



Title	ES-301-4.03 Cleaning/Washing - Outdoor Areas and Structures
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1) Activity Description:

Routine maintenance and cleaning of outdoor pavement, structures, buildings, and facilities to ensure efficient operation of this public facility as well as to ensure 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, etc. both “landside” and on the “airside”. These areas are delineated by a security fence.

Discharges to the storm sewer system without a permit are prohibited by State regulation (Regulation 65). However, it is allowable for wash waters from power washing activities to migrate onto landscaping with vegetated cover without having to obtain a permit provided the chemicals used are not harmful to the vegetation, the material being removed is not harmful to vegetation, there is no ponding, and there is no runoff from the site into a storm water conveyance or Waters of the State (www.cdphe.state.co.us/wq/PermitsUnit/POLICYGUIDANCEFACTSHEET/powerwash.pdf). This is allowable at DEN only in compliance with the above guidance and upon review and approval of the proposed chemicals by DEN Environmental Services.

Discharges to the industrial stormwater (DIW) sewer system from cleaning operations on the airside are conditionally allowable (permitted) discharges under the Department of Aviation’s Wastewater Contribution Permit following review and approval of MSDSs for proposed products by DEN Environmental Services.

This guideline serves as the 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.

2) Potential Environmental Risks

- A. The following environmental concerns are associated with these activities:
 - 1. Release of contaminants in wash fluids to sewer, waterways, or soils, such as:
 - i) Oil and Grease
 - ii) Fuels
 - iii) Solvents, Soaps, and Detergents
 - iv) Propylene Glycol/Aircraft Deicing Fluid
 - v) Ethylene Glycol/Radiator Coolant (Antifreeze)
 - vi) Hydraulic Fluids or other maintenance materials
 - vii) Pavement Deicers
 - viii) Animal Droppings
 - ix) Sediments
- B. Potential consequences from performing the activity incorrectly:
 - i) Property damage, personal injury, or long-term damage to the environment
 - ii) Regulatory non-compliance, Notices of Violation, and related [financial & non-financial] penalties

3) Critical Operating Requirements

- A. Prohibited Activities

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- i) Transporting waste liquids and solids contained in equipment and originating off site onto DEN property is strictly prohibited (e.g., fluids in scrubbers).
- ii) Washing spills of any kind into the stormwater collection system is prohibited.
- iii) Washing spills of any kind into the industrial stormwater (DIW) sewer system is not allowed without prior approval by DEN Environmental Services.
- iv) Washing spills of any kind into the sanitary sewer collection system is not allowed without prior approval by DEN Environmental Services.
- v) Disposal of solid waste materials into any drain is prohibited.
- vi) Discharge/disposal of liquid wastes into any sewer system is prohibited without a permit.
- vii) The discharge must not: contain floating or solid materials, have a visible sheen, be harmful to vegetation, or cause erosion of a land surface.

B. General Considerations

- i) Each operator, tenant, and/or vendor conducting outdoor maintenance and/or cleaning 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.
- ii) Consolidate solid waste materials into appropriate containers (i.e., dumpsters, trash cans, tanks, drums, etc.).
 - Refer to *ES-301-6.01 General Waste Management* for guidance on waste handling & disposal.
- iii) For all cleaning/maintenance activities for outdoor areas and structures, the following options exist for disposal/discharge of the effluent under the following requirements/conditions:
 - If chemicals are used for outdoor washing or maintenance activities, MSDSs must be submitted and approved by DEN Environmental Services.
 - If environmentally friendly (contains no toxic or hazardous constituents), the effluent from power washing activities can be land applied onto grassy or unpaved areas at a rate that it will not cause erosion or discharge to a storm water conveyance (refer to the policy identified in the Activity Description above), including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains designed or used for collecting or conveying stormwater. No CDPS permit is required for this approach.
 - Collect the fluid and discharge to the sanitary sewer system through a pretreatment device. This approach requires approval by DEN Environmental Services and may require additional approvals from Department of Public Works and/or Metro Wastewater Reclamation District.
 - Utilize drain covers, straw bales, etc. to protect the storm sewer system from discharges due to washing activities.
 - Offsite disposal in an appropriately permitted facility. No CDPS permit required for this approach; 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). No CDPS permit is required for this activity; however, prior approval by DEN Environmental Services is required.

- If cleaning an area with visible animal droppings/waste, apply Best Management Practices (BMPs) to prevent or control the presence of solids in the discharge through sweeping, berming, filtering, etc.

C. Training Requirements

- Staff performing such outdoor cleaning/washing activities must be trained in appropriate disposal/discharge procedures for the wastes 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.

D. Storage and Materials Management Requirements

- Store chemicals used for washing in containers in good condition and utilize secondary containment when appropriate (e.g., if stored indoors and in close proximity to a drain; if stored outdoors, containers must be in/on secondary containment and covered).

4) **Planning Requirements**

- All detergents used must be pre-approved in advance by the airport's Contract Administrator and Environmental Services Section. If any additives are to be used for outdoor cleaning activities, DEN Environmental Services must be contacted immediately to determine permit coverage, and the sampling and reporting requirements. Additional approval and/or permitting by CDPHE may be required depending on the scope of the activity and chemical usage.
- 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.

5) **Critical Tasks**

- Contact DEN Environmental Services prior to conducting outdoor cleaning operations to ensure compliance for the proposed activity, that proper disposal will occur, and if collection of discharge data are required.
- Check with Environmental Services for any questions.

6) **Emergency Response**

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- A. Call DEN Communications Center immediately at 303-342-4200 for all spills regardless of whether any media was impacted.
 - See Environmental Guideline *ES-301-5.02: Spill Response*
- B. 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. Use absorbent materials for spot cleaning of small spills. Place used materials in an appropriate labeled container and dispose off-site in an approved, permitted facility. Contact DEN Environmental Services for assistance.
- C. Spills of any kind shall not be washed into any storm sewer or waterway, or onto any soils.

7) Inspection and Maintenance Requirements

- A. Inspect pretreatment devices and sumps regularly and maintain as necessary.
 - Refer to Environmental Guideline- *ES-301-2.07 Maintenance of Pretreatment Devices*

8) Expected Records and Outputs

- A. 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).
 - Operator must maintain waste management records at the facility for a minimum of 3 years.
- B. 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.
- C. Discharge Monitoring Reports
 - Required for discharges of wash water under CDPS permit(s). Reports are prepared by DEN Environmental Services (ES) and copies are maintained in the DEN ES central files. Provide discharge data to DEN ES.

9) References

- A. Phone Numbers
 - i) DEN Communications Center (for spill reporting) (303) 342-4200
 - ii) Keith Pass (DEN Environmental Services) (303) 342-2689
 - iii) Kim Ohlson (DEN Environmental Services) (303) 342-2637
 - iv) DEN Environmental Services (Main Line) (303) 342-2730
- B. Guidance Materials (list is not limited to the following)
 - i) DEN Stormwater Management Plan
 - ii) CDPHE Power Washing Guidance

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- iii) CDPHE WQCD permit fact sheets, rationales, and general permits
- C. Training Materials (list is not limited to the following)
- i) ES-303-1.01 Stormwater Pollution Prevention Training
- D. Related Environmental Documents (list is not limited to the following)
- i) ES-301-2.07 Maintenance of Pretreatment Devices
 - ii) ES-301-5.02 Spill Response
 - iii) ES-301-6.01 General Waste Management
- E. Applicable Regulations (list is not limited to the following)
- i) 40 CFR 110.3 Discharge of Oil
 - ii) 40 CFR 112 Oil Pollution Prevention (SPCC Plans)
 - iii) 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
 - iv) 40 CFR 122-124 NPDES Regulations for Storm Water Discharges
 - v) 40 CFR 401 Effluent Limitation Guidelines
 - vi) Denver Wastewater Management Division Rules and Regulations
 - vii) Metro Wastewater Reclamation District Rules and Regulations
 - viii) City and County of Denver Mayor's Executive Order No. 115
 - ix) DEN Industrial Stormwater Permit
 - x) DEN Metro Wastewater Contribution Permit
 - xi) CDPHE Regulation 65
 - xii) CDPHE Regulation 61
 - xiii) Colorado Water Quality Control Act
 - xiv) DEN rules and regulations

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