

## SECTION .1000 - AERIAL APPLICATION OF PESTICIDES

### 02 NCAC 09L .1001 DEFINITIONS

All specific words or terms used in this Section shall have the same definitions as shown in the North Carolina Pesticide Law of 1971, G.S. 143-460, or unless the context otherwise requires, other definitions shall be:

- (1) Agricultural Aircraft Operation. The operation of an aircraft for the purpose of dispensing any pesticide directly affecting agriculture, horticulture, forest preservation, or for any other pest control operation;
- (2) Adverse Effect. Personal injury, damage to personal property, damage to real property, damage to the environment or any combination of these;
- (3) Aircraft. A weight-carrying structure for navigation of the air that is supported either by its own buoyancy or by the dynamic action of the air against its surfaces; This shall include either fixed-wing or rotary-wing aircraft;
- (4) Congested Areas. The same meaning as described in Federal Aviation Regulations (F.A.R.), Part 137;
- (5) Contractor. Any person who owns or manages an aerial application business which is engaged in the custom application of pesticides;
- (6) Custom Application. Any application of pesticides by aircraft for which service a payment is made;
- (7) Drift. The airborne movement of pesticides resulting from the application of pesticides such as to carry the pesticides beyond the target area;
- (8) Emergency. An occurrence which can impair public health, safety or result in injury, damage, or loss of life which calls for immediate action; An emergency may be minor or of such magnitude as to create a disaster;
- (9) Environment. Water, air, land and all plants and man and other animals living therein and the interrelationships which exist among these;
- (10) F.A.R.-137. Federal Aviation Regulations Volume VII, Part 137, as amended through September 10, 1980, relating to agricultural aircraft operations;
- (11) Pilot. The person in control of the aircraft during the application of a pesticide;
- (12) Registered Apiary--an apiary registered with the North Carolina Department of Agriculture;
- (13) Respirator. A respirator or mask of a type that has been tested by the National Institute of Occupational Safety and Health and found to be satisfactory for protection against the particular pesticide being used;
- (14) Spray Equipment. The equipment used for spraying liquid mixtures of pesticides in an agricultural aircraft operation;
- (15) Target Area. Intended site of pesticide application;
- (16) Toxicity Category I Pesticides. Any pesticide products which are required to display the signal word "Danger" prominently on the label.

*History Note: Authority G.S. 143-458; 143-463;  
Eff. July 2, 1976;  
Amended Eff. January 1, 1985.*

### 02 NCAC 09L .1002 GENERAL REQUIREMENTS

(a) All agricultural aircraft operations in North Carolina shall comply with the Federal Occupational Safety and Health Act of 1971 (OSHA), the North Carolina Occupational Safety and Health Law, all regulations promulgated thereunder and the Federal Aviation Regulations part 137. In any case of conflict, a provision of the aforementioned authorities takes precedence over any of these Rules.

(b) Each aerial application business shall have a licensed contractor. The contractor shall be responsible for the compliance of the business with the North Carolina Pesticide Law of 1971 and all regulations

promulgated thereunder except where the responsibility is specifically designated to another person(s) by these Rules.

(c) All agricultural aircraft operations (pilot or contractor) shall keep a written record to be completed within 72 hours after each application. This requirement must be fulfilled sooner if requested by an employee of the Pesticide Section for the purposes of a pesticide incident investigation. The record shall show the following:

- (1) name of contractor;
- (2) name and address of the person for whom the pesticide was applied;
- (3) identification of farm or land sites treated with pesticide(s);
- (4) name of crop which was treated;
- (5) total number of acres treated;
- (6) the year, month, day, and approximate time the pesticide was applied;
- (7) the brand name of the pesticide(s) and EPA registration number;
- (8) amount of formulated product or active material applied per acre (must specify);
- (9) total gallons or pounds per acre of the final tank mix applied per acre;
- (10) name of pilot;
- (11) signature of person completing this record.

(d) The pilot shall, prior to application, learn and confirm:

- (1) the boundaries and exact location of the target area(s),
- (2) the identity of nontarget areas and safety hazards located on or adjacent to the target areas.

(e) Spray and spreading equipment shall be thoroughly rinsed after each agricultural aircraft operation except when the next agricultural aircraft operation will be made using the same pesticide, or if another pesticide, one which by its manufacturer's recommendations is compatible with that previously in the equipment, and will not result in any adverse effects or illegal residues. Rinsing shall be conducted in an area where an environmental hazard will not be created by the drainage or disposal of waste materials and conducted with methods which will not create an environmental or human hazard.

(f) During application, the flow and mixture of the pesticide(s) shall be uniform. Pilots and contractors shall utilize equipment which will maintain a uniform mixture and flow during application.

(g) Pilots and contractors shall use and operate, in any agricultural aircraft operation, aircraft equipped with spray or spreading equipment suited, according to its manufacturer's recommendations for the pesticide(s) to be applied. All aerial spray or spreading equipment shall be free of leaks and shall have a positive shutoff system to prevent leaking and dissemination of pesticides on any nontarget areas over which the flight is made. Such equipment shall not allow spillage, dripping and backflow or create a hazard from vapors or drift.

(h) The loading area shall be kept reasonably free of pesticide contamination.

(i) No pesticide(s) shall be applied by an aerial applicator while any persons other than those assisting in the application are in the target area.

(j) The shape of the tank or hopper of the spray or spreading equipment shall be such as to allow complete drainage during flight and on ground.

(k) The contractor or pilot shall immediately notify the Secretary of the Board, or designated alternate, of any emergency or accidental release of pesticide(s) from the application or auxiliary equipment. They shall provide the following information:

- (1) the name of the pilot,
- (2) the contractor involved,
- (3) the name of the property owner or operator,
- (4) the location of the incident,
- (5) the name of the pesticide,
- (6) the estimated amount of pesticide involved,
- (7) the estimated size of the area that received the spill,
- (8) the description of what is located within 300 feet from the edge of the spill in all directions,
- (9) the number of humans or animals known to have been contaminated,
- (10) the weather conditions at the site of the emergency or accidental release of pesticide(s).

*History Note: Authority G.S. 143-458; 143-463; 143-466;*

*Eff. July 2, 1976;*  
*Amended Eff. February 1, 1989; January 1, 1985; August 1, 1982; March 1, 1981.*

**02 NCAC 09L .1003      DRIFT CONTROL**

No person shall apply a pesticide(s) aerially under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. As a minimum, the following precautions shall be taken:

- (1) Fixed nozzles shall be spaced on the boom to afford a uniform spray pattern at the height the aircraft will be flown.
- (2) All pesticides applied aerially as liquids, in liquid carriers, or as dusts shall be released within 15 feet above the canopy of the target, except where obstructions in or adjacent to the target would endanger the safety of the pilot while applying pesticides at that altitude.
- (3) All pesticides applied aerially as dry granules or pellets shall be released within 40 feet above the canopy of the target, except where obstructions in or adjacent to the target would endanger the safety of the pilot while applying pesticides at that altitude.
- (4) All applications of the following liquid pesticide formulations shall be made using a D4 or larger disk with a 46 whirlplate with the discharge directed with the airstream or not more than 10 degrees below the horizontal, and operated at a maximum pressure of 40 pounds per square inch, or a system producing a droplet size range not smaller than the above system, except for rotary-wing aircraft flying at speeds of 60 mph or less, in which case the nozzles may be directed downward:
  - (a) phenoxy herbicides,
  - (b) paraquat,
  - (c) picloram (Tordon),
  - (d) dicamba.
- (5) Restricted use pesticides other than those specified in (4) of this Rule shall be applied as follows:
  - (a) use a D4 or larger disk with a 45 whirlplate with the discharge directed with the airstream or not more than 10 degrees below the horizontal, and operated at a maximum pressure of 40 pounds per square inch; or
  - (b) a system producing a droplet size range not smaller than the above system, except for rotary-wing aircraft flying at speeds of 60 mph or less, in which case the nozzles may be directed downward; or
  - (c) use a boom with outside nozzles placed no closer to the wingtips than 12-1/2 percent of the total wingspan distance. If the length of the boom of the spraying equipment exceeds the nozzle span, a bleeder line shall be provided from the end of the boom to the last nozzle on the boom.

*History Note: Authority G.S. 143-458; 143-463;*  
*Eff. July 2, 1976;*  
*Amended Eff. January 1, 1985.*

**02 NCAC 09L .1004      HANDLING AND LOADING OF PESTICIDES**

- (a) Pilots or employees handling or loading toxicity category I pesticides shall wear approved respirators. Filters and cartridges in respirators shall be changed according to the manufacturer's recommendation.
- (b) Pilots or employees handling or loading toxicity category I pesticides shall wear freshly laundered protective clothing and shall bathe and change such clothing daily or sooner if the situation warrants.
- (c) Pilots or employees handling or loading toxicity category I pesticides shall wear chemical-resistant gloves and boots or overshoes, in good condition.
- (d) Aircraft cockpits shall be kept clean.

(e) If a toxicity category I pesticide contacts the skin of any person during any part of the agricultural aircraft operation, the person shall wash or be washed immediately, thoroughly with detergent and water and clothing replaced with clean clothing. Detergent and water adequate for personal washing shall be available at the pesticide loading site. They must also be available at any pesticide handling site which is separated geographically from the loading site.

*History Note: Authority G.S. 143-458; 143-463;  
Eff. July 2, 1976;  
Amended Eff. January 1, 1985.*

## **02 NCAC 09L .1005 RESTRICTED AREAS**

(a) No pesticide shall be applied by aircraft within the limits of any congested area except when permission is granted under F.A.R.-137.

(b) No pesticide shall be deposited by aircraft within 300 feet of the premises of schools, hospitals, nursing homes, churches, or any building (other than a residence) which is used for business or social activities if either the premises or the building is occupied by people.

(c) No pesticide shall be deposited by aircraft on the right-of-way of a public road or within 25 feet of the road, whichever is the greater distance.

(d) No pesticide labeled toxic or harmful to aquatic life shall be deposited in or near any body of water in such a manner as to be hazardous to aquatic life unless such aquatic life is the intended target of the pesticide.

(e) No pesticide shall be deposited within 100 feet of any residence.

(f) No pesticide shall be deposited onto any nontarget area in such a manner that it is more likely than not that adverse effect will occur.

*History Note: Authority G.S. 143-458;  
Eff. July 2, 1976;  
Amended Eff. July 1, 1988; January 1, 1985; December 1, 1976.*

## **02 NCAC 09L .1006 EXEMPTIONS**

No person or procedure or spraying and spreading system for aerial application of pesticides shall be exempt from any of the provisions of this Section except under these conditions:

- (1) During an emergency proclaimed by the commissioner, specific aerial applicators may, on a temporary basis, be exempted from all, or from specific regulations by the commissioner.
- (2) The Pesticide Board may authorize exemptions:
  - (a) from specific regulations for specific aerial applications when deemed appropriate,
  - (b) from specific regulations for an aerial applicator applying pesticides while engaged in experimental work for or under the direct supervision of a public agency or while engaged in experimental work for a private individual or person.
- (3) Any state, federal or public agency or aerial applicator under contractual agreement with and under supervision of such an agency when conducting a pest control operation may be exempted from 2 NCAC 9L .1002(i), General Requirements, and 2 NCAC 9L .1005(b) through (e), Restricted Areas, provided that, at least 30 days prior to the proposed initiation of the subject operation they present to the Pesticide Section, a complete description of the operation which meets or exceeds the following standards:
  - (a) Project Description. The application shall include all of the following:
    - (i) explanation of why the project is needed;

- (ii) identification of target pest or pests;
  - (iii) map showing treatment area;
  - (iv) total acreage to be treated;
  - (v) proposed dates of application (range).
- (b) Description of the Pesticide. The application shall contain a description of the pesticide(s) proposed for use under the exemption. Such information shall include:
- (i) a statement that the pesticide product(s) proposed for use carries current state and federal registration and are currently labeled for the proposed use. Include EPA registration number for each pesticide;
  - (ii) Material Safety Data Sheet (MSDS). Include an MSDS for each pesticide proposed for use;
  - (iii) a statement specifying the composition of the final spray mixture to be applied to the target area. Identify any diluent(s), adjuvant(s), or other materials to be used with the pesticide(s) in the final spray mixture.
- (c) Aircraft Information. The description shall include the following:
- (i) identification of type(s) of aircraft proposed for use (fixed wing, helicopter, etc.);
  - (ii) identification of equipment specifications.
- (d) Environmental Evaluation. The description shall include the following:
- (i) identify or map any hospitals, schools, nursing homes, watersheds, and any other sensitive areas in or near the proposed treatment area;
  - (ii) list any rare, threatened, or endangered species in the proposed treatment area and describe measures (if any) to lessen adverse environmental impacts to such species or their habitat from the proposed treatment(s);
  - (iii) describe alternative methods of pest control (options). A no treatment alternative should be included. Describe probable environmental consequences of each alternative;
  - (iv) describe measures (if any) to mitigate the adverse environmental impacts of the proposed project.
- (e) Notification and Public Input Plan. The application shall contain the following:
- (i) Preliminary Notification:
    - (A) For small projects (less than 50 acres or fewer than 20 landowners) individual notification (personal contact or mailings) may be used. This notification shall include the information in criteria (a) through (c);
    - (B) For larger projects, the news media (radio, TV, newspapers) may be used for preliminary notification. A public meeting may also be used as a preliminary notification tool. This notification shall include the information in criteria (a) through (c);
  - (ii) Input Plan. There should be a plan for allowing public input about the project prior to the final choice of the course of action to be taken;
  - (iii) Operational Notification. After a decision is made on the course of action to be taken on the project, the people affected by the project should be informed of the decision. On small projects this may be done on an individual basis. On larger projects the news media would be an appropriate avenue of notification;
  - (iv) A contact person and telephone number shall be listed in the public notice;
  - (v) Evacuation Plan. For persons concerned about the project because of health reasons, there should be a notification procedure so they may leave the treatment area while the project is underway.

The Pesticide Section shall either approve, disapprove, or refer to the North Carolina Pesticide Board all applications for exemption.

- (4) Any local health director or aerial applicator licensed under the subcategory of public health pest control, under supervision of such local health director when conducting a control operation for disease vectors or other pest of public health significance shall be exempted from 2 NCAC 9L .1002(i), General Requirements; .1003, Drift Control; and .1005(b) through (e), Restricted Areas, provided such local health director or his authorized designee notifies the secretary of the Board prior to initiation of subject operation and submits the following information:
- (a) name of aerial applicator or contractor,
  - (b) location and general description of operation area(s),
  - (c) identity of target pest(s),
  - (d) brand name(s) and EPA registration number(s) of the pesticide(s) to be used,
  - (e) scheduled date(s) of application(s), and
  - (f) outline of nature of operation.

Approved pesticide(s) shall be applied in compliance with label requirements.

*History Note:* Authority G.S. 143-458; 143-461(1),(2),(5); 143-463;  
Eff. July 2, 1976;  
Amended Eff. October 1, 1988; January 1, 1985; August 1, 1982; July 21, 1978.

**02 NCAC 09L .1007 EMERGENCY EXEMPTION: PAMLICO COUNTY: MOSQUITOES**

*History Note:* Filed as an Emergency Regulation Eff. September 30, 1977, for a Period of 20 Days to Expire on October 20, 1977;  
Authority G.S. 143-458;  
Expired Eff. October 20, 1977.

**02 NCAC 09L .1008 EMERGENCY EXEMPTION: BEAUFORT COUNTY: MIDGES**

*History Note:* Filed as an Emergency Regulation Eff. July 17, 1978, for a Period of 30 Days to Expire on August 16, 1978;  
Authority G.S. 143-458; 143-461;  
Expired Eff. August 16, 1978.

**02 NCAC 09L .1009 NOTIFICATION OF APIARIES**

Any person who hires the services of an aerial applicator to apply a pesticide labeled as toxic to bees, shall notify, based on available listings of registered apiaries, the owner or operator of any registered apiary located within one-half mile of the target area not less than twenty-four hours nor more than ten days prior to the beginning of a single application or a seasonal spray schedule, giving the approximate time of day of application and type of pesticide to be used. Notification may be either oral or written. Notification for the purposes of this Paragraph is defined as follows:

- (1) written communication by:
- (a) U.S. mail,
  - (b) Notification left at residence, or
  - (c) Notification left at alternate as designated on the honeybee registration list.

- (2) oral communication by:
  - (a) telephone,
  - (b) personal communication, or
  - (c) verbal communication with an alternate as designated on the honeybee registration list.

The Pesticide Section will distribute new registrations of beekeepers and their alternates by U.S. mail on the first of each quarter (January 1, April 1, July 1, and October 1) to all farmers growing crops within one-half mile of the apiaries that are identified on the "Apiary Registration Form" of the Plant Industry Division. The list of revised registered apiaries will become effective on the fifth day of the first month in the quarter stated in this Rule. The registration of apiaries shall be effective for the calendar year that they are registered.

*History Note:* Authority G.S. 143-458; 143-463; 143-466;  
Eff. January 1, 1985.