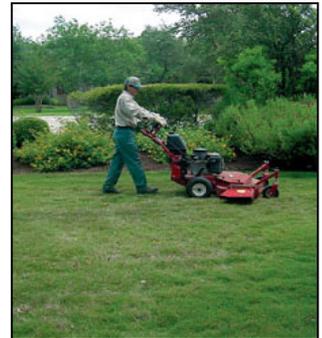


Best Management Practice (BMP) Water Quality Protection Guideline Commercial Landscaping and Lawn Care Services

For the purpose of this Water Quality Protection Guideline, Commercial Landscaping and Lawn Care Services are defined as those services offered for a fee and which include the installation, maintenance and/or care of lawns, trees, shrubs, gardens and ancillary hardscapes primarily for aesthetic purposes but which exclude commercial agricultural activities.



Section 1. Introduction

According to the EPA, the majority of water pollution in our streams today is caused by pollutants that have been dumped or spilled onto the ground, and which are then washed from these surfaces by rainwater into our creeks and streams. This pollution is caused by many different sources and activities, each of which may seem insignificant when considered in isolation. However, stormwater runoff, acting as nature's bath, collects and combines each of these small pollutant sources, which drain into a local stream and cause significant levels of water pollution.

Activities associated with Commercial Landscaping and Lawn Care Services have the potential to contribute pollutants such as sediments, pesticides, fertilizers, and yard waste into our waterways.

Pollution from these activities can be minimized or eliminated through the implementation of the simple water quality best management practices (BMPs) contained within this guideline.

With respect to Commercial Landscaping and Lawn Care Services this guideline is intended to provide minimum requirements for compliance with Gwinnett County's Illicit Discharge and Illegal Connection (IDIC) Ordinance (Chapter 100, Gwinnett County Code of Ordinances). It is expected that individuals and companies involved in Commercial Landscaping and Lawn Care Services will fully implement these guidelines and take any additional necessary and reasonable actions, as needed on a case-by-case basis, to prevent storm water pollution.

1.1 Definitions

"Pesticide" as used in this guideline refers to any chemical that is used to control pest species and that includes but is not limited to insecticides, herbicides, fungicides, algacides and other similar products.

"Fertilizer" as used in this guideline refers to any substance that contains as an active ingredient, in any form, phosphorus, nitrogen and/or potassium and which is used for the purpose of maintaining or enhancing the growth of vegetation.

"Fuel" as used in this guideline refers to any liquid that could reasonably be expected to cause water pollution if it were to enter into a stream or drainage system and would include but not be limited to both new and used hydraulic oils, motor oils, gasoline, diesel and other similar products.

"Secondary Containment" refers to a risk management measure that provides a secondary container as

backup to a primary container for the purpose of providing adequate volume capacity to contain a spill from the primary container.

Section 2. Purpose

The purpose of this Water Quality Protection Guideline is to:

- (1) provide details of water quality BMPs that may be implemented to assist in controlling pollutants associated with Commercial Landscaping and Lawn Care Services;
- (2) serve as a reference for regulators, inspectors and others who assess the water quality impacts of Commercial Landscaping and Lawn Care Services; and
- (3) provide guidance that, if implemented, will assist in securing compliance with Gwinnett County's Illicit Discharge and Illegal Connection (IDIC) Ordinance.

Section 3. Best Management Practices

3.1. Storage and Maintenance Facilities

3.1.1 Storage

- (1) All employees who use pesticides and/or fertilizers will follow all product label directions and precautions regarding storage requirements.
- (2) Pesticides and fertilizers should only be stored in their original containers and must have their labels intact. Damaged labels should be replaced.
- (3) All pesticides, fertilizers, fuels, and other potential stormwater pollutants are to be stored on an impervious surface within a contained and covered area to prevent water pollution associated with leaks and spills. An adequate storage area will:
 - i. be capable of effectively containing 110% of the volume of the largest single container stored within the area; and
 - ii. will effectively prevent the ingress of rainfall and stormwater surface runoff into the storage area. See Gwinnett County Water Quality Guideline: WQ3 Secondary Containment Design and Operation Standards for more information.

3.1.2 Equipment and Vehicle Washing

- (1) Wastewater generated during vehicle or equipment cleaning **must not** be allowed to enter into a street, storm sewer or waterway.
- (2) The washing of any equipment or vehicles that has the potential to contribute pollutants to stormwater runoff must be performed in an appropriately designed wash bay.
- (3) Wash bays shall be designed and constructed to meet three basic goals:
 - i) collect and contain waste water for appropriate disposal;
 - ii) prevent storm water runoff or rainwater from entering the wash bay; and
 - iii) prevent the intermingling of storm water with wastewater.
- (4) Washing of equipment and vehicles without the use of chemicals or detergents to remove grass clippings, dust or pollen may be completed on a grassy area.

- (5) Please refer to *Gwinnett County Water Quality Guideline WQ6 - Wash Bay Design Standards** and *WQ5 - Commercial Car Washing Operations** for more information.

*Gwinnett County Stormwater Management Division is currently developing these Water Quality Guidelines.

3.2 Work Site Management

3.2.1 Chemical Use

3.2.1.1 Handling

- (1) Product label directions and precautions must be followed by all employees to ensure proper use.
- (2) Bulk (> 5 gallons of finished product) mixing and decanting of pesticides and fertilizers should be completed in a contained and covered area or within a grassy surface at least 50 feet away from any storm drain, impervious surface or water way. Spills should be handled in accordance with Section 3.2.5 of this guideline. Mixing and decanting of small amounts (less than 5 gallons of product in its final diluted form) of pesticides and fertilizers may be completed within a grassy area at least 10 feet away from any storm drain, impervious surface or water body.
- (3) In an effort to minimize spills, closed handling systems should be used to transfer pesticides and fertilizers directly from a storage container to the application equipment (through a hose, or funnel for example).
- (4) Where possible, rinsate collected during previous equipment cleaning should be used in mixing batches of the same product.
- (5) To protect against backflow, an air gap of at least 6 inches must be left between a potable water supply hose and the top of the application equipment tank. A potable water supply hose must never be submerged directly into any reservoir containing a chemical.

3.2.1.2 Application

- (1) Product label procedures, directions and precautions must be followed at all times to ensure proper application of the product.
- (2) All local, state and federal regulations regarding application procedures must be followed.
- (3) Application equipment should be checked carefully prior to use in an effort to identify leaking hoses or connections and obstructed or worn nozzles.
- (4) Spray equipment should be calibrated as necessary to achieve required distribution and application rates.
- (5) Pesticides and fertilizers must never be applied when rain is expected, during a rain event, or during windy conditions.
- (6) Avoid applying pesticides and fertilizers on or near curbs, gutter, driveways, or other impervious surfaces as application onto these surfaces will be washed off during the next rain event and contribute to water pollution.
- (7) Spray guards should be used on equipment to reduce off-spray.
- (8) Rather than blanketing entire areas, pesticides and fertilizers should be spot applied only where necessary.

3.2.2 Chemical Disposal

3.2.2.1 Pesticide and Fertilizer Containers

- (1) After a container is emptied and prior to its disposal, empty containers should be tripled rinsed to remove all residues from within. The rinsate should then be collected and poured into the appropriate application equipment reservoir. Refer to the *Triple Rinsing Procedure* in Attachment 1.
- (2) Holes should be punched into empty containers after triple rinsing to ensure that they are not re-used.
- (3) After triple rinsing, empty containers may be properly disposed of with normal municipal trash unless the label indicates otherwise. Disposal should always be completed in accordance with all applicable federal, state and local regulations.
- (4) Pesticide and fertilizer containers should **not** be refilled or burned.
- (5) Pesticide and fertilizer containers should **not** be recycled with other general household type recyclables.
- (6) Plastic and metal containers should be recycled by approved recyclers whenever possible. USAg Recycling, Inc. will collect containers for free upon request. For more information go to www.usagrecycling.com. Only dry, empty, properly rinsed containers are accepted at collection sites. See acceptable containers fact sheet attached in Attachment 2.

3.2.2.2 Pesticides and Fertilizers

- (1) Unusable or unwanted pesticides and fertilizers must be disposed of properly. Waste pesticides are likely to be classified as hazardous waste. As such, they **MUST** be handled by a hazardous waste contractor licensed to dispose of pesticides.
- (2) The GA Department of Agriculture, Pesticides Division periodically offers free pesticide disposal through its *Georgia Clean Day* program. For information on the next *Georgia Clean Day* contact the Pesticide Division of the GA Department of Agriculture: (404) 656-4958. Such pesticides should be stored in accordance with section 3.1.1 of this guideline for disposal at the next *Georgia Clean Day*.
- (3) Waste pesticides and fertilizers must never be disposed of into a dumpster or by pouring onto the ground, into a sanitary sewer or into a storm drain.

3.2.2.3 Rinsate

- (1) Equipment used in the mixing, storage or application of pesticides and fertilizers must be cleaned in an equipment cleaning wash bay or sink that drains to the sanitary sewer. Concentrated and prepared pesticides must not be disposed of into the sanitary sewer.
- (2) Where possible rinsate should be collected and reused by placing it back into the application equipment reservoir.
- (3) Equipment rinsing stations should be used and maintained properly to minimize the potential for water pollution associated with these activities.
- (4) Equipment rinsing wash bays/sinks must be covered and contained.

3.2.3 Yard Waste Disposal

- (1) Leaves, grass clippings and other yard waste must **never** be blown, swept or dumped into a storm drain, street, driveway, drainage ditch, waterway, parking lot, or any other conveyance that provides for the collection and movement of stormwater.
- (2) Yard waste blown, swept or dumped into any stormwater conveyance constitutes a violation of Gwinnett County's Illicit Discharge and Illegal Connection Ordinance.
- (3) All yard waste should be bagged for disposal at a permitted inert landfill, composted or applied to an area of land where no possibility for entrance into the storm sewer system or a waterway exists.

3.2.4 Concrete Placement and Clean Up

- (1) Concrete placement and clean up must be done in a manner that eliminates the possibility of concrete slurry or wash water from entering into a street, storm drain, gutter, drainage ditch or any other conveyance that provides for the collection and movement of stormwater.
- (2) Equipment used in concreting should be cleaned in an area that allows for the generated wastewater to soak quickly into the ground. Acceptable cleanup locations would be within a wooded area or pine straw garden bed. Alternatively, dig a hole to receive the waste water and refill with excavated dirt once the water has soaked into the ground. Beware of underground utilities whenever you dig.
- (3) Cleanup should be completed at least 50 feet away from a storm drain, waterway or impervious surface.

3.2.5 Spill Management

- (1) All spills must be attended to immediately to minimize the potential that the spill may cause water pollution.
- (2) Spills of dry chemicals (such as pesticides or fertilizers) should be promptly swept up and reused.
- (3) Appropriate absorbent materials should be used to immediately contain and collect liquid spills.
- (4) Soil contaminated by spills must be collected and disposed of appropriately. Note: such waste should be assessed to determine whether it should be considered hazardous, and if so should be handled in accordance with all applicable regulations.
- (5) Facilities that store any type of stormwater pollutant (i.e. pesticides, herbicides, fuel) in a quantity that exceeds 55 gallons in capacity (concentrated or diluted), should develop a written spill response plan. Such a plan should simply address methods to be used in controlling a spill, notification requirements and should be reviewed with relevant employees at least annually.
- (6) All vehicles transporting pesticides or fertilizers should have a spill kit on board at all times.
- (7) In the event of a chemical spill onto a roadway, Gwinnett County's Department of Transportation must be contacted immediately at (770) 822-7400.
- (8) Any spill that exceeds 55 gallons or is of any size and enters into a storm drain or waterway must be reported to Stormwater Management Division immediately. Please call 678-376-7000 (24 hours). Additional reporting under other regulations may also be necessary.
- (9) All employees should be educated regarding the potential for water pollution associated with the use and storage of lawn care chemicals, fuels and any other substance that could

reasonably be expected to cause water pollution if it were to enter into a stream or drainage system.

3.2.6 Sediment and Erosion Control

- (1) Erosion and sediment controls should be employed whenever soil is disturbed during landscaping activities. Guidance on appropriate Sediment and Erosion control Best Management Practices are detailed within the latest version of the *Manual for Erosion and Sediment Control in Georgia (The Green Book)*. You may access a copy of this publication online at www.gaswcc.org/docs.htm. Alternatively please contact the Georgia Soil and Water Conservation Commission at 770-761-3020 to obtain a hard copy.
- (2) If the area to be disturbed is greater than one acre or of any size but within within 200 feet of a state water, a land disturbance permit will be required from Gwinnett County's Department of Planning and Development. In addition the State of Georgia has mandated that persons involved in such work must also receive specific Erosion and Sediment Control training. See www.gaswcc.org for more details.

3.3 Licensing and Training

3.3.1 Material Safety Data Sheets (MSDSs) and Product Labeling

- (1) Materials Safety Data Sheets (MSDSs) for all chemicals used or stored must be made available at all times.
- (2) All employees must be made aware of any precautions or emergency response procedures indicated on product MSDS.
- (3) All storage, application and safety instructions on MSDSs must be precisely followed.
- (4) **All** chemical products must be clearly labeled at all times. No unlabeled chemicals should be stored.

3.3.2 Employee Education

3.3.2.1 Education

- (1) All employees should be educated regarding the potential for stormwater pollution associated with the landscaping and lawn care industry.
- (2) All employees should be educated about Gwinnett County's Illicit Discharge and Illegal Connection Ordinance and be aware of penalties associated with a violation of this Ordinance.
- (3) All employees should be encouraged to further their education regarding the handling, application and disposal of pesticides and fertilizers to reduce the possibility of water pollution associated with their use. Contact Gwinnett County's Cooperative Extension Service office at 678-377-4010 to obtain information about available training.
- (4) See section 3.2.6(2) above for information on mandated Sediment and Erosion Control training.

3.3.2.2 Pesticide Operator Licensing

- (1) In order to provide pesticide applications of **any** type of pesticide to the property of another, and collect a fee for these services, both a Commercial Applicator License and a Pesticide

- Contractor License are required. These licenses are issued and administered by the Georgia Department of Agriculture's Pesticide Division.
- (2) A Pesticide Contractor's License is required by any business engaged in the activity of contracting for the application of any type of pesticide to the property of another in the state of Georgia.
 - (3) A Pesticide Contractor's License requires that each business must maintain at least one certified Commercial Pesticide Applicator in full employment during all periods of operation.
 - (4) These requirements apply to all types of pesticides (insecticides, herbicides, fungicides, algaecides), and include common use pesticides such as "Roundup" and "Weed and Feed."
 - (5) For more information regarding licensing requirements for commercial pesticide use contact the Georgia Department of Agriculture's Pesticide Division at (404) 656-4958.

Section 4. General

- (1) It is illegal to dispose of any waste or pollutants into the storm sewer system. Penalties for non-compliance include fines of up to \$1,000 and/or 60 days in county jail.
- (2) To report a spill or discharge into the storm sewer system contact Gwinnett County's Storm Water Management Division's 24-hour call center at 678-376-7000.
- (3) Additional information regarding water quality, storm water programs and storm water best management practice implementation can be obtained by contacting Gwinnett County's Storm Water Management Division at 678-376-6949 or visiting www.gwinnettstormwater.com

Attachment 1

Triple Rinsing Procedure

1. **Empty contents of container into spray tank, turning the container so that any product trapped in the handle is allowed to flow out. Once flow is down to a drip, allow the container to drain for an additional 30 seconds.**
2. **Immediately begin rinsing procedures or the product may become difficult to remove.**
3. **Fill the empty container 1/4 full of clean water.**
4. **Replace the cap on the container. With the container opening facing left, shake the container left to right over a distance of four to six inches. Shake the container about twice per second for 30 seconds.**
5. **Drain rinse water into spray tank as previously described.**
6. **Fill the empty container 1/4 full of clean water a second time.**
7. **Recap the container. With the opening of the container pointed towards the ground, shake the container as described before. Then drain the rinse water into the spray tank.**
8. **Finally, fill the empty container 1/4 full once more with clean water.**
9. **Recap the container. With the container in the normal, upright position, shake the container as described before.**
10. **Pour the rinse water into the spray tank. Carefully rinse and spray residue from the outside of the container.**



Source: www.usagrecycling.com/triple.html#Triple Rinsing

Acceptable vs. Unacceptable Containers!

ACCEPTABLE 



Thread and lip are clean.

NOT ACCEPTABLE 



Dried formulation on thread and lip.



Stained but acceptable.



Stained and unacceptable.



Inside of container is dry.



Liquid is present inside container.



Inside of bottom is rinsed clean.



Bottom is caked with formulation.

To be acceptable for recycling, plastic crop protection products containers must be empty, clean, uncapped, and dry. Follow this checklist to make sure your containers are acceptable, then compare them with the above pictures.

- **EMPTY:** Plastic containers must be empty to be recycled.
- **CLEAN:** [Pressure](#) or [triple-rinse](#) the container as soon as it is emptied. Container must be cleaned or they will not be accepted into the recycling program.
- **INSPECT:** Immediately after rinsing the container, look inside and make sure that all the formulation has been rinsed out. Also inspect the outside of the container; particularly check that the pour spout, the spout threads, and the container wall surrounding the spout are free of formulation residues that flake, smear, or come off on a glove when touched. We cannot process containers that have dried formulation in or on them.
- **DISCARD CAP:** Caps are usually made of a different kind of plastic and cannot be recycled. Be sure to clean the cap at the time the container is rinsed. Never put a cap back on a cleaned container. Dispose of the cleaned caps as normal solid waste.
- **KEEP CONTAINERS DRY:** Cleaned containers must be kept out of the rain and away from the rain water. Store cleaned containers in a roofed building, an enclosed trailer, or in plastic bags.
- **LABELS:** Please Remove the instruction booklets.
- **STAINS:** Containers that originally held products known to stain plastic are acceptable for recycling if the plastic is stained but otherwise clean.

Source: www.usagrecycling.com/containers.html