



CLEANING/WASHING - OUTDOOR AREAS AND STRUCTURES

ENVIRONMENTAL GUIDELINES-OPERATION



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ACTIVITY DESCRIPTION

Routine cleaning of outdoor pavement, structures, buildings, and facilities to ensure efficient operation and cleanliness and public safety. This activity includes sweeping, scrubbing, power washing, etc. of building exteriors including roof tops, windows, and walls, parking lots and structures, parking kiosks/enclosures, runways/taxiways and other pavement areas, concrete islands, signs, ramp areas, sidewalks, that are exposed to precipitation both “landside” and “airside”. Landside and airside areas are delineated by a security fence.

Discharges to the storm sewer without a permit are prohibited by State regulation. However, it is allowable for wash water from power washing activities to migrate to landscaping with vegetative cover without having to obtain a permit provided all provisions are met in this guidance document and in the Colorado Department of Public Health and Environment’s Low Risk Discharge Guidance: Discharges from Surface Cosmetic Power Washing Operations to Land:

www.cdphe.state.co.us/wq/PermitsUnit/POLICYGUIDANCEFACTSHEET/powerwash.pdf

Discharges from cleaning operations on the airside are conditionally allowable (permitted) discharges under the Department of Aviation’s Metro Wastewater Contribution Permit (sanitary sewer). However, any discharge to the sanitary requires prior approval from DEN Environmental Services (ES). Additionally, discharges to the Deicing Waste (DIW) collection system require prior approval from DEN ES. The use of chemicals or cleaning agents in the cleaning/washing that discharge to the DIW may be allowed if the Safety Data Sheet (SDS) is reviewed and approved by DEN ES before washing.

POTENTIAL ENVIRONMENTAL RISKS

The following environmental concerns are associated with these activities:

- Release of contaminants in washing effluent to storm sewers, conveyances, waterways, or soils, such as:
 - Oil and Grease
 - Fuels
 - Solvents, Soaps, and Detergents
 - Propylene Glycol/Aircraft Deicing Fluid
 - Ethylene Glycol/Radiator Coolant (Antifreeze)
 - Hydraulic Fluids or other maintenance materials
 - Pavement Deicers
 - Animal Droppings
 - Sediments

Potential consequences from performing the activity incorrectly:

- Property damage, personal injury, or environmental damage
- Regulatory non-compliance, Notices of Violation, and related [financial & non-financial] penalties

RECOMMENDED OPERATING CONTROLS



This guideline serves as the Best Management Practices (BMP) document that will be followed for discharges from outdoor washing of buildings and structures on City and County of Denver, Department of Aviation property to land.

Discharges to the surface waters, ground water, and storm sewer systems without a permit are prohibited by State regulations (Regulations 41, 61, and 65). However, it is allowable for wash water effluent from power washing activities to migrate onto landscaping without having to obtain a permit provided:

- No chemicals, detergents, or cleaning agents are used,
- The discharge to land is conducted in a manner that is not harmful to the vegetation and does not cause erosion,
- The discharge does not contain a visible sheen,
- The discharge does not contain visible solids,
- The material being removed is not harmful to vegetation,
- There is no ponding,
- The wash water effluent completely infiltrates,
- There is no runoff from the site into a storm water conveyance or Waters of the State,
- The discharge does not occur during a storm event

Prohibited Activities

- The use of chemicals, detergents, or cleaning agents in the washing activities that discharge to land is prohibited.
- Transporting waste liquids and solids contained in equipment and originating off site onto DEN property is prohibited (e.g., fluids in scrubbers).
- Washing spills of any kind into the stormwater collection system is prohibited.
- Washing spills of any kind into the DIW or its conveyances is prohibited without prior approval by DEN ES.
- Washing spills of any kind into the sanitary sewer collection system is prohibited without prior approval by DEN ES.
- Disposal of solid waste materials into any drain is prohibited.
- Discharge/disposal of liquid waste into any sewer system is prohibited without a permit.
- The discharge of washing effluent to land during a storm event (snow, precipitation, etc.) is prohibited.
- The cleaning/washing of vehicle surfaces used for containing or transferring materials is prohibited including beds, concrete mixers, hoppers, and chutes.

General Considerations

Each operator, tenant, and/or vendor conducting washing activities for the City and County of Denver at DEN is responsible for understanding the applicable regulations and managing their activities accordingly. This Environmental Guideline is meant as guidance only and does not supersede any regulations.



For all cleaning activities of outdoor areas and structures, the following alternative options exist for disposal/discharge of the washing effluent:

- Collect the washing effluent and discharge it to the sanitary sewer system through a pretreatment device. This requires approval from DEN ES and review of Safety Data Sheet (SDS) if chemicals are used and may require additional approvals from the Department of Transportation and Infrastructure (DOTI) and/or Metro Wastewater Reclamation District.
- Collect and dispose of the washing effluent to an appropriately permitted facility. A CDPS permit is not required, however approval from the permitted facility is required.
- Conduct the work in an area that will allow for complete evaporation of the wash water (zero discharge). A CDPS permit is not required, however prior approval from DEN ES is required.
- Utilize drain covers or similar BMPs to protect and prevent discharges to the storm and sanitary sewer systems. Allow for complete evaporation of the effluent or collect and dispose of the washing effluent to the sanitary system or an appropriately permitted facility (see bullets above).

Training Requirements

- Staff performing such outdoor cleaning/washing activities must be trained in appropriate disposal/discharge procedures for the waste generated.
- Employee training programs shall inform personnel at all levels of responsibility who are involved in industrial activities that may impact stormwater runoff. Stormwater training shall address topics such as spill response, good housekeeping, and material management practices. Contractor or temporary personnel shall be informed of plant operation and design features to prevent discharges or spills from occurring.

Storage and Materials Management

Cleaning solutions should be stored indoors utilizing secondary containment if there is a drain in the vicinity. If cleaning solutions must be stored outdoors, secondary containment and cover must be used.

- Maintain legible labels and markings on all containers and tanks; labels on all containers must have the name of the owner of the container, an associated contact telephone number, an appropriate hazard warning, and must clearly indicate the contents. In addition, the name on the label must match the name on the corresponding SDS.

PLANNING REQUIREMENTS

The following BMPs should be followed for discharging power washing wastewater to land with vegetated cover:

- All BMPs must be selected, installed, implemented, and maintained according to good engineering, hydrologic and pollution control practices. The BMPs must be adequately designed to provide control for all potential pollutant sources associated with the discharge.



- Solids and any pooled liquids other than stormwater should be removed from the area prior to power washing.
- A filter bag or similar filtration device should be used to remove suspended solids. This device should be used and maintained in accordance with the manufacturer's specifications.
- An absorbent oil pad, boom or similar device should be used to eliminate any oil from the discharge water.
- The discharge should be applied at a rate to minimize ponding so there is no potential for the water to flow to a storm sewer or other conveyance to surface waters.

CRITICAL TASKS

- Contact DEN ES prior to conducting outdoor cleaning operations to ensure compliance with the proposed activity, that proper disposal will occur, and if collection of discharge data is required.
- Contact DEN ES for further assistance or to answer any questions.

EMERGENCY RESPONSE

If a spill occurs, refer to EMS Environmental Guideline: Spill Response.

- Call DEN Communications Center immediately at 303-342-4200 for all spills.
- Spills/releases should be contained and cleaned up as soon as possible using either manual (e.g., absorbents, shovel) or mechanical (e.g., vacuum, sweeper) means to minimize potential stormwater impacts. Place used materials in an appropriate labeled container and dispose off-site in an approved, permitted facility.
- Spills shall not be washed into any storm sewer or waterway, or onto any soil.

INSPECTION AND MAINTENANCE REQUIREMENTS

Pretreatment devices and sumps should be included in a routine inspection and maintenance program.

- See EMS Environmental Guideline: Maintenance of Pretreatment Devices

EXPECTED RECORDS AND OUTPUTS

Waste management records (profiles, manifests, sample results, etc.).

- Based on the disposal profile, manifests and related forms may be required. Manifests & profile forms can be obtained from the disposal facility for off-site disposal activities (manifests **are required** for hazardous, special, and universal waste).
- Operators must maintain waste management records at the facility for a minimum of 3 years.

Evidence of training

- While formal certifications are not necessary, some form of "proof of training" (such as sign-in logs and handouts) is expected & should be maintained on file by the Operator.

SDSs for cleaning solutions/products



- Manufacturers of cleaning products will supply these documents on demand. SDSs for cleaning products should be made available to employees engaged in cleaning/washing activities and maintained on file by the Operator at the facility.

Evidence of approval of any cleaning solutions used

- Metro Wastewater or DEN ES will issue a letter of approval for cleaning products on request, after review of product information provided by the Operator.

Discharge Monitoring Reports

- Required for discharges of wash water under CDPS permit(s). Reports are prepared by DEN ES and copies are maintained in the DEN ES central files. Provide discharge data to DEN ES.

REFERENCES

Contacts

- DEN Communications Center (for spill reporting): 303-342-4200
- DEN Environmental Services (Main Line): 303-342-2730; DIA.Environmental@flydenver.com
- Tom Somers, DEN Environmental Services: 303-342-2733; Tom.Somers@flydenver.com
- Mark Kunugi, DEN Environmental Services: 303-342-2629; mark.kunugi@flydenver.com

Guidance Materials

- DEN Stormwater Management Plan
- CDPHE Power Washing Guidance
- CDPHE WQCD permit fact sheets, rationales, and general permits

Training Materials

- EMS Document: Stormwater Pollution Prevention Training

Related EMS Environmental Documents

- Maintenance of Pretreatment Devices
- Spill Response
- General Waste Management

Applicable Regulations

- 40 CFR 110.3 Discharge of Oil
- 40 CFR 112 Oil Pollution Prevention (SPCC Plans)
- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 122-124 NPDES Regulations for Storm Water Discharges
- 40 CFR 401 Effluent Limitation Guidelines
- Denver Wastewater Management Division Rules and Regulations
- Metro Wastewater Reclamation District Rules and Regulations



- City and County of Denver Mayor's Executive Order No. 115
- DEN Industrial Stormwater Permit
- DEN Metro Wastewater Contribution Permit
- Colorado Water Quality Control Commission (WQCC) Regulation 35
- CQCC Regulation 41
- CQCC Regulation 61
- CQCC Regulation 65
- Colorado Water Quality Control Act
- DEN rules and regulations