MUNICIPAL OPERATIONS

Stormwater Standard Operating Procedures

Boulder County

Municipal Operations Stormwater Standard Operating Procedures

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For More Information

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Applicable Departments

- Parks and Open Space
- Building Services

Possible Pollutants

- Sediment
- Organics and Nutrients
- Chemicals and Petroleum Products
- Trash and Debris

Related Procedures

- Construction Activities less than an Acre
- Spill Prevention and Response

New Construction of Municipal Facilities

Description

The purpose of this document is to provide stormwater pollution prevention control measures for new construction of municipal facilities conducted or contracted out by Boulder County for projects that disturb an acre or more or are part of a larger common plan of development that disturbs an acre or more. Small construction activities disturbing less than an acre are covered under the Construction Activities less than an Acre Procedure.

Stormwater pollution prevention controls are needed to protect water quality because construction activities disturb the vegetation and natural soils of a site, resulting in increased soil erosion and sedimentation. Construction can also involve other pollutants such as fuel, fertilizers, portable toilets, asphalt, sealants, and concrete. These pollutants must be managed to avoid impacts to water quality.

Construction Activity is defined as:

Ground surface disturbing and associated activities (land disturbance), which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. Construction does not include routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility, including routine maintenance. Activities to conduct repairs that are not part of routine maintenance or for replacement are construction activities and are not routine maintenance. Repaving activities where underlying and/or surrounding soil is exposed as part of the repaving operation are considered construction activities. Construction activity is from initial groundbreaking to final stabilization regardless of ownership of the construction activities.

Routine Maintenance Activity is defined as:

Activities to maintain original line and grade, hydraulic capacity, or original purpose of a facility.

Contracted Services

The County's construction contract contains language that makes the contractor responsible for water quality and MS4 compliance for construction projects and provides a link to this stormwater standard operating procedures.

Local, State and Federal Permitting

Some construction activities require federal, state, and local permits.

- Obtain all applicable federal, state, and local water quality permits for construction activities as needed. Examples of such permits are provided below.

Boulder County Stormwater Quality Permit (SWQP) For Projects in Unincorporated Boulder County

- A SWQP is required for construction activities that:
    1. Disturb less than one acre but located within 100 horizontal feet of a waterway. In accordance with the Guidance for Small Construction Activities publication, small construction activities (e.g., pavement removal-replacement, sign installation) will not require a SWQP if the duration of the work is less than 2 weeks. **Despite the lack of a permit, stormwater pollution prevention controls are still required on all construction activities conducted or contracted out by County staff**; or
    2. Disturb one acre or more; or
    3. Disturb less than one acre but part of a larger common plan, meaning it is grouped with other nearby construction activities (e.g., in the Right-Of-Way) that collectively disturb one acre or more.
- All construction projects must meet good engineering, hydrologic and pollution control practices.

Projects Located in an Incorporated Area

Review and design stormwater management plans to adhere to the local municipality's construction site program.

State Stormwater Construction Permit (SCP)

- A State Stormwater Construction Permit is required for construction activities that:
    1. Disturb one acre or more; or
    2. Disturb less than one acre but part of a larger common plan, meaning it is grouped with other nearby construction activities that collectively disturb one acre or more.

Routine Maintenance Exemption

- Importantly, if you are conducting **routine maintenance** to maintain original line and grade, hydraulic capacity, or original purpose of a facility, it does not qualify as construction activity and does not need a stormwater discharge permit. **Activities typically considered "routine maintenance" include routine road grading, ditch cleaning, and culvert cleaning, replacement of an equivalent culvert or French drain, repairing erosion, repairing fences or gates, vegetation clearing, and repairing parking lots, trails, or sidewalks**. For an activity to be considered routine maintenance, it may not be an improvement project or include changes in location or size. **Control measures (i.e., erosion and sediment controls) are still required despite the lack of a permit**.

- Pavement removal and replacement qualifies as construction activity if the subgrade is disturbed.[1] Follow the SWQP requirements determine the need for a permit if the activity qualifies as construction versus maintenance.

Clean Water Act, Section 404 Permit

- If you are working within the bed or banks of a stream or placing fill in a wetland or other waters of the United States, a 404 Permit is required.[2] Road Maintenance activities can typically qualify under Nationwide Permit (NWP) 3, other County construction may qualify under other NWPs.

Colorado Department of Public Health and Environment, Dredge and Fill Notification

- If you are working within the bed or banks of a stream or placing fill in a wetland or other waters of the United States that is no longer covered by the Federal 404 Permit program due to the Sackett SOCTUS decision, then it may require notification to the Colorado Department of Public Health and Environment (CDPHE). Reach out to the Stormwater Quality Coordinator to discuss and for more information see https://cdphe.colorado.gov/dredge-and-fill .

State Dewatering Permit

- A State Dewatering Permit is required if you need to discharge groundwater or surface water offsite or into a waterway.

Water Quality Protection Controls

- Applicable sediment and erosion controls will be designed and installed, such as inlet protection, silt fence, sediment traps, erosion control logs, check dams, anchoring portable toilets, and vehicle tracking control.
- Where practicable, non-structural controls will be used, such as phased construction, dust control, good housekeeping practices, and spill prevention and response.
- Stormwater management plans will meet all applicable permits and will be submitted for acceptance to the appropriate agencies as applicable.
- If you need assistance or recommendations on additional control measures, please call the Stormwater Quality Coordinator (contact on the front of this standard operating procedure).

[1] Road Resurfacing and Replacement Guidance from CDPHE, dated March 14, 2011.

Spill Prevention and Response

See Spill Prevention and Response Procedures

Employee Training

- Train employees who are involved with construction on this written procedure. Stormwater training for construction may occur through Colorado Stormwater Council, Keep it Clean Partnership, or may be given by Public Works Stormwater staff. Contracted entities are expected to provide a qualified stormwater manager for any construction requiring coverage under CDPS COR400000.

For More Information

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Applicable Departments

- Public Works
- Parks and Open Space
- Building Services

Possible Pollutants

- Sediment
- Organics/Nutrients
- Chemicals and Petroleum Products
- Trash and Debris

Related Procedures

- Spill Prevention and Response
- Roadway Operations and Maintenance
- Parks and Open Space Ground Operations and Maintenance
- Building Maintenance
- New Construction of Municipal Facilities

Construction Activites Less than an Acre

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for small construction activities conducted or contracted out by Boulder County. Small construction activities include any type of excavation or land disturbance that is not considered routine maintenance, such as a new culvert installation, pavement repair where the subgrade is exposed, minor grading that alters the original grade, foot bridge installations, and trail work disturbing less than an acre of land and more than 100 feet from a waterway.

Stormwater pollution prevention controls are needed to protect water quality because construction activities disturb the vegetation and natural soils of a site, resulting in increased soil erosion and sedimentation. Construction can also involve other pollutants such as fuel, fertilizers, portable toilets, asphalt, sealants, and concrete. These pollutants must be managed to avoid impacts to water quality.

Projects disturbing an acre or more or part of a larger common plan of development are covered by Boulder County Stormwater Quality Permit (SWQP) and requirements are fully described in that permit (Boulder County Stormwater Quality Permit). Additionally, small project located within 100 feet of a waterways are also covered by the County's SWQP.

Construction Activity is defined as:

Ground surface disturbing and associated activities (land disturbance), which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. Construction does not include routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility, including routine maintenance. Activities to conduct repairs that are not part of routine maintenance or for replacement are construction activities and are not routine maintenance. Repaving activities where underlying and/or surrounding soil is exposed as part of the repaving operation are considered construction activities. Construction activity is from initial groundbreaking to final stabilization regardless of ownership of the construction activities.

Routine Maintenance Activity is defined as:

Activities to maintain original line and grade, hydraulic capacity, or original purpose of a facility.

Contracted Services

The County's construction contracts contain language that makes the contractor responsible for water quality and MS4 compliance for construction projects and provides a link to this stormwater standard operating procedures.

Small Construction Activities Not Associated with a Waterway

The following stormwater pollution prevention controls are required for construction activities that disturb less than one acre and are not located near a waterway. For the waterway and construction activity definitions, please see Guidance for Small Construction Activities and Stormwater Quality Permit Requirements publication, respectively, and available here Boulder County Stormwater Quality Permit

Because of their size and location these activities do not require a State Stormwater Construction Permit or a Boulder County Stormwater Quality Permit. **Despite the lack of a permit, stormwater pollution prevention controls are still required to be used on all construction activities conducted or contracted out by Boulder County staff**.

Local, State and Federal Permitting

Some construction activities require federal, state, and local permits.

- Obtain all applicable federal, state, and local water quality permits for construction activities as needed. Examples of such permits are provided below.

Boulder County Stormwater Quality Permit (SWQP) For Project in Unincorporated Boulder County

- A SWQP is required for construction activities that:

  1. Disturb less than one acre but located within 100 horizontal feet of a waterway (the most common Road Maintenance trigger). In accordance with the Guidance for Small Construction Activities publication, small construction activities (e.g., pavement removal-replacement, sign installation) will not require a SWQP if the duration of the work is less than 2 weeks. **Despite the lack of a permit, stormwater pollution prevention controls are still required on all construction activities conducted or contracted out by County staff**; or
  2. Disturb one acre or more; or
  3. Disturb less than one acre but part of a larger common plan, meaning it is grouped with other nearby construction activities (e.g., in the Right-Of-Way) that collectively disturb one acre or more.

Project Disturbing an Acre or More or Part of a Larger Common Plan of Development within Incorporated Areas of Boulder County

Construction projects disturbing an acre or more or part of a larger common plan of development require stormwater discharge permits. If the project is in an incorporated area of the County, follow that jurisdictions process and requirements as well as obtaining coverage under the State Stormwater

Construction Permit (SCP) described below. Routine maintenance is not considered a construction activity see exemption below.

State Stormwater Construction Permit (SCP)

- A State Stormwater Construction Permit is required for construction activities that:

  1. Disturb one acre or more; or
  2. Disturb less than one acre but part of a larger common plan, meaning it is grouped with other nearby construction activities that collectively disturb one acre or more.

Routine Maintenance Exemption

- Importantly, if you are conducting **routine maintenance** to maintain original line and grade, hydraulic capacity, or original purpose of a facility, it does not qualify as construction activity and does not need a stormwater discharge permit. **Activities typically considered "routine maintenance" include routine road grading, ditch cleaning, and culvert cleaning, replacement of an equivalent culvert or French drain, repairing erosion, repairing fences or gates, vegetation clearing, and repairing parking lots, trails, or sidewalks**. For an activity to be considered routine maintenance, it may not be an improvement project or include changes in location or size. **Control measures (i.e., erosion and sediment controls) are still required despite the lack of a permit**.
- Pavement removal and replacement qualifies as construction activity if the subgrade is disturbed.[1] Follow the SWQP requirements determine the need for a permit if the activity qualifies as construction versus maintenance.

Clean Water Act, Section 404 Permit

- If you are working within the bed or banks of a stream or placing fill in a wetland or other waters of the United States, a 404 Permit is required.[2] Road Maintenance activities can typically qualify under Nationwide Permit (NWP) 3, other County construction may qualify under other NWPs.

Colorado Department of Public Health and Environment, Dredge and Fill Notification

- If you are working within the bed or banks of a stream or placing fill in a wetland or other waters of the United States that is no longer covered by the Federal 404 Permit program due to the Sackett SOCTUS decision, then it may require notification to the Colorado Department of Public Health and Environment (CDPHE). Reach out to the Stormwater Quality Coordinator to discuss and for more information see Reg 87 - Colorado Dredge and Fill Program

[1] Road Resurfacing and Replacement Guidance from CDPHE, dated March 14, 2011.

State Dewatering Permit

- A State Dewatering Permit is required if you need to discharge groundwater or surface water offsite or into a waterway (CDPHE Dewatering Permit Programs). If the water can be discharged to land and infiltrate within County owned areas, it may be covered under CDPHE Low Risk Discharge Guidance.
- A control measure such as a dewatering filter bag must be used for discharges.

Water Quality Protection Controls

- Control measures (i.e., erosion, sediment, and other controls) must be utilized following specifications referenced in the Boulder County Storm Drainage Criteria Manual or otherwise approved design criteria or industry standards. Specifications for commonly used controls such as rock socks, sediment control logs, Dandy Recyclers®, Filtrexx®, and weighted wattles are included at the end of this SOP.
- Drainage features and waterways must be protected during upgradient land disturbing activities.
- Material stockpiles should not be stored in stormwater flow lines. Temporary sediment control will be used during temporary, short-term placement while work is actively occurring.
- Where feasible, grading activities should be scheduled during dry weather.
- Best management practices will be periodically inspected and maintained as necessary.
- Waste containment for concrete washout, masonry, paint, trash and other potential pollutants will be available when these activities are being conducted.
- Trash must be removed and properly disposed of.
- Portable toilets will be anchored to prevent tipping.
- Where practicable, non-structural controls will be used, such as phased construction, dust control, good housekeeping practices, and spill prevention and response.
- If you need assistance or recommendations on additional control measures, please contact Public Works Stormwater staff.

Additional Erosion Control Measures

- Minimize soil disturbance and keep as much original vegetation as possible.
- Limit the flow of water to non-erosive velocities for the conveyance of water around, through, or from the disturbed area.
- Establish temporary or permanent cover on areas that have been disturbed as soon as practicable to minimize the total amount of soil exposed at any given time.
- Provide surface roughening on inactive areas that will continue to be under construction in the future.
- Reseed and stabilize completed area with crimp mulch, erosion control blanket, or hydromulch.

Additional Sediment Control Measures

- Install and maintain perimeter control around the downgradient side of the disturbed area.
- Install vehicle traffic control or tracking pads at the exit of the project as applicable.
- Install inlet protection and check dams in the flow line to prevent sediment from entering the MS4.

Spill Prevention and Response

See Spill Prevention and Response Procedures

Employee Training

- Train employees who are involved with construction on this written procedure. Information regarding proper practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

- Stormwater training may occur through Colorado Stormwater Council, Keep it Clean Partnership, or may be given by Public Works Stormwater staff.

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For More Information

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Applicable Departments

Road Maintenance

Possible Pollutants

Sediment
Organic Matter
Oil and Grease
Trash and Debris
Metals
Asphalt and Concrete Waste
Paints
Deicer Materials
Slurry and Sludge

Related Standard Operating Procedures

Spill Prevention and Response
Sweeping Operations and Waste Disposal
Snow Disposal Areas
Vehicle and Equipment Fueling
Storm Drain Cleaning
Fleet Operations for Maintenance Shops with Limited Outdoor Storage Areas
Roadside Vegetation Management

Operation and Maintenance of Streets, Roads, and Highways

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for the operation and maintenance (O&M) of roads and their associated drainage conducted by Boulder County Public Works. These activities include paving roads (e.g., concrete and asphalt work; patching, resurfacing, and surface sealing, curb and gutter maintenance), gravel roads (e.g., grading, dust control,), bridge maintenance, and snow and ice operations.

These activities are performed to provide a safe roadway surface for the traveling public and to reduce further roadway or drainage deterioration. If not conducted properly, roadway O&M can be a source of water pollution and illegal discharges.

Contracted Services (as applicable)

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Do not perform concrete or asphalt work during wet conditions, whenever possible. This prevents materials and chemicals from washing away during a storm event.
- Locate pollutant sources such as concrete equipment/truck washout area, portable toilets, and material storage away from drainage features such as roadside ditches and inlets.
- **Liquid chemicals** 55 gallons or greater must have secondary containment.
- Leaking material containers should be properly discarded and replaced.
- Monitor equipment for leaks and use drip pans as necessary.
- Flushing of paved roads is not allowed; it is a violation of Boulder County's Municipal Separate Storm Sewer System (MS4) Permit and more broadly the Colorado Water Quality Control Act. Flushing removes fine particles and

associated metals; it is considered as an illegal discharge of these pollutants to the drainage feature and waterways.

- When saw cutting, ensure that slurry does not enter drainage features or waterways. Place covers or plastic over any drop inlets (within 25 feet) to protect them from entry of wastes, dusts, or slurry.
- When performing a wet saw cut, a vacuum must be used to remove slurry so that it does not enter downgradient drainage features. Additionally, an absorbent sock or other type of containment should be available in case of a vacuum malfunction. For dry saw cuts, dust must be minimized to the extent practicable, and dust must be swept and properly disposed.
- Power Washing needs to follow CDPHE Low Risk Discharge Guidance titled Surface cosmetic power washing operations to land and cannot use soaps, solvents or other chemical additions.
- Stay alert for any signs of pollution entering drainage features or waterways. This includes illegal dumping of waste near drainage features (e.g., household chemicals, automobile fluids).
- Report any suspicious discharges/illegal dumping or spills to your supervisor. Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.
- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff at 303-441-4444 have Public Health contacted. For any questions contact the Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.
- Drainage features that are known to have been affected by traffic accidents or spills should not be cleaned by Public Works until the responsible party has remediated the area. Stormwater Quality Coordinator or Public Health Water Quality can enforce proper cleanup if necessary.

Temporary Control Measures

- **Temporary controls such as rock socks, sediment control logs, Dandy® Product, Road Wattle® or equivalent are required on O&M activities that stockpile or create erodible materials or have earth work near storm inlets or waterways.**

    1. Protect storm drain inlets and waterways near the work area.
    2. Locate control measures downgradient of stockpiled materials or spoil piles.
    3. Placement of controls can be short-term installations while work is actively occurring unless there are remaining materials or chemicals left onsite that can wash away during a storm event.

4. Placement requires a certain level of judgement and is job-site specific. The goal is to protect downgradient drainage features and waterways. For most projects, the control measures will include inlet protection, perimeter control for material stockpiles, and a check dam in the ditch downgradient of the work activity.
5. Controls must meet the installation and maintenance specifications referenced in the Boulder County Storm Drainage Criteria Manual (SDCM). Installation specifications for commonly used controls such as rock socks, sediment control logs, Road Wattle ®and Dandy Recyclers® are attached to this document.

General Patching, Resurfacing, and Surface Sealing (e.g., chip seal, seal coat)

- Avoid performing patching, resurfacing, or surface sealing work during wet conditions, whenever possible.
- Where applicable, cover piped storm drain inlets and any manhole cover openings before applying coatings (e.g., seal coat).
- Sweep up debris remaining from new asphalt installation and keep it from getting into drainage features, roads, and waterways.
- Stockpile materials away from drainage features and waterbodies. During wet weather, prevent transport of materials in runoff by covering stockpiles (e.g., asphalt) with tarps or placing perimeter controls (e.g., erodible materials) as appropriate.
- Clean oil distribution equipment (e.g., tack nozzle) into the designated disposal receptacle (e.g., trough at OSTC).
- Transfer and load materials (e.g., slurry ingredients and hot bituminous material) away from drainage features and waterbodies.

Concrete Work (including curb and gutter)

- Make sure uncured concrete and chemicals do not leave the work site or enter drainage features and waterways.
- Ensure there is a designated concrete equipment/truck washout area available. Only wash out mixers, delivery trucks, tools, or other equipment at approved washout.
- Store concrete materials under cover or away from drainage features. Secure bags of cement once open to prevent transport of cement powder by wind or rain.
- Dispose of small amounts of hardened excess concrete, grout, and mortar in the trash. Collect and return sweepings to aggregate base stockpile or dispose in the trash.
- Minimize the drift of chemical cure on windy days by using the curing compound sparingly and applying it close to the concrete surface.

Gravel Roads (e.g., grading, dust control)

- When grading or re-shaping road, use only as much water as necessary to avoid runoff to the roadside ditch.
- When applying dust palliative, avoid runoff to the roadside ditch. Avoid spills when transferring product from the bulk storage at OSTC facility and filling the applicator truck.

Bridge Maintenance

- Working over waterways, ditches, or channels requires a high standard of care to prevent demolition debris and other materials from entering the water or channel. Use the following controls to address debris, material handling, and work over water.

  1. Schedule work during dry ditch season and dry weather. Do not conduct work during or immediately after a rainfall to avoid contact with standing or flowing water.
  2. Isolate or schedule activities near waterways, ditches, or drainage features to avoid contact between fresh concrete and water.
  3. Protect scuppers with weighted wattles or an equivalent prior to work.
  4. Place covers, weighted wattles, filter fabric or plastic around or over any drop inlets (within 25 feet) to protect them from entry of wastes, dusts, overspray or slurry.
  5. Capture all falling debris, scraps, rust or paint to prevent materials from entering waterways, ditches, or drainage features. Place and secure tarps or drop cloths below the bridge or in the dry channel to catch falling debris. If sanding, use a vacuum bag attachment.
  6. Obtain a stormwater quality permit (SWQP) if working under or within 100 feet of the edge of a waterway that is depicted as a blue line on the Stormwater GIS Map link on Boulder County Stormwater Quality Permit website: Boulder County Stormwater Quality Permit

Painting and Striping

- If possible, schedule painting and striping projects during dry weather.
- Use thermoplastic or epoxy markings in place of paint whenever feasible.
- The pre-heater for thermoplastic striping and the melting tanks used during pavement marking must be filled carefully to prevent splashing or spilling of materials. Leave 6 inches at the top of pre-heater and the melting tanks to allow room for material to move and splash when vehicles are deadheaded.
- Clean up any spill material promptly.

Snow Removal and Deicing

- Inspect plowing equipment for leaks prior to use. If there are leaks, contact Fleet services and follow the Fleet Operations for Maintenance Shops with Limited Outdoor Storage Areas Standard Operating Procedure for outdoor vehicle and equipment storage while waiting for a mobile repair unit to address leaking vehicles.
- Take care when connecting or releasing plow blades and clean up any hydraulic fluid that may leak onto the pavement.
- Wash snow removal equipment only at approved washing stations following Fleet Operations for Maintenance Shops with Limited Outdoor Storage Areas Standard Operating Procedure
- Do not pile snow in front of storm sewer inlets to allow inflow of snowmelt runoff.
- Gutters and storm sewer inlets should be cleared of ice to allow drainage of snowmelt or ice-melt.
- Apply only the recommended amount of deicer to roadways.
- Spreaders should be calibrated at the beginning of each season and inspections for maintenance or repair should be conducted after each storm.
- As soon as weather conditions allow; follow-up with street sweeping to remove remaining deicer from roadways.

Street Sweeping

See Sweeping Operations and Waste Disposal Procedures

Employee Training

- Train employees who perform roadway O&M on this written procedure. Information regarding proper O&M practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that road maintenance staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

Sediment Control Log (SCL) SC-2

Description

A sediment control log is a linear roll made of natural materials such as straw, coconut fiber, or compost. The most common type of sediment control log has straw filling and is often referred to as a "straw wattle." All sediment control logs are used as a sediment barrier to intercept sheet flow runoff from disturbed areas.

Photographs SCL-1 and SCL-2. Sediment control logs used as 1) a perimeter control around a soil stockpile; and, 2) as a "J-hook" perimeter control at the corner of a construction site.

Appropriate Uses

Sediment control logs can be used in the following applications to trap sediment:

- As perimeter control for stockpiles and the site.
- As part of inlet protection designs.
- As check dams in small drainage ditches. (Sediment control logs are not intended for use in channels with high flow velocities.)
- On disturbed slopes to shorten flow lengths (as an erosion control).
- As part of multi-layered perimeter control along a receiving water such as a stream, pond or wetland.

Sediment control logs work well in combination with other layers of erosion and sediment controls.

Design and Installation

Sediment control logs should be installed along the contour to avoid concentrating flows. The maximum allowable tributary drainage area per 100 lineal feet of sediment control log, installed along the contour, is approximately 0.25 acres with a disturbed slope length of up to 150 feet and a tributary slope gradient no steeper than 3:1. Longer and steeper slopes require additional measures. This recommendation only applies to sediment control logs installed along the contour. When installed for other uses, such as perimeter control, it should be installed in a way that will not produce concentrated flows. For example, a "J-hook" installation may be appropriate to force runoff to pond and evaporate or infiltrate in multiple areas rather than concentrate and cause erosive conditions parallel to the BMP.

Sediment Control Log	
Functions	
Erosion Control	Moderate
Sediment Control	Yes
Site/Material Management	No

Although sediment control logs initially allow runoff to flow through the BMP, they can quickly become a barrier and should be installed as if they are impermeable.

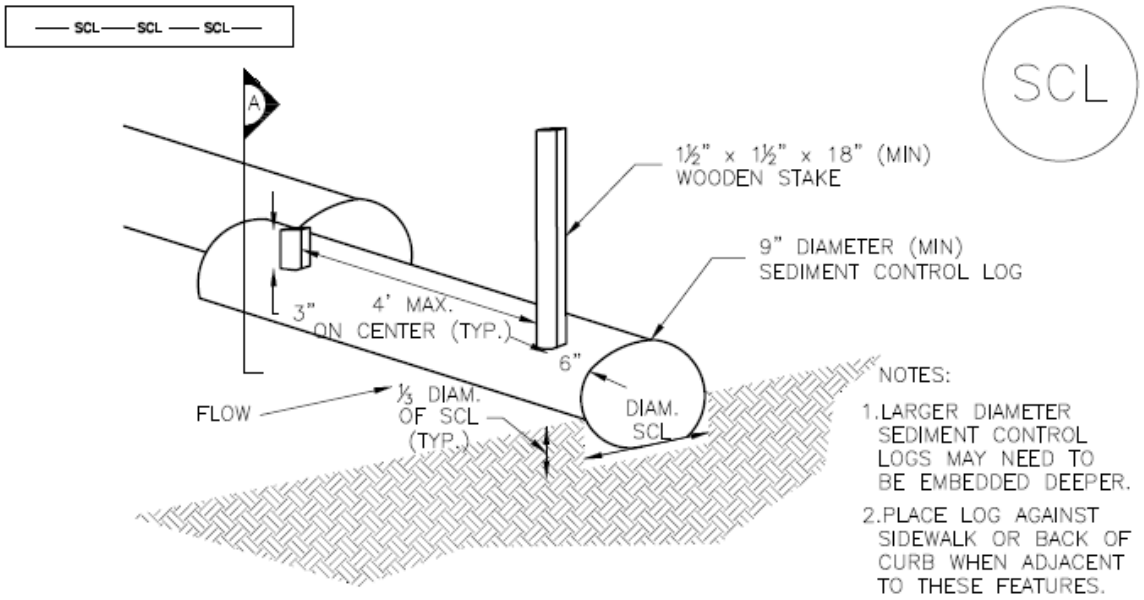
Design details and notes for sediment control logs are provided in the following details. Sediment logs must be properly installed per the detail to prevent undercutting, bypassing and displacement. When installed on slopes, sediment control logs should be installed along the contours (i.e., perpendicular to flow).

Improper installation can lead to poor performance. Be sure that sediment control logs are properly trenched (if lighter than 8 lb/foot), anchored and tightly jointed.

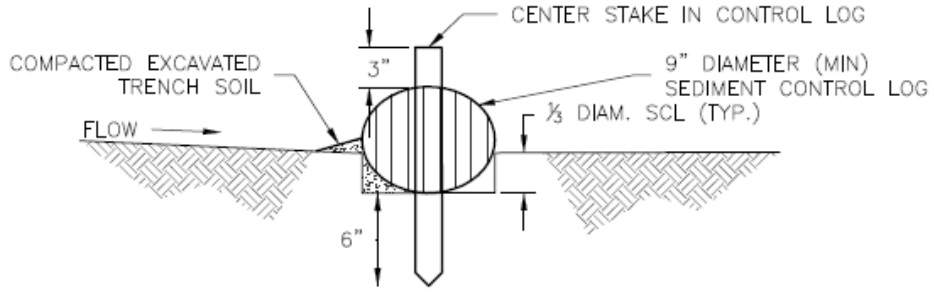
Maintenance and Removal

Be aware that sediment control logs will eventually degrade. Remove accumulated sediment before the depth is one-half the height of the sediment log and repair damage to the sediment log, typically by replacing the damaged section.

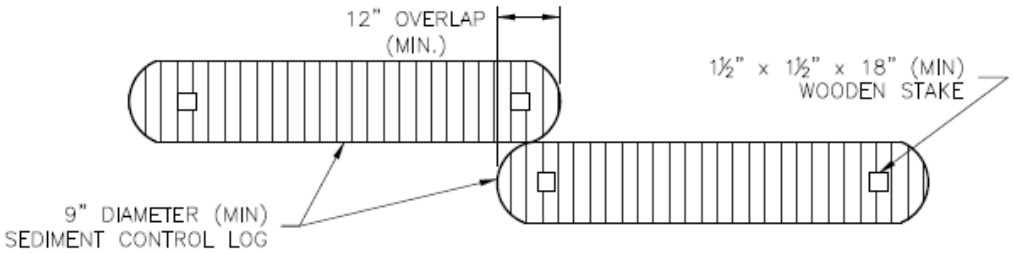
Once the upstream area is stabilized, remove and properly dispose of the logs. Areas disturbed beneath the logs may need to be seeded and mulched. Sediment control logs that are biodegradable may occasionally be left in place (e.g., when logs are used in conjunction with erosion control blankets as permanent slope breaks). However, removal of sediment control logs after final stabilization is typically appropriate when used in perimeter control, inlet protection and check dam applications. Compost from compost sediment control logs may be spread over the area and seeded as long as this does not cover newly established vegetation.



TRENCHED SEDIMENT CONTROL LOG

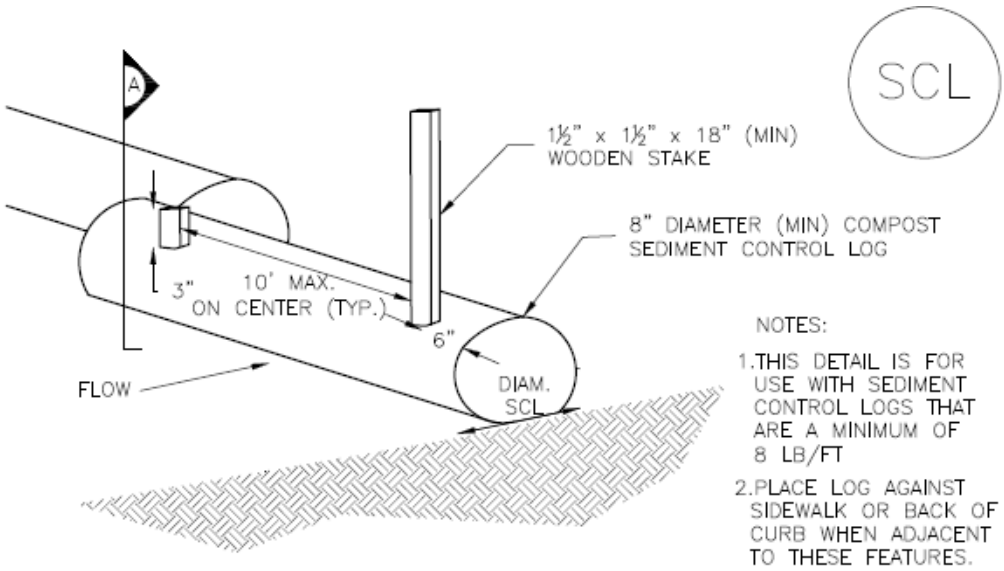


SECTION Ⓐ
TRENCHED SEDIMENT CONTROL LOG

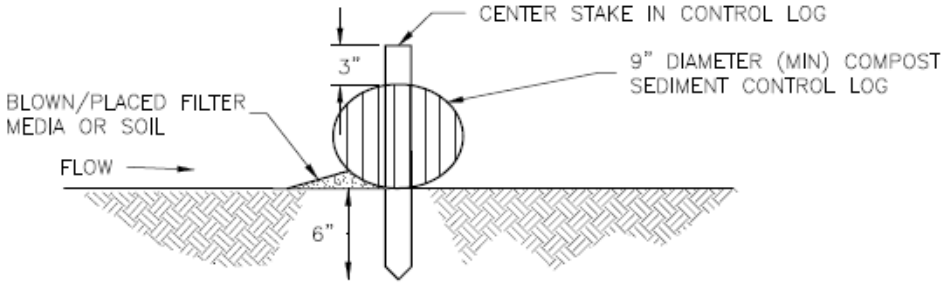


LOG JOINTS

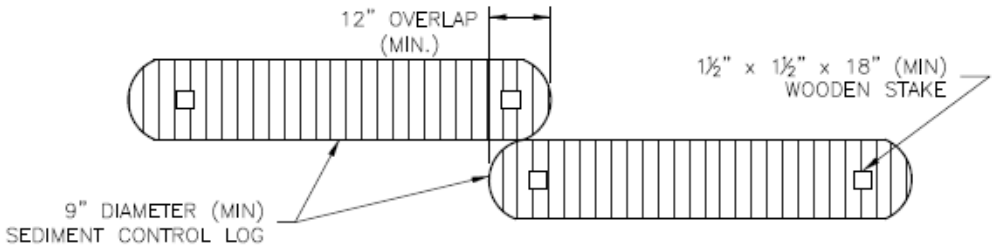
SCL–1. TRENCHED SEDIMENT CONTROL LOG



COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

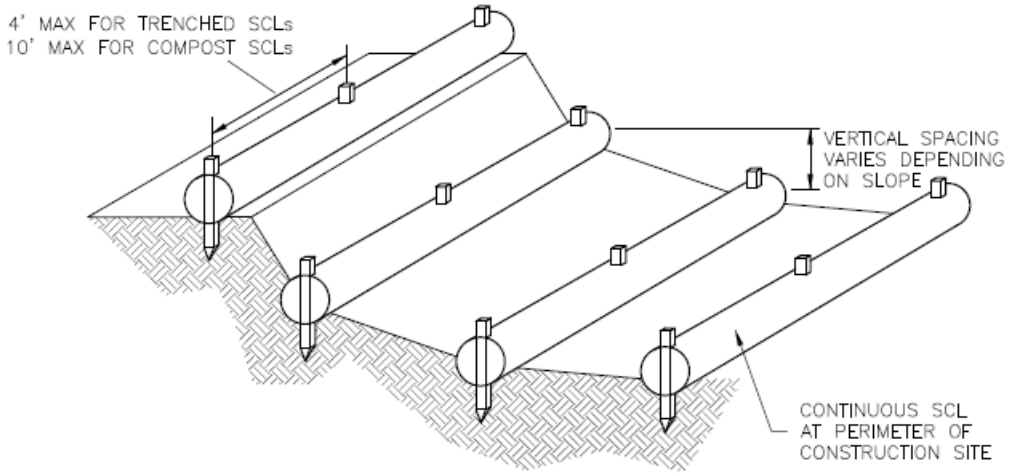


SECTION (A)
COMPOST SEDIMENT CONTROL LOG



LOG JOINTS

SCL–2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)



SCL–3. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND–DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

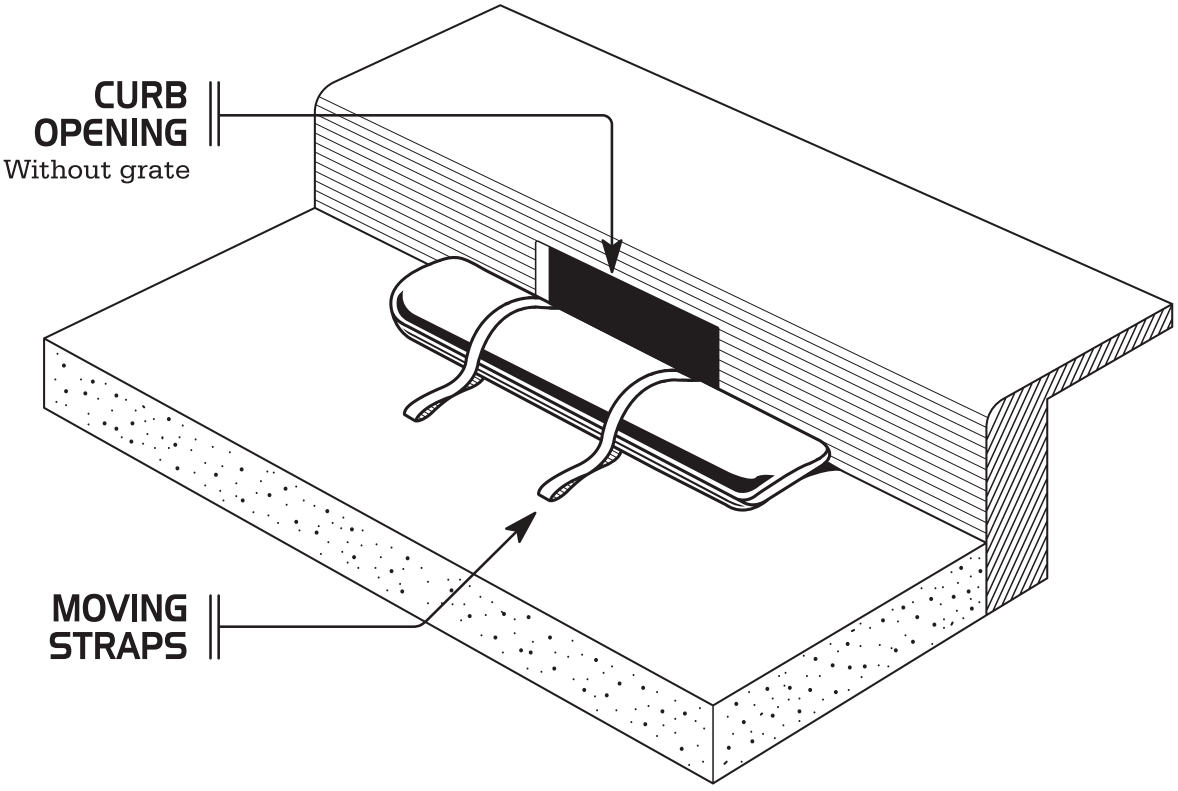
4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

DANDY RECYCLER™



DANDY RECYCLER™
CURB INLET AND GUTTER PROTECTION
SYSTEM GUIDE SPECIFICATION

PRODUCT:

DANDY RECYCLER™

MANUFACTURER:
Dandy Products Inc.
P.O. Box 1680
Powell, Ohio 43065
Phone: 800-591-2284
Fax: 740-881-2791
Email: sdunnpe@dandyproducts.com
Web: www.dandyproducts.com

1.0 **Description:**

1.1 Work covered under this item consists of installing a Dandy Recycler™ inlet and gutter protection system for inlets, median barrier inlets without grates, and gutters. The purpose is to keep silt, sediment, and construction debris out of the storm system.

2.0 **Material:**

2.1 The Dandy Recycler™ inlet protection system shall be a **sewn in the U.S.A**. fabric unit in the form of a cylindrical tube. Diameter of the tube is nominal 9". Lengths available are 3', 4', 5', 6', and 8'.

2.2 The Dandy Recycler™ is filled with a recycled crumble rubber material or aggregate on the Velcro end of the unit. This work it typically performed by others.

2.3 The Dandy Recycler™ unit shall utilize an orange monofilament fabric that is manufactured in the U.S.A. with the following characteristics:

PROPERTY	TEST METHOD	UNITS	TEST RESULTS
Tensile Strength	ASTM D4632	lbs	450 x 300
Elongation	ASTM D4632	%	38% x 21%
Trapezoidal Tear	ASTM D4533	lbs	165 x 150
CBR Puncture	ASTM D6241	lbs	1000
HYDRAULIC PROPERTIES:			
Apparent Opening Size (AOS)	ASTM D 4751	US Std Sieve	30
Permittivity	ASTM D 4491	sec^{1}	4.9
Water Flow Rate	ASTM 4491	$gal/min/ft^2$	365
% Open Area (POA)	COE - 22125-86	%	29
UV Resistance (% Retained @ 2500 hrs)	ASTM D 4355	%	70

Color			Orange[1]

[1]The color orange is a trademark of Dandy Products, Inc.
The property values listed above are effective April 2022 and are subject to change without notice.

3.0 Installation:

3.1 Place Dandy Recycler™ inlet protection unit on ground near the inlet, or in the gutter, where it is to be installed.

3.2 For oil and sediment model, to install or replace absorbent, open the Velcro end, and place absorbent inside the unit.

3.3 Using the lifting straps, maneuver the Dandy Recycler™ to the location where it will be used for best protection against silt, sediment, and construction debris out of the storm system.

3.4 Place the unit with no gaps between the adjoining curb or another unit.

4.0 Maintenance:

4.1 The contractor shall remove all accumulated sediment and debris from around and within the vicinity of unit after each rain event or as directed by engineer/inspector. Dispose of unit no longer in use at an appropriate recycling or solid waste facility.

4.2 *For oil and sediment model; remove and replace absorbent when near saturation.*

5.0 Method of Measurement:

5.1 The quantity to be paid is for the actual number of Dandy Recycler™ inlet protection units installed, or by the lineal foot.

6.0 Basis of payment:

6.1 The unit price shall include labor, equipment, and materials necessary to complete the work and maintain the True Dam® inlet protection units.
6.2 Payment for the completed work will be made at the contract prices for:

ITEM	UNIT	DESCRIPTION
Dandy Recycler™	EA	Inlet Protection Unit (#_____Inlet)
Dandy Recycler™	EA	Inlet Protection by foot (#_____/ft)

FILTREXX®
Advanced Tubular Filters

ROADWATTLE®

Portable Road Wattle

Sometimes you need a filter sock that can be moved.

RoadWattle is the answer – it's designed for daily portability. Use it across access roads at night, during rainouts, and near stream crossings on pipeline and powerline projects.

RoadWattle is filled with chopped switchgrass – a PADEP - approved alternative fill material for Compost Filter Sock.

RoadWattle weighs 50% less than Compost Filter Sock and is made of heavy duty textile and strapping – enabling the device to be moved again and again.

Comes in Hi-Vis orange for maximum visibility.

Benefits:

- Available in 12 and 18 foot lengths
- Textile is 1/8-inch opening heavy-duty Polyethylene
- Four integrated straps for easy moving
- Fill is chopped switchgrass or pine straw
- Sock quickly dries and is moveable after rain event
- Available coiled on a pallet or in a super sack
- Field longevity of up to one year
- Approved by PA DEP for HQ and EV watersheds
- Can be staked through or driven over (if necessary)
- Available in Hi-Vis orange for maximum visibility

MKB Stormwater Innovation
888-578-0777
mkbcompany.com

Made in U.S.A.

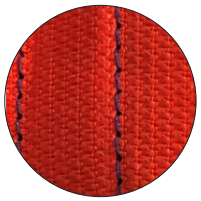
FILTREXX®
Advanced Tubular Filters

ROADWATTLE®

Portable Road Wattle

RoadWattle Product Specs:

Netting Material Type	275g/m^2 reinforced slit film Polyethylene
Netting Color	Blaze Orange
End Closure	hog rings -or- zip ties
Handling Straps	4 per unit (blue)
Fabric Tensile Strength (ASTM D 4632)	MD – 267 lbs. TD – 168 lbs.
Elongation at Max Load (ASTM 4632)	MD – 66% TD – 109%
Permittivity g/m/ft2 (ASTM D 4491 C)	180 g/m/ft2
Fill Type	Switchgrass
Functional Longevity	Up to 1 year


Netting Sample


Fill Sample

[1]Functional longevity ranges are estimates only. Site specific environmental conditions may result in significantly shorter or longer time periods.

Item List:

Part Number	Diameter	Total Linear Feet per pallet	Unit Length	Units per pallet	Unit Weight	Pallet Weight
RW95-12-SG	9.5-in	240-ft	12-ft	20	~ 41 lbs	~ 875 lbs
RW95-18-SG	9.5-in	252-ft	18-ft	14	~ 60 lbs	~ 895 lbs
RW12-10-SG	12-in	100-ft	10-ft	10	~ 60 lbs	~ 655 lbs

Shipping Specs:

Pallets per TL	up to 28
Shipping Dimensions	40L x 48W x 66H
Packaging	40 x 48 Pallet; Wattles are strapped together, and pallet is stretch-wrapped
Storage Life	Under Roof - 6 months / Outdoors - 3 months

MKB Stormwater Innovation
888-578-0777
mkbcompany.com

Made in U.S.A.

Rock Sock (RS) SC-5

Description

A rock sock is constructed of gravel that has been wrapped by wire mesh or a geotextile to form an elongated cylindrical filter. Rock socks are typically used either as a perimeter control or as part of inlet protection. When placed at angles in the curb line, rock socks are typically referred to as curb socks. Rock socks are intended to trap sediment from stormwater runoff that flows onto roadways as a result of construction activities.

Photograph RS-1. Rock socks placed at regular intervals in a curb line can help reduce sediment loading to storm sewer inlets. Rock socks can also be used as perimeter controls.

Appropriate Uses

Rock socks can be used at the perimeter of a disturbed area to control localized sediment loading. A benefit of rock socks as opposed to other perimeter controls is that they do not have to be trenched or staked into the ground; therefore, they are often used on roadway construction projects where paved surfaces are present.

Use rock socks in inlet protection applications when the construction of a roadway is substantially complete and the roadway has been directly connected to a receiving storm system.

Design and Installation

When rock socks are used as perimeter controls, the maximum recommended tributary drainage area per 100 lineal feet of rock socks is approximately 0.25 acres with disturbed slope length of up to 150 feet and a tributary slope gradient no steeper than 3:1. A rock sock design detail and notes are provided in Detail RS-1. Also see the Inlet Protection Fact Sheet for design and installation guidance when rock socks are used for inlet protection and in the curb line.

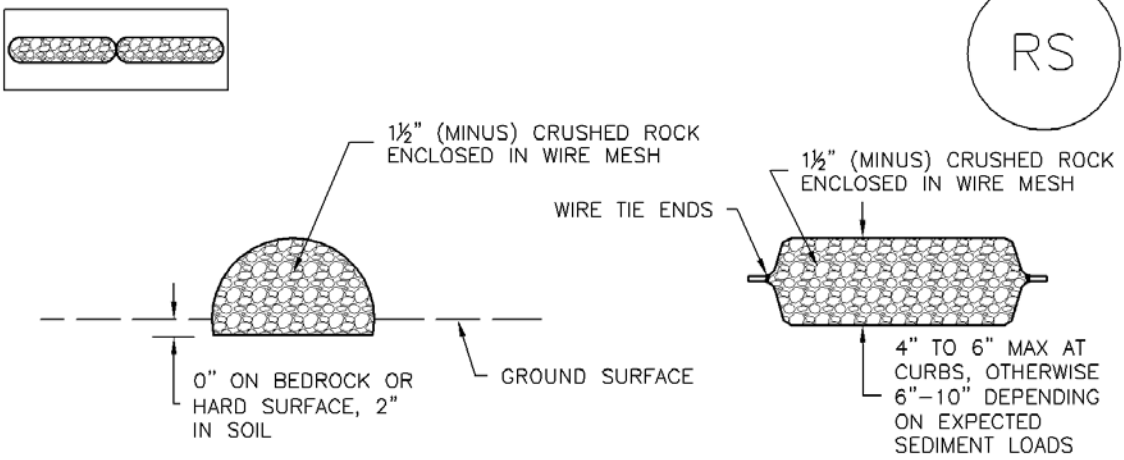
When placed in the gutter adjacent to a curb, rock socks should protrude no more than two feet from the curb in order for traffic to pass safely. If located in a high traffic area, place construction markers to alert drivers and street maintenance workers of their presence.

Maintenance and Removal

Rock socks are susceptible to displacement and breaking due to vehicle traffic. Inspect rock socks for damage and repair or replace as necessary. Remove sediment by sweeping or vacuuming as needed to maintain the functionality of the BMP, typically when sediment has accumulated behind the rock sock to one-half of the sock's height.

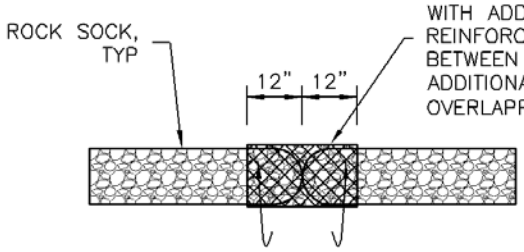
Once upstream stabilization is complete, rock socks and accumulated sediment should be removed and properly disposed.

Rock Sock	
Functions	
Erosion Control	No
Sediment Control	Yes
Site/Material Management	No



ROCK SOCK SECTION

ROCK SOCK PLAN



ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 1½" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE OVERLAPPED (TYPICALLY 12–INCH OVERLAP) TO AVOID GAPS.

ROCK SOCK JOINTING

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION(S) OF ROCK SOCKS.

2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", RECOMMENDED MINIMUM ROLL WIDTH OF 48"

4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS–1. ROCK SOCK PERIMETER CONTROL

ROCK SOCK MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.

5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE ROCK SOCK.

6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER NDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

Revised May 2024

Operation and Maintenance of Municipal Parking Lot

For More Information

Jennifer Keyes
Stormwater Quality Coordinator
(720) 225-7228
jkeyes@bouldercounty.gov

Applicable Departments

- Building Services
- Parks and Open Space

Possible Pollutants

- Sediment
- Nutrients
- Organic Matter
- Oil and Grease
- Trash and Debris
- Metals
- Bacteria
- Deicer

Related Standard Operating Procedures

- Spill Prevention and Response
- Snow Storage/Disposal Areas
- Vehicle and Equipment Fueling
- Fleet Operations for Maintenance Shops with Limited

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for the operation and maintenance (O&M) of parking lots owned or leased by Boulder County. These activities include routine maintenance, resurfacing, minor repairs, painting, and snow management. Snow disposal is covered in the Snow Storage/Disposal Areas Standard Operating Procedure.

The operation and maintenance of municipal parking lots, if not conducted properly, can contribute to stormwater pollution. Limited portions of this procedure apply to Parks and Open Space (POS). POS parking lots typically consist of road base material with limited stormwater features.

Contracted Services (as applicable)

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Inspect access roads and parking lots for deterioration.
- Do not perform concrete or asphalt repairs, seal coat, or striping in wet conditions. Cease work if rain occurs and protect work areas and materials to prevent materials and chemicals from washing away during a storm event.
- Locate pollutant sources such as trash receptacles, dumpsters, and material storage away from drainage features such as inlets.
- Perform periodic sweeping to minimize the potential for sediment and other pollutants from being discharged during a storm event. Sweeping after foliage has fallen is a key time to prevent clogging of inlets prior to winter snow melt as well as in the spring to remove materials prior to the start of the rainy season.
- Swept material must be disposed of properly and in a manner to prevent debris from encountering stormwater.
- Significant dust must not be created by sweeping.
- If a parking lot cannot be cleaned using dry methods, power washing may be

performed if it follows the Colorado Department of Public Health and Environment Low Risk Discharge Guidance titled Surface cosmetic power washing operations to land. Some key requirements for low-risk power washing are:

1. All water shall soak into the land.
2. The addition of chemicals and detergents to the wash water or to the discharge is strictly prohibited.
3. Floating or solid materials or visible sheen shall not be evident in the discharge.
4. The discharge shall not be harmful to vegetation.
5. The discharge shall not cause erosion of a land surface.
6. The discharge shall not occur during a stormwater runoff event.
7. The wastewater may reach the street, curb flow line, impermeable channels, or other open impermeable areas if it remains in the operators' control and is within Boulder County's owned systems and not within an incorporated area (e.g., Longmont, Superior, Lafayette, or city of Boulder) and is immediately collected (including all deposited pollutants) for proper disposal in accordance with all conditions of the low-risk guidance. Collection can be with a vacuum. Additionally, inlets and other stormwater conveyances can be blocked, and wash water vacuumed to prevent a discharge.

- Stay alert for any signs of pollution entering drainage features or waterways. This includes illegal dumping of waste near drainage features (e.g., household chemicals, automobile fluids).
- Inspect storm structures, culverts, detention areas or permanent structural control measures regularly for debris accumulation. Clean out as needed.
- Report any suspicious discharges/illegal dumping or spills to your supervisor. Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.
- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff at 303-441-4444 have Public Health contacted. For any questions contact the Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.

Temporary Sediment Control Measures

- Temporary controls such as rock socks or Road Wattles® or equivalent are required on O&M activities that stockpile or create erodible materials.

1. Placement of controls can be short-term installations while work is actively occurring unless there are remaining materials or chemicals that can wash away during a storm event.
2. Placement requires a certain level of judgement and is job-site specific. The goal is to protect downgradient drainage features and waterways. For example, you are not expected to protect an entire length of roadside ditch but must install inlet protection and perimeter control for material stockpiles and should use a check dam in the ditch downgradient of the work activity.
3. Controls must meet the installation and maintenance specifications referenced in the Boulder County Storm Drainage Criteria Manual.

General Patching, Resurfacing, and Surface Sealing (e.g., chip seal, seal coat)

- Perform preventative maintenance such as crack sealing, slurry sealing, patching, pavement overlays and shoulder replacement to prevent stormwater contamination.
- Avoid performing patching, resurfacing, striping or surface sealing work during wet conditions, whenever possible.
- Where applicable, cover piped storm drain inlets and any manhole cover openings before applying coatings (e.g., seal coat).
- Stockpile materials away from drainage features and waterbodies. During wet weather, prevent transport of materials in runoff by covering stockpiles (e.g., asphalt) with tarps or placing perimeter controls (e.g., erodible materials) as appropriate.
- Remove and properly dispose of any debris or sealant remaining from new surfacing installation and keep it from getting into drainage features, roads, and waterways.
- Transfer and load materials (e.g., slurry ingredients and hot bituminous material) away from drainage features and waterbodies.

Snow Removal and Deicing

- Inspect plowing equipment for leaks prior to use. Follow the Spill Response Plan Procedure for responding to leaking vehicles and report them to fleet.
- Take care when connecting or releasing plow blades and clean up any hydraulic fluid that may leak onto the pavement.
- Wash snow removal equipment only at approved washing stations following the Fleet Maintenance Operation and Maintenance SOP.
- Do not pile snow in front of storm sewer inlets to allow inflow of snowmelt runoff.

- Gutters and storm sewer inlets should be cleared of ice to allow drainage of snowmelt or ice-melt.

- Apply only the recommended amount of deicer to parking lots, driveways, and sidewalks.

- If utilized, spreaders should be calibrated at the beginning of each season and inspections for maintenance or repair should be conducted after each storm.

- Follow-up with sweeping to remove remaining deicer from parking lots, access areas and sidewalks when weather conditions allow for such actions.

Employee Training

- Train applicable employees who are involved with parking lot maintenance activities on this written procedure in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that is completed by building service staff. New hires are required to take the Cornerstone training as part of their onboarding.

Revised May 2024

Operations at Road Maintenance Facilities and Outdoor Storage Yards

For More Information

Jennifer Keyes
Stormwater Quality Coordinator
(720) 225-7228
jkeyes@bouldercounty.gov

Applicable Departments

Road Maintenance

Possible Pollutants

Sediment
Salt and Sand (deicer/magnesium chloride)
Organic Matter/Nutrients
Oil and Grease
Trash and Debris
Metals
Fuel
Road Waste (millings, recycled concrete, gravel, vactor waste)
Tack Trucks
Road Maintenance Equipment

Related Standard Operating Procedures

Spill Prevention and Response
Sweeping Operations and Waste Disposal
Snow Disposal Areas
Vehicle and Equipment Fueling
Storm Drain Cleaning
Fleet Operations for Maintenance Shops with Limited Outdoor Storage Areas
Vegetation Management in Road Right-of Way

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOPs) for the Nederland, Walden, Alaska Avenue, OSTC, and Longhorn Road Maintenance and Storage Yards that serve as facilities for road maintenance crews, equipment, and storage of materials.

Outdoor storage of raw materials, machinery, and other materials exposed to precipitation or runoff can pollute stormwater. Additionally, stormwater can become contaminated when encountering spills and leaks from equipment operating or parked in storage yards. Many road maintenance facilities contain equipment washing stations and minor repair shops. Generally, most vehicle and equipment maintenance are performed at the OSTC Fleet Facility and covered under Fleet Operations for Maintenance Shops with Limited Outdoor Storage Areas Standard Operating Procedures.

Contracted Services

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

Material Stockpiles

- Stockpiles of erodible material (e.g., soil) or waste material (e.g., roadside waste/trash/removed materials) must have temporary perimeter controls such as rock socks, Dandy Recyclers®, jersey barriers, trenches, or a compacted earthen berm unless infeasible. Temporary controls must be installed along the entire downgradient portion of the stockpile.
- If the stockpiles are so large that they cannot be feasibly covered or contained, implement erosion and sediment controls at the perimeter of the site and at any drop inlets or end of the concrete drain pan to prevent material from migrating off-site.
- Minimize stormwater contact when possible, by delineating storage areas with jersey barriers to keep piles smaller.

Salt and Sand/ Deicer Storage

- Keep salt/sand products under cover inside the storage shelter when not being applied to roadways or facilities.
- Sweep all paved areas and clean up any salt and sand that that remains after spills or after the storm has ended.
- When loading and unloading salt/sand mix or liquid deicer, do not overfill the truck or tank.
- Inspect the loading areas for salt stains on ground near and around the salt shelter, loading area, or down slope. **Improvements are needed if salt stains are present or have washed away**.
- Routinely inspect the magnesium chloride ($MgCl_2$) transfer area at OSTC and clean up any spills from transferring $MgCl_2$ to vehicles or to mix with aggregate.
- When receiving bulk deliveries or when loading liquid deicers into truck mounted tanks, minimize leaks and clean up spills as soon as they occur.

Outdoor Storage and Maintenance

- **Plow blade and spreader storage:** Keep plow blades and spreaders free of sand and salt before storing outside, so that materials are not exposed to rain and/or runoff.
- **Equipment and hydraulic storage**: When possible, store implements with hydraulic hoses connected in a closed circuit, or with covers on hose fittings. Clean up hydraulic fluid leaks as necessary and properly dispose of waste.
- **Paving equipment cleaning:** Only clean distributor truck nozzles at designated OSTC cleanout trough. When cleaning paving equipment in the OSTC Wash Bays, make sure the floor is also cleaned or use a drop cloth to avoid tracking or migration of materials outside the bays.
- **Materials such as metal drums and scrap metal** should be stored in an orderly fashion. Minimize stormwater contact, when possible, by storing on pallets, or delineating storage areas with jersey barriers to keep piles smaller. Try to keep chemicals in original containers and labeled.
- **Keep liquid products** stored indoors and under cover when possible. Containers 55 gallons or greater must have secondary containment.
- **Limit exposure of pollutants with stormwater.**
- **Check equipment for leaking oil and/or hydraulic oil.**
- **Trash:** All dumpsters and outdoor waste containers should be monitored and emptied regularly. This includes roll-off dumpsters that contain trash or liquids that may leak.
- At OSTC, inspect **concrete drainage pan outlet to the detention basin** for sediment and debris accumulation and clean as necessary. **The drainage pan**

outlet must have temporary perimeter controls such as rock socks or Dandy Recyclers® installed.

Bulk Storage and Spill Prevention

- Storage of petroleum products or liquid chemicals 55 gallons or larger must have secondary containment or equivalent protection. Secondary containment for single containment systems that serve multiple tanks must have capacity to hold 10% of the volume of the containers or the volume of the largest container in the group plus 10%, whichever is greater.
- Stay alert for any signs of pollution entering storm drains or waterways. This includes illegal dumping of waste near storm drains (e.g., household chemicals, automobile fluids). Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.
- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff's line at 303-441-4444 have Public Health contacted. For any questions, contact Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.

Fueling of Vehicles and Equipment

- See Vehicle and Equipment Fueling Standard Operating Procedures

Snow Dumps/Storage

- Pollutants such as sediment and salt can be concentrated at snow storage locations, so plow and store snow away from drainage inlets and waterbodies when possible. Also store snow on pervious surfaces to allow infiltration, or where snowmelt is routed through a permanent stormwater management facility (e.g., extended detention basin, oil/water separator, vegetated buffer) prior to reaching a waterbody. See Operations and Maintenance of Snow Storage/Disposal Areas Standard Operating Procedure.

Indoor shops

- Major maintenance is performed by the Fleet Division; however, minor maintenance and vehicle washing is performed at several road maintenance facilities (Nederland, Longhorn, Walden, and washing at OSTC)
- Only wash vehicles and equipment at designated OSTC Wash Bays or at road maintenance facilities with wash stations. OSTC floor drains are plumbed to the Longmont wastewater treatment plant (sanitary sewer). Nederland and Longhorn also have wash stations that drain to sand and oil separators but are not connected to sanitary sewer and must be stored in a vault and pumped and hauled for proper offsite disposal.

- Avoid tracking or migration of materials outside wash bay.

Employee Training

- Train applicable employees who work at maintenance and storage yards on this written procedure. Information regarding proper pollution prevention practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollutants associated with municipal operations that road maintenance staff complete. New hires are required to take the Cornerstone training as part of their onboarding. Furthermore, annual training is performed for Spill Protection Countermeasure and Control Plans applicable facilities such as the OSTC, Nederland, Longhorn, and Alaska Avenue. There is a correlation between the SPCC training and many of the stormwater protection procedures.

For More Information

Jennifer Keyes
Stormwater Quality Coordinator.
(720) 225-7228
jkeyes@bouldercounty.gov

Applicable Departments

Road Maintenance

Possible Pollutants

Sediment
Organic Matter and Nutrients
Oil and Grease
Trash and Debris
Road Salt
Metals
Toxins

Related Standard Operating Procedures

Spill Prevention and Response
Vehicle and Equipment Fueling
Operation and Maintenance of Streets, Roads, and Highways

Sweeping Operations and Waste Disposal

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for sweeping of roadways and other paved surfaces. These activities involve the storage, dewatering, and disposal of sweeper waste and cleaning of the sweeper and other equipment.

Sweeping will remove sediment, debris, and other pollutants from the roadway before it enters drainage inlets, streams, or other waterways. Sweeping is part of the County's good housekeeping practices giving the County an overall clean appearance, in addition to reducing traffic accidents and air pollution.

Contracted Services

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Operate all sweepers according to manufacturer's recommended speed, settings, and standards.
- Prior to operating the sweeper, perform a Driver's Vehicle Inspection Report, including checking for leaks. Follow procedures outlined in the Spill Prevention and Response Procedures. If a leak is observed have Fleet Services make repairs.
- Do not wash down any paved roads or curbs for routine cleaning.
- Stay alert for any signs of pollution entering drainage features or waterways. This includes illegal dumping of waste near drainage features (e.g., household chemicals, automobile fluids).
- Report any suspicious discharges/illegal dumping or spills to your supervisor. Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.
- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during

business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff at 303-441-4444 have Public Health contacted. For any questions contact the Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.

Sweeper Waste Disposal

- Do not empty sweeper hoppers, even temporarily, onto areas near storm drains or surface water bodies or where wind or rain could wash the waste into drainage features.
- Sweeper wastes generally do not classify as "hazardous" except on rare occasions such as a spill or illegal dumping incident. If unusual sweeping materials are identified, bring the issue to the attention of a supervisor for evaluation and proper disposal.
    - Solid waste should be dry prior to being disposed at the OSTC Road Maintenance Storage Yards where it may be temporarily stored.
    - Liquid waste (if collected) must be discharged to the trench drains at the OSTC Wash Bays. These drains are plumbed to the Longmont wastewater treatment plant.
    - Hazardous waste, as defined under Colorado Hazardous Waste Regulations (6 CCR 1007-3, Part 261), must be transported, and disposed of at a permitted disposal or treatment facility.
- Dispose of sweeper waste at landfill or store at the designated area at the OSTC. Temporary storage areas for sweeper waste are sited for protection from drainage paths.

Sweeper Wash Out

- Sweepers must be washed every day at the end of the day (or other frequency as determined by the manufacturer).
- Only wash sweepers at designated OSTC Wash Bays.

Employee Training

- Train applicable employees who perform sweeping on this written procedure. Information regarding proper waste storage practices and how to prevent and report spills will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

Revised May 2024

Storm Drain Maintenance

For More Information

Jennifer Keyes
Stormwater Quality Coordinator
(720) 225-7228
jkeyes@bouldercounty.org

Applicable Departments

- Road Maintenance
- Building Services
- Parks and Open Space

Possible Pollutants

- Sediment
- Organic Matter and Nutrients
- Oil and Grease
- Trash and Debris
- Metals

Related Standard Operating Procedures

- Operations and Maintenance of Streets, Roads and Highways
- Building Maintenance
- POS Grounds Operations and Maintenance
- Spill Prevention and Response
- Small Construction Activities

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for storm drain maintenance/cleaning of open (e.g., ditches and swales) and enclosed (e.g., piped) drainage features. These activities involve the operation of equipment such as a vacuum truck and backhoes; and the storage, dewatering, and disposal of waste removed from the storm drain system.

Storm Drain Maintenance can be a source of water pollution and illegal discharges if it is not managed properly. Cleaning is also viewed as the last chance to remove sediment, debris, trash, and other pollutants before it enters streams or other waterways and ensures proper drainage to avoid flooding. Flooding, ponding, and uncontrolled sheet flow can result in roadway, property damage, and increased soil erosion.

Construction and dewatering are covered under Small Construction Activities Procedure or under the Stormwater Quality Permit program. Boulder County does not own or operate any potable water lines, or other utilities other than storm sewer systems except for Eldorado Springs wastewater treatment plant which is regulated under an individual Colorado Discharge Permit System (CDPS) permit.

Contracted Services

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Conduct routine inspection and maintenance on storm sewer systems.
- Where feasible, schedule maintenance activities during dry weather.
- Remove debris and trash as needed.
- Prior to operating equipment, perform an inspection, including checking for leaks. Follow procedures outlined in the Spill Prevention and Response Procedure. If a leak is observed, contact Fleet Services to make repairs.
- Stay alert for any signs of pollution entering drainage features or waterways. This includes illegal dumping of waste near drainage features (e.g., household chemicals, automobile fluids).

- Report any suspicious discharges/illegal dumping or spills to your supervisor. Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.
- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff at 303-441-4444 have Public Health contacted. For any questions contact the Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.

Rural Culvert Flushing

- Minimize the need for flushing as a maintenance practice during the design of the culvert where feasible. Boulder County Storm Drainage Criteria Manual (SDCM) provides minimum and maximum velocities for culvert design that should be followed unless infeasible. The minimum velocity of 3ft/s reduces sediment accumulation in culverts minimizing the need for culvert flushing.
- Large culverts where equipment can access the culvert will be cleaned without using flushing methods and during dry conditions.
- For culverts that require flushing in rural areas outside the MS4 permitted area, the "flushing water" must comply with CDPHE Low Risk Discharge Guidance titled Rural Roadway Culvert Flushing. Key requirements are:
    - If weather conditions are dry and the culvert is not actively flowing and is not in a stream, flushing water may infiltrate. Sedimentation controls such as Dandy Recyclers, rock socks, or an equivalent must be properly installed downstream of the culvert prior to flushing.
    - Sedimentation controls must meet the installation and maintenance specifications referenced in the Boulder County Storm Drainage Criteria Manual. Specifications for commonly used controls such as rock socks and Dandy Recyclers® are included on the following pages.
- When infiltration is not possible, it is critical to always use the vacuum wand when jetting as it is your control measure to recapture as much "maintenance water" as possible. Apply the water jet and vacuum wand to the downgradient end of the culvert and ride up the pipe so that the water can be drained/vacuumed back into the truck. If the downgradient end is not accessible, use the culvert inlet.
- Flushing of culverts discharging to a stream is very complicated and typically requires a 404 Permit or a notification to the Water Quality Control Division Dredge and Fill Program. The Stormwater Quality Coordinator must be consulted if this practice is planned.
- Trash may be removed by hand or using equipment.

Urban Storm Drain Cleaning

- In areas in Boulder County MS4 permit area/urbanized area (Stormwater Map), clean storm drain system by jetting the pipes using a jet/vacuum truck to remove the material. The normal cleaning operation is to propel the water jet from the downstream manhole towards the upstream manhole at a low pressure, and then slowly pull the jetting nozzle back at a higher pressure, thereby pulling any debris and maintenance water back to the downstream manhole for collection.
- Waste material must be removed at the manhole from which you are jetting using the equipment's vacuum system; it cannot be passed from one storm drain line to another!
- Trash may be removed by hand or using equipment.

Stormwater Control Measures and Management Facilities (aka Ponds, Sand Filters, Bioretention Areas)

- Inspect facilities at least once a year to determine maintenance. Submit annual reports to local jurisdiction if required.
- Inspect the outlet works and remove trash or vegetation from the trash racks and grates.
- Inspect side slopes of the pond for erosion and reestablish vegetation as needed.
- Report any suspected water quality problems such as a change in growth or appearance of vegetation.
- Remove debris and trash from ponds, bioretention, sand filters, and outlet structures.
- Maintain positive drainage from inlet pipes to the outlet structure.
- Sand filters should be raked at least once a year.
- Report issues with standing water to the Stormwater Quality Coordinator if the cause cannot be determined.

Open Channels, Roadside Ditches, Swales

- Inspect drainageways for erosion and repair if necessary.
- Remove and properly dispose of trash and debris from the drainageways. Remove sediment which could impede flow in drainageways. In subdivisions, work with private landowner to perform maintenance.

Disposal of Storm System Cleaning Waste

- Do not store collected storm system cleaning waste adjacent to any surface water, storm drain inlet, or drainageway.

- Solids must be dry prior to being disposed at a re-use site or landfill. Dewater the solids by dumping at the designated OSTC Decant Bay or an appropriate dewatering area.
- Liquid waste must be collected and disposed of properly either at the OSTC or hauled offsite for disposal at an approved facility.
- Final disposal of dried storm system waste is located at a private development re-use site or landfill.

Vacuum Truck Wash Out

- The vacuum truck debris body must be washed out when the waste is dumped (or other frequency as determined by the manufacturer).
- Only wash vacuum truck debris body into the designated OSTC Decant Bay or designated facility at OSTC.

Employee Training

- Train applicable employees who perform storm drain system maintenance on this written procedure. Information regarding proper cleaning and waste storage practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

Revised May 2024

Operations and Maintenance of Snow Storage/Disposal Areas

For More Information

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jkeyes@bouldercounty.gov

Applicable Departments

- Building Services
- Road Maintenance
- Parks and Open Space Ground Maintenance

Possible Pollutants

- Sediment
- Organics
- Oil and grease
- Salts
- Debris and trash

Related Standard Operating Procedures

- Spill Prevention and Response
- Operation and Maintenance of Streets, Road, and Highways
- Municipal Parking Lot Operation & Maintenance
- Parks and Open Space Ground Operations

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for the operation and maintenance (O&M) of snow storage/disposal areas. Snow may need to be stored during major winter storms to increase street and parking lot accessibility. It is possible for pollutants such as sediment, organics, oil, and grease to be concentrated at snow storage locations and to impact stormwater quality.

Boulder County Road Maintenance does not typically have snow storage areas. Snow is generally pushed to the sides of the right-of-way where it can melt; however, in locations where snow must be stored including in municipal parking lots, this document must be followed.

Contracted Services

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Snow should not be stored on storm sewer inlets (unless it contains a treatment system) or near waterways.
- When possible, snow should be stored on a pervious surface to allow infiltration.
- Snowmelt runoff should be routed through a best management practice (e.g., Stormceptor®, extended detention basin, oil/water separator, vegetated buffer) prior to reaching a waterbody.
- Sweep or vacuum impervious snow storage areas once snow has melted.

Deicer Storage and Application

- See Operations at Road Maintenance Facilities and Outdoor Storage Yards Procedures and Operations and Maintenance of Street, Roads and Highways Procedures

Employee Training

- Train applicable employees who are involved with snow storage on this written procedure. Information regarding proper storage practices and how to prevent and report spills will be presented during the training. Additionally, the County

has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

Revised May 2024

For More Information

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jkeyes@bouldercounty.gov

Applicable Departments

- Parks and Open Space
- Road Maintenance

Possible Pollutants

- Grass/landscape clippings
- Debris
- Sediment
- Chemicals

Related Standard Operating Procedures

- Spill Prevention and Response
- Fertilizer, Herbicide, and Pesticide Application and Storage
- POS Maintenance Shop and Storage Yard
- Vehicle and Equipment Fueling

Roadside Vegetation Management

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for vegetation management operations within the roadway right-of-way. These procedures will be consistent with the Boulder County Integrated Weed Management Plan. The County's Integrated Weed Management Plan addresses the complex issue of weed management and describes the multi-pronged approach the County uses when it comes to managing weeds. The County is committed to protecting air, water, and soil resources. If a chemical treatment approach is selected for managing weeds, then the Fertilizer, Herbicide, and Pesticide Application and Storage Procedures will be followed. This standard operating procedure will focus on mechanical vegetative management. Mowing is the most common mechanical management technique used to manage roadside vegetation. Other mechanical tools may include weed trimmers. Roadsides and roadside vegetation are a critical part of the roadway structure.

Contracted Services

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Avoid mowing when muddy conditions exist.
- **Collect and properly dispose of trash** prior to mowing to avoid shredding the trash or causing liquids to be released.
- Remove grass or other vegetation clippings from drainage ways and paved areas where safe to do so by blowing the clippings to flat areas away from drainages.
- Keep culverts and inlets free from vegetation clippings or trash.
- If any stockpiles are placed in the ROW, they should be contained and stored away from drainages to the extent possible. Stockpiles are not typically stored in the right-of-way (ROW) during vegetation management operations.
- Report significant bare spots or evidence of substantial erosion to Road Maintenance and the Stormwater Quality Coordinator (contact on the front of this SOP).

- Have spill cleanup materials available in case of a spill and clean up chemical spills promptly with dry methods, if possible. Refer to the Spill Prevention and Response Procedure.

Equipment

- Brush off mowers (reels and decks) and tractors over grassy areas and away from drainages.
- Leave clippings on relatively flat vegetated areas away from drainages or dispose by composting. Do not hose off mowers or other equipment onsite.
- **Check equipment and mowers for leaks (pay special attention to hydraulic oil lines) prior to use.**

Debris and Trash

- Stay alert for any signs of pollution entering drainage features or waterways. This includes illegal dumping of waste near drainage features (e.g., household chemicals, appliances, and automobile fluids).
- Report any suspicious discharges/illegal dumping or spills to your supervisor. Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.
- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff at 303-441-4444 have Public Health contacted. For any questions contact the Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.
- If materials are deemed to be safe for removal, bring the trash or debris to the OSTC and follow the proper disposal of the materials to the designated areas. Do **not bring leaking material to the OSTC without first stopping leaks or containing the leaking material.** Contact Joe Thiltgen with any concerns or questions.

Fueling of Vehicles and Equipment

- See Vehicle and Equipment Fueling Standard Operating Procedures for equipment that requires fuel such as tractors.

Washing and Maintenance of Vehicles and Equipment

- Maintain (including washing) all equipment by following the Fleet Operations for Maintenance Shop with Limited Outdoor Storage Areas Procedure.
- Equipment used to mow noxious weeds should be cleaned prior to moving locations. Cleaning should only be performed at a designated County wash facility.

Nutrient Source Reductions

- Compost or other type of fertilizer should not be applied when raining or near waterways when precipitation is in the 72-hour forecast.
- See Fertilizer, Herbicide, and Pesticide Application and Storage Procedures.
- Compost stockpiles should not be stockpiled within the right-of-way.

Employee Training

- Train applicable employees who are involved with roadside vegetation management operations on this written procedure. Information regarding proper pollution prevention practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

Revised May 2024

For More Information

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jkeyes@bouldercounty.gov

Applicable Departments

Fleet Services

Possible Pollutants

Antifreeze
Brake fluid and brake pad dust
Battery acid
Motor oil
Fuel (gasoline, diesel, kerosene)
Lubricating grease and oils
Metals
Soaps
Solvents

Related Standard Operating Procedures

Spill Prevention and Response
Vehicle and Equipment Fueling

Fleet Operations for Maintenance Shops with Limited Outdoor Storage Areas

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for vehicle and equipment maintenance conducted by Fleet Services, particularly any outdoor and shop aspects that could affect stormwater quality. These activities primarily involve the Fleet maintenance shop, outdoor storage of vehicles and equipment to the southwest of Fleet Services Building 4, and repair services using the mobile maintenance trucks.

Regular maintenance of county vehicles and equipment prolongs the life of the County's assets and prevents the leaking of automotive fluids commonly associated with normal wear and tear. Routine maintenance is considered a stormwater control measure important for minimizing leaks. Generally, county fleet maintenance is performed at the OSTC Fleet facility.

Contracted Services (as applicable)

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Maintenance activities should be performed **inside the Fleet Maintenance building** unless the equipment is too large to fit inside or temporary repairs need to be made before the equipment can be moved inside the maintenance building.
- Have absorbent pads and drip pans accessible to capture leaks and spills during maintenance activities.
- Keep equipment clean and do not allow excessive build-up of oil and grease.
- Perform regular preventative maintenance to minimize the occurrence of leaks and major repairs.
- Recycle and/or dispose of all wastes properly and promptly.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches. Sweep and pick up trash and debris as needed.

- Clean up spills promptly using dry methods (do not hose down). Consult the Spill Prevention and Response Procedure for more information. Cleanup is completed only after absorbent and rags are disposed of properly.
- Significant body work or painting is not typically performed at the OSTC Fleet Facility. Equipment and vehicles that require significant body work or painting are sent to an offsite private service company specializing in that type of work.

Mobile Repair Truck

For the service trucks used occasionally to repair vehicles in the field, proper spill control and pollution prevention practices are necessary.

- Make sure the mobile repair trucks are equipped with a spill kit to clean up any spills encountered in the field.
- Place a drip pan or absorbent pad under the work area PRIOR to beginning repairs if it involves fluids.
- If possible, try to locate the equipment or vehicle away from stormwater drainage systems. If this is not feasible, cover the inlet or culvert while working on the vehicle.
- Immediately contain and properly clean up any spills in the field with absorbent materials and dispose of back at the Fleet Services building in an approved manner.
- In the event of a spill, use the spill contact numbers for fire, emergency, or County employees that is in the service vehicles spill kit.

Outdoor Vehicle and Equipment Storage

- For vehicles and equipment awaiting repair, monitor for leaks and use drip pans underneath equipment until repairs can be performed. When drip pans are used, keep pans under the leak until vehicle is moved inside.
- Inspect outdoor storage areas regularly for drips, spills and improperly stored materials (unlabeled containers, auto parts that might contain grease or fluids, etc.). This is particularly important for parking areas for vehicles awaiting repair.
- Limit exposure of pollutants to stormwater.

Vehicle and Equipment Washing

- Only wash vehicles and equipment at designated facilities (e.g., Fleet Services wash bays). These wash bays are connected to a sand and oil separator providing pretreatment before flowing to Longmont's sanitary sewer system.

Material Management

- Store maintenance materials and waste containers in labeled containers under cover or in secondary containment tanks.
- All hazardous wastes must be labeled and stored according to hazardous waste regulations.

- Store used vehicle batteries indoors or in secondary containment to contain any potential leaks. Recycle used batteries.
- Store new vehicle batteries securely to avoid breakage and acid spills.
- Limit the outdoor storage of chemicals and materials.
- Periodically inspect and maintain all sanitary sewer pretreatment equipment, including sumps, separators, and grease traps to ensure proper functioning.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches.
- Perform maintenance indoors unless infeasible.
- Have absorbent pads and spill kits available.
- Cleanup spills promptly using dry methods (do not hose down) (see the Spill Prevention and Response Procedure). Cleanup is complete only after absorbent and rags are disposed of properly.
- Stormwater Quality Coordinator can assist with guidance for cleanups as needed (contact on front of this SOP).

Parts Cleaning

- Use designated areas for engine, parts, or radiator cleaning. Do not wash or rinse parts outdoors. If parts cleaning equipment is not available, use drip pans or other containment to capture parts cleaning fluids.
- Use steam cleaning or pressure washing of parts whenever possible instead of solvent cleaning.
- When steam cleaning or pressure washing is used, only discharge wastewater to an oil/water separator connected to the sanitary sewer.
- When using solvents, rinse and drain parts over the designated solvent tank so that fluids will not drip or spill onto the floor. Use drip boards or pans to catch excess solutions and divert them back to the tank. Allow parts to dry over the hot tank.
- Recycle cleaning solution when it becomes too dirty to use. Never discharge cleaning waste to the storm or sanitary sewer systems.

Fueling

- See Vehicle Fueling Standard Operation Procedure

Bulk Storage and Spill Prevention

- Storage of petroleum products or liquid chemicals 55 gallons or larger must have secondary containment or equivalent protection. Secondary containment for single containment systems that serve multiple tanks must have capacity to hold 10% of the volume of the containers or the volume of the largest container in the group plus 10%, whichever is greater.

- Stay alert for any signs of pollution entering storm drains or waterways. This includes illegal dumping of waste near storm drains (e.g., household chemicals, automobile fluids). Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.

- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff's line at 303-441-4444 to have Public Health contacted. For any questions, contact Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.

Employee Training

- Train employees who perform heavy equipment and vehicle maintenance and washing on this written procedure. Information regarding proper O&M practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollutants for municipal operations that fleet staff complete. New hires are required to take the Cornerstone training as part of their onboarding. Furthermore, annual training is performed for Spill Protection Countermeasure and Control Plans for applicable facilities such as the OSTC. There is a correlation between the SPCC training and many of the stormwater protection procedures.

For More Information

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Stormwater Quality Coordinator
(720) 225-7228
jkeyes@bouldercounty.gov

Applicable Departments

Fleet Services

Applicable Departments using County Fueling Stations

Possible Pollutants

Metals

Hydrocarbons

Petroleum and Associated Products

Related Standard Operating Procedures

Spill Prevention and Response

Vehicle and Equipment Fueling

Description

The purpose of the is document is to provide stormwater pollution prevention standard operating procedures (SOP) for fueling vehicles or equipment. Spills of gasoline and diesel fuel on the ground or on vehicles during fueling can wash into a storm drain or waterway negatively impact aquatic organisms and water quality.

Contracted Services

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Fuel vehicles at designated municipal fueling stations.
- Familiarize yourself with spill kit location and be ready to use if a spill occurs. All fueling areas have a nearby spill kit.
- Follow all posted warnings.
- Ensure that the nozzle is properly inserted in the filler neck of the vehicle before dispensing any fuel.
- Remain by the fill nozzle while fueling to ensure the nozzle stays in place.
- Do not top off the tank of the vehicle once the nozzle has shut off the fuel.
- Report leaking vehicles or fuel hoses and dispensing systems to fleet maintenance.
- If a spill occurs, clean up promptly using dry methods (do not hose down). Consult the Spill Prevention and Response Procedure for more information. Cleanup is completed only after absorbent and rags are disposed of properly or appropriate Fleet staff are notified and can take over clean up responsibilities.
- Never use water to clean up a spill.
- Do not perform any vehicle maintenance at fueling areas.

Fleet Services Responsibilities

- If fuel is stored in an above-ground tank, use an enclosed, covered tank with secondary containment (e.g., concrete barrier or double-walled tank).
- All fuel tanks will be inspected per State and Federal regulations.
- Avoid locating fueling dispensers or tanks near storm drains or drainages.

- Fleet staff periodically inspect municipal fueling locations for the following:
    - For above-ground tanks, inspect tank foundations, connections, coatings, tank walls, and piping systems. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank.
    - Check for spills and fuel tank overfills due to operator error.

Mobile Fuel Truck

- Provide inlet protection (e.g., berms, weighted inlet covers) for nearby storm drain inlets when transferring fuel and fueling a vehicle.
- Use a funnel to transfer fuel to vehicles and equipment. After the transfer is complete, the funnel should be dried with a rag or placed in a container to avoid dripping fuel on the ground.
- Maintain a spill kit in mobile fuel truck.

Employee Training

- Train applicable employees who fuel vehicles on this written procedure. Information regarding how to avoid and report spills will be presented during the training. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable staff complete. New hires are required to take the Cornerstone training as part of their onboarding.
- Signage is placed at all fueling stations listing who to contact in the case of a spill.

Revised May 2024

For More Information

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Applicable Departments

Parks and Open Space Facilities

Possible Pollutants

Organic Matter/Nutrients

Sediment

Trash and Debris

Metals

Chemicals

Related Standard Operating Procedures

Fertilizer, Herbicide, and Pesticide Application

Spill Prevention and Response

Snow Storage/Disposal Areas

New Construction

Parking Lot Operations and Maintenance

Storm Drain Maintenance

Parks and Open Space Grounds Operations and Maintenance

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for Parks and Open Space (POS) operations and maintenance activities on open space lands. These activities involve:

- Operation of equipment such as mowers and tractors
- Disposal of waste from mowing, planting, weeding, raking, pruning where needed
- Trash collection
- Cleaning and maintenance of park amenities such as restrooms, structures, trails, and parking lots
- Small construction and improvement projects

Contracted Services

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

General

- Repair damage to vegetated areas, mulch, gravel, or road base to minimize erosion by reducing bare patches. There are limited paved surfaces at POS facilities.
- Remove (sweep, shovel, or blow) materials such as soil, mulch and grass clippings from drainage areas, trails, or parking lots and properly dispose of the materials or leave on flat areas away from waterways or drainages.
- Collect and properly dispose of trash.
- Do not attempt to clean up any unidentified or possibly hazardous materials notify your supervisor. Bring illegally dumped materials that do not contain hazardous material to the POS OSTC facility for proper storage and disposal.
- Refer to the Fertilizer, Pesticide, and Herbicide Application Procedure for information on the application of these materials.
- **Liquid chemicals** 55 gallons or greater must have secondary containment.

Outdoor Stockpiles

- Stockpiles of erodible material (e.g., soil, mulch, etc) must have temporary perimeter controls such as rock socks, Dandy Recyclers®, jersey barriers, trenches, rock socks or a compacted earthen berm around the downgradient toe of stockpile or around the downgradient perimeter of the storage area. Stockpiles should be located away from drainages and waterways to the extent feasible.
- **Mulch and organic material storage:** Limit exposure to the extent possible by reducing the duration and size of the piles. Piles should be stored away from drainages to the extent possible.

Mowing

- Remove paper, debris, and trash from areas prior to mowing.
- Prevent grass clippings and leaves from entering the drainage system. Do not blow or wash them into the street, roadside ditches or other drainage ways including streams or wetlands.
- Limited mowing operations are performed within the POS recreational areas. Typically, mowing is limited to along roadways and trails.
- Properly recycle or dispose of organic wastes after mowing, weeding, and trimming if needed. For flat areas away from drainages, clippings may be left onsite as a mulch.

Nutrient Source Management

- Compost piles will be limited in size and duration on site. Pile should be located away from drainages and covered if left for extended periods.
- Compost or other type of fertilizer should not be applied when raining or near waterways when precipitation is in the 72-hour forecast.
- Fertilizers other than compost are rarely used on POS lands.

Irrigation (Limited)

- Repair broken sprinkler heads as soon as possible.
- Only irrigate at a rate that can infiltrate into the soil to limit run-off.
- There is limited irrigation at POS facilities.

Landscape/Mowing Equipment

- Brush off mowers (reels and decks) and tractors over grassy areas and away from drainages.
- Leave clippings on relatively flat vegetated areas away from drainages or dispose of materials by composting. Do not hose off mowers or other equipment onsite.
- **Check equipment and mowers for leaks prior to use.**

Fueling of Vehicles and Equipment

See Vehicle and Equipment Fueling Standard Operating Procedures

Bulk Storage

- Follow Spill Prevention and Response Procedures for any spills that occur from bulk storage.
- Storage of petroleum products or liquid chemicals 55 gallons or larger must have secondary containment or equivalent protection. Secondary containment for single containment systems that serve multiple tanks must have capacity to hold 10% of the volume of the containers or the volume of the largest container in the group plus 10%, whichever is greater.
- Municipal facilities with Bulk Storage such as the OSTC identify locations and tanks in the Facility Runoff Control Plan (FRCP) and/or the SPCC plan. Bulk storage is not anticipated to occur outside of the OSTC.

Washing and Maintenance of Vehicles and Equipment

See Fleet Operations for Maintenance Shops with Limited Outdoor Storage Procedures

Snow Removal and Deicing

- Inspect plowing equipment for leaks prior to use. Follow the Spill Response Plan Procedure for responding to leaking vehicles and report them to fleet.
- Take care when connecting or releasing plow shovels and clean up any hydraulic fluid that may leak onto the ground.
- Wash snow removal equipment only at approved washing stations following the Fleet Maintenance Operation and Maintenance SOP.
- Do not pile snow in front of storm sewer inlets to allow inflow of snowmelt runoff and limited the potential for materials in the snow to drain directly to the inlet.
- Apply only the recommended amount of deicer or sand to parking lots, driveways, and trails.
- If utilized, ice melt/deicer material spreaders should be calibrated at the beginning of each season and inspections for maintenance or repair should be conducted after each storm.

Other Activities

- Encourage use of pet waste stations with bags and trash receptacles where feasible.

- All **portable toilets** should be staked down in flat, secure locations where they are less likely to be knocked or blown over. Portable toilets should be in a location that would retain any spillage opposed to washing into storm drains or waterway. Hire a third-party vendor to perform the recommended routine maintenance and servicing.
- **Equipment and hydraulic storage**: When possible, store implements with hydraulic hoses connected in a closed circuit, or with covers on hose fittings. Clean up hydraulic fluid leaks as necessary and properly dispose of waste. Remove grass clippings from equipment using dry methods.
- **Check equipment for leaking oil and/or hydraulic oil.**
- Stay alert for any signs of pollution entering storm drains or waterways.
- Report any suspicious unknown discharges to your supervisor. Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor. Supervisors call Public Health at 303-441-1564 (leave a detailed message) during business hours or the Stormwater Quality Coordinator (contact information on front of this SOP). After hours, call 303-441-4444 and request the Emergency Environment Response Team be contacted. Contact 911 if it is an emergency.
- Contact the Stormwater Quality Coordinator (contact information at the front of this SOP), or use the reporting form Boulder County Public Health Spill Reporting Form for general water quality concerns.
- **Know what you're dealing with; do it safely; or call on experts.** Immediately contain and properly clean up spills if it can be done safely (see the Spill Prevention and Response Procedures).
- Illegal dumping may occur on POS property. Such materials need to be removed and properly disposed of it if safe to do so.
- Small construction activities should reference New Construction Procedures and install the proper stormwater control measures to minimize the potential for pollutants including sediment from leaving the construction site or entering waterways.

Employee Training

- Train applicable employees who are involved with POS maintenance activities on this written procedure. Information regarding proper pollution prevention practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollutants sources associated with municipal operations that applicable Parks and Open Space staff complete. New employees are required to take the training as part of their onboarding.

Revised May 2024

For More Information

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Applicable Departments

- Parks and Open Space
- Building Services

Possible Pollutants

- Chemicals
- Nutrients

Related Standard Operating Procedures

- Spill Prevention and Response
- Roadside Vegetative Management
- POS Grounds Operations & Maintenance
- POS Maintenance Shop and Storage Yard
- Building Services

Fertilizer, Herbicide, and Pesticide Application and Storage

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for the application of fertilizers, herbicides, and pesticides, and storage of these materials. These procedures will be consistent with the Boulder County Integrated Weed Management Plan which addresses the complex issue of weed management and describes the multi-pronged approach the County uses when it comes to managing weeds. The County is committed to protecting air, water, and soil resources. If a chemical treatment approach is selected for managing weeds, then this standard operating procedure will be followed. Herbicides and pesticides can contaminate groundwater and surface waters if not managed properly and excessive fertilizer application can contribute to algae blooms and deplete oxygen in waterways.

Contracted Services

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

General

- Follow label directions when applying, storing, handling, mixing, recycling, and disposing of chemicals and empty containers.
- Use care to transfer, mix or dispose of chemicals. Never perform these activities near storm drains or drainage areas.
- Mixing of chemicals will be performed on tarps or secondary containment devices on flat surfaces away from drainage features or waterways.
- Spill cleanup materials must be available in case of a spill. Clean up chemical spills promptly with dry methods, if possible. Refer to the Spill Prevention and Response Procedure.

Application

- Staff performing chemical applications should wear all appropriate protective garments.
- All chemicals shall be used strictly in accordance with their labels and all applicable federal, state, and local laws, regulations, and ordinances.
- Always follow the manufacturer's recommendation on handling and applying the chemicals.
- Chemicals should not be applied immediately before or during rainstorms or while the area is being irrigated. Follow rainfast labels when available. In addition to rainfast labels, all warnings must be read and followed. EPA warnings contain information about runoff and toxicity to aquatic life. Herbicides with surface water or runoff warnings that pertain to having high potential to reach waterways via runoff for weeks after application should not be used near waterways. Furthermore, herbicides with warning labels indicating toxicity to aquatic organisms should not be used near waterways.
- Chemicals should not be applied right before or during high-wind events. Label and equipment give information about use and wind speeds and must be followed.
- Apply only the recommended amounts of chemicals to avoid chemicals being picked up by irrigation or stormwater runoff.
- Be careful not to overspray chemicals onto an impervious surface, such as a sidewalk or roadway. These chemicals will wash into the storm drain inlet during the next rainstorm.
- Clean up all over-sprayed chemicals.
- Do not apply chemicals to frozen ground.
- Avoid application of chemicals at the water's edge unless designed for use near aquatic areas. Maintain a native buffer between treated vegetation and aquatic areas.

Application Equipment

- Sprayers shall be used to apply only materials that are suitable for spraying.
- Spreaders shall be used to apply only materials that are available in granular forms.
- Fertilizers and pesticides should be loaded into application equipment over impervious surfaces, so that any spills can be easily cleaned.
- Properly calibrate application equipment to ensure the proper amount of chemical is applied.
- Keep application equipment clean; do not allow chemical buildup.
- Maintain (including washing) all equipment by following the Fleet Operations for Maintenance Shop with Limited Outdoor Storage Areas Procedure.

Chemical and Bulk Storage

- Materials shall be stored in accordance with all current federal, state and local laws, regulations and ordinances.
- Chemicals should be stored inside when not in use at the OSTC POS storage facility or other designated area for building services. Containers 55 gallons or greater must have secondary containment.
- Ensure chemical cabinets maintain their structural integrity if applicable.
- Recycle or dispose of all spent or excess chemicals properly and promptly.
- Limited materials are stored inside at the OSTC shop in a temperature-controlled environment with its own ventilation. Typically, less than 500 gallons. Building services has limited materials stored onsite.

Fueling of Vehicles and Equipment

- See Vehicle and Equipment Fueling Standard Operating Procedures for equipment that requires fuel such as tractors.
- If helicopters are utilized, they will be refueled in designated areas with fuel spill kits. A third party is used for helicopter work and the contractor supplies a spill mitigation plan and is responsible for storage of fuels.

Nutrient Source Reductions

- Compost or other fertilizers should not be applied when raining or near waterways when precipitation is in the 72-hour forecast.
- Compost stockpiles should be located away from waterways and with downgradient perimeter controls, if located outside of a designated facility. (See POS Maintenance Shop and Storage Yard Procedures, POS Grounds Operations and Maintenance, and Building Services Procedures).

Employee Training

- Train applicable employees who work with fertilizers, herbicides, and pesticides on this written procedure. Information regarding proper pollution prevention practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

Revised May 2024

Municipal Building Operation and Maintenance

For More Information

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Applicable Departments

Building Services Division

Possible Pollutants

Sediment
Nutrients and Organic Matter
Chemicals
Trash and Debris
Metals
Bacteria
Deicer

Related Standard Operating Procedures

Spill Prevention and Response
Parking Lot O&M
Snow Storage/Disposal Areas
Vehicle and Equipment Fueling
Construction less than an acre
Construction of Municipal Facilities
Fertilizer, Herbicide, Pesticides Application and Storage

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for operation and maintenance (O&M) of buildings owned by Boulder County. These activities include routine maintenance, minor repairs, painting, good housekeeping, and snow management of sidewalks and pathways. Snow removal in parking lots is covered in Parking Lot Operation and Maintenance Standard Operating Procedure. Snow disposal is covered in the Snow Storage/Disposal Areas Standard Operating Procedure.

The operation and maintenance of municipal buildings, if not conducted properly, can contribute to stormwater pollution.

Contracted Services (as applicable)

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Inspect walkways and grounds for deterioration.
- Stabilize bare patches with non-erosive surface such as rock or vegetation.
- Do not perform painting, concrete, stucco, or mortar repairs, in wet conditions. Cease work if rain occurs and protect work areas and materials to prevent materials and chemicals from washing away during a storm event.
- Locate pollutant sources such as trash receptacles, ice melt, dumpsters, and material storage away from drainage features such as inlets.
- Stay alert for any signs of pollution entering drainage features or waterways. This includes illegal dumping of waste near drainage features (e.g., household chemicals, automobile fluids).
- Inspect storm structures, culverts, detention areas or permanent structural control measures regularly for debris accumulation. Clean out as needed.
- Inspect grounds frequently for trash and windblown debris.
- Collect and properly dispose of trash.

- Do not discharge any treated or wastewater to storm drains without a separate permit. This includes HVAC condensate treated with algae inhibitors, wash water with soaps, and blow down from boilers.
- Empty all mop buckets or other cleaning wash water in sinks inside building. This includes wastewater from floor and carpet cleaning equipment.

Outdoor Structures

- Building washing may be performed by containing all liquids after washing and properly disposing in a designated treatment system designed to treat building wash water.
- Wastewater may not be discharged into storm drains or systems.
- Alternatively, surface washing of outdoor structures may be performed that follows the Colorado Department of Public Health and Environment Low Risk Discharge Guidance Surface cosmetic power washing operations to land. Some key requirements for low risk power washing are:
    1. All water must soak into the land.
    2. The addition of chemicals and detergents to the wash water or to the discharge is strictly prohibited.
    3. Floating or solid materials or visible sheen must not be evident in the discharge.
    4. The discharge must not be harmful to vegetation.
    5. The discharge must not cause erosion of a land surface.
    6. The discharge must not occur during a stormwater runoff event.
    7. The wastewater may reach the street, curb flow line, impermeable channels, or other open impermeable areas provided that it remains in the operators' control and is within Boulder County's owned systems and not within an incorporated area (e.g., Longmont, Superior, Lafayette, or city of Boulder) and is immediately collected (including all deposited pollutants) for proper disposal in accordance with all conditions of the low-risk guidance. Collection can be with a vacuum. Additionally, inlets and other stormwater conveyances can be blocked, and wash water vacuumed to prevent a discharge.

Painting, Staining and Sandblasting

- Use a ground cloth or oversized tub for paint mixing and tool cleaning. Properly dispose of the wastes.
- Enclose spray-painting operations with tarps or other means, as possible, to minimize wind drift and to contain overspray.
- Clean paintbrushes and tools used to apply water-based paints in sinks plumbed to a sanitary sewer or in portable containers that can be emptied into sanitary sewer drains. Never clean tools over a storm drain or outside.
- Brushes and tools used for oil-based paints, finishes, thinners, solvents, or other materials must be cleaned over a tub or container and the cleaning wastes disposed or recycled at an approved hazardous waste facility. Never clean tools over a storm drain or outside.
- Promptly cleanup any spills of paints, cleaners or other maintenance chemicals or supplies (see the Spill Prevention and Response Procedure).
- When sand blasting exterior surfaces, place tarps or ground cloths beneath the work area to capture sand blasting media and debris. Enclose the sand blasting area with tarps or plastic to protect from wind and to capture airborne particles (dust).
- Cease all sand blasting operations on windy days.

Grounds Maintenance

- Perform vegetation maintenance as needed.
- Brush off mowers (reels and decks) and tractors over grassy areas and away from drainages.
- Check equipment and mowers for leaks prior to use.
- Remove debris and trash from areas prior to mowing.
- Avoid mowing when muddy conditions exist.
- Prevent grass clippings and trimmed vegetation from entering the drainage system. Do not blow or wash them into the street, roadside ditches, or other drainage ways.
- Properly recycle or dispose of organic wastes after mowing, weeding, and trimming.
- Refer to the Fertilizer, Pesticide, and Herbicide Application Procedure for information on the application of these materials.
- For sidewalks and walkways, remove snow as needed. Do not overapply deicers. Store deicers and deicer equipment inside. Do not pile snow on inlets, gutter lines, or other drainage conveyances.
- Maintain storm drain systems including any permanent stormwater quality facilities.

Spills and Illegal Dumping

- Stay alert for any signs of pollution entering drainage features or waterways. This includes illegal dumping of waste near drainage features (e.g., household trash, chemicals, and automobile fluids).
- Report any suspicious discharges/illegal dumping or spills to your supervisor. Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.
- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff at 303-441-4444 have Public Health contacted. For any questions contact the Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.
- Chemicals stored by County staff in 55-gallon containers or larger must have secondary containment including generators.
- Fueling areas have spill kits and signage to report spills (see Vehicle and Equipment Fueling Procedures)

Temporary Sediment Control Measures

- **Temporary controls such as rock socks, sediment control logs, or Road Wattle® or equivalent are required on O&M activities that stockpile or create erodible materials or have earth work near storm inlets or waterways.**

  1. Placement of controls can be short-term installations while work is actively occurring unless there are remaining materials or chemicals that can wash away during a storm event.
  2. Placement requires a certain level of judgement and is job-site specific. The goal is to protect downgradient drainage features and waterways. For example, you are not expected to protect an entire length of roadside ditch but must install inlet protection and perimeter control for material stockpiles and should use a check dam in the ditch downgradient of the work activity.
  3. Controls must meet the installation and maintenance specifications referenced in the Boulder County Storm Drainage Criteria Manual and found in Mile High Flood Control District Volume 3, Chapter 7 (MHFD Construction Details) or CDOT Temporary Control Measures Details

Nutrient Source Management

- Compost or other fertilizers should not be applied when raining or near waterways when precipitation is in the 72-hour forecast.
- Compost piles will be limited in size and duration on site. Pile should be located away from drainages and covered if left for extended periods.
- Remove pet waste and provide signage where excessive dog waste issues persist.

Irrigation

- Inspect and repair broken sprinkler heads as soon as possible.
- Only irrigate at a rate that can infiltrate into the soil to limit run-off.
- Install moisture sensors where feasible to limit watering when raining or wet conditions occur.

Employee Training

- Train applicable employees who are involved with building services activities on this written procedure. Information regarding proper O&M practices will be presented during the training, in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable building staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

Revised May 2024

Waste and Recyclable Transfer Stations

For More Information

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Applicable Departments

Resource Conservation Division

Possible Pollutants

- Trash and Debris
- Nutrients
- Organic Matter
- Oil and Grease
- Sediment
- Metals
- Bacteria

Related Standard Operating Procedures

- Spill Prevention and Response
- Parklng Lot O&M
- Vehicle and Equipment Fueling
- Fleet Operations for Maintenance Shops with Limited

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for operation and maintenance of municipal waste and/or recyclable transfer stations owned or operated by Boulder County. If not conducted properly, transfer stations can contribute to stormwater pollution. Blowing trash, residual chemicals, and organics are some of the pollutant sources that require good housekeeping practices as well as containment.

Several waste transfer stations and household recycling drop-off centers are operated by the County with contracted waste haulers.

Contracted Services (as applicable)

This document is provided to contractors working on behalf of the County through the contracting process.

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Items prohibited from municipal solid waste landfills in Colorado will not be accepted (i.e., hazardous waste, uncontained asbestos, low-level radioactive waste, medical waste).
- Household hazardous waste (HHW) will be collected through the hazardous material management facility program. These items include but may not be limited to used oil, used paint, compact fluorescent light bulbs, batteries, pesticides, and electronic equipment.
- Periodically inspect areas to ensure that all materials are being stored properly.
- Dispose of trash and debris as needed.
- Divert stormwater drainage, where possible, to prevent contact with potential pollutants.
- Install and maintain best management practices/control measures (inlet protection, berms, weighted inlet covers, check dams, dumpsters, etc.) to minimize pollutants in stormwater runoff.
- **Liquid chemicals** 55 gallons or greater must have secondary containment.
- Have spill cleanup materials available in case of a spill. Refer to the Spill Prevention and Response Procedure.

- Keep equipment clean and do not allow excessive build-up of oil and grease.
- If chemicals 55 gallons or
- Do not wash or hose down the area except in areas where the wash water will only enter the sanitary sewer drain as an approved discharge. Use dry clean-up methods as often as possible.
- Do not wash out trash receptacles unless wash water will be discharged to the sanitary sewer.
- Stay alert for any signs of pollution entering drainage features or waterways. This includes illegal dumping of waste near drainage features (e.g., household chemicals, automobile fluids).
- Report any suspicious discharges/illegal dumping or spills to your supervisor. Do not attempt to clean up any unidentified or possibly hazardous materials; notify your supervisor.
- **Spills or suspicious discharges, know what you're dealing with; if it safe to do so, i**mmediately contain and properly clean up spills (see the Spill Prevention and Response Procedure). If it is not safe to clean up a spill, notify 911 for emergencies, and for non-emergencies supervisors call 303-441-1564 during business hours and leave a detailed message or email waterqualityspills@bouldercounty.gov. Outside of business hours, call the non-emergency sheriff at 303-441-4444 have Public Health contacted. For any questions contact the Stormwater Quality Coordinator Jennifer Keyes, 720-225-7228.
- Trash collection vehicles are operated by a third-party licensed vendor that follows their own stormwater procedures.

Snow Removal and Deicing

- Inspect plowing equipment for leaks prior to use. Follow the Spill Response Plan Procedure for responding to leaking vehicles and report them to fleet.
- Take care when connecting or releasing plow blades. Properly clean up and dispose of any hydraulic fluid if it leaks onto the pavement.
- Wash snow removal equipment only at approved washing stations following the Fleet Maintenance Operation and Maintenance Procedure.
- Do not pile snow directly on storm sewer inlets.
- Gutters and storm sewer inlets should be cleared of ice to allow drainage of snowmelt or ice-melt if such structure exist on site.
- Apply only the recommended amount of deicer to stations.

Employee Training

- Train applicable employees who are involved with waste/recyclable transfer station activities on this written procedure in addition to how to prevent and report spills. Additionally, the County has an online stormwater training via Cornerstone on how to identify and report illicit discharges and common pollution sources associated with municipal operations that applicable staff complete. New hires are required to take the Cornerstone training as part of their onboarding.

For More Information

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Applicable Departments

Special Events Coordinator

Parks and Open Space

Possible Pollutants

Trash

Sanitary waste

Organics/Nutrients

Livestock

Related Procedures

Spill Prevention and Response

Street Sweeper Cleaning and Waste

Large Outdoor Festivals and Events

Description

The purpose of this document is to provide stormwater pollution prevention standard operating procedures (SOP) for large outdoor festivals and events operated or controlled by Boulder County including events that are issued special use permits and occur at the Fairgrounds. Pollutants such as trash, spills, portable toilets, livestock, and food wastes associated with large events may wash into a storm drain and cause water pollution if they are not managed properly.

Contracted Services

This written document must be provided to contractors operating large outdoor festivals and events on behalf of the County and to outside organizations that operate events on municipal property, so they have county-approved stormwater pollution prevention procedures.

For the Fairgrounds, some of the procedures listed in this SOP are performed by County staff and some are the responsibility of the lessee (see lease requirements).

Procedures

Illegal Discharge Prevention, Identification, and Good Housekeeping Practices

- Provide adequate trash receptacles for vendors and guests.
- Monitor and respond to leaking waste containers.
- Empty trash receptacles to prevent overflow.
- Store waste containers under cover or on grassy areas, if possible.
- Do not wash out trash receptacles unless wash water will be discharged to the sanitary sewer.
- Walk the outdoor festival and event area during and after every large event to pick up loose trash and debris. Properly dispose of this material.
- Sweep the roadway and parking lots after the large festival or event.
- If a spill occurs, clean up promptly using dry methods (do not hose down). Consult the Spill Prevention and Response Procedure for more information.
- Never use water to clean up a spill.

Portable Toilet Service

- Portable toilets are used at most large outdoor festivals and events. All portable toilet waste is classified as septage. The municipality will use a licensed waste hauler to dispose of their waste for any large outdoor festival or event that has portable toilets.

The units will be removed as soon as the festival or event is completed so that they do not become a nuisance or vandalized.
- Portable toilets that are intended to remain in place longer than one week need to be anchored to the ground.

Food and Beverage Vendor Waste

- Waste generated by food and beverage vendors is regulated by the Colorado Retail Food Rules and Regulations.
- Food waste should not be left on the ground and must be properly disposed of or composted.

Livestock Waste

- Manure must be removed from paved, public streets and must be properly disposed of.
- Manure at the Fairgrounds must follow Fairground standard procedures and be stored at the designated waste station.
- Livestock at the Fairgrounds may only be washed at the designated wash station that drains to an oil and sand separator and Longmont Sanitary Sewer System.

Employee Training

- Train applicable County employees who operate large festivals and events on this written procedure and provide this procedure with the Special Use Permits issued to outside agencies operating events on county property.

Initial Assessment:

- **Know what you're dealing with; do it safely; or call on experts**.
- Never approach, contact, or sample an unknown substance. If a highly toxic or flammable substance is discovered, staff should leave the immediate area and call 911.
- If the situation is an emergency, call 911.
- Take photographs and gather evidence identifying the responsible party if safe to do so.

Spill Response:

1. Identify the material and volume spilled. If you cannot identify the material and its properties, contact your **Division Manager or designee/Supervisor** (e.g., Shelly Fuller, Bob Kiepe, Joe Lafollette, David Pfeifer, Sean Reynolds, Grant Roberts or their designees) and **DO NOT proceed to step 2**.
    a. Division Managers or designees see County Management Staff Spill Response sheet.
    b. **If Division Managers or designees determine** that it is safe to contain and removed spill material, **proceed to step 2**.
2. Refer to the Safety Data Sheet (SDS) to determine appropriate personal protective equipment (PPE), such as gloves and safety glasses and appropriate cleanup methods. Gear up in the PPE.
3. Stop the leading edge of the spill. Block or divert the spill to avoid discharge to the storm drain system and to minimize the area requiring cleanup.
4. Determine the source of the spill and stop the spill at its source by closing a valve, plugging a leak, or setting a container upright.
5. Use sand or absorbents (socks, pillows, or pads) to quickly capture spilled liquid. Use dry clean-up methods only, and properly dispose of all clean-up materials.
6. Clean up spills immediately to prevent potential safety hazards and spreading of wastes by wind, rain, or vehicle traffic.
7. Mitigate environmental damage, including removing remaining material to prevent transport in future storm events to the extent feasible.
8. **Call Public Health Stormwater Quality staff (303-441-1564 and leave a detailed message during business hours or email waterqualityspills@bouldercounty.gov) when spills reach any type of stormwater conveyance (e.g., drainage ditch, swale, inlet) or waterbody)**. Contact the non-emergency sheriff's office after hours at 303-441-4444 and ask for the Environmental Emergency Response Team to be notified. Public Health or the Stormwater Quality Coordinator are available to facilitate

reporting to CDPHE and other agencies and help investigate and hold the responsible party accountable for cleanup costs, when applicable.

9. Complete all other necessary reporting and notifications including notifying the Public Health or the Stormwater Quality Coordinator (720-225-7228) to ensure documentation and notifications were applicable for the type of spill that occurred.
10. When the substance is determined safe to handle, but requires special disposal, the cleanup contractor may be able to take it to Boulder County's Hazardous Materials Management Facility (HMMF) for disposal (work with HMMF contact, Shelly Fuller @ 720-564-2243 or the general number 720-564-2251, to arrange a drop-off).

Documentation

- Documentation showing proper cleanup is required. Confer with Division Manager or designee, Public Health water quality spill response staff, or Stormwater Quality Coordinator to determine specifics.

SPILL NOTIFICATION NUMBERS[1]	
Name	**Number**
Local Fire Department (For an Emergency)	911
Hazardous Material Management Facility (HMMF)	Shelly Fuller 720-564-2243, Brandon Champion 720-564-2249
Fleet	Grant Roberts 720-346-0100, Cody Sweet 303-817-6917
Road Maintenance	303-441-3962, Bob Kiepe 303-678-6086, TJ McKeehan, 303-678-6287
Building Services	David Pfeifer - 720-864-6508
Parks and Open Space OSTC	Joe Thiltgen, 303-678-6296, Sara Milligan, 720-480-0422
Parks and Open Space	Jarret Roberts, 303-413-7000 and Sean Reynolds, 303-678-6311
Public Health (During Business Hours)	**303-441-1564 (leave a detailed message) or email waterqualityspills@bouldercounty.gov**
Non-emergency Sheriff Dispatch (After hours)	303-441-4444, ask for EERT to be paged
CDPHE Colorado Environmental Emergency and Incident Reporting Line	1-877-518-5608 (24-hour)
National Response Center (Coast Guard-EPA)	1-800-424-8802 (24-hour)
Colorado Division of Oil & Public Safety-Above & Underground Storage Tank Regulators	303-318-8547 (for oils spills > 25 gallons)
Colorado State Patrol (non-emergency)	*CSP 303-239-4501 (24-hour)

Spill Response Procedures for County Division Managers or Designees

Spill Response:

1. Division Managers or their designees are typically notified of spills by field or maintenance staff upon identification.
2. Division Managers or designees are tasked with immediately determining the next steps that need to be taken.
    a. Spill may be stopped and cleaned up by staff
    b. Spill cannot be safely stopped and cleaned up by staff – Call qualified clean up contractor (see below for contacts**)**

Spills Safely Stopped and Cleaned by County Staff

- Use dry clean up methods and proper PPE as described in the Spill Response Procedures for County Staff.
- Notifications to Colorado Department of Public Health and Environment (CDPHE) are required for the following conditions:
    - Any releases to waterways (i.e. storm sewer, creeks, river, lakes, dry waterways)
    - Greater than 25 gallons of any Petroleum Product released to ground only
    - All mercury spills and all asbestos releases that meet the reportable quantity
    - All sanitary sewer releases
    - Any deliberate releases (i.e. dumping, burying, etc.)
    - All releases of chemicals that eclipse the reportable quantities detailed in EPA's List of Lists
    - Permit exceedances

Spills that Cannot be Stopped or Contained by County Staff

- For emergencies call 911. For non-emergencies, one of Boulder County's environmental and abatement service contractors may be contacted.

24-hour Environmental and Abatement Service Contractors

Company Name	Contact Person	Address	Home Phone	Work Phone	Email
Custom Environmental (Ambipar)	Aaron Whatley	8041 N I-70 Frontage Rd Unit 11 Arvada, CO 80002	(800) 310-7445	(303) 423-9949	aaron.whatley@ambipar.com
Environmental Hazmat Services	Marty Green	4745 Independence St. Wheat Ridge, CO 80033	(720) 225-9252		mgreen@envhaz.com
Environmental Restoration	Patrick Heyneman	4295 Kearney St. Denver, CO 80216	(314) 347-2930	(888) 814-7477	p.heyneman@erllc.com

- When calling a cleanup contractor, be prepared to provide the following information so the contractor can determine the correct equipment and develop an initial quote (if applicable):

  c. The location of the spill (e.g., address, mile marker), its source (e.g., manhole, tanker truck), and identification of the type of material spilled (e.g., untreated wastewater, biosolids, specific chemical with applicable SDS);
  d. The estimated volume of the spill;
  e. How far the spill has travelled, and whether it has reached a drainage feature or waterbody;
  f. Measures that are being or have been taken to contain or reduce the spill;
  g. A list of potentially affected properties; and
  h. A phone number and e-mail to contact an on-site representative that will meet with the cleanup contractor.

- **Purchasing policies need to be strictly followed**. However, when waiting on quotes would result in the spread of spilled materials, increased cleanup costs, or additional environmental harm; it is not necessary to obtain quotes. In such fast-acting situations that do not require a call to 911, the purchase order (i.e., Oracle) needs to document why you were not able to obtain quotes. It is recognized that in many cases the contractor will need to respond to the scene to provide a quote and once mobilized it is most efficient to also perform the cleanup; therefore, in emergency situations quotes are not necessary.

    - An Emergency Response Work Order (EWO) or similar form will be prepared by the Contractor and emailed to the County for signature and approval.
- When the cleanup is not time sensitive, the exception to purchasing policies does not apply and quotes must be obtained when applicable (i.e., for purchases $10,000 or more).
- **Call Public Health Environmental Health staff (303.441-1564 and leave a detailed message or email waterqualityspills@bouldercounty.gov) when spills reach any type of stormwater conveyance (e.g., drainage ditch, swale, inlet) or waterbody**. Public Health will facilitate reporting to CDPHE and other agencies, and help investigate and hold the responsible party accountable for cleanup costs, when applicable. The Stormwater Quality Coordinator may also be contacted as needed.
- Public Health or Stormwater Quality Coordinator will make observations of the cleanup operation to ensure that environmental damage is mitigated, including removal of remaining material to prevent transport in future storm events to the extent feasible.
- Notify the Hazardous Materials Program Manager (Shelly Fuller) and Cody Lillstrom (720-564-2757), and (Stormwater Quality Coordinator (Jennifer Keyes) for all services provided under the County's emergency environmental and abatement contracts. Please note that each department or responsible entity will be responsible for costs incurred under the on-call contract.
- Complete all other necessary reporting and notifications or verify that Public Health or the Stormwater Quality Coordinator is making the notifications.
- When the substance is determined safe to handle, but requires special disposal, the cleanup contractor may be able to take it to Boulder County's Hazardous Materials Management Facility (HMMF) for disposal (work with HMMF contact, Shelly Fuller @ 720-564-2243, to arrange a drop-off appointment).

Documentation

- Documentation showing proper cleanup is required. Confer with Public Health Stormwater Quality staff to determine specifics.

Spill Notification Numbers

SPILL NOTIFICATION NUMBERS[1]	
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State Oil Inspector (Colorado Division of Oil & Public Safety-Above & Underground Storage Tank Regulators)	303-318-8547 (for oils spills > 25 gallons)
Colorado State Patrol (non-emergency)	*CSP 303-239-4501 (24-hour)

[1] Contact numbers provided by CDPHE Office of Emergency Preparedness & Response, Environmental Spill Reporting Brochure, Updated February 2017