii. Describe all measures proposed for interim site stabilization.

\_\_\_\_\_

\_\_\_\_\_

iii. Describe the inspection and maintenance schedule proposed for BMPs on-site.

\_\_\_\_\_

\_\_\_\_\_

c. Permanent Site Stabilization/Landscaping

i. Describe the types and placements of BMPs proposed for use during site stabilization and landscaping, as well as describing all permanent water quality enhancement facilities.

\_\_\_\_\_

\_\_\_\_\_

ii. Describe all measures proposed for final site stabilization.

---

---

iii. Describe the inspection and maintenance schedule proposed for BMPs on-site.

---

---

iv. Identify any annual grasses proposed for use in stabilizing the site.

---

---

v. List the perennial grasses seed mix proposed for site stabilization

---

---

vi. Identify the estimated date for seeding

---

---

### **I. Required Best Management Practices (BMP)**

*As listed, under Section 4 of Information Guide document*

1. Vehicle Tracking Control (See Erosion Control Detail)
2. Inlet Protection (See Erosion Control Detail)
3. Site Stabilization (Sediment Control Narrative)
4. Spill Prevention/Containment (Sediment Control Narrative) - (See Attached Narrative)
5. Chute Washout Containment (See Erosion Control Detail)
6. Street Sweeping (See Standard Note #13)
7. Perimeter Control (See Erosion Control Details)
8. Portable Toilets

### **J. Maintenance, Inspections & Record Keeping (See Standard Note #7)**

Additional Maintenance, Inspection & Record Keeping Instructions: (If needed, See attached Narrative)

---

---

### **K. Post Construction Permanent Water Quality**

Identify permanent water quality BMPs proposed for site sediment control:

- |   |     |    |
|---|-----|----|
| 1. Grass Buffer                         | YES | NO |
| 2. Grass Swale                          | YES | NO |
| 3. Modular Block Porous Pavement        | YES | NO |
| 4. Porous Pavement Detention            | YES | NO |
| 5. Porous Landscape Detention           | YES | NO |
| 6. Extended Detention Basin             | YES | NO |
| 7. Sand Filter Extended Detention Basin | YES | NO |
| 8. Constructed Wetlands Basin           | YES | NO |
| 9. Retention Pond                       | YES | NO |
| 10. Constructed Wetlands Channel        | YES | NO |
| 11. Innovative/Proprietary Technology * | YES | NO |

\*Use of Innovative/Proprietary Technology will require the submission of the technology developer's technical data, specifications, design criteria and installation requirements for review.

**L. Certifications**

- 1. Engineer's Certification - Plans submitted for review need to bear a P.E. Stamp, signature, and a P.E. 's Certification Note

**Engineer's Certification:**

*"I hereby certify that this Construction Activities Stormwater Management Plan for \_\_\_\_\_, Project # EC-\_\_\_\_\_ - \_\_\_\_\_ was prepared by me (or under my direct supervision) in accordance with the provisions of the Construction Activities Stormwater Discharge Permit for the City and County of Denver. I understand that the City and County of Denver does not and will not assume liability for drainage facilities design."*

\_\_\_\_\_ Colorado Registered PE# \_\_\_\_\_  
Date \_\_\_\_\_  
Project Design Engineer

- 2. Owner's Certification Note using the following language and signed by owner or authorized agent.

**Owner's Certification:**

*"This Construction Activities Stormwater Management Plan has been submitted as the application for a Construction Activities Stormwater Discharge Permit filed with the Wastewater Management Division of the City and County of Denver. I understand that additional erosion control, sediment control and water quality enhancing measures may be required of the owner and his or her agents due to unforeseen pollutant discharges or if the submitted plan does not function as intended. The requirements of this plan shall be the obligation of the land owner and/or his successors or heirs; until such time as the plan is properly completed, modified, or voided."*

\_\_\_\_\_  
Date \_\_\_\_\_  
Owner or Authorized Agent Representing Owner

**M. Required Drawing Plans for each phase**

- a. Demolition (if applicable)
- b. Site Preparation/Grading
- c. Utility/Infrastructure/Building Construction
- d. Permanent Site Stabilization/Landscaping

**Attachment C - Notice of Permit Transfer and Acceptance Form**

**CITY AND COUNTY OF DENVER  
NOTICE OF TRANSFER AND ACCEPTANCE OF TERMS OF  
CONSTRUCTION ACTIVITIES STORMWATER DISCHARGE PERMIT**

**1) To be completed by the NEW permittee:**

I hereby accept transfer of this Construction Activities Stormwater Discharge Permit No. \_\_\_\_\_, which was issued to, \_\_\_\_\_. I have reviewed the terms and conditions of this permit and the Construction Activities Stormwater Management Plan and accept full responsibility, coverage, and liability. This transfer will be effective on: \_\_\_/\_\_\_/\_\_\_.

Street Address: \_\_\_\_\_

City, State and Zip Code: \_\_\_\_\_

Name of facility or development: \_\_\_\_\_

The New permittee is: \_\_\_\_\_

Company Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City, State and Zip Code: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Fed. Taxpayer (or Employer) ID No. \_\_\_\_\_

Local Contact (familiar with facility) \_\_\_\_\_

Title: \_\_\_\_\_

Phone Number: \_\_\_\_\_

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature of Permit Applicant  
(Legally Responsible Party) \_\_\_\_\_

Date Signed: \_\_\_\_\_

Name:  
(printed) \_\_\_\_\_

Title: \_\_\_\_\_

**2) To be completed by the PREVIOUS permittee:**

As previous permittee, I hereby agree to the transfer of the above referenced permit and certification and all responsibilities thereof.

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City, State and Zip Code: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Fed. Taxpayer (or Employer) ID No.: \_\_\_\_\_

Signature of Permit Applicant: \_\_\_\_\_  
(Legally Responsible Party)

Name: \_\_\_\_\_  
(printed)

Title: \_\_\_\_\_ Date Signed: \_\_\_\_\_

## Attachment D - CASDP Inactivation Request Form

**CITY AND COUNTY OF DENVER  
INACTIVATION REQUEST FOR  
CONSTRUCTION ACTIVITIES STORMWATER DISCHARGE PERMIT**

Please print or type. Form must be filled out completely.

Permit Number: \_\_\_\_\_ Taxpayer ID or EIN: \_\_\_\_\_

Permittee (Company) Name: \_\_\_\_\_

Permittee Address: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Site/Facility Name: \_\_\_\_\_

Site Address/Location: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Summary of work performed and **description of final site stabilization:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I certify under penalty of law that by the date of my signature below, all disturbed soils at the identified construction site have been finally stabilized; all temporary erosion and sediment control measures have been removed; all construction and equipment maintenance wastes have been disposed of properly; and all elements of the Stormwater Management Plan have been completed. I understand that by submitting this notice of inactivation, I am no longer authorized to discharge stormwater associated with construction activity by the CASDP. I understand that discharging pollutants in stormwater associated with construction activities to the waters of the State of Colorado, where such discharges are not authorized by a CASDP or SUDP is unlawful under the Denver Revised Municipal Code, Colorado Water Quality Control Act and the Clean Water Act. I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (See 18 U.S.C 1001 and 33 U.S.C. 1319.)

Signature of Permit Applicant: \_\_\_\_\_  
(Legally Responsible Party)

Name: \_\_\_\_\_  
(printed)

Title: \_\_\_\_\_

Date Signed: \_\_\_\_\_