


Standard Operating Procedure (SOP) for:		
<b>Fertilizer, Herbicide, and Pesticide Application</b>		
Purpose of SOP:	Stormwater pollution prevention procedures for storage, mixing, disposal and application of fertilizers, herbicides and pesticides.	
Location of SOP:	(Indicate where SOPs is kept: Stormwater Binder and Electronic)	
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.
3. Ensure compliance with the Pesticide Applicators Act.
4. Pesticide application must be done only under the supervision of a Certified Pesticide Applicator or Qualified Supervisor.
5. All employees who handle or apply fertilizers, herbicides or pesticides should be trained on the most recent Material Safety Data Sheets (MSDS).

### Stormwater Protection Equipment and Materials

1. ANSI approved sprayers
2. Polly or plastic pallets and pails for secondary containment.
3. Proper PPE (Rubber gloves and protective eyewear)
4. Spill kit and equipment for dry clean up (socks, absorbent pads, kitty litter, broom, and dustpan)
5. All pesticide application equipment must be capable of immediate shut-off in the event of an emergency.
6. Manufactures' instructions for use and disposal of material
7. MSDS sheets for all chemicals

### Standard Operating Procedures

#### 1. General

- Always follow the manufacturer's recommendations for mixing, application and disposal.
- Follow the IPM Plan. Use manual and/or mechanical methods for weed/pest control and vegetation removal wherever possible rather than chemical methods. When chemicals are required, use the least toxic method to control animal and plant pests. Pheromone-based traps and sticky paper are often more effective than chemicals and are protective of water quality. Beneficial organisms should be promoted and protected whenever/wherever possible.
- When chemicals are used, use the most biodegradable product that will accomplish the desired goal.

#### 2. Mixing

- Follow all manufacturers' recommendations for mixing, applying and handling of fertilizers, herbicides and pesticides.
- Mix fertilizers, herbicides or pesticides inside a protected area with impervious secondary containment (preferably indoors) so that spills or leaks will not contact soils.
- Fertilizers, herbicides or pesticides are mixed at these locations: \_\_\_\_\_.
- Label all containers.
- Always mix only the minimum amount of fertilizers, herbicides or pesticides that will be needed for the immediate job.

- If possible, use rinse water from cleaning of containers and application equipment as a dilution for the next batch.

### 3. Application

- Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and training of pesticide applicators ("Read the Label").
- Time the application of fertilizers, herbicides or pesticides to coincide with the manufacturer's recommendation for best results. (ex: Do not apply during a heavy rainfall or if a heavy rainfall is expected and do not apply immediately before an irrigation cycle.)
- If possible, avoid broadcast spraying of pesticides. Choose an appropriate method of application such that application does not exceed the problem area. (Fertilizer may be broadcast sprayed.)
- If possible, spot spray pesticides on infested areas whenever possible rather than treating a larger area. Do not use pesticides on a regular (preventive) basis. Apply only when there is an actual pest problem.
- Designate "no spray zones" and/or buffer areas around water features (ponds, lakes or streams).
- If possible, avoid applying fertilizers, herbicides or pesticides within \_\_\_\_ (50) \* feet of any surface water or storm drainage structure (\*50 ft unless stricter limits apply). Fill in the applicable buffer limit (above).
- If possible use granular fertilizers, herbicides or pesticides whenever possible since they result in lower application losses.
- Avoid applying fertilizers, herbicides or pesticides in or near any drainage ditch, creek, pond or seasonal streambed.

### 4. Clean-Up

- Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and training of pesticide applicators ("Read the Label").
- Always follow all manufacturers' recommendations for cleaning-up and handling of fertilizers, herbicides or pesticides.
- Sweep pavements or sidewalks where fertilizers or other solid chemicals have fallen, sweep them back onto grassy areas.
- Clean up any spills or leaks of fertilizers, herbicides or pesticides promptly. Refer to the *Spill Clean-Up* BMP for more details.
- Make sure all containers are clearly labeled.
- Dispose of excess or leftover chemicals and empty expired fertilizers, herbicides or pesticides containers according to instructions on the label – preferably on the target pest or vegetated area.
- If possible use the triple rinsate from empty containers and/or rinsate from sprayer cleaning as dilution for the next batch.
- Never pour triple rinsate from empty containers and/or rinsate from sprayer cleaning onto ground or into any drainage system.
- Dispose of excess, expired or waste fertilizers, herbicides or pesticides properly. Try to use up the entire product on target areas. If not, dispose of the remaining product as hazardous waste.

### 5. Storage

- Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and training of pesticide applicators ("Read the Label").
- Store fertilizers, herbicides or pesticides inside a protected area with impervious secondary containment (preferably indoors) so that spills or leaks will not contact soils.
- Chemicals and pesticides are stored at: \_\_\_\_\_. (This area should be indoors or have secondary containment so that spills or leaks will not contact soils.)
- All containers must be clearly and correctly labeled.

### Contracts & Contractors

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

## **Employee Training**

1. All applicable employees should be trained in general stormwater pollution prevention; including how to recognize and report illegal connections or discharges.
2. Pesticide application must be done only under the supervision of a "certified pesticide applicator" or qualified supervisor.
3. All employees who handle or apply pesticides or herbicides should be trained on the most recent Material Safety Data Sheet(s).
4. Train employees on the proper methods for cleaning up spills or leaks of pesticides, herbicides and fertilizers. (Refer to the *Spill Clean-Up BMP* or *Spill Prevention, Clean up and Response SOP* for more details.)

## **Record Keeping and Documentation**

1. Keep a list of all employees trained in the facility's Stormwater Pollution Prevention Binder. (This is also recorded in PACE's Training List).
2. Records of pesticide application activities are kept at: \_\_\_\_\_.
3. An inventory of fertilizers, herbicides and pesticides including expiration dates are kept at: \_\_\_\_\_.
4. A copy of the Integrated Pest Management Plan is kept at: \_\_\_\_\_.
5. Copies of MSD sheets for all pesticides, fertilizers and other hazardous products are kept at: \_\_\_\_\_.

## **References and Related Procedures**

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

1. PACE SOP: *Parks, Golf Course and Open Space Maintenance*
2. PACE SOP: *Fueling and Fuel Spills*
3. PACE SOP: *Outdoor Material Storage*
4. PACE SOP: *Parking Lot Maintenance*
5. PACE SOP: *Pressure Washing and Exterior Cleaning*
6. PACE SOP: *Spill Prevention, Clean up and Response*
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: *Park and Golf Course Maintenance*
15. City of \_\_\_\_\_ *Integrated Pest Management Policy*
16. Colorado Pesticide Applicators Act: <http://openlibrary.org/b/OL1816368M/Colorado-Pesticide-Applicators%27-Act>

<sup>1</sup> **Integrated Pest Management** is defined as: "the balanced use of cultural, biological, and chemical procedures that are environmentally compatible and economically feasible to control pests or noxious weeds." Biological and physical methods are preferred such as manual removal of weeds, the use of natural predators or parasites of a pest or the use of ladybugs to control aphids. Chemical control should be used as a last resort and then the least toxic product should be used.