


Standard Operating Procedures (SOPs) for:		
Parks, Golf Course and Open Space Maintenance		
		Revised September 1, 2009
Purpose of SOP:	Stormwater pollution prevention procedures for maintenance of parks, golf courses, and open space.	
Location of SOP:	(Indicate where SOP is kept- electronic or hard copy.)	
Administrator of SOP:	(Indicate who reviews and updates SOP.)	

Prerequisites

1. Employees should attend PACE's general stormwater pollution prevention training. Contact PACE at 303-786-PACE.
2. Employees performing the procedures in this SOP should read and refer to the materials in the *References and Related Procedures* section of this SOP.

Stormwater Protection Equipment and Materials

1. Spill kit and equipment for dry clean up (socks, absorbent pads, kitty litter, broom, and dustpan).
2. Inlet protection devices (wattles, drain covers, berms, sand bags, and/or filter fabric)
3. Mulching mowers
4. Automatic timers
5. Rainfall sensors
6. ET controllers
7. Manufacturer's recommendations for application and storage of pesticides

Standard Operating Procedures

1. General

- Never dump any liquids or other materials outside. Dispose of all liquids and materials appropriately.
- Ensure the storm drain system (ditches, inlets, catch basins, drainage channels, or underground lines) on the property is properly maintained.
- Catch basins, inlets and culverts are scheduled to be cleaned X's _____ / year.) If additional cleaning or maintenance is needed notify: _____ at: (____) _____.
- Keep all outdoor work areas neat and tidy. Sweep around work areas after each shift and properly dispose of all wastes.
- If possible, do not hose down outdoor work areas or trash/waste container storage areas. If these areas must be washed, ensure that wash water will enter the sanitary sewer or a landscaped area. Do not use soap. (*See Pressure Washing and Exterior Cleaning SOP*)

2. Irrigation Systems

- Set sprinklers to water at rates less than the infiltration rate of the soil, to water evenly over the vegetated area, and to minimize the amount of water falling on impervious surfaces.
- Automatic timers should be used on all irrigation equipment to minimize run-off and over irrigation. Monitor soil moisture content and adjust timer settings appropriately.
- Always replace or repair broken or leaking sprinkler heads as soon as possible.
- To report an irrigation problem or concern contact: _____ at (____) _____.

3. Landscaping, Lawn & Vegetation Maintenance

- Whenever possible, mulch-mow grasses.
- Sweep grass clippings and other vegetation debris from sidewalks or streets back on to grassy areas.
- Dispose of lawn clippings, leaves, tree trimmings, or other landscape waste appropriately. Grass clippings are stored at _____ or taken to _____ for disposal.

- If possible, dispose of organic wastes by composting. If composting is not possible, dispose of organic wastes at an approved disposal facility. Organic waste is composted at _____.
- If possible, control soil erosion by seeding, sod, mats, mulching, terracing or other effective methods. Use mulch or other erosion control methods to prevent erosion of exposed soils and flowerbeds.
- Do not apply bark or mulch on top of plastic sheeting unless the area is enclosed by a barrier-like lawn edging or it is far away from a storm drain inlet. Bark on plastic is easily washed off by heavy rainfall.
- If possible, design new or re-landscaped areas using xeriscape and Low Impact Development (LID) techniques to the maximum extent possible. Use hardy plant materials appropriate to the climate.
- Always follow the *Integrated Pest Management Plan*.
- Always follow the *Fertilizer, Herbicide and Pesticide Application SOP*.

4. Buildings and Structures

- Never discharge waste and/or wastewater from cleaning and repair of exterior surfaces into the Municipal Separate Storm Sewer System (MS4).
- Always follow the *Pressure Washing and Exterior Cleaning SOP* when power washing buildings or structures.
- Use inlet protection devices, such as rock wattles or drain covers, when constructing or repairing paved pathways or other structures to protect any storm drain inlets or ditches that are within 25 feet or are at the same or lower elevation than the work area.
- If possible, use rub-on techniques for graffiti removal or re-paint over the affected areas.
- Capture any wastewater, debris, solvent wastes or solid wastes from graffiti removal with tarps or wet vacs.

5. Vehicle & Equipment Washing and Storage

- Wash vehicles, equipment and mowers at: _____, which drains to the sanitary sewer or an approved holding tank or infiltration area.
- Vehicles and mowers may also be washed at a commercial or other designated car washing facility.
- If possible, perform all maintenance and repair work inside shop. (Only emergency repairs and maintenance activities that do not involve fluids may be performed outdoors.)
- Do not store leaking vehicles or equipment outdoors. Contain the leak, repair immediately, or move indoors and repair.
- Notify shop supervisor _____ at _____ when leaving a leaking vehicle at Fleet Services or at your shop.

6. Painting and Staining

- Do not clean tools over a storm drain.
- Use a ground cloth or oversized tub for paint mixing and tool cleaning. Properly dispose of the wastes. Avoid performing activities near storm drains.
- Enclose spray-painting operations with tarps or other means 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.
- Clean brushes and tools used for oil-based paints, finishes, thinners, solvents or other materials over a tub or container and dispose of the cleaning wastes at an approved hazardous waste facility.
- Immediately clean up any spills of paints, cleaners or other maintenance chemicals or supplies. (*See: Spill Prevention, Clean up and Reporting SOP*)
- Store paints, stains and solvents inside, or under cover and with secondary containment (as per manufacturer's recommendations).

7. Swimming Pool Maintenance (You may delete this section if not applicable.)

- Do not discharge pool water to a street or storm drain when draining pools or hot tubs. Discharge water to vegetated landscape or the sanitary sewer if permitted to do so. If using the storm drain system to discharge de-chlorinated pool water, be sure to follow the guidance developed by CDPHE at: <http://www.cdphe.state.co.us/wq/PermitsUnit/PolicyandGuidance/swimpooolsguidancedoc.pdf>
- Never clean pool filters in the parking lot or near a storm drain.

- Do not hose down pool decks or sidewalks if the wash water will flow to pavement or the storm sewer system. Direct wash water to landscaped or grassy areas or to sanitary sewer.
- Store all pool chemicals indoors and under cover.

Contracts & Contractors

- Contracts should include stormwater pollution prevention language.
- Ensure that contractors implement proper Best Management Practices (BMPs) to prevent stormwater pollution.

Employee Training

- All applicable employees should be trained in general stormwater pollution prevention; including how to recognize and report illegal connections or discharges.

Record Keeping and Documentation

1. Keep a list of all employees trained in the department's Stormwater Pollution Prevention Binder. PACE also keeps lists of all employees trained.
 2. Records of all maintenance activities are kept at:
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References and Related Procedures

PACE Government Operations website: <http://www.bouldercolorado.gov/www/pace/government/index.html>

1. PACE SOP: *Pesticide and Fertilizer Application*
2. PACE SOP: *Fueling and Clean up of Fuel Spills*
3. PACE SOP: *Outdoor Materials Storage*
4. PACE SOP: *Parking Lot Maintenance*
5. PACE SOP: *Pressure Washing and Exterior Cleaning*
6. PACE SOP: *Spill Prevention, Clean up and Reporting*
7. PACE SOP: *Waste Management and Disposal*
8. PACE BMP: *Facilities and Building Maintenance*
9. PACE BMP: *Good Housekeeping & Spill Prevention*
10. PACE BMP: *Illicit Discharge Reporting*
11. PACE BMP: *Landscape and Lawn Maintenance*
12. PACE BMP: *Outdoor Container Storage*
13. PACE BMP: *Spill Clean Up*
14. PACE Resource Sheet: *Parks and Golf Course Maintenance*
15. PACE *Guidelines for Pressure Washing*
<http://www.bouldercolorado.gov/www/pace/documents/StormwaterPollutionPrevention-PowerwasherBrochure.pdf>
16. CDPHE Low Risk Discharge Guidance: Discharges from Swimming Pools, Hot Tubs, Decorative Fountains and Other Similar Type Facilities, JUNE 2008
<http://www.cdphe.state.co.us/wq/PermitsUnit/PolicyandGuidance/swimpoolsguidancedoc.pdf>
17. City of _____ *Integrated Pest Management Policy*