City of Raleigh Parks, Recreation and Cultural Resources

Pesticide Management Policy

Landscape and Grounds

Revised March 2023

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Pesticide Management Policy

Acknowledgments

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Pesticide Management Policy

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A. Purpose

The City of Raleigh Parks, Recreation and Cultural Resources Department (PRCR) promotes environmentally sensitive landscape pest and vegetation management by using Integrated Pest Management (IPM) and reducing overall pesticide use while preserving landscape assets and protecting the health and safety of the public and our employees.

The PRCR Department has adopted IPM as a comprehensive approach to pest management including biological, cultural, mechanical, and chemical controls.

This policy regulates the use and application of pesticides on the landscape and grounds of city parks, greenways, highway shoulders and medians and any other property owned, controlled, or managed by the City of Raleigh Parks, Recreation and Cultural Resources Department.

B. Policy Requirements and Practices

1. The Parks, Recreation and Cultural Resources Department (PRCR) shall employ an Integrated Pest Management (IPM) program utilizing biological, mechanical, cultural, and chemical control methods to effectively achieve desired maintenance goals specific to each site.

2. It shall be the policy of the PRCR Department to limit the use of pesticides to the extent practicable, taking into consideration public health and safety, environmental stewardship, budgetary and staffing constraints, and the need and desire of the public to have well-maintained grounds and facilities.

3. Limiting pesticide use shall consider specific locations, targets, pest threshold levels, environmental hazard potential and other factors like the use of pre-emergent herbicides to reduce the need for and application frequency of post-emergent herbicides.

4. Inspection frequency shall be set based on park maintenance standards.

5. It shall be the policy of the department to use, to the extent practicable and available, pesticides that carry a Caution signal word under EPA FIFRA label requirements.

6. Plans for new construction and landscape projects shall be reviewed by the Horticulturist and Assistant Director of Parks and Natural Resources or designee. Poorly planned landscape designs may require intensive maintenance and greater reliance on pesticides for pest control than landscapes created with integrated pest management design specifications. The preferred method is to use design elements to reduce or eliminate pest habitats in new or renovated landscapes during the planning phase. These design elements include:

    a. Using proper soil preparation and amendments.
    b. Specifying weed-free soil amendments.
    c. Using mulches to control weeds, conserve water, and build healthy, biologically diverse soils.

d. Use site adapted and pest resistant plants: “the right plant for the right place.”
e. Group together plants with similar horticultural needs.
f. Retain and use regionally native trees, shrubs, and perennials where appropriate.
g. Control noxious weeds and invasive, non-native plant species.
h. The city will reduce and strive to eliminate the purchase and installation of exotic invasive plants (Appendix F).
i. Plant for erosion and weed control.
j. Assess whether landscapes can still meet the intended site use objectives if changing the aesthetic standard, simplifying the design, and or looking for opportunities for reduced maintenance.
k. Match maintenance standards to site objectives in the design stage.
l. Plant vegetation that will encourage the presence of beneficial insects and birds.

7. Staff who are assigned to purchase, handle, mix and apply pesticides in city parks, greenways and other property shall be Qualified Applicators, which includes the following credentials:
    a. Possess a current and valid North Carolina Public Operator Pesticide License in the required category or categories for the specific area of assignment or application (Ornamental and Turf, Right-of-way, Aquatic, etc.).
    b. Review and sign a copy of the Pesticide Management Policy.
    c. Complete 8-hour Qualified Applicator classroom training and two field exercises.
    d. Undergo annual inspections of pesticide application equipment and storage facilities.
    e. Document all pesticide applications.
    f. Complete OSHA’s Hazardous Waste Operations and Emergency Response (HAZWOPER) training every three years.
    g. Complete HAZWOPER refresher annually.

8. Pesticides shall be handled, mixed, and applied in strict accordance with the product label. THE LABEL IS THE LAW.

9. Only approved pesticides on the approved list for department use shall be purchased, mixed and/or applied (Appendix A). Product substitutions, additions and/or deletions must be reviewed by the Pesticide Core Team and approved by the Parks Superintendent or designee. Relevant quantities shall be reported to PRCR Risk Management in adherence to the EPA List of Lists, NC DENR and local Tier II requirements.

10. No Restricted Use Pesticides shall be purchased, handled, mixed or applied in any city park, greenway or other property unless approved by the Pesticide Core Team and the Assistant Director of Parks and Natural Resources. The published lists of EPA and North Carolina Department of Agriculture Restricted Use Chemicals shall be reviewed by the Horticulturist to determine if any products currently in use have been added or deleted from the list. If it is found that a product currently in use has been added to the list, use of that product shall be suspended immediately and any remaining quantity on hand shall be disposed of in accordance with this policy.

11. Any organization applying chemicals on PRCR Department owned, controlled or managed property shall adhere to the requirements of this policy (See section H. Contractor and Non-Departmental Pesticide Application).

12. Changes to the PRCR Department Pesticide Management Policy can be made by request to the Pesticide Core Team with final approval by the Assistant Director of Parks and Natural Resources. Relevant stakeholders shall be included in the review process.

C. Definitions

1. *Area:* The number of square feet or acres to be treated.

2. *Application Site:* Property where pesticide application occurs.

3. *Approved List of Pesticides:* The approved list of permitted pesticides for use in city parks, greenways and other properties under the management of the Parks, Recreation and Cultural Resources Department.

4. *Broadcast Application:* A pesticide application made in a uniform pattern over the areas to be treated (blanket application).

5. *Calibration:* The process of measuring and adjusting the amount of pesticide your equipment will apply to the target area.

6. *Departmental Trainer*: A PRCR department staff person who is qualified to train Qualified Applicators.

7. *Fungicide:* Biological organisms used to kill or inhibit fungi or fungal spores.

8. *Herbicide*: A pesticide formulated to control weeds or other unwanted vegetation. Herbicides can be contact or systemic, selective or non-selective, pre-emergent or post-emergent.

9. *Horticulturist:* Staff person responsible for developing and maintaining the PRCR Departmental Pesticide Management Policy and all applicable documentation and

training. Implements a comprehensive IPM program and provides educational opportunities and design resources for gardeners, planners, and managers.

10. *Insecticide*: A pesticide specifically formulated to control insects and/or other insect-like pests.

11. *Integrated Pest Management (IPM*): The use of a combination of methods to prevent pest damage from exceeding acceptable levels. IPM employs a comprehensive approach including biological control, cultural control, mechanical control, sanitation, and chemical control.

    a. Pest Control Options

        i. *Biological control:* The conservation of naturally occurring or purchase of biological control agents that acts as predators or parasites of pest species, or the use of other beneficial organisms that improve plant health by enhancing soil quality.

        ii. *Mechanical control:* The use of manual methods that may include a variety of tools and equipment for the purpose of excluding, suppressing, or eliminating pests.

        iii. *Cultural Control:* The use of sound horticultural maintenance practices to optimize plant health and to suppress insects, disease, and weed growth. Other cultural controls include site-appropriate design and the use of disease or drought resistant plants.

        iv. *Chemical control:* The application of various products such as pheromones, growth regulators, herbicides, insecticides, fungicides or other chemical compounds to a target pest or plant as a means of control.

12. *Invasive Plant*: Non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health. A comprehensive list is in Appendix F.

13. *Miticide*: A pesticide formulated specifically to control mites.

14. *Nature Preserve:* Park units that contain examples of high-quality plant or animal populations, natural communities, landscapes or ecosystems, documented by subject matter experts through local or state programs, which contribute to biodiversity and environmental health. The size of a Nature Preserve should be sufficient to buffer, conserve and protect the target element or area. Efforts should be made to protect and manage significant natural resources in these areas through stewardship and best-practice management that do not degrade the resources present. Opportunities for the public enjoyment of natural resource-based recreation and environmental education

may be provided that are compatible with the protection and enhancement of the Nature Preserve and the nature experience. Examples of these sites include Annie Louise Wilkerson, M.D. Nature Preserve, Horseshoe Farm, Durant Nature Preserve, and Lake Johnson Park- southern portion.

15. *MSDS/SDS:* The Hazard Communication Standard requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) to communicate the hazards of hazardous chemical products.

16. *Personal Protective Equipment (PPE):* Protective clothing, equipment or devices required by the label to be worn during the handling of pesticide containers, mixing and/or application of pesticides.

17. *Pest:* Living organisms (e.g., animal, plant, insect) that are not wanted and cause problems for humans.

18. *Pesticide*: A chemical used to destroy pests, control their activity, or prevent them from causing damage.

19. *Pesticide Core Team:* Interdepartmental team representing applicators, supervisors, and experts, including the following: Assistant Director of Parks and Natural Resources, Park Superintendent(s), Horticulturist, Gardener, Greenway Manager, and the Athletic Field Maintenance Manager. Policy changes shall be made upon recommendation from a majority of the Pesticide Core team and with approval of the Assistant Director of Parks and Natural Resources.

20. *Pesticide Label*: Written information printed on or attached to the container of pesticide.

21. *Pesticide License*: North Carolina Public Operator Pesticide License in the required category or categories for the specific area of assignment or application (Ornamental and Turf, Right-of-way, Aquatic, etc.)

22. *Playground:* Designated play structure for public use.

23. *Post-emergent Herbicide*: Herbicides formulated to kill weeds or other unwanted vegetation during their growth.

24. *Pre-emergent Herbicide*: Herbicides formulated to prevent weed emergence.

25. *Protected Natural Areas:* Portions of park units that contain examples of high-qualityplant or animal populations, natural communities, landscapes or ecosystems, documented by subject matter experts through local or state programs, that contribute to biodiversity and environmental health. In the case of existing parks, Protected Natural Areas should be identified as part of an inventory process based on the

natural resources, buffers, educational opportunities, and consistency with adopted master plans. Efforts should be made to protect and manage significant natural resources in these areas through stewardship and best-practice management that do not degrade the resources present. The designation of a Protected Natural Area should be differentiated from areas reserved for future development e.g., Anderson Point Park.

26. *Qualified Applicator*: Staff person who has successfully completed the following requirements:

    a. Obtained a North Carolina Public Operator Pesticide License in the required category or categories and maintained their license through Continuing Education Credits (CEUS);
    b. has successfully completed 8 hours of classroom training and completed the field training as described in this policy;
    c. Subjects spray equipment and storage facilities to annual inspection;
    d. Completes 8-hour OSHA HAZWOPER training every three years and an annual refresher course.

27. *Qualified Spotter*: A qualified spotter is a trained individual that assists the applicator to keep unauthorized individuals out of spray area, assist with application, and monitor pesticide application equipment.

28. *Rate:* The quantity of product to be used in each application per the instructions on the label.

29. *Sensitive Area*: To include Nature Preserves and Protected Natural Areas. Carefully assess use of pre-emergent herbicides and surfactants.

30. *Signal Word*: Provides precautionary information on how acutely toxic the pesticide is to humans and the environment and appears in large letters on the product label. On MSDS sheets the signal words Caution, Warning and Danger reflect toxicity categories which rate oral, dermal, or inhalation acute toxicity levels along with skin irritation and eye irritation factors. On SDS sheets the signal words are Warning and Danger.

31. *Spot Treatment*: Pesticide application directed to a small area or individualized targets.

32. *Target Pest*: The pest at which a particular pesticide or other control method is directed.

D. Departmental Qualified Pesticide Applicator Requirements

Newly licensed applicators must receive additional classroom and field training by a Departmental Trainer developed by the Horticulturist or designee prior to handling, mixing, and/or applying any pesticide.

1. All Qualified Applicators (applicators) shall review and sign a copy of this policy. A copy shall be placed in the employee's personnel file.

2. Applicators must have a current valid North Carolina Public Operator pesticide license. A licensed applicator must be on site for all applications. Applicators must notify their supervisor of all pesticide applications.

    a. It shall be the responsibility of the licensed applicator to ensure that they obtain any recertification credits required to keep their license current and valid. A record of recertification credit requirements and accrued credits is mailed annually to the licensed applicator from the State. In addition, this information is available online. The applicator is not monetarily responsible for the cost of training or seminars but must monitor their own record.

    b. The department is responsible for notifying applicators of training and recertification opportunities. The department will pay the cost of training for all qualified pesticide applicators with an "active" or "applicator" status only. Those staff with an "inactive" status can maintain their license through recertification credits at their own expense.

    c. Failure of required staff to maintain a current and valid license through either recertification credits or successful re-examination shall result in the applicator's loss of status as a Qualified Applicator and in some cases, depending on pay grade and job requirements, could result in demotion or termination of employment.

3. In addition to state licensing requirements, newly licensed staff must complete 8 hours of classroom training prior to handling, mixing or applying any pesticide. Once classroom training has been completed, newly licensed staff must complete two "hands-on" field trainings under the guidance of a Departmental Trainer before they are permitted to make applications on their own. One additional day shall be monitored by the supervisor. A newly licensed applicator that does not successfully complete all sections of the department training program will be prohibited from handling, mixing and/or applying pesticides in city parks, greenways and other properties until such time as this requirement is met. All training shall be documented, and a record placed in the employee's personnel file and the department training record.

4. Qualified Applicators shall use inspected and approved application equipment. Inspections occur annually by the Core team and City Horticulturist. See Appendix G for inspection record.

5. All pesticide applications shall be documented with the name of the applicator, the date, the location, what was applied and the rate. The applicator shall submit a Pesticide Application work order (Appendix D) for each application. Pesticide applicators shall receive a Distribution report (Appendix E) and the distribution recorded in an inventorying system for all pesticides they receive.

6. All Qualified Applicators shall complete OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) training which includes the following:
    a. 8 hours classroom training every three years.
    b. And annual refresher training.

Horticultural Training Program

The training program shall be developed and administered by the Horticulturist. Training shall be documented.

i. The classroom component shall consist of a minimum of 8 hours or the additional time necessary to cover the content. The training program shall include a review of the following topics:

1. The Departmental Pesticide Management Policy.
2. Hazard Communication.
3. Potential Hazards and Benefits Associated with the Use of Pesticides.
4. Handling Pesticides Safely (mixing, loading, and applying).
5. Personal Protective Equipment (PPE).
6. First Aid and Pesticide Poisoning Recognition.
7. Pesticide Laws and Regulations.
8. The Pesticide Label and application rate calculations.
9. MSDS/SDS.
10. Approved Application Equipment Types and Use.
11. Equipment Calibration Procedures.
12. Equipment inspection and maintenance
13. Department's Approved List of Pesticides.
14. Required Recordkeeping.
15. Other topics as necessary.

ii. The hands on, field component of the training program shall be conducted by the *Departmental Trainer* and consist of the following:

1. Use of pesticides and equipment approved for training purposes.
2. Application of the pesticide(s) on an approved target at an approved location.
3. Step by step instruction on handling, mixing and applying the pesticide(s) and application rate calculations.

4. Review of proper use, transport and storage of the pesticide(s) and the application equipment.
5. Review of equipment calibration.
6. Review of spill clean-up procedures.
7. Observation of a proper application made by the trainee.
8. Continual observation by the Departmental Trainer of all applications made by the trainee.

iii. 8 Hour Training for spill clean-up and a one-hour refresher is required for all Qualified Applicators and spotters through the Learning Development and Risk Management Division.

7. Personal Protective Equipment

a. Required personal protective equipment (PPE) is determined by the specific product used and found on the product label. However, in addition to the requirements of the product label, all staff handling, mixing and/or applying pesticides shall wear long pants, a long-sleeved shirt, chemical resistant gloves and either a face shield or chemical resistant eye protection. Tyvek apparel may be worn as appropriate over short pants and/or short-sleeved shirt in lieu of long pants and a long-sleeved shirt. It shall be understood that some pesticides will require additional or specific personal protective equipment, above and beyond the minimum requirements described above.

b. It shall also be understood that personal protective equipment requirements may be different for mixing and loading as opposed to application of the same product.

c. No handling, mixing or application of a pesticide will occur without the personal protective equipment required by the product label.

d. In addition, each qualified applicator shall carry a minimum of two (2), 16-ounce bottles of eyewash on the spray application vehicle in the event of product contact with the eyes.

e. Respirator use has additional training requirements from both the State and City including a physical and annual evaluation. Preference will be given to products that do not require the use of respirators.

f. Personal protective equipment will be inspected annually by the Horticulturist and/or supervisor during truck inspections and more frequently as determined by the supervisor.

g. PPE Disposal: Used Tyvek suites shall be removed and placed in a trash receptacle. Clothing that has come in contact with chemicals shall be

removed and washed separately. Severely contaminated clothing should be placed in a plastic bag and disposed of in an appropriate trash receptacle.

8. Recordkeeping

a. State law mandates that records be maintained only if Restricted Use Pesticides are applied. The PRCR Department shall exceed State requirements and maintain the following records related to the use of any pesticide:

i. Daily Pesticide Application Reports
ii. Department Approved List of Pesticides
iii. Pesticide Inventory
iv. Pesticide Distribution Records
v. Pesticide Usage Reports

b. Copies of appropriate forms are maintained by the Horticulturist.

c. It shall be the responsibility of the applicator to maintain Distribution and Application Reports and submit them to the Horticulturist. Reports shall be filled out accurately and completely and entered electronically into the work order database (e.g., Cityworks).

d. All MSDS/SDS and medical records shall be retained for the length of employment plus 30 years per the NC Department of Labor.

9. **Spotters**

a. Applicators are required to have a spotter for any application of 5 gallons or more, or any application with a mounted sprayer. A spotter assists the applicator to keep unauthorized individuals out of the spray area, assist with application, and monitor the equipment. Spotter training is required. Part time gardeners are required to have spotter training.

b. The spotter's role and responsibilities are as follows:

i. Assist with posting (signage) of the site prior to beginning the operation.
ii. Double check condition of the sprayer unit prior to use.
iii. Monitor equipment during operation.
iv. Assist applicator with positioning of hoses.
v. Monitor area during the application for people and/or pets that might inadvertently enter the site. Approach and warn people that a pesticide application is in progress and that re-entry may occur only when the product has dried (or per requirements of product label) and the posting is removed.

vi. Assist the applicator with securing equipment after the application.
vii. Assist the applicator with checking and confirming that the applied pesticide has dried, or the re-entry period has passed. Assist with removal of posting signage.
viii. Monitor the area to make sure it remains free of hazards and debris.

c. Spotters may apply herbicide as a non-qualified applicator when directly supervised by a Departmental Qualified Applicator. The following conditions apply:
    i. Invasive management for cut & treat applications only.
    ii. Pre-mixed pesticide in dauber bottles or similar handheld devices.
    iii. Use only herbicides with a Caution signal word.

d. Spotter Training

    i. Review of the Pesticide Policy
    ii. Integrated Pest Management in the landscape
    iii. Herbicide use and safety
    iv. Pesticide storage and transport
    v. Spill management
    vi. PPE
    vii. Signage and communicating with the public
    viii. Field review of pesticide application equipment, spill kit and pesticide labels, MSDS/SDS

e. Exceptions to using a spotter

    i. Fenced fields and courts that are locked.
    ii. Stump treatments in areas under 25 square feet applied with low pressure sprayers or a brush.
    iii. Applications made with a backpack sprayer, 5 gallons or less, or handheld devices or daubers for cut stump or hack & squirt treatments, all other requirements of this policy must be followed.

E. Pesticides

1. **Approved List of Pesticides**

    a. The PRCR Department Approved List of Pesticides (Appendix A) is maintained by the Horticulturist. Only pesticides with active ingredients that appear on this list shall be used on PRCR owned or controlled property. This list shall be reviewed and revised based on manufacturer product update information, change in use or need of a specific product, new products entering the market, price or other factors that warrant revision of the approved list. New chemicals shall be reviewed and approved by the Pesticide Core Team.

2. **Pesticide Purchasing, Delivery**

    a. Only pesticides that appear on the PRCR Department's approved list shall be purchased for use in city parks, greenways and other property managed by the department. All chemical orders shall be made by the Horticulturist or designee. An MSDS/SDS sheet must be requested for each pesticide requisitioned.

    b. Pesticide deliveries shall be accepted in person by the Horticulture staff and verified against purchase orders to confirm correct product and quantities. Any attempted delivery that does not meet the requirements of the purchase order shall be rejected and the products removed from the premises by the delivery agent. MSDS/SDS information must be received prior to or accompanying the delivery. If MSDS/SDS information has not been provided, the delivery will not be accepted. All deliveries should be routed to the chemical storage building and the greenhouse staff notified. No deliveries of chemicals should be accepted or unloaded at the machine shop loading dock.

    c. Exception: Deliveries can be received at remote sites by the facility supervisor. The Horticulture staff shall be notified upon delivery and MSDS/SDS sheets must be present on site.

3. **Pesticide Storage and Transport**

    a. Bulk quantities of pesticides shall be maintained in the designated bulk pesticide storage facility. Access to this facility is limited to the Horticulturist, and the Greenhouse staff. Pesticides for distribution to qualified applicators shall be maintained in the pesticide storage building. The storage building shall always remain locked. Only pesticides on the department approved list shall be kept at this facility. All containers must carry an original product label. Pesticides may be transferred from original containers to an approved "Tip and Measure" container for use by a licensed applicator. "Tip and Measure" containers shall carry a copy of the

original product label for the product being transferred for use. Lost labels shall be replaced immediately.

b. Pesticide and chemical storage at remote sites shall adhere to all storage requirements.

c. Pesticide storage containers on trucks and enclosed trailers.

i. Any pesticide shall be transported on a vehicle or trailer in an enclosed, locked pesticide box and labeled as required.

d. Eyewash Station

i. Eyewash training required. Eye wash/shower stations shall be inspected and documented on a log sheet attached to the unit.

ii. An approved eyewash/shower station shall be maintained adjacent to the pesticide distribution room at the greenhouse and at remote locations where pesticides are being stored.

4. **Pesticide Distribution, Inventory and Control**

a. All pesticides utilized by the PRCR Department shall be inventoried and the inventory maintained by the Horticulturist and the Greenhouse staff. An inventory of all pesticides in the bulk storage facility shall be completed on the first workday of each month. Pesticides shall be distributed to licensed applicators only and distribution shall be made by the Horticulturist or designee.

b. Pesticides distributed to licensed applicators in "Tip and Measure" containers or original containers shall be logged and signed for by both the licensed applicator and the Greenhouse staff. A copy of the distribution receipt shall be given to the applicator for filing in his/her Applicator Notebook. The inventory and usage report shall be reviewed with the Pesticide Core Team, the Park Superintendents and the Assistant Director of Parks and Natural Resources to ensure inventory and distribution controls are being followed.

5. **Inspections**

a. A minimum annual inspection of application equipment, pesticide containers, equipment and container storage areas and vehicle transport shall be conducted by division management staff and shall be documented. Any policy violations will be noted, and appropriate action taken according to Section H: Violations of Policy. Random inspections may occur throughout the year. See appendix D for the pesticide application equipment and storage inspection report.

6. **Pesticide Container Disposal Process**

a. *No original pesticide container shall be reused for any purpose.* Original pesticide containers shall be triple rinsed by a licensed applicator and the rinsate emptied into an approved sprayer unit. Small original pesticide containers and larger containers (barrels) shall be punctured to prevent reuse. Once they are triple rinsed and rendered unusable, empty original pesticide containers shall be secured in a trash bag and disposed of according to the label or in a sanitary landfill. The same process shall apply to "Tip and Measure" containers. Air compressed sprayers and backpack sprayers that are taken out of service shall be triple rinsed, punctured to prevent reuse and disposed of at an approved landfill.

b. Each licensed applicator shall be responsible for triple rinsing and pouring rinsate back into the tank. They are then responsible for rendering unusable, any original pesticide container issued to them once the container is empty or any discontinued "Tip and Measure" or air compressed sprayer in their possession once it is taken out of service. This shall be achieved within a 24-hour period.

7. **Pesticide Application Equipment**

a. **Equipment Types and Use**

i. Compressed air sprayers (pump-up sprayers) of 1–3-gallon capacity and backpack sprayers (up to 4-gallon capacity) shall be utilized whenever practicable to apply pesticides.

ii. Applications requiring utility vehicles, all-terrain vehicles, truck-mounted, trailer-mounted or larger self-contained units shall be made under low pressure (10-100 psi). Exceptions are limited to contract pesticide applications made at the Raleigh Rose Garden and applications to large canopy trees for control of insects and diseases.

iii. All sprayers must be labeled with the pesticide or pesticides used in that particular sprayer and the appropriate hazard identification label. Acceptable labeling is a legible copy of the product label or labels affixed to the sprayer in a complete and legible form. Sprayer labels shall be affixed in such a manner as to protect them from damage.

iv. Truck-mounted, trailer-mounted or larger self-contained units shall be operated by a team only. One qualified, licensed staff person shall serve as the applicator and the other must be a trained Spotter.

v. Handheld spray bottles and wick/sponge/glove applications are acceptable for controlling selected woody plant material (e.g., Invasive plant control.)

vi. Applicators shall not use any sprayer equipment unless they have been properly trained on the specific piece of equipment.

b. **Equipment Storage and Transport**

i. Compressed air sprayers (pump-up sprayers) of 1–3-gallon capacity and backpack sprayers (up to 4-gallon capacity) shall be stored and transported in a securing device that is permanently mounted to the bed of the truck or enclosed trailer. The securing device should be of appropriate size, width and height as to accommodate the sprayers in an upright position to prevent movement, overturning and subsequent damage during transport. It is recommended that equipment is depressurized prior to transport.

ii. Spray equipment may be stored in sheds or on ATV's or Utility Vehicles in sheds. Preferably all tanks should be stored empty; however, exceptions can be made at the supervisor's discretion.

c. **Equipment Inspection and Maintenance**

i. All equipment used for the application of any pesticide shall be inspected by the applicator prior to daily use and shall receive routine maintenance and repair as required. Equipment and vehicles shall be kept clean and free of debris.

ii. The sprayer maintenance procedure and frequency are included in the training requirements for qualified applicators. If through the course of maintenance or operation a defect is discovered, the equipment is to be taken out of service immediately until repairs can be completed. Spill clean-up shall be addressed per this policy.

d. **Equipment Calibration**

i. Proper calibration of pesticide application equipment is required prior to application of any pesticide in a city park, greenway or other managed property. Application of too little pesticide can result in inadequate control. Too much pesticide can result in injury to the non-target plants, illegal residues, excess runoff or drift, injury to persons, pets or wildlife.

ii. Applicators using spray application equipment requiring calibration shall be thoroughly familiar with the equipment, the conditions of the application site, application rates, and the pesticide to be applied.

iii. Pesticide labels, university and/or other professional association recommendations provide information needed to properly calibrate the application equipment.

F. Pesticide Application Procedures

1. **Pesticide Need and Selection**

    a. The use of insecticides, miticides and fungicides shall be limited to high value trees, rare habitats, specialty gardens and greenhouse/nursery production and applications shall occur only when warranted except for ant bait. In high value ornamental and turf areas, pre-emergent herbicides should be utilized to prevent weed growth and reduce the need for and frequency of post-emergent herbicide spot applications throughout the growing season.

    b. Pre-emergent applications are strongly encouraged to reduce the amount of post emergent applied in parks. Pre-emergent is not to be tank mixed with a post-emergent herbicide, except for applications made in high quality turf areas.

    c. The use of pre-emergent herbicides is prohibited in city greenways and other natural open spaces except for parking lots that are not in proximity to water and are pre-approved by the Pesticide Core Team. Post-emergent herbicide applications in these areas shall be limited to the use of herbicides that are not toxic to fish and other aquatic organisms.

    d. The qualified applicator shall review the location, specific target(s), and pesticide selected for control prior to making an application. Questions shall be directed to the Horticulturist or designee for resolution.

2. **Park Levels and Maintenance Standards**

3. **Pesticide Mixing and Application**

    a. Mixing and application of any pesticide shall be in strict accordance with the product label. *Any violation of the product label shall constitute grounds for disciplinary action.*

4. **Time of Application, Posting and Re-entry**

    a. It is the responsibility of the Qualified Applicator to obtain a copy of the weather forecast at the beginning of the workday to properly plan for an application. Refrain from spraying pesticides when the wind meter reads more than 10 mph and/or there is predicted or occurring rainfall. Spraying should stop immediately if wind speeds increase, or rain occurs once at the site. No application shall occur that is not in compliance with the product label.

    b. The qualified applicator is responsible for ensuring that pesticides do not drift from the intended target or run off the site. In the case of pre-

emergent herbicide applications where no irrigation exists, the application should be timed in advance of expected rainfall.

c. Pesticide applications shall be scheduled, as much as practicable, to coincide with low use periods in city parks, greenways and other managed properties. Prior to making an application, the qualified applicator is responsible for warning co-workers and the public in the park, greenway or other area that an application of pesticides is pending, clear the application site and post signs at normal points of entry.

d. The re-entry interval or waiting period required before re-entry can occur is provided on the pesticide label. Generally, the products used by an applicator in the Parks, Recreation and Cultural Resources Department prohibit re-entry until the product has dried. The application site must remain posted and protected from unprotected re-entry until the qualified applicator has confirmed that the pesticide has dried, and re-entry is possible. Once confirmed, signage can be removed and unprotected access into the site permitted. Again, it is the responsibility of the qualified applicator to post and restrict re-entry based on the specific product label.

5. **Nature Preserves and Protected Natural Areas:** Consideration shall be given to the special populations of flora and fauna present on nature preserve properties.

    i. When pesticide application is planned the Park Manager shall be contacted in advance to discuss timing, areas to be sprayed, impact on special populations and how it will impact programming and usage.

6. **Non-Qualified Applicators and Volunteer Projects:** Non-Qualified Applicators, such as volunteers and positions other than natural resources and parks specialists, whether part-time or full-time, may apply pesticides when supervised by a Departmental Qualified Applicator. The Departmental Qualified Applicator shall act in a supervisory role and shall be available to the non-certified applicator in the event they are needed. It shall be the responsibility of the certified applicator to keep the non-certified applicator aware of all directions for use and cautions for safe use and application of any pesticide they may be directed to apply. The following additional conditions apply:

    a. Non-qualified applicators are only permitted to assist in invasive species management by cut & treat applications only with pre-mixed pesticide in dauber bottles or similar handheld devices.
    b. Chemicals are limited to products with a “Caution” signal word only.
    c. Non-qualified applicators must be 18 or older
    d. Only Qualified Applicators shall mix and refill containers.
    e. On-site training will include the following:
        i. Purpose of the herbicide application;

ii. Review of the label and clear communication of the health, and environmental hazards of the product;
iii. PPE requirements;
iv. User safety recommendations;
v. Spill cleanup procedure.
vi. Application demonstration by qualified applicator with daubers, i.e., cambium.
vii. Include training sign-off sheet/roster (Appendix H).

G. Pesticide Spill Procedure

1. **General Requirements**

a. The Environmental, Health and Safety Coordinator shall be called in the event any spill has entered or has the potential to enter the storm drainage system, ditch or other conveyance leading to an adverse impact on a water body.

b. Adhere to the PRCR Emergency Response Guide for Hazmat-Chemical Spill in compliance with Administrative Regulation 'Emergency Response Training Requirements'.

c. All pesticide spills are to be reported immediately to the applicator's supervisor and the Horticulturist and documented appropriately. See specific requirement for notification in Major Spill and Minor Spill sections. When reporting be specific about the nature and location of spilled material and any person that has been contaminated by the spill.

d. Persons not trained in spill techniques or response should immediately evacuate the area.

e. Approved spill kits, capable of containing a spill up to 5 gallons, shall be carried on every truck being utilized for the purpose of making pesticide applications. It is the responsibility of the qualified applicator to ensure that the spill kit is complete and on the vehicle. Kits shall be labeled "Chemical Spill Kit".

i. **Spill Kit**
   a. Label "Chemical Spill Kit"
   b. Absorbent pads
   c. Dikes
   d. Spill absorbent
   e. Disposal bag
   f. Gloves
   g. Goggles
   h. Eye wash (32 oz.)
   i. 1 Tyvek suit

2. **Minor Spills**

   a. A minor spill is defined as being less than 5 gallons and one that can be easily controlled and cleaned up by the applicator. If a minor spill should occur, the applicator is responsible for taking the following action:

      i. Contain the spill. If it starts to spread dike it with sand, soil or other available materials.
      ii. Keep people away from the spill.
      iii. Restrict access to the location of the spill.
      iv. If a pesticide has spilled on a person, wash it off immediately and arrange for medical treatment.
      v. Notify your immediate supervisor and the Horticulturist.
      vi. Use an absorbent material such as soil, sawdust or absorbent clay to soak up the spill.
      vii. Shovel the contaminated material into a leak proof container for proper disposal.
      viii. Dispose of the contaminated material following the same procedure for the disposal of excess pesticides.
      ix. DO NOT hose down the area, this will spread the pesticide.
      x. DO NOT leave the site unless another staff person is available to confine the spill and warn others of danger.
      xi. DO NOT let anyone enter the spill site until the spill is completely cleaned up.

3. **Major Spills**

   a. A major spill is defined as one is more than 5 gallons and that may be too difficult for the applicator to control and/or clean-up due to quantity of pesticides involved, rate of loss, potential to harm people and the environment.

   b. In the case of a major spill, the applicator is responsible for taking the following action:

      i. Locate source of spill or leak, disable equipment and confine the spill. If it starts to spread dike it with sand, soil, mulch or other available materials.
      ii. Keep people away from the spill.
      iii. Restrict access to the location of the spill.
      iv. If a pesticide has spilled on a person, wash it off immediately and arrange for medical treatment.
      v. Notify your immediate supervisor and the Horticulturist to make subsequent calls.

vi. If the Horticulturist is not available notify the Parks Superintendent and the Environmental, Health and Safety Coordinator. The Assistant Director of Parks and Natural Resources shall be notified.
vii. Qualified cleanup staff shall be deployed to assist the applicator with clean up.
viii. DO NOT hose down the area, this will spread the pesticide.
ix. DO NOT leave the site unless another staff person is available to confine the spill and warn others of danger.
x. DO NOT let anyone enter the spill site until the spill is completely cleaned up.

c. A thorough investigation will be conducted immediately upon report of a spill and a determination made as to the following:

i. Contact protocol followed.
ii. Location.
iii. Target(s).
iv. Pesticide(s) used.
v. Dilution rate(s).
vi. Equipment used and condition.
vii. Applicator name(s).
viii. Witnesses.
ix. Impact to people other than the applicator.
x. Environmental impact.
xi. Cause of spill.
xii. Confirmation of proper confinement and clean-up procedure.

H. Contractor and Non-Departmental Pesticide Application

1. Any organization applying chemicals on Parks, Recreation and Cultural Resources Department owned or controlled property shall adhere to the relevant requirements of this policy.

2. Applicators shall provide the Parks Superintendent or designee with a copy of the relevant North Carolina Department of Agriculture and Consumer Services (NCDA & CS) pesticide license, a description of the methods proposed to be used with list of all controls, chemical and non-chemical including concentrations, frequency and application reports (Appendix D).

3. The PRCR Department Approved List of Pesticides is maintained by the Horticulturist. Only pesticides with active ingredients that appear on this list shall be used on PRCR Department owned or controlled property. Requests for an exception shall be made in writing to the Assistant Director of Parks and Natural Resources (for example fungicide applications at the Raleigh Rose Garden and applications to large canopy trees for control of insects and diseases) and shall be approved on a case-by-case basis.
4. Any violation of this policy shall constitute grounds for a stop work order and Notice

of Violation and may result in contract cancellation or removal from the City approved Vendor list.

5. Violation of applicable federal and/or state law governing the use of pesticides (FIFRA, North Carolina Pesticide Laws and Regulations) can result in Class 2 misdemeanor charges, and/or civil penalties up to $2,000.

I. Violations of Policy

1. Any violation of this policy shall constitute grounds for disciplinary action as prescribed in Standard Procedure 300-14: Disciplinary Action, Suspension and Dismissal. In addition, any violation of applicable federal and/or state law governing the use of pesticides (FIFRA, North Carolina Pesticide Laws and Regulations) can result in Class 2 misdemeanor charges, and/or civil penalties up to $2,000.

2. Policy violations and investigations may be reviewed by the Pesticide Core Team. Violations include but are not limited to equipment failures, major spills, plant death, negligence, and failure to follow the label.

PRCR DEPARTMENT USE ONLY

Qualified Applicator Acknowledgement

I have read and understand this policy. I agree to abide by the provisions of this policy.

_____ _____

Signature Date