



Pollution Prevention-Good Housekeeping for County Operations- Standard Operating Procedures (SOP)

Revised: June 2020

Major Revisions: June 2019, February 2019, August 2018, July 2018

Original: April 2017

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Introduction

Part I.E.5 of the MS4 Permit (No. COR-090000) requires the County to implement a Pollution Prevention/Good Housekeeping (PPGH) program for facilities and operations that the County owns, operates, or performs within the MS4 Permit area. In the County, the MS4 Permit area is the unincorporated urbanized area (i.e., where the County has jurisdiction). The program must prevent or reduce water quality impacts from pollutants being discharged to the MS4 from County facilities and operations. This document constitutes the County's PPGH Program Description and documents the procedures used to meet the MS4 Program requirements for that program. The document not only addresses each of the PPGH requirements, but also consolidates the Recordkeeping (Part I.E.5.b) and Program Description (Part I.E.5.c) requirements to further explain how each of these provisions are met by County staff.

Section 1: Roles and Responsibilities

The Stormwater Quality Program Manager housed at Boulder County Public Health serves as a technical resource to assist each regulated County department with Colorado Water Quality Control Act compliance. The Stormwater Quality Program Manager is responsible for providing MS4 Permit compliance tools including: regulatory oversight and audits, evaluating compliance, recordkeeping, annual reporting, communication, training, and outreach.

County departments that own assets or conduct activities regulated under the MS4 Permit are responsible for compliance on their individual projects and daily activities.

Section 2: Applicable Fixed Facilities

Per the MS4 permit, "Applicable operations and facilities" are County operations and facilities that are not authorized by a separate CDPS or NPDES discharge permit.

Part I.E.5.a.ii.(A) of the MS4 permit (Fixed Facilities) states that Boulder County "*shall implement control measures to prevent or reduce potential discharges of pollutants to the MS4 from the applicable facilities listed below. New written procedures shall be developed and implemented for any new applicable facilities prior to associated pollutant sources being present.*

- 1) *Vehicle maintenance facilities*
- 2) *Asphalt and concrete batch plants which are not already authorized by a separate CDPS or NPDES discharge permit*
- 3) *Solid-waste transfer stations where waste and recyclables are briefly held before further transport*
- 4) *Outdoor storage yards with exposed stockpiles of materials, including stockpiles of road deicing salt, salt and sand, sand, and rotomill material*

Boulder County GIS (Mark Mullane and Cynthia Swain) conducted a GIS analysis in August of 2016 to help identify applicable facilities. County GIS based this analysis on real estate records of properties owned or operated (e.g., leased) by the County that are located in the unincorporated urbanized area. The analysis was limited to those properties that have a structure erected on the land (e.g., fixed facility). The results of the GIS analysis are provided as a spreadsheet in Attachment A. Using this GIS analysis, the only fixed facility meeting the "applicable facility" definition (per above referenced criteria) is listed below.

List of Applicable County Facilities (Part I.E.5.c.i.(A) of the MS4 permit)

- **Boulder County Fairgrounds Complex** – located at 9595 Nelson Road and managed by Parks and Open Space (POS). The Fairgrounds is an applicable facility as it is in the MS4 Permit area and has outdoor storage with exposed stockpiles of materials. In addition, a variety of regulated activities are conducted at the Fairgrounds such as “park and open space maintenance, fertilizer applications, large outdoor festivals and events,” etc. Detailed information can be found in the Boulder County Fairgrounds Facility Runoff Control Plan (FRCP).

Boulder County owns and/or operates multiple other fixed facilities that are located within incorporated towns/cities such as the City of Boulder, rather than the unincorporated urbanized area. To address this, the CDPHE guidance document entitled *Frequently Asked Questions, General Permits for Stormwater Discharges Associated with Municipal Separate Storm Sewer Systems (MS4s), COR080000 and COR090000*, Revised July 13, 2016 states the following:

County operated facilities located within incorporated areas (added 5/27/16)

QUESTION: If a county with an MS4 permit owns a facility that is located within an incorporated town/city, does the county have to meet the MS4 permit requirements for that facility?

ANSWER: No. Incorporated areas are outside of the jurisdictional authority of a county, and therefore not within the permit area of that county.

Therefore, the CDPHE guidance treats these sites similar to private facilities if they discharge to a city MS4, and these sites are not considered applicable facilities under Boulder County’s MS4 Program.

County Facility Runoff Control Measures for Fixed Facilities

Part I.E.5.a.ii.(B) of the MS4 permit (Required Control Measure Categories) states that Boulder County “shall implement the following categories of control measures as necessary to prevent or reduce the pollutant sources present:

- 1) Preventive maintenance
- 2) Good housekeeping
- 3) Spill prevention and response procedures
- 4) Structural control measures
- 5) Evaluation of non-stormwater discharges
- 6) Employee training”

At this time, the only applicable fixed facility in the County is the Boulder County Fairgrounds. The above referenced categories are specifically included in the Fairgrounds Facility Runoff Control Plan. The Fairgrounds FRCP also provides the following required components:

- Inspection procedures/scope [Part I.E.5.a.ii.(C)],
- Applicable control measures for activities conducted at the Fairgrounds [Part I.E.5.a.iii.(A)],
- Nutrient Source Reductions [Part I.E.5.a.iv],
- Outdoor bulk storage [Part I.E.5.a.v],
- Training [Part I.E.5.a.vi], and
- Recordkeeping and Required FRCP contents [Part I.E.5.b].

Outdoor Bulk Storage

Part I.E.5.a.v of the MS4 Permit requires outdoor bulk storage structures, of more than 55 gallons, for any liquid chemicals to have secondary containment. The Boulder County Fairgrounds has only one applicable storage container, a 500-gallon diesel fuel tank that is double-walled for secondary containment. The tank was manufactured by Containment Solutions, Inc., and specifications are provided on a plaque affixed to the tank.

Section 3: Facilities with NPDES or CDPS Permit Coverage

Part I.E.5.c.i of the MS4 Permit requires Boulder County to provide a list of facilities that the County owns or operates that are subject to separate CDPS or NPDES permit coverage under the state’s general stormwater permits for discharges of stormwater associated with industrial activity. Table 1 provides this list of facilities along with pertinent information. In addition, Table 1 includes additional CDPS or NPDES permit coverage that has been obtained for County Departments that own regulated assets (e.g., fixed facilities) or activities that are not construction related. This aspect was added to make the inventory more comprehensive and useful in showing CDPS or NPDES permit coverage. All data used in Table 1 was obtained from the list of active CDPS certifications available at <https://www.colorado.gov/pacific/cdphe/clean-water-active-permits> (sort by county). The EPA ECHO website was also referenced, but it was difficult to use the data to determine permittee and jurisdictional information.

Table 1 – County Facilities and Activities with CDPS or NPDES Permit Coverage (2016-2021 Permit Term)

Permit	Permit ID	Facility Name and Address	Activity Description	Inside County MS4 Permit Area?
COR900000-Industrial stormwater	COR900440	Boulder County Hazardous Materials Management Facility- 1901 63 rd St., Boulder	Conditionally Exempt Small Quantity Generator/ Household Hazardous Waste Consolidation Facility	No
COR900000-Industrial stormwater	COR900445	Boulder County Recycling Center- 1901 63 rd St., Boulder	Processing of source-separated commingled recyclable materials	No
CO-Individual permit	CO0047651	Eldorado Springs WWTF- 83 Barber Ln., Eldorado Springs	Domestic wastewater	No, but service area includes some urbanized area
COG603000-Subterranean dewatering or well development	COG603078	New Cardinal Mill- Caribou Rd., Nederland	Dewatering	No
COG603000-Subterranean dewatering or well development	COG603101	Boulder County Justice Center- 1777 6 th St., Boulder	Dewatering	No
COR040000-Metal mining stormwater	COR040298	Argo Mine- 3209 Overland Rd., Jamestown	Reclamation of nine waste rock piles left from prior mining operations.	No
Pesticide Application	COG860037	Boulder County Mosquito Control District	Pesticides compliance certification	No, but service area includes some MS4

Pesticide Application	COG860044	Boulder County Parks and Open Space Pesticides	Pesticides compliance certification	No, but service area includes some MS4
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Section 4: Procedures for Conducting Inspections of the Fixed Facility (Fairgrounds)

Part I.E.5.a.ii of the MS4 Permit states, *(C) The permittee shall implement written county facility inspection procedures, which must at a minimum include the following:*

- 1) An annual visual inspection of each applicable municipal facility.*
- 2) A verification that the written procedures and documentation reflect current conditions.*
- 3) Observation of locations and areas where stormwater from municipal facilities are discharged off-site; or discharged to waters of the state, or to a storm sewer system that drains to waters of the state.*
- 4) Observation of facility conditions, including pollutant sources and control measures, to identify inadequate control measure and control measure requiring maintenance.*

At this time, the only applicable fixed facility in the County is the Boulder County Fairgrounds. BCPH Stormwater Quality Staff will make at least annual visual inspection of the Fairgrounds for compliance purposes.

The Fairgrounds Manager is the only other employee that conducts County facility inspections and he is trained on how to inspect the control measures present at the Fairgrounds. The Fairgrounds Manager’s inspections are considered periodic inspections to oversee facility conditions, but they do not qualify as an Annual MS4 Inspection of the Fairgrounds.

An inspection checklist specific to the facility (BOCO Fairgrounds Field Inspection Form) has been created and can be found on the iPads in the PDF Expert App and in the FRCP along with instructions for filling out the form. The BOCO Fairgrounds Field Inspection Form is primarily a tool to ensure BCPH Stormwater Quality Staff cover the MS4 Permit-required inspection scope. The scope of the annual inspection includes, among other things, observation of stormwater discharge locations and areas. These areas are displayed on the facility map attached to the BOCO Fairgrounds Field Inspection Form. The scope of the inspection also includes observation of facility conditions, including pollutant sources and control measures, to identify inadequate control measures and control measures requiring maintenance.

Public Health Stormwater Quality staff are now using iPads and Adobe Acrobat fillable forms (BOCO Fairgrounds Field Inspection Form) for inspections. The iPads assist with efficiency as photographs are taken in the field and dropped directly into the fillable form.

Upon return from the field, a PPGH record entry needs to be made in Accela. Fill out the checklist tab built into the inspection record in Accela as it contains all information/fields required under Part I.E.5.b.i(F) of the MS4 Permit and helps document the appropriate scope of inspection as required under Part I.E.5.a.ii(C). Please note that a PPGH record entry also needs to be made in Accela if you conduct a compliance assistance inspection of a County Activity (such as storm drain cleaning by Road Maintenance).

Once inspection records are entered in Accela, a copy must be provided to the Fairgrounds Manager and POS upper management using the memo template hyperlinked below ([Annual MS4 Annual Inspection - Memo Template - POS Fairgrounds.docx](#)). Ensure that corrective actions are made and update Accela appropriately. [..\Fairgrounds FRCP\Annual Inspections\Annual MS4 Annual Inspection - Memo Template - POS Fairgrounds - 06-20-2018.docx](#)

Next, all documentation such as the BOCO Fairgrounds Field Inspection Form and written notices need to be uploaded into Accela (use Attachment B below). These documents are then accessible through both Accela and FileNet/IBM Content Management (with searchable text) under the appropriate unique record ID (PPGH-18-XXX).

Lastly, Public Health Stormwater Quality staff must update the FRCP and checklist if there are significant changes to facility conditions. FRCP updates are important so that documentation accurately reflects the current site conditions and configuration.

Section 5: County Operations and Maintenance (O&M) Procedures

Part I.E.5.a.iii of the MS4 Permit requires Boulder County to develop and implement procedures that prevent or reduce stormwater pollution from operations and activities conducted by the County, particularly those transient activities that are not covered under the Fixed Facilities requirements (Part I.E.5.a.ii (A) of the MS4 Permit).

Multiple County Departments own assets or conduct activities regulated under the County Operations Program of MS4 Permit, primarily the Road Maintenance Division (Public Works) and Recreation and Facilities Division (Parks and Open Space), and to a lesser extent Building Services (Administrative Services). These departments are currently operating under the stormwater quality procedures and controls that were specified in the One-Time Operating Procedures Report to CDPHE, dated March 10, 2010. These controls were updated in 2014-2015 by Partners for a Clean Environment (PACE) in coordination with Keep it Clean Partnership (KICP), and are hereinafter referred to as the PACE controls and located here <https://www.pacepartners.com/program-areas/water/municipal-stormwater-operations/>. Editable versions of these documents are available by contacting PACE, now located in the Office of Sustainability, Climate, and Resilience.

Public Health Stormwater Quality staff intend to select and work with individual County Divisions each Permit term as shown in Table 2 to replace the PACE controls based on templates developed by the Colorado Stormwater Council. Our approach is to work intensively with individual County Divisions and have their staff assist in self-developing controls that can be more readily implemented. We are using a participatory process to generate ownership of the County O&M procedures (hereinafter, stormwater quality controls) by individual County Divisions, and include those staff doing the actual work activities in the field.

Table 2 – Individual County Divisions (2016-2021 Permit Term)

Division	Description	Department Contacts
Fairgrounds group - Recreation and Facilities Division (Parks and Open Space)	Incorporated Activity controls into the Fairgrounds Facility Runoff Control Plan (FRCP). Bring in other groups for standardization in a future Permit term, such as Building Services Grounds group.	Joe Lafollette Randy Noterman
Road Maintenance Division (Public Works)	Road Maintenance is updating their Activity Guidelines in 2018-2019 so we will integrate stormwater quality controls with what they already use for procedures.	Bob Kiepe

Again, multiple County Departments have activities that are conducted in the MS4 Permit area (i.e., the unincorporated urbanized area). In practice, it is too difficult for County staff to always know when their work is located in the MS4 Permit area. Furthermore, the County is required to protect water quality, both in the urban "MS4 Permit area" and more broadly (county-wide) under the Colorado Water Quality Control Act. Due to intensive work with the Road Maintenance Division in the 2016-2021 Permit term, Road Maintenance staff are attempting to be pro-active and apply any new stormwater quality controls wherever their work is located.

Applicable activities are as follows:

- 1) Operation and maintenance of streets, roads, highways
- 2) Operation and maintenance of municipal parking lots
- 3) Operations at maintenance and storage yards
- 4) Operations at maintenance shops with outdoor storage areas
- 5) Operation and maintenance of snow dumps/snow disposal areas
- 6) Operation and maintenance of sites used for temporary storage of sweeper tailings or other waste piles
- 7) Park and open space maintenance
- 8) Building maintenance
- 9) New construction of municipal facilities
- 10) Application of pesticides, herbicides, and fertilizers
- 11) Large outdoor festivals and events
- 12) Construction activities not subject to the requirements of Part I.E.3
- 13) Maintenance, replacement, and construction of utilities and the storm system, including operations, such as storage, dewatering, or disposal, associated with removal of sediment, debris, and other pollutant sources from the MS4, including removal of materials, such as trash, from control measures implemented in accordance with Part I.E.4, unless covered by a separate CDPS or NPDES permit.

As individual PACE controls are replaced, they are included on the Public Health server here [..\Activity BMPs](#). The new stormwater quality controls are made available to individual County Divisions in a way that is effective for each Division. For example, the Road Maintenance Division uses tablets so we will be saving stormwater quality controls on their tablet storage. In addition, stormwater quality controls related to a facility with a Runoff Control Plan (i.e., Boulder County Fairgrounds), are incorporated into the Facility Runoff Control Plan itself.

Section 6: Nutrient Source Reductions

Part I.E.5.a.iv of the MS4 Permit requires Boulder County to *“evaluate, identify, and document the county operations and facilities that are and/or have the potential to contribute nitrogen and phosphorus to the waters receiving the discharge authorized under this permit (identified county operations nutrient sources).”* The MS4 Permit also requires that the County include the storage and application of fertilizer, including subsequent stormwater or irrigation runoff from areas where fertilizer has been applied, as an identified county operations nutrient source if these operations were not covered under the Fairgrounds Facility Runoff Control Plan or standard operating procedures.

In accordance with Part I.E.5.c.iii of the MS4 Permit, applicable County facilities have been evaluated to determine if there is potential to contribute nitrogen and phosphorus to discharges under the MS4

Permit. The following operations found at the Fairgrounds have been identified as potential county operations nutrient sources:

- Storage of manure piles from livestock on site
- Occasional fertilizer application in picnic shelter and fertilizer storage
- Leaking waste receptacles

These county operations nutrient sources are addressed in the Fairgrounds Facility Runoff Control Plan with corresponding stormwater quality controls. As of March 2020, Boulder County Resource Conservation is proposing the construction of a new commercial Compost Processing Facility. We have been coordinating on this proposal to incorporate an improved disposal/recycling process for the manure waste stream at the Fairgrounds. The goal would be to provide more controlled recycling options for manure, as it may provide ancillary benefits for non-point source pollution.

Public Health Stormwater Quality staff intend to evaluate County operations for Nutrient Source Reductions by selecting and working with individual County Divisions each Permit term as shown in Table 2. The method used to evaluate County operations will be observation and discussion with those staff doing the actual work activities in the field, and having those staff assist in self-developing controls that can be more readily implemented.

Section 7: Training

Because the Commissioners are now the legal contact on the County's MS4 Permit, BCPH felt it was important to have a policy statement to employees on protecting water quality. In June 2017, BOCC approved Policy Number 10.2, Stormwater Quality Compliance Policy, as part of updates to the County Personnel and Policy Manual. This policy stresses that water quality is important to County leadership, particularly as it relates to the county departments. It also educates employees that the county is required to protect water quality, both in the urban "MS4 Permit area" and more broadly (county-wide) under the Colorado Water Quality Control Act. Employee awareness is increased by including this policy in trainings provided by BCPH Stormwater Quality staff.

Public Health Stormwater Quality staff intend to select and work with individual County Divisions each Permit term as shown in Table 2 to replace the PACE "municipal" trainings. These PACE trainings have been conducted since the first MS4 Permit term and have reached a broad audience of County staff, but were discontinued by KICP as of January 2018. Our refreshed approach is to work intensively with individual County Divisions and have their staff receive PPGH training that is tailored to their specific work.

Applicable County staff are trained on facility plans and control measures related to the operations they perform. Our trainings inform employees responsible for operations with the potential to result in an illicit discharge about the prohibitions against, and potential impacts associated with, illicit discharges from County operations. The trainings include information on trash and its effects on water quality.

Name and department of each individual trained, date of training, the type of training, and a list of topics covered are documented for each training in the Public Health G-drive <\\Crfs01\he\HEShared\EH\Water Quality Program\Stormwater\ MS4 Program\Training Records>

Fairgrounds Training Program

Applicable Fairgrounds staff will receive ongoing training on the Facility Runoff Control Plan and applicable standard operation procedures related to the operations they perform. Additional training

details are included in the Facility Runoff Control Plan. Training target dates are saved in the BCPH Stormwater Quality Program staff's outlook calendars. Aside from Public Health Stormwater Quality staff, the Fairgrounds Manager is the only other employee that conducts County facility inspections and he is trained on how to inspect the control measures present at the Fairgrounds.

Road Maintenance Training Program

Due to intensive work with the Public Works Road Maintenance Division in the 2016-2022 Permit term, Road Maintenance staff are beginning to receive a refreshed approach to training that is tailored to their specific work. Training target dates are saved in the BCPH Stormwater Quality Program staff's outlook calendars. For the remainder of the 2019-2021 calendar years we plan to conduct training as follows:

- All Staff Meeting (August 2019)—this will consist of stormwater quality basic training topics such as simple good housekeeping, illegal discharge, trash, and the 3 main things to know as follows:
 - i. Boulder County holds an MS4 Permit to protect water quality
 - ii. Each Department has “stormwater pollution prevention controls” or BMPs they must follow for their field work
 - iii. Staff know who to call. Report any suspicious discharges to BCPH water quality staff by contacting your foreman. Foreman call the Environmental Health Front Desk (303-441-1564) or use the reporting form here <https://www.bouldercounty.org/environment/water/stormwater-quality-protection/>.
- Winter Operations Training (October 2019)—this is when Road Maintenance trains on the upcoming winter operations. We will use this training to detail snow removal, salt-sand storage (e.g., Maintenance & Storage Yards), liquid deicer storage and other controls so that staff are given instructions and a refresher just prior to the winter season's activities.
- Road Sweeping and Maintenance & Storage Yards Controls (February 2020)

Due to COVID concerns in March 2020, Boulder County discontinued all in-person trainings including stormwater quality training. During the COVID pandemic, training of Road Maintenance staff is particularly challenging because field staff do not have individual offices and computers to receive online training. If we cannot get Road Maintenance staff into a large “all staff” training room, we will explore alternate methods of training in the future such as the use of tablets. In the meantime, stormwater quality controls documents have been made available to Road Maintenance field staff by saving the documents on their tablet storage. The following trainings will be scheduled when more information is known.

- Small Construction Controls (March is ideal)—most Road Maintenance construction projects are coordinated with Public Works Engineering and conducted in spring-summer.
- Summer Operations Training (Late April is ideal)—this is when Road Maintenance trains on the upcoming spring-summer operations. We will use this training to detail Roadway O&M (e.g., dust control, paving), Storm Drain Maintenance and other controls so that staff are given instructions and a refresher just prior to the spring-summer season's activities.

Attachment A: County GIS Analysis of Applicable Facilities

STATUS	Location	ADDRESS1	NAME	NOTES
Inactive		3532 Diagonal Hwy	Boulder Emergency Squad	8/26/16 - Per Mark Frederick in Facilities Real Estate, these "inactive" sites are no longer owned or leased by the county. They are only kept in the dataset for filenet purposes. Bottom line- these are not regulated under our MS4 permit.
Active	Fairgrounds	9593 Nelson Rd	Clover Building	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Affolter House	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Camper Facility	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Exhibit Building	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Maintenance Shop	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Outdoor Arena	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Pavillion	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Natural Resource Building	
Inactive		6790 N. 79th St	Niwot Senior Housing	Same as above.
Inactive		7160 Niwot Rd Suite B-9	Niwot Sheriffs Sub.	Same as above.
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Indoor Arena	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Barn A	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Barn B	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Barn C	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Barn D	
Active	Fairgrounds	9595 Nelson Rd	Fairgrounds-Barn E	

Attachment B: Accela Document Upload

Documents must be uploaded into the Accela record using the Documents feature. General information and instructions can be found here under “Attaching a Document to a CAP”: [Accela Wiki](#)

1. Under PUBLIC INFO CATEGORY from the drop-down menus Select BOCO FILENET in the first one, and then in the second one Select either Internal Correspondence, Limited Public, or Public. Currently, most documents are “Public.”
2. Next under DESCRIPTION the name of your document should be one of the following:
 - Annual MS4 Inspection
 - Periodic Staff Inspection
 - MS4 Compliance Assistance Inspection
 - Correspondence
 - Portfolio to Management
 - Warning Notice
 - NOV
 - Corrective Action Inspection
 - Corrective Action Improvements
 - Corrective Action Approval