

State of Vermont
Agency of Agriculture, Food and Markets



Public Health & Agricultural Resource Management Division

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**Vermont Rule for Control of Pesticides
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Vermont Rule for Control of Pesticides

Subchapter 1 – Definitions; Powers of the Secretary; Licenses, Certificates, and Permits issued by the Agency; Classification of Pesticides and Limitations on Sale

Section 1. Definitions

- 1.01 Accident means any release of a pesticide or pesticide mix from its container or application equipment that is contrary to a label instruction for use of that pesticide, or that violates this rule.
- 1.02 Aerial Application means a pesticide application from a motorized vehicle used for flight, including fixed-wing aircraft, rotary aircraft, and unmanned aerial vehicles.
- 1.03 Agency means the Vermont Agency of Agriculture, Food and Markets.
- 1.04 Agricultural Commodity means any plant, fungus, or algae, or part thereof, or any animal or animal product produced by a person primarily for sale, consumption, propagation, or other use by a human or animal.
- 1.05 Anti-Siphon Device means any equipment designed and constructed to prevent the accidental backflow or siphoning of a pesticide into any potable water supply or public water source or to prevent contamination by a pesticide of another material being injected at the same time, such as a fertilizer or other pesticide.
- 1.06 Applicator means any individual using a pesticide. An applicator may be certified as a commercial, non-commercial, or private applicator or may be a noncertified applicator.
- 1.07 Application means the dispersal of a pesticide on, in, at, or directed toward a target site.
- 1.08 Appurtenance means any equipment that is connected to a bulk storage container or pesticide application equipment for the purpose of transferring a pesticide and includes: valves, pumps, fittings, pipes, hoses, metering devices, mixing containers, and dispensing devices.
- 1.09 Bulk Pesticide means liquid pesticide in a container larger than 210 gallons (795 liters) or dry pesticide in undivided quantities greater than 100 pounds (45 kilograms), and includes mini-bulk pesticide containers, except as otherwise specified.
- 1.10 Bulk Storage Container means a container used for the fixed storage of bulk pesticide, that may include a rail car, nurse tank, portable container of mini-bulk pesticide, or other similarly mobile container that is used for the fixed storage of bulk pesticide for more than 15 consecutive days. A Bulk Storage Container does not include a container that is used solely for emergency storage of a leaking pesticide container that is 55 gallons or smaller.
- 1.11 Certified Commercial Applicator means any person certified pursuant to the requirements of this rule who uses a pesticide on the land or home of another whether for remuneration or gratis.
- 1.12 Certified Non-commercial Applicator means any person certified pursuant to the requirements of this rule who uses or supervises the use of a Class A or Class B pesticide in the course of their employment on their employer's property.
- 1.13 Certified Private Applicator means any person certified pursuant to the requirements of this rule who uses or supervises the use of a Class A pesticide on property owned or rented by the person or their employer for the production of an agricultural commodity.

- 1.14 Chemigation means the use of a pesticide applied through an irrigation system to land or crops.
- 1.15 Class A Pesticide means a pesticide that is classified as federally restricted or State restricted.
- 1.16 Class B Pesticide means a general use pesticide that the Secretary classifies as a controlled sale product.
- 1.17 Class C Pesticide means a general use pesticide that the Secretary classifies as a homeowner or specialty product.
- 1.18 Commercial Applicator means a person who is not certified in accordance with the requirements of this rule and uses a pesticide on the land or home of another whether for remuneration or gratis under the direct supervision of a certified commercial applicator.
- 1.19 Company License means a license issued by the Secretary to a business entity that uses a pesticide on the land or home of another person for remuneration or gratis.
- 1.20 Competency means having the practical knowledge, skills, experience, and judgment necessary to perform functions associated with a pesticide application without causing an unreasonable adverse effect, where the nature and degree of competency required relate directly to the nature of the activity and the degree of independent responsibility.
- 1.21 Conspicuous Point of Access means the usual and customary entrance or entrances where a person is likely to enter a treated area.
- 1.22 Container means a device in which a pesticide is stored, transported, treated, disposed of, or otherwise handled.
- 1.23 Dealer means any person who distributes a pesticide.
- 1.24 Dealer Outlet means any location where a pesticide is distributed within or into the State.
- 1.25 Direct Supervision means physical, on-site supervision of a pesticide use by a certified applicator who is capable of calibrating equipment, selecting a pesticide, calculating an application rate and responding to an emergency. Direct supervision is not permitted for use of a federally restricted use pesticide.
- 1.26 Discharge means a spill, leak, or other emission of a pesticide from a storage container, container, or appurtenance, and includes a release into secondary containment. Discharge shall not mean a fully contained transfer of bulk pesticide that is made pursuant to sale, storage, or distribution that is in accordance with label directions.
- 1.27 Distribute means to import, consign, sell, offer for sale, solicit an order for sale, or otherwise supply a pesticide for sale or use in this State through any means, including sales outlets, catalogues, the telephone, the Internet, or any electronic means.
- 1.28 Earth means soil, defined as a three-phase system comprised of various combinations of naturally derived solids including fine to coarse-grained rocks and minerals, organic matter (including living organisms), weathered rock, and precipitates.
- 1.29 Economic Poison means any substance produced, distributed, or used for preventing, destroying, or repelling any insects, rodents, nematodes, fungi, weeds, or other forms of plant or animal life or viruses, except viruses on or in living humans or other animals, that the Secretary shall declare to be a pest; or any substance produced, distributed, or used as a plant regulator, defoliant, or desiccant.
- 1.30 EPA means the United States Environmental Protection Agency.
- 1.31 Environmentally Sensitive Areas means those areas that:
- (a) are significant wetlands as defined in 10 V.S.A. Chapter 037;

- (b) are necessary wildlife habitat as defined in 10 V.S.A. Chapter 151; or
 - (c) contain endangered or threatened species as defined in 10 V.S.A. Chapter 123 or are critical habitat as designated under 10 V.S.A. Chapter 123.
- 1.32 Experimental Use means the use of an unregistered pesticide or the use of a registered pesticide for an unregistered use conducted under a permit.
- 1.33 Federally Restricted Use Pesticide means a pesticide classified for restricted use under the provisions of Section 3(d) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and 40 C.F.R. part 152, subpart I.
- 1.34 Fraud means the intentional misrepresentation through a verbal or written statement, the media, a falsified record, an invoice or report, or a false statement on an application for a license or certificate.
- 1.35 Golf Course means any contiguous area upon which the game of golf is played including such supporting operations as practice greens, tees, and driving areas.
- 1.36 Groundwater means water below the land surface that occurs in a zone of saturation.
- 1.37 Groundwater Protection Rule and Strategy means Chapter 12 of the Environmental Protection Rules adopted pursuant to 10 V.S.A. Chapter 48, as amended.
- 1.38 Half-Life means the time required for degradation of one-half of the pesticide residue present.
- 1.39 Integrated Pest Management means an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment.
- 1.40 KOC means the soil organic carbon-water partitioning coefficient: a measure of the tendency of a pesticide to be strongly attached, by chemical or physical bonds, to soil particle surfaces.
- 1.41 Label or Labeling means:
- (a) the written, printed, or graphic matter on, or attached to, the pesticide, or the immediate container thereon;
 - (b) the outside container or wrapper of the retail package, if there is one, of the pesticide; and
 - (c) the written, printed, or graphic matter that is incorporated into the label by reference.
- 1.42 Loading means any act of transferring a pesticide to or from any storage container, or to any application equipment.
- 1.43 Manufacture means to process, produce, formulate, prepare, compound, package, repackage, or label a pesticide.
- 1.44 Mini-bulk container means either:
- (a) a container, designed for ready handling and transport, that holds more than 55 gallons (208 liters) but not more than 350 gallons (1,325 liters) of liquid pesticide; or
 - (b) a container that holds more than 100 pounds (45 kilograms) but not more than 1,000 pounds (454 kilograms) of dry pesticide.

- 1.45 Misuse means an application not made in compliance with the pesticide label or this rule, including:
- (a) pre-application activities involving mixing and loading the pesticide;
 - (b) applying the pesticide, including supervising the use of a pesticide by a noncertified applicator;
 - (c) other pesticide-related activities, including transporting or storing pesticide containers that have been opened, cleaning equipment, and disposing of excess pesticide, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials; or
 - (d) recommending the use of a pesticide.
- 1.46 Mixing means the act of combining a pesticide with another pesticide, or a pesticide with a diluent for the purpose of application.
- 1.47 Noncertified Applicator means a person who is not certified under this rule and uses a pesticide.
- 1.48 Non-commercial Applicator means a person who uses a Class A or Class B pesticide in the course of their employment on their employer's property.
- 1.49 Ornamental means plants such as flowers, shrubs, and trees used for decorative purposes, shade, or other landscape purposes.
- 1.50 Person means any individual, partnership, association, corporation, or organized group of persons whether incorporated or not, including:
- (a) an unincorporated organization, trust, or other legal or commercial entity, including a joint venture or affiliated ownership;
 - (b) a municipality or state agency;
 - (c) individuals and entities affiliated with each other for profit, consideration, or any other beneficial interest derived from agricultural management, including lessors and lessees; or
 - (d) a farmer, rancher, vineyardist, apiarist, plant propagator, Christmas tree grower, aquaculturist, floriculturist, orchardist, forester, migrant farmworker or another comparable person.
- 1.51 Pesticide means economic poison as defined in 6 V.S.A. § 911 and Section 1.29 of this rule.
- 1.52 Potable Water Supply means the same as it is defined in 10 V.S.A. Chapter 064.
- 1.53 Potable Water Source means a component of a potable water supply that withdraws or collects water from soil or bedrock. Potable water sources include springs; drilled, driven, or dug wells; and surface water.
- 1.54 Practical Knowledge means the possession of pertinent facts and comprehension sufficient to properly perform functions associated with the use of a pesticide, including properly responding to reasonably foreseeable problems and situations.
- 1.55 Prescreened Pesticide List means a list of pesticides that, based on their human and ecological toxicity, relative immobility, and limited persistence in the environment (as measured by parameters such as, but not restricted to, solubility, KOC, and half-life) are deemed unlikely, under normal conditions and use, to leave established turf grass and enter surface or ground water.
- 1.56 Private Applicator means any person who uses a non-restricted use pesticide on property owned or rented by the applicator that is residential in nature or on property owned or rented by the applicator or the applicator's employer for the production of an agricultural

commodity. Private applicators may apply a pesticide to the property of a neighboring producer of an agricultural commodity, provided that the applicator receives no compensation other than the trading of personal services between the applicator and their neighbor.

- 1.57 Public Water Source means the same as it is defined in 10 V.S.A. Chapter 056.
- 1.58 Residential Dwelling Unit means any room or group of rooms located within a structure and forming a single habitable unit with facilities that are used, or are intended to be used, for living, sleeping, cooking, and eating. This definition includes a building or structure or part of a building or structure that is used for a home or residence by one or more persons who maintain a household. It also means a mobile home regardless of ownership of the land. This definition does not include a guest room at a hotel or motel.
- 1.59 Restricted Use Pesticide means a pesticide classified as State or federally restricted and is synonymous with a Class A pesticide.
- 1.60 Right-of-way means an interest in real property, above, on, or below the ground, that entitles the holder of the interest to pass over the land for the purpose of carrying, transmitting, or transporting liquids, gases, electricity, communications, vehicles, or people. For the purpose of this rule, it is immaterial whether the right-of-way is owned, leased, or an easement.
- 1.61 Secretary means the Secretary of the Agency of Agriculture, Food and Markets, and their designees.
- 1.62 Service Container means any container, other than an original container that is filled with an EPA-registered pesticide, used to hold, or transport a pesticide concentrate or a pesticide use-dilution preparation prior to application. A service container is neither used to distribute or store a pesticide nor does the definition include pesticide application equipment.
- 1.63 Simple Dilution Analysis means an analysis involving the dilution of a chemical with an expected volume of precipitation available for infiltration within a watershed or hydrologic unit. Simple Dilution Analysis is used to assess the potential for a contaminant to be transported to groundwater through the process of infiltration.
- 1.64 Spray Drift means the movement of pesticide dust or droplets through the air at the time of application or soon after, to any site other than the area intended.
- 1.65 State Restricted Use Pesticide means a pesticide classified by the Secretary as Class A but does not bear labeling as Restricted Use.
- 1.66 Storage means the holding of a pesticide for use or distribution in an area other than the sales floor of a licensed retailer.
- 1.67 Storage Facility means a location at which bulk pesticide is held in storage.
- 1.68 Surface Water means all rivers, streams, brooks, reservoirs, ponds, lakes, springs, and all bodies of waters, artificial or natural, that are contained within, flow through, or border the State or any portion of it.
- 1.69 Turf means a covering of mowed grass vegetation growing together with an upper soil stratum of intermingled roots and stems.
- 1.70 Undue Hazard means A substance that harms human health and the environment based on studies prepared for pesticide registration, independent peer-reviewed studies, and other data as may be requested by the Secretary.
- 1.71 Use means:
- (a) pre-application activities involving mixing and loading a pesticide;

- (b) applying a pesticide, including supervising the use of a pesticide by a noncertified applicator;
 - (c) other pesticide-related activities, including transporting or storing a pesticide container that has been opened, cleaning equipment, and disposing of any excess pesticide, spray mix, equipment wash water, a pesticide container, and other pesticide-containing material; or
 - (d) recommending the use of a pesticide.
- 1.72 Utility means a privately, publicly, or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, cable television, power electricity, light, heat, gas, oil, crude products, water, steam, waste, stormwater not connected with the highway drainage or any other similar commodity, including any fire or police signal system or highway lighting system, that directly or indirectly serves the public. The term shall mean the utility company inclusive of any wholly owned or controlled subsidiary.
- 1.73 Vapor Drift means the movement of a pesticide in the form of a volatilized gas to any site other than the area intended.
- 1.74 Wastewater and Potable Water Supply Rules means Chapter 1 of the Environmental Protection Rules adopted pursuant to 10 V.S.A. Chapters 47, 56, and 64, as amended.

Section 2. Powers of the Secretary

- 2.01 Issuance of Licenses, Certificates, and Permits
The Secretary may issue licenses, certificates, and permits pursuant to 6 V.S.A. Chapter 87.
- 2.02 Denial, Amendment, Suspension, or Revocation of Licenses, Certificates, or Permits
- (a) The Secretary may deny, amend, suspend, or revoke any license, certificate or permit for failure to comply with 6 V.S.A. Chapter 87 or any rule adopted under its authority or for being subject to a final order imposing a civil penalty under 7 U.S.C. Section 136l or for being convicted under 7 U.S.C. Section 136l on due notice to the licensee or holder of the certificate or permit, with an opportunity for hearing if a written request is filed with the Secretary within five days of receipt of a notice of violation.
 - (b) If the Secretary finds that public health, safety, or welfare requires emergency action and the Secretary incorporates a finding to that effect in the order, summary suspension of a license, certificate or permit may be ordered, pending proceedings for revocation or other action.
- 2.03 Restriction and Regulation of Ineffective and Hazardous Products or Devices
- (a) The Secretary may restrict, regulate, or deny registration of any pesticide product or device that is deemed to be ineffective, or that constitutes an undue hazard to the public or the environment.
 - (b) Any person aggrieved by a decision of the Secretary under this section may request a hearing within 15 days of the receipt of notice of the decision. The hearing shall be for the purpose of reviewing evidence pertaining to the ineffectiveness of the product or the hazard presented to the public from its use.
- 2.04 Pesticide Cease and Desist Order

- (a) The Secretary may issue a cease and desist order for failure to comply with 6 V.S.A. Chapter 87, or any rule adopted under its authority with an opportunity for hearing if a written request is filed with the Secretary within five days of receipt of the cease and desist order.
- (b) It shall be unlawful to violate a cease and desist order.

2.05 Right of Entry

The Secretary or a designee thereof may enter any premises, public or private, as may be necessary to carry out the provisions of 6 V.S.A. Chapter 87 and this rule, including inspecting pesticide application sites, records, equipment, or to obtain pesticide samples.

2.06 Reciprocal Agreements

- (a) The Secretary may enter into a reciprocal agreement with officials of other states and federal agencies and issue certificates to a certified applicator of another state on a reciprocal basis provided that:
 - (1) the certification requirements are substantially the same as those required by Vermont;
 - (2) the certified applicator knows and abides by Vermont's pesticide control law and rules;
 - (3) the certified applicator pays all appropriate fees; and
 - (4) the certified applicator is a resident of and has a valid pesticide applicator license or certificate issued by a state that has established a reciprocal agreement with Vermont.
- (b) The certified applicator's reciprocal certificate is valid for an entire calendar year.
- (c) Applicators with certificates that expire on dates other than December 31 of each year shall provide confirmation that their certificate has been renewed by their state of residence within 45 days from the date of expiration.
- (d) Failure to provide confirmation shall result in the revocation of reciprocal certificates.
- (e) The certified applicator shall notify the Secretary within 30 days of termination of their reciprocal state's certification.

Section 3. Licenses, Certificates, and Permits Issued by the Secretary

3.01 Company License

- (a) A business entity that uses a pesticide on the land or home of another person for remuneration or gratis shall obtain a company license that shall expire on December 31st of the year that the license was obtained.
- (b) The following are exempted from the requirement of Section 3.01(a):
 - (1) A Doctor of Medicine or Doctor of Veterinary Medicine applying a pesticide as a drug or medication during the course of practice.
 - (2) Applicators certified under research, demonstration, or sales programs only making recommendations and applying a pesticide in research, demonstration, or sales programs.
 - (3) Private applicators.
 - (4) Non-commercial applicators.
- (c) Business entities required to obtain a company license shall:

- (1) be responsible for ensuring that they employ pesticide applicators that are properly certified under this rule, except those employees working under the direct supervision of a certified applicator do not need to be certified;
- (2) send written notice to the Secretary within 30 days whenever a certified commercial applicator is terminated from employment; and
- (3) renew the company license annually.

3.02 Dealer License

- (a) No person shall distribute a pesticide within the State without the appropriate license.
- (b) A person who distributes a Class A pesticide shall obtain a Class A license, that entitles the licensee to sell Class A, Class B, and Class C pesticides.
- (c) A person who distributes a Class B pesticide shall obtain a Class B license, that entitles the licensee to sell Class B and Class C pesticides.
- (d) A person that distributes only Class C pesticides shall obtain a Retail/Class C license and is exempt from the examination requirements of Section 3.03.
- (e) A person that distributes a Class A or Class B pesticide shall employ a full-time employee that has the appropriate license for the pesticide class being distributed. A full-time employee shall be a person who works at least 32 hours per week on a year-round basis.

3.03 Dealer License Examination Requirements

- (a) A candidate for Class A and B licenses shall submit to a written examination covering competency standards and recordkeeping requirements, including adequate knowledge of rules, Vermont classification of a pesticide, pesticide labels, safe handling, hazards, spill cleanup, and proper disposal.
- (b) A candidate shall have a maximum of three opportunities to achieve a passing score on the certification examination during a 12-month period. This 12-month period shall begin on the date the candidate takes the first examination. After an initial failing score, a candidate must wait at least seven calendar days to retake the examination. If a candidate fails twice, there shall be at least a 28 calendar day waiting period from the first examination date before taking the exam for the third time.
- (c) Licensed Class A and Class B dealers are required to notify the Secretary, in writing, within 30 days of termination or a change of employment, including a change from one branch store location to another.
- (d) A license may be renewed without examination provided that the conditions under which the original license was issued have not changed. The Secretary may determine that additional instruction or examination is necessary to meet new criteria relative to any use and require re-examination or training prior to renewal.
- (e) A license not renewed within 365 days shall be considered lapsed and shall require re-examination prior to any re-issuance.

3.04 Applicator Certificates

- (a) Commercial and non-commercial applicator certificates.

- (1) A person who uses or supervises the use of a pesticide to the lands and homes of others whether for remuneration or gratis, except those who work under the direct supervision of a certified applicator, shall obtain certification as a commercial applicator.
- (2) A person who uses or supervises the use of a Class A or Class B pesticide in the course of their employment on their employer's property, except those who work under the direct supervision of a certified applicator, shall obtain certification as a noncommercial applicator.
- (b) Private applicator certificate. A person who uses or supervises the use of a Class A pesticide on property owned or rented by the person or their employer for the production of an agricultural commodity shall obtain certification as a private applicator.
- (c) Exemptions.
 - (1) A Doctor of Medicine or Doctor of Veterinary Medicine who applies a pesticide as a drug or medication during the course of practice is exempt from the certification requirement.
 - (2) Any person conducting laboratory research involving a pesticide.
- (d) All sales or technical field representatives who recommend, demonstrate, or distribute a Class A or Class B pesticide directly to an end user in this State, and who is not employed at a dealer outlet, shall obtain certification in Category 10 and the category or categories of products sold.
- (e) Any applicator who uses a federally restricted use pesticide under the provisions of FIFRA shall be certified under this rule. A noncertified applicator shall not use a federally restricted use pesticide under direct supervision.

3.05 General Requirements for Applicator Certification

A candidate for certification shall:

- (a) be at least 18 years of age;
- (b) submit to a written examination(s) covering the applicable competency standards described in Sections 8 and 9;
- (c) be certified in each category and sub-category, if applicable, that they intend to work in; and
- (d) have a maximum of three opportunities to achieve a passing score on the certification examination during a 12-month period that shall begin on the date the candidate takes the first examination. After an initial failing score, a candidate must wait at least 7 calendar days to retake the examination. If a candidate fails twice, there shall be at least a 28-calendar day waiting period from the first examination date before taking the exam for the third time. Re-examination fees may apply.

3.06 Certification of Commercial and Non-commercial Applicators

- (a) Certification shall expire on December 31st of the year that the certificate was obtained.
- (b) Certification may be renewed annually for up to five years, after which recertification shall be required, either through training or re-examination.

- (c) The Secretary may require recertification whenever necessary and determine the procedure for additional training or re-examination.
- (d) Certified non-commercial or commercial applicators shall send written notice to the Agency within 30 days of termination or changing employers.
- (e) A certificate not renewed in 365 days shall be considered lapsed and shall require re-examination prior to any re-issuance.

3.07 Certification of Private Applicators

- (a) Certification is valid for five years, after which recertification shall be required either through training or re-examination.
- (b) The Secretary may require recertification whenever necessary and shall determine the procedure for additional training or re-examination.
- (c) The Secretary shall require that private applicators obtain certification, regardless of the class of pesticide used, for certain use patterns, including soil and commodity fumigation or aerial application.
- (d) A certificate not renewed by April 1st of the year following the expiration of the certificate shall be considered lapsed and shall require re-examination.

3.08 Permits

- (a) A person who intends to use a pesticide in any of the following areas or manners shall first obtain an approved permit from the Secretary:
 - (1) Right-of-way, exclusive of terrestrial invasive plant control
 - (2) Aerial
 - (3) Experimental use
 - (4) Golf course
- (b) A person who intends to use a pesticide in any of the following areas or manners may be required to obtain an approved permit from the Secretary:
 - (1) Mosquito larvicide
 - (2) Mosquito adulticide
 - (3) Terrestrial invasive plant control
 - (4) Bird or animal control

3.09 Requirements for Licenses, Certificates, and Permits

Any form required by the Secretary shall be filled out completely and accurately and any applicable fee shall be remitted to the Secretary.

3.10 Denial, Amendment, or Revocation of Licenses, Certificates, and Permits

- (a) The Secretary may deny, amend, or revoke issuance of a license, certificate, or permit to a person:
 - (1) who fails to demonstrate competency on any examination;
 - (2) who is currently under a suspension or revocation by the Secretary;
 - (3) who fails to provide accurate and complete information to the Secretary;
 - (4) who fails to remit appropriate fees to the Secretary; or
 - (5) for any other reason that the Secretary deems appropriate.
- (b) The Secretary may amend a license, certificate, or permit upon written request and after review.
- (c) Any pesticide applicator certificate issued may be revoked or further restricted when the Secretary determines that the restrictions are necessary to protect human health or the environment.

- (d) A person whose license, certificate, or permit is denied, amended, or revoked may appeal the Secretary's determination within 15 days of receiving notice of the denial, amendment, or revocation by requesting a hearing, in writing, to the Secretary in accordance with 6 V.S.A. Chapter 1.

Section 4. Classification of Pesticides and Limitations on Sale

4.01 Classification and Registration

- (a) The EPA classifies all registered pesticides available to consumers as either general use or restricted use for the purposes of federal regulation. Vermont recognizes federal and State restricted use pesticides as Class A. Vermont classifies any registered pesticide used, sold, distributed, or manufactured within the State into three categories known as:
 - (1) Class A - Restricted Use – Federal and State;
 - (2) Class B - Controlled Sale; and
 - (3) Class C - Homeowner.
- (b) Any pesticide sold in Vermont shall be registered with the State under 6 V.S.A. Chapter 81.

4.02 Identification of Class A – Restricted Use, Class B – Controlled Sale, and Class C – Homeowner Pesticides

- (a) Class A – Restricted Use – Federal are federally restricted use pesticides identified by the EPA designation "Restricted Use Pesticide" on the product label.
- (b) Class A – Restricted Use – State are pesticides classified as general use by the EPA and reclassified as restricted use by the Agency after consideration of the following:
 - (1) Toxicological profile, including acute, subchronic, and chronic effects.
 - (2) Environmental profile, including aquatic and wildlife effects.
 - (3) Physical hazard profile, including the potential for fire, explosion, and reactivity.
 - (4) Potential for ground and surface water contamination.
 - (5) Potential for misuse.
 - (6) Potential for drift.
 - (7) Container construction and size.
 - (8) Those requiring training due to special concerns.
 - (9) Method of application.
 - (10) Product label statements, such as "professional use".
- (c) Class B – Controlled Sale includes all turf products and any pesticide that is for use outside of the home and not marketed as ready-to-use, excluding products containing either *Bacillus thuringiensis* or potassium fatty acids regardless of percent of total active ingredient and does not meet Class A definition. The Secretary reserves the right to classify additional pesticides as Class B.

- (d) Class C – Homeowner includes any pesticide applied in and around the home and that are marketed as ready-to-use and have total active ingredient of 3% or less. The following additional pesticides are classified as Class C.
 - (1) Class C pesticides with a limited percentage of active ingredient include dichlorvos-impregnated strips (DDVP) with concentrations not over 20% in resin strips and pet collars.
 - (2) Class C pesticides with an unlimited percentage of active ingredients include the following:
 - (A) pet supplies including shampoos, dips, and tick and flea control products;
 - (B) wood preservatives and sapstain control agents other than creosote, inorganic arsenicals, and pentachlorophenol;
 - (C) animal and insect repellents;
 - (D) moth flakes, crystals, cakes, and nuggets;
 - (E) indoor aquarium products;
 - (F) swimming pool products;
 - (G) pediculocides and mange cure on humans;
 - (H) pheromone baits and lures;
 - (I) premixed paints that make pesticidal claims;
 - (J) antimicrobial agents such as disinfectants, bacteriostats, bactericides, mildewcides, mildewstats, viricides, sanitizers, slimicides, sterilants, and industrial preservatives;
 - (K) insecticides containing bacillus thuringiensis, bacillus popilliae, bacillus lentimorbus, or potassium fatty acid; and
 - (L) animal ear tags.
 - (3) The Secretary reserves the right to classify additional pesticides including non-homeowner products as Class C.

4.03 State Prohibited Pesticides

- (a) The distribution, sale, or use of pesticides cancelled or suspended by the EPA or the Agency, shall not be allowed in the state of Vermont, except as provided for the disposition of existing stocks in the cancellation or suspension order published in the Federal Register by the EPA or by order of the Agency.
- (b) The Agency may add additional restrictions to the conditions of distribution, sale, or use of pesticides provided for the disposition of existing stocks in the cancellation or suspension order published in the Federal Register by the EPA or by order of the Agency in order to protect human health or environmental quality.

4.04 Limitations on the Sale of Pesticides

- (a) Limitations on sales of Class A – Restricted Use – Federal and State.
 - (1) Dealers shall obtain a Class A dealer's license before they may distribute a Class A - Restricted Use pesticide.

- (2) A Class A pesticide shall be sold only to certified applicators with certification in the appropriate category specific to a use site on the pesticide label.
- (3) A Class A pesticide shall not be displayed for self-service or stored in food or feed areas.
- (b) Limitations on sales of Class B pesticides.
 - (1) Dealers shall obtain a Class A or Class B dealer's license before they may distribute a Class B pesticide to the public.
 - (2) A Class B pesticide shall not be stored or displayed in areas containing food or feed.
- (c) Limitations on sale of Class C pesticides.
 - (1) A dealer shall obtain either a Class A, Class B, or Class C (retail) dealer's license before they may sell a Class C pesticide to the public.
 - (2) A Class C pesticide may not be stored or displayed in food or feed areas.

4.05 Availability of Information

The Secretary shall make available pesticide product classifications in a public format.

Subchapter 2 – General Standards for Pesticide Use; Permitting Requirements; Notification and Posting of Pesticide Applications; Maintenance of Records by Certified Applicators, Licensed Companies, Licensed Pesticide Dealers, and Pesticide Producing Establishments

Section 5. General Standards for Pesticide Use

5.01 Registered and Recommended Uses of Pesticides

- (a) A pesticide use shall comply with that pesticide's label, which shall be registered with the EPA and the Agency, except as provided under authority for pesticide use in Sections 18 and 24(c) of FIFRA.
- (b) A pesticide shall be used under conditions known to minimize spray and vapor drift.

5.02 Standards of Operations

All applicators and licensed companies shall:

- (a) use only methods and equipment that ensure safe and efficient application of a pesticide;
- (b) use properly functioning equipment that is free of leaks and defects and is calibrated according to manufacturer's calibration instructions;
- (b) use equipment with an effective anti-siphoning device to prevent backflow when drawing or pumping water to fill pesticide application devices;
- (c) use equipment with an effective anti-siphoning device to prevent backflow when drawing or pumping water to be used in chemigation operations;
- (d) operate in a careful manner and only when climatic, pest, or other conditions are proper for controlling pests;
- (e) make no false or fraudulent claims;

- (f) completely and accurately maintain, submit, and report use and sales data as required by the Secretary, including weekly spray reports, invoices, sales records, training records, application records, and annual usage;
- (g) conform to the use restrictions in 6 V.S.A. Chapter 87, the Rule for Control of Pesticides, and permits issued thereunder;
- (h) cooperate with Agency requests for information related to pesticide application, to observe pesticide applications, to inspect equipment, to inspect pesticide related records, to inspect business premises, to conduct pesticide-related sampling;
- (i) use a pesticide consistent with its labeling. Use of a pesticide in the following manner shall be considered an application consistent with the labeling:
 - (1) Applying a pesticide at any dosage, concentration, or frequency less than specified on the labeling.
 - (2) Applying a pesticide against any target pest not specified on the labeling if the application is to the crop, animal, or site specified on the labeling except when the labeling specifically states that the pesticide may be used only on pests specified on the labeling;
 - (3) Employing a reasonable method of application that is not prohibited by the labeling.
- (j) provide the following information on a bill, invoice, or other written or electronic documentation to all customers or persons for which pesticide applications are exchanged for remuneration, at the time of application, unless otherwise specified in Section 6:
 - (1) the common or trade name for each pesticide applied;
 - (2) the EPA registration number for each pesticide applied;
 - (3) the address and sites treated as indicated on the label;
 - (4) the date and time of application;
 - (5) the amount of each pesticide applied;
 - (6) the amount of total dilution used, if applicable;
 - (7) the pest treated for;
 - (8) the name of the applicator;
 - (9) the certified applicator certificate number;
 - (10) the name, address, and telephone number of the applicator or company providing service;
 - (11) all information as required by the Worker Protection Standard; and
 - (12) post-application label safety precautions, if specified.
- (k) use a pesticide so as not to exceed the maximum contaminant level or primary groundwater quality enforcement standards pursuant to Appendix One of the “Ground Water Protection Rule and Strategy” in accordance with 10 V.S.A. Chapter 48;
- (l) manage the use of a pesticide to reduce the concentrations of a pesticide in groundwater to below the preventative action limits pursuant to Appendix One of the “Ground Water Protection Rule and Strategy” when monitoring indicates the presence of pesticide concentrations in groundwater that exceed the preventative action limits;

- (m) maintain a minimum 50-foot buffer when applying a pesticide to soil or vegetation around any potable water source unless:
 - (1) the label prescribes a greater buffer; or
 - (2) a greater buffer is required for the specific application (such as application on agricultural cropland, or herbicide and pesticide application on utility rights-of-way) pursuant to the distances established in Table 11-1 of the Wastewater and Potable Water Supply Rules; and
- (n) maintain a minimum buffer distance around any public water source when applying a pesticide to soil or vegetation, unless the label prescribes a greater buffer:
 - (1) 100-foot buffer for all public non-community groundwater drinking water sources; and
 - (2) 200-foot buffer for all public community drinking water sources and intakes, and surface water public non-community drinking water intakes.

5.03 General Requirements for Applicators, Licensed Companies, and Dealers

- (a) A federally restricted use pesticide shall only be used by a certified applicator.
- (b) Applicators, licensed companies, and dealers shall maintain a legible manufacturer label on pesticide containers at all times.
- (c) Applicators, licensed companies, and dealers shall not re-use containers for use in any manner other than what is specified on the container's original labeling.
- (d) Service containers shall be made of similarly durable material to the original container, be free of leaks and have a label affixed to the container or have clearly written information that shall, at a minimum, contain the following:
 - (1) The name, address, and telephone number of the applicator or commercial company, if applicable.
 - (2) Product name.
 - (3) EPA registration number.
 - (4) Name and percentage of active ingredient in container.
 - (5) Indication whether the material is dilute or concentrate and the pertinent dilution concentration or ratio.

5.04 Protection of Bees

- (a) No person shall apply a pesticide to a flowering crop, including alfalfa, apple, blueberry, clover, pumpkin, raspberry, squash, or trefoil without prior notification of at least 48 hours to an apiculturist who has an established apiary on the premises.
- (b) A person hiring a commercial applicator for an application under Section 5.04(a) shall notify, or cause to be notified, the apiculturist at least 48 hours prior to the application.
- (c) A person applying a pesticide that is highly toxic to bees shall:
 - (1) apply the pesticide during periods and conditions of least exposure, such as early morning or late evening; and when winds are less than nine mph; and

- (2) include a 50-foot buffer from pollinator foraging sites, such as natural and semi-natural areas or intentional pollinator plantings or a 20-foot-wide non-pollinator-attractive vegetative barrier higher than the spray release height with an established 60% plant density.
- (d) A person shall avoid the application of a fungicide or soil fumigant to pollinator-attractive plants when in bloom.

Section 6. Permitting Requirements

6.01 Right-of-Way Clearing and Maintenance Permit

- (a) No person shall apply an herbicide for the purpose of clearing or maintaining a right-of-way without first obtaining an approved permit from the Secretary as provided in this section. For persons seeking to control terrestrial invasive plant species on a right-of-way for purposes other than clearing or maintaining a right-of-way see Section 6.08.
- (b) Right-of-way clearing and maintenance permits shall not be issued for treatment of terrestrial invasive plants when the presence and treatment of the plant is not required to maintain the right-of-way.
- (c) A complete and accurate permit application shall be made, on a form provided by the Secretary, before March 1 of the year of the proposed application.
- (d) The application form shall be accompanied by a digital or electronic map of the area of proposed application indicating the right-of-way boundaries, surface waters, public water sources and potable water sources, threatened or endangered species, and a copy of the notice of intent to use an herbicide that shall be published.
- (e) The notice of intent to use an herbicide shall:
 - (1) be published not less than 25 days nor more than 60 days prior to the anticipated first application of a herbicide;
 - (2) be published for one day a week for two consecutive weeks in each of two newspapers, for every county to be affected by the right-of-way application. If the notice is printed in a daily newspaper, then the notice shall be published on Thursdays. If the notice is printed in a weekly newspaper, then the notice shall be published on whatever day the paper is published;
 - (3) be at least two columns wide by three inches high; and
 - (4) set forth the name and address of the permit applicant; a reasonable identification of the affected right-of-way; the names of the towns where the application is to be done; the approximate date of the herbicide application; that a permit has been requested from the Secretary; the method by which the herbicide is to be applied; the common name of the product or active ingredient to be used; the name, position, address, and telephone number of a person from the applicant to contact for further information; the address and phone number of the Agency identifying it as the appropriate place to contact with comments and/or complaints; a notice to residents

along the right-of-way that potable water source should be buffered and that it is the resident's responsibility to notify the permit applicant of the existence of a potable water source near the right-of-way.

- (f) In addition to the notice of intent to use an herbicide, further notification by one of the following methods containing the information set forth in subdivision 6.01(e)(4) shall be provided by:
 - (1) three spot messages per day on each of two radio stations in the area of application on two consecutive days during the two-week period prior to the commencement of application;
 - (2) written communication to residents adjacent to the right-of-way during the calendar year of application, at least two weeks prior to such application, by U.S. Mail or electronic mail; or
 - (3) a hand-delivered, printed statement to residents of property adjacent to the right-of-way during the calendar year of spray application, at least ten days prior to such application.
- (g) Permit applicants shall submit an integrated vegetative management plan to the Secretary at least every five years that shall include:
 - (1) a general statement of policy and goals;
 - (2) identification of the species to be maintained; the scheduled frequency and method of maintenance; and an evaluation of non-chemical options;
 - (3) identification of other applicable utility and federal guidelines and standards to be maintained on the right-of-way;
 - (4) establishment of right-of-way inspection and monitoring standards including frequency and method of inspection; and
 - (5) establishment of standards and practices for:
 - (A) wetlands,
 - (B) pollinator habitat,
 - (C) wildlife,
 - (D) erosion control, and
 - (E) aesthetic considerations.
- (h) Right-of-Way clearing and maintenance permits issued by the Secretary shall establish buffer distances that shall be determined according to the type of application, properties of a pesticide to be used, and the characteristics of the area to be treated.
- (i) The Secretary shall publish permit applications for a 30-day comment period prior to any issuance of a permit. The Secretary shall issue, condition, or deny a permit within 60 days of receipt of a permit application.

6.02 Aerial Permit

- (a) No person shall make an aerial application without first obtaining an approved permit from the Secretary as provided in this section.
- (b) A complete and accurate permit application shall be made, on a form provided by the Secretary, before the proposed application.

- (c) An applicant for an aerial permit shall demonstrate compliance with the requirements of the Federal Aviation Administration and the Vermont Agency of Transportation in the permit application.
- (d) An aerial application shall be conducted by a certified applicator in the appropriate categories and/or sub-categories.

6.03 Experimental Use Permit

- (a) No person shall use a pesticide, regardless of registration status, for an unregistered use without first obtaining an approved experimental use permit from the Secretary.
- (b) A complete and accurate permit application shall be made on a form provided by the Secretary before the proposed application.
- (c) The Secretary may issue permits for three types of experimental uses:
 - (1) A State-issued permit as authorized under Section 5(f) of FIFRA to accumulate information or data necessary to register a pesticide use for special local needs.
 - (2) A State-issued permit to conduct laboratory, greenhouse, or limited replicated field trials to test or validate a substance for pesticidal activity, determine its toxicity, or other related chemical properties to the extent allowed under FIFRA.
 - (3) A State-issued authorization to conduct an experimental use in the State for all or some of the uses provided on the label under the experimental use permit issued by the EPA pursuant to Sections 5(a)-(e) of FIFRA.
- (d) No experimental use permit shall exceed one year.
- (e) Upon completion of the experimental use or at the expiration date of the experimental use permit, the permittee shall provide a written summary to the Secretary that shall include:
 - (1) the chemical or pesticide product used;
 - (2) the location of the application;
 - (3) the rate of application;
 - (4) the dates of application; and
 - (5) any adverse effects of the application.
- (f) The permittee shall report to the Secretary upon identification of any adverse effects from the use of or exposure to the pesticide.
- (g) The application of a pesticide under an experimental use permit shall be made by an applicator certified under Category 10 and another applicable category or categories.
- (h) When a pesticide is applied to a food or feed crop under an experimental use permit where a tolerance has not been established for that crop and use pattern, then:
 - (1) the crop shall be destroyed after harvest; or
 - (2) the crop may be used for further testing, provided that the crop shall not be consumed by humans. If the crop is consumed by test animals, the animals or animal products shall not be used for human or animal consumption.

6.04 Bird and Other Vertebrate Pest Control Permit

- (a) No person shall use a pesticide to control birds or other animals without first obtaining an approved permit from the Secretary.
- (b) A complete and accurate permit application shall be made, on a form provided by the Secretary, for bird or animal control.
- (c) A pesticide application may only be made after the Secretary has deemed the bird or animal a pest.
- (d) Types of use that may be authorized by this permit:
 - (1) Area-wide application for the protection of agricultural commodities, wildlife, and human health.
 - (2) Limited-area applications where the use of that pesticide could have a detrimental effect on non-target animals or may affect food or food products.
- (e) A permit application for an area-wide treatment shall be reviewed by the Vermont Fish and Wildlife Department and the Vermont Department of Health prior to any permit issuance.
- (f) Notification of all permitted limited-area pesticide applications shall be submitted to the Vermont Fish and Wildlife Department and the Vermont Department of Health.
- (g) A permit is not required for:
 - (1) animal or bird repellents; or
 - (2) pesticide applications for members of the *Cricetidae* and *Muridae* families.

6.05 Golf Course Permit

- (a) No person shall use a pesticide on a golf course without first obtaining a permit from the Secretary.
- (b) The Secretary shall issue, amend, or deny a permit after consideration of risk to human health and the environment and review of the integrated pest management and nutrient management plans, and the past compliance history of the golf course.
- (c) For a new or expanded golf course the Secretary may require proof that the course was built as represented in the submitted site plan.
- (d) Initial application.
 - (1) A complete and accurate permit application shall be made, on a form provided by the Secretary, prior to an application for the purpose of maintaining golf course turf.
 - (2) An application for a golf course permit shall contain all information requested in the application, that shall include:
 - (A) the name and contact information of the golf course;
 - (B) the mailing address and E911 golf course address;
 - (C) a general description of the golf course as it exists or is designed;
 - (D) a mapped site plan;
 - (E) an integrated pest management plan; and
 - (F) a nutrient management plan.
 - (3) The mapped site plan provided to the Secretary shall include:
 - (A) the tees, greens, and fairways;

- (B) all surface waters;
 - (C) all public water sources or potable water sources on or within 200 feet of an abutting property line;
 - (D) property boundary lines;
 - (E) all buildings and a description of their uses;
 - (F) a legend, scale, and north designation;
 - (G) surface acreage and average depth of ponded surface waters and identification of primary source of potable water supply;
 - (H) a soils map and key as mapped by the U. S. Natural Resources Conservation Service;
 - (I) the square footage of each green and tee and an identification of each green or tee located within 100 feet of surface water;
 - (J) an approximate acreage of fairways and roughs; and
 - (K) the location of any proposed buffer to protect surface water, groundwater, and environmentally sensitive areas.
- (4) The integrated pest management plan shall include:
- (A) a general statement of policy and goals;
 - (B) an identification of the species to be maintained, the scheduled frequency and method of maintenance, and an evaluation of non-chemical control options;
 - (C) a description of biological and cultural pest management strategies and practices that will be used and will identify pest thresholds;
 - (D) a description of the location of pesticide storage and handling areas including a spill response plan;
 - (E) a description of irrigation practices used;
 - (F) a description of any unique features or practices that may minimize pest pressure; and
 - (G) the description, including the location, of any proposed buffer established to protect surface water, groundwater, and environmentally sensitive areas.
- (5) The nutrient management plan shall include:
- (A) a description of the goals of the nutrient management plan;
 - (B) an identification of any area where a nutrient application will be made including greens, tees, fairways and roughs; and
 - (C) a description of the process for interpreting soil test results based on accepted university or Agency recommendations and consistent with the nitrate leaching index.
- (6) A permit applicant shall provide information for any pesticide being requested for use at the golf course, that shall include:

- (A) the pesticide product name and EPA Registration Number;
 - (B) any active ingredient;
 - (C) the proposed rate of application, site of application, number of applications per year, acres to be treated, and target pest for each application;
 - (D) the anticipated total annual amount of each active ingredient; and
 - (E) a demonstration that use of the pesticide will not exceed ground or surface water standards using dilution analyses calculations or other methods approved by the Secretary.
- (7) All initial permit applications shall be published by the Secretary for a 30-day comment period prior to any issuance of a permit.
- (e) Permittee testing and buffer requirements.
- (1) A golf course permit holder shall sample and test areas receiving fertilizer applications at a minimum of once every three years; be collected according to university recommendations or other methods approved by the Secretary; and analyzed for:
 - (A) available phosphorus using Modified Morgan Extraction method or other methods approved by the Secretary;
 - (B) potassium;
 - (C) pH;
 - (D) reactive aluminum; and
 - (E) soil organic matter.
 - (2) The Secretary may require sampling and analysis of relevant groundwater or surface water such as those described in subdivisions (d)(3)(B)-(D) of this section.
 - (3) Any golf course permit or permit amendment shall be conditioned to include buffer strips for the purposes of protecting surface waters, groundwater, or other environmentally sensitive areas that shall, at a minimum, be established as follows:
 - (A) be 100-feet from all potable water sources and public non-community groundwater drinking water sources;
 - (B) be 200-feet from all public community drinking water sources and intakes, and surface water public non-community drinking water intakes;
 - (C) be 25 feet from all flowing surface waters;
 - (D) be 10 feet from impounded surface waters wholly on the golf course property; and
 - (E) be 25 feet from impounded surface waters not wholly on the golf course property.
 - (4) The Secretary may modify these buffers upon written request. Buffer modifications shall be considered on a case-by-case basis.
- (f) Permittee recordkeeping and posting requirements.

- (1) Routine pesticide application records shall be maintained on a daily basis for a period of five years and shall be made available to the Secretary or their designee upon request.
- (2) Routine pesticide application records shall contain:
 - (A) date and time of application;
 - (B) site of application (tee, green, fairway, rough etc.);
 - (C) pesticide applied and EPA Registration Number;
 - (D) amount of pesticide product used;
 - (E) active ingredient(s) in product applied;
 - (F) amount of active ingredient(s) applied in pounds;
 - (G) pest or pests treated for; and
 - (H) weather conditions at the time of application.
- (3) Routine records for nutrient application shall be maintained on a daily basis for a period of five years and shall be made available to the Secretary or their designee upon request.
- (4) Routine records for nutrient application shall contain:
 - (A) date of application;
 - (B) site of application (tee, green, fairway, rough etc.);
 - (C) grade or nutrient analysis of the fertilizer applied;
 - (D) area of application in acres or square feet;
 - (E) amount of product used;
 - (F) university or Agency-approved recommendation relied upon for nitrogen application;
 - (G) university or Agency-approved recommendation relied upon for phosphorous application; and
 - (H) amount of nitrogen and phosphorus applied per thousand square feet.
- (5) Any pesticide application made on golf course turf-grass or landscape plants shall require the posting of a written notice on the clubhouse bulletin board or the first tee.
 - (A) The written notice shall contain the information specified under Section 7.01(c)(1)-(6) and include the specific location and number of each fairway, green, tee and driving area, etc., where pesticide is applied.
 - (B) The notice shall be posted prior to application and remain on the bulletin board or the first tee for at least 24 hours after application.
 - (C) Upon request, a pesticide label and Safety Data Sheet for the specific product(s) used shall be made available to any golfer using the facility or course employee.
- (6) Maintenance of records and reports of pesticide application as provided in subsection 6.05(f) shall exempt a golf course or certified applicator employed by a golf course from the reporting requirements of Sections 8.02, 8.04, and 8.07.

- (7) The permittee shall have an up-to-date mapped site plan, integrated pest management plan, and nutrient management plan at the course at all times and make them available to the Secretary upon request.
- (g) A complete and accurate permit renewal for the maintenance of golf course turf shall be made on a form provided by the Secretary annually at the end of the calendar year and prior to any application in the subsequent year. An application for a golf course permit renewal shall contain all information requested in the application, that may include:
 - (1) A report of the previous year's pesticide usage.
 - (2) A report of the previous year's fertilizer usage containing the:
 - (A) total amount of nitrogen and phosphorus used in the preceding calendar year;
 - (B) total amount of nitrogen and phosphorous applied at each application site including tees, greens, fairways, and roughs; and
 - (C) average rate of nitrogen and phosphorus used per acre (or per 1000 sq. ft.) for each site of application.

6.06 Mosquito Larvicide Permit

- (a) Any person who makes a mosquito larvicide application must first obtain a permit from the Secretary as provided in this section.
- (b) A complete and accurate permit application shall be made on a form provided by the Secretary before the proposed application.
- (c) The application form shall be accompanied by a map of the area of proposed potential application indicating the town boundaries, surface waters, potable water sources and public water sources, threatened or endangered species habitat, and a copy of the notice of intent to use a larvicide that shall be published.
- (d) The notice of intent to use a mosquito larvicide shall:
 - (1) be published not less than 25 days nor more than 60 days before the commencement of application;
 - (2) be published for one day a week for two consecutive weeks in a newspaper, for every county to be affected by the larvicide application. If the notice is printed in a daily newspaper, then the notice shall be published on Thursdays. If the notice is printed in a weekly newspaper, then the notice shall be published on whatever day the paper is published;
 - (3) be at least two columns wide by three inches high;
 - (4) set forth the method(s) that the larvicide is to be applied; the common name of the product or active ingredient to be used; the name, position, address, and telephone number of the applicant to contact for further information; the address and phone number of the Agency identifying it as the appropriate place to contact with comments and/or complaints; reasonable description of the area to be treated, including the names of towns that treatments will occur in; the approximate date(s) of the treatments; and

- (5) set forth a provision for an opportunity for individuals to refuse treatment of their property or request a buffer around their potable water source.
- (e) Following publication of the notice of intent, the permittee shall provide any tear sheets and distribution lists used to the Secretary as proof of public notice.
- (f) In addition to the notice of intent to use a mosquito larvicide, further notification by one of the following methods containing the information set forth in subdivision 6.06(d)(4) shall be provided by:
 - (1) written communication to residents in or abutting the larvicide treatment area during the calendar year of application, at least two weeks prior to such application, by U.S. Mail or electronic mail; or
 - (2) a hand-delivered, printed statement to residents in or abutting the larvicide treatment area at least 14 days prior to such application.
- (g) The permit applicant shall only use products allowed for and in accordance with the conditions specified in the Vermont Mosquito Control Permitting Procedures, that the Secretary shall publish.
- (h) The Secretary shall publish all permit applications for a 30-day comment period prior to any issuance of a permit.
- (i) A mosquito larvicide permit may be issued for a maximum of 5 years before renewal.
- (j) A private, certified commercial, or non-commercial applicator making an application of *Bacillus thuringiensis israelensis* bits-and-dunks larvicide products on wholly-owned private property is exempt from this section.

6.07 Mosquito Adulticide Permit

- (a) No person shall apply a mosquito adulticide for nuisance mosquitos using ground-based truck-mounted sprayers without first obtaining an approved permit from the Secretary as provided in this subsection.
- (b) A complete and accurate permit application shall be made, on a form provided by the Secretary before February 1 of the year of the proposed application.
- (c) The application form shall be accompanied by a map of the area of proposed application indicating boundaries, surface waters, potable water sources and public water sources, threatened or endangered species habitat, and a copy of the notice of intent to use a mosquito adulticide that shall be published.
- (d) The notice of intent to use a mosquito adulticide shall:
 - (1) be published not less than 25 days nor more than 60 days before the commencement of application;
 - (2) be published for one day a week for two consecutive weeks in each of two newspapers, for every town to be affected by the adulticide application. If the notice is printed in a daily newspaper, then the notice shall be published on Thursdays. If the notice is printed in a weekly newspaper, then the notice shall be published on whatever day the paper is published;
 - (3) be at least two columns wide by three inches high;
 - (4) set forth the name and address of the permit applicant; a reasonable identification of the affected treatment areas; the towns where the application is to be done; the approximate starting date of the

application; that a permit has been requested from the Secretary; the method that the adulticide is to be applied; the common name of the product or active ingredient to be used; the name, position, address, and telephone number of a person from the applicant to contact for further information, the address and phone number of the Agency identifying it as the appropriate place to contact with comments and/or complaints; and

- (5) set forth the provision for an opportunity for individuals to request a no-treatment area on or abutting their property.
- (e) Prior to the issuance of any permit for aerial or truck-mounted pesticide application, the Secretary shall consult with the Department of Health to evaluate whether issuing the permit would cause a significant public health risk. As used in this Section, “significant public health risk” means a public health risk of such magnitude that the Commissioner or a local health officer has reason to believe that it must be mitigated. The risk’s magnitude is assessed by evaluating the characteristics of the public health hazard, the degree of exposure to it, and the circumstances of exposure.
- (f) In addition to the notice of intent to use a mosquito adulticide, further notification by one of the following methods containing the information set forth in subdivisions 6.07(d)(4), (5) shall be provided by:
- (1) written communication to residents in or directly adjacent to the treatment area during the calendar year of application, at least two weeks prior to such application, by U.S. Mail or electronic mail;
 - (2) a hand-delivered, printed statement to residents of property in or directly adjacent to the treatment area during the calendar year, at least ten days prior to such application; or
 - (3) other means of public notification deemed acceptable by the Secretary.
- (g) Permit applicants shall submit a integrated pest management plan to the Secretary at least every five years that shall include:
- (1) a general statement of policy and goals;
 - (2) identification of the species to be controlled, the thresholds at which adult control will be conducted, larvicide control options prior to the use of an adulticide, and an evaluation of non-chemical options;
 - (3) an assessment or inventory of mosquito breeding habitat and proposed mechanisms to reduce this habitat in the proposed treatment area;
 - (4) a public notification action plan identifying steps the permittee will take to notify the public of how the permittee plans on reducing mosquito habitat; and
 - (5) establishment of standards and practices for:
 - (A) endangered species protection,
 - (B) water protection,
 - (C) wildlife protection, including pollinators, and
 - (D) buffer establishment and maintenance.

- (h) The Secretary shall establish buffer distances for any adulticide permits issued. Buffer distances shall be determined by factors such as the type of application, properties of any pesticide to be used, and the characteristics of the area to be treated.
- (i) The Secretary shall publish all permit applications for a 30-day comment period prior to issuance of any permit.

6.08 Terrestrial Invasive Plant Control Permits

- (a) No person shall use a pesticide to control a terrestrial invasive plant on property that they do not have a legal right to control without first obtaining an approved permit from the Secretary.
- (b) A complete and accurate permit application shall be made on a form provided by the Secretary before April 1 of the year of the proposed application.
- (c) A terrestrial invasive plant control application shall be conducted by a certified applicator in the appropriate categories and/or sub-categories.
- (d) A terrestrial invasive plant control shall be conducted in accordance with recommendations provided by the Secretary's Invasive w Plant Advisory Committee and in the permit application shall include a plan demonstrating how the permit applicant will either be able to eradicate or otherwise further control the spread of the invasive species with a reduction in any continued chemical applications.
- (e) Written landowner permission for chemical control shall be required.
- (f) The Secretary shall publish all permit applications for a 10-day comment period prior to the issuance of a permit.

Section 7. Notification and Posting of Pesticide Applications

7.01 Turf-grass and Ornamental Application – General Requirements

Excepting golf courses, no outdoor application by a commercial or non-commercial applicator to turf-grass or ornamental plants shall be made without first meeting the following requirements:

- (a) Prior to any outdoor pesticide application to turf-grass or ornamental plants the applicator or their employer shall provide the customer with the pesticide's common name and EPA registration number, the proposed application rate, and, if requested, the product label, and safety data sheet.
- (b) Before beginning an application, the applicator shall post at least one sign, prescribed below, at each conspicuous point of access to the treated area. The applicator shall leave the sign posted with instructions to remove the sign 24 hours following the application. The sign shall:
 - (1) be at least four by five inches, of sturdy, weather resistant material;
 - (2) be made with contrasting colors;
 - (3) contain no additional words or symbols on the front panel;
 - (4) contain the date and time of application on the back panel; and
 - (5) be posted at least 12 inches above the ground.

C A U T I O N



Pesticide Application

KEEP OFF UNTIL DRY

CUSTOMER: Please remove after 24 Hours.

- (c) Immediately upon completion of each application, the applicator or their employer shall leave with the customer, resident, or occupant, and if unavailable in a notable location at the site, a statement that contains:
 - (1) the name, address, and telephone number of the applicator or company providing service;
 - (2) the pesticide applicator's name and certification number;
 - (3) the common or trade name, EPA registration number, amount used and pest treated for each pesticide applied;
 - (4) any required post-application label safety precautions;
 - (5) the application date, time, and location; and
 - (6) instructions that the sign should be removed after 24 hours.
- (d) The applicator or their employer shall provide a copy of the pesticide label and Safety Data Sheet upon request by either the customer or adjoining landowner.
- (e) The applicator or their employer shall provide the customer with prior notification of the timing of each pesticide application upon request.

7.02 Turf-grass and Ornamental Application – Condominiums or Apartment Buildings

Excepting owner-occupied dwellings and in addition to complying with the requirements of Section 7.01, no outdoor application by a commercial or non-commercial applicator to turf-grass or ornamental plants shall be made on property of condominiums or apartment buildings without first meeting the following requirements:

- (a) Prior to any application under this section, the applicator or their employer shall provide a template form to the customer that contains:
 - (1) the name, address, and telephone number of the applicator or company providing service; and
 - (2) text headings that include:
 - (A) the contact information of the property manager or owner; and
 - (B) the anticipated application date, time, common name of product or active ingredients, and general location.
- (b) At least 24 hours, but no more than seven days, before an application under this section, the customer shall complete and post, or cause to be completed and posted, the written notice provided in subsection 7.02(a) in a central area accessible to all occupants. Alternatively, the written notice may be made to occupants electronically such as by text message or email notifications.
- (c) At least 24 hours, but no more than seven days, before an application under this section, the applicator or their employer shall complete and post, or cause

to be completed and posted, a written notice containing the information provided in subdivisions (1) and (2) of Section 7.02(a) in a central area accessible to all occupants. The written notice may be made to occupants electronically such as by text message or email notifications.

7.03 Indoor Application – Residential Dwelling Unit

Excepting owner-occupied dwellings and in addition to the requirements of Section 7.01, no application shall be made inside a residential dwelling unit not wholly owned by the occupant, owner, or landlord of the residential dwelling unit without first meeting the requirements of subsections (a) through (c) of this Section.

- (a) At least 24 hours and no more than seven days in advance of any private, commercial or non-commercial pesticide application made inside a residential dwelling unit not owned by the occupant, the owner, or landlord of the residential dwelling unit shall complete and provide or cause to be provided a written notice to the occupant of the residential dwelling unit, where the occupant of that unit did not request the impending pesticide application.
- (b) The written notice may be mailed, sent electronically, or provided directly to the occupant and shall include:
 - (1) the name of the certified applicator or company making the application;
 - (2) the anticipated date and time of application;
 - (3) product name and EPA registration number;
 - (3) the pests treated for; and
 - (4) the contact information of the owner or landlord for more information.
- (c) Upon request by an occupant, the property owner or landlord shall provide any additional information requested relating to the application of pesticide.
- (d) The following are exempt from the requirements of Section 7.03(a):
 - (1) Application of a pesticide by hand or with non-powered equipment to control or repel stinging insects when there is an urgent need to mitigate or eliminate a pest that threatens the health or safety of any person.
 - (2) Application of an antimicrobial product by hand or with non-powered equipment to interior or exterior surfaces and furnishings during the course of routine cleaning procedures.
 - (3) Application of any paint, stain, or wood preservative that is not a State-restricted use product;
 - (4) Application of a pesticide by an occupant to their own unit.
 - (5) Commercial application of a pesticide where the occupant has contracted for application to their own unit.
 - (6) Indoor applications of a pesticide injected into closed systems for control of nuisance microbial organisms.

Section 8. Maintenance of Records by Certified Applicators, Licensed Companies, Licensed Pesticide Dealers, and Pesticide Producing Establishments

8.01 Requirements for Certified Private Applicators

- (a) A certified private applicator shall maintain routine operational records for any Class A pesticide applied.
- (b) Routine operational records shall be maintained on a daily basis and shall contain:
 - (1) date and time of the pesticide application;
 - (2) brand name or product name of the pesticide applied;
 - (3) EPA registration number of the pesticide applied.
 - (4) active ingredient or ingredients of the pesticide applied;
 - (5) total amount of the pesticide applied per location per application;
 - (6) restricted entry interval (“REI”) of the pesticide applied;
 - (7) location of the pesticide application;
 - (8) size of the area treated;
 - (9) crop, commodity, stored product, or site that the pesticide was applied;
 - (10) pest treated for; and
 - (11) name and certification number of the certified applicator that made or supervised the application, and, if applicable, the name of any noncertified applicator(s) that made the application under the direct supervision of the certified applicator.
- (c) These records must be maintained for a period of three years and shall be made available to the Secretary upon request.

8.02 Requirements for Certified Commercial and Non-commercial Applicators

- (a) Certified commercial and certified non-commercial applicators shall keep and maintain pesticide operational records of all pesticides applied.
- (b) Routine operational records shall be maintained on a daily basis and shall contain:
 - (1) name and address of the person for whom the pesticide was applied;
 - (2) pest treated for;
 - (3) location of the pesticide application;
 - (4) size of the area treated;
 - (5) crop, commodity, stored product, or site that the pesticide was applied;
 - (6) time and date of the pesticide application;
 - (7) brand name or product name of the pesticide applied;
 - (8) EPA registration number of the pesticide applied;
 - (9) total amount of the pesticide applied per location per application and
 - (10) name and certification number of the certified applicator that made or supervised the application, and, if applicable, the name of any noncertified applicator(s) that made the application under the direct supervision of the certified applicator.
- (c) These records must be maintained for a period of three years and shall be made available to the Secretary upon request.
- (d) Certified commercial and non-commercial applicators shall submit an annual pesticide application report to the Secretary.

- (1) The report shall state the EPA Registration Number, the product name, the amount applied, the general purpose that it was applied for and the county where it was applied.
- (2) The report shall be submitted together with an application for the renewal of certification to the Secretary.
 - (A) Commercial and non-commercial pesticide applicator certificates shall not be renewed without the submission of an annual application report.
 - (B) Annual pesticide application reports shall be submitted regardless of whether a pesticide was applied during a given year.

8.03 Requirements for Permittees

A person applying a pesticide under the authority of a permit issued by the Agency shall comply with all recordkeeping and reporting requirements in addition to complying with all other requirements of this rule.

8.04 Requirements for Licensed Companies

- (a) A licensed company shall maintain routine operational records and submit the annual pesticide application report to the Secretary.
- (b) A licensed company shall collect operational records required by this section from its certified applicators, hold them for a period of three years, and make them available to the Secretary upon request.
- (c) A licensed company shall submit the annual pesticide application report together with the company license renewal application to the Secretary prior to January 1 of each year.

8.05 Requirements for Class A Dealers

- (a) A Class A dealer shall keep and maintain records of the sales of any pesticide and shall make them available for inspection to the Secretary upon request.
- (b) A Class A dealer shall record and maintain at each outlet for a period of at least three years records of each transaction where a Class A pesticide is distributed to any person, excluding transactions solely between persons who are pesticide producers, registrants, wholesalers, or retail sellers, acting only in those capacities.
- (c) A record of each Class A pesticide transaction shall include the following information:
 - (1) The name and address of the residence or principal place of business of the certified applicator to whom the Class A pesticide was distributed or sold or, if applicable, the name and address of the residence or principal place of business of each noncertified applicator to whom the Class A pesticide was distributed or sold for application by a certified applicator.
 - (2) The certification number presented to the dealer evidencing the valid certification of the certified applicator authorized to purchase the Class A pesticide.
 - (3) The expiration date of the certified applicator's certification.
 - (4) The category or categories that the applicator is certified in.

- (5) The product name and EPA registration number of the Class A pesticide distributed or sold in the transaction including any applicable emergency exemption or State special local need registration number.
- (6) The quantity of the Class A pesticide distributed or sold in the transaction.
- (7) The date of the transaction.
- (d) A report of special permit and any Class A pesticide sold on a calendar year basis shall be submitted together with the application for license renewal to the Secretary by all Class A pesticide dealers prior to January 31 of the following year. Reports may be required by the Secretary at any other time, provided the request is made in writing.
- (e) Annual sales reports shall include the product name, the EPA registration number, the total amount of Class A pesticide sold and the county of intended use. For reporting the county of intended use, pesticide dealers may use the applicator's county of residence.
- (f) Annual sales reports shall be submitted regardless of whether a Class A pesticide was sold.

8.06 Requirements for Pesticide Producing Establishments

A pesticide producing establishment shall maintain records required by FIFRA and make those records available to the Secretary upon request.

8.07 Additional Recordkeeping Requirements

- (a) Annual records may be required for the treatment of a pest as deemed necessary by the Secretary.
- (b) In the event that a certified applicator, licensed company, or licensed pesticide dealer should choose not to renew a certificate or license, the annual use and/or annual sales reports are still required for the last year that a valid certificate and/or license was held.

Subchapter 3 – Certification Standards for Commercial Applicators and Non-commercial Applicators Using Other Than Class C Pesticides; Certification Standards for Private Applicators

Section 9. Certification Standards for Commercial Applicators and Non-commercial Applicators Using Other than Class C Pesticides

9.01 General Certification Requirements

- (a) Any non-commercial applicator who uses a pesticide other than Class C and any commercial applicator, except those who work under the direct supervision of a certified applicator, shall be certified according to categories that reflect the types of pesticide use that they have been examined for and found competent.
- (b) An applicant shall take and pass a written examination covering core pesticide use standards and examination(s) related to specific standards required for each category that a person uses a pesticide.

9.02 Description of Certification Categories

- (a) Category 1 Agricultural Pest Control.
 - (1) Category 1A Agricultural Plant applies to an applicator who uses or supervises the use of a pesticide in the production of agricultural commodities, including but not limited to grains, vegetables, small fruits, tree fruits, peanuts, tree nuts, tobacco, cotton, feed and forage crops including grasslands, and non-crop agricultural lands.
 - (2) Category 1B Animal applies to an applicator who uses or supervises the use of a pesticide on animals or to places on or in which animals are confined including a Doctor of Veterinary Medicine engaged in the business of applying a pesticide for hire, and who publicly holds themselves out as pesticide applicators. This category does not include the use of a pesticide in apiculture.
 - (3) Category 1C Apiculture applies to an applicator who uses or supervises the use of a pesticide in apiculture, including, but not limited to miticides.
- (b) Category 2 Forest Pest Control applies to an applicator who uses or supervises the use of a pesticide in forests, forest nurseries and forest seed production.
- (c) Category 3 Ornamental and Turf Pest Control.
 - (1) Category 3A Ornamental & Shade Trees applies to an applicator who uses or supervises the use of a pesticide to control pests in the maintenance and/or production of ornamental and landscape plants including flowers, shrubs and trees.
 - (2) Category 3B Turf applies to an applicator who uses or supervises the use of a pesticide to control pests in the maintenance and production of turf, including golf courses.
- (d) Category 4 Seed Treatment applies to an applicator who uses or supervises the use of a pesticide on seeds in seed treatment facilities.
- (e) Category 5 Aquatic Pest Control applies to an applicator who uses or supervises the use of a pesticide as applied to, or adjacent to, standing or running waters and includes but is not limited to, waters of the State, drinking water reservoirs, industrial lagoons and sewage or wastewater treatment plant lagoons.
- (f) Category 6 Rights-of-way Pest Control applies to an applicator who uses or supervises the use of a pesticide in the maintenance of roadsides, powerlines, pipelines, railway rights-of-way or similar areas.
- (g) Category 7 Industrial, Institutional, Structural, and Health Related Pest Control.
 - (1) Category 7A General Pest Control applies to an applicator who uses or supervises the use of a pesticide in, on or around food handling establishments; human dwellings; institutions, such as schools or hospitals; industrial establishments, including warehouses and grain elevators and any other structure and adjacent area, public or private, for the protection of stored, processed, or manufactured products.
 - (2) Category 7B Vector Pest Control (non-public health) applies to an applicator who uses or supervises the use of a pesticide for the

control of mosquitoes, ticks and other biting arthropods. This category does not apply to government applicators engaged in public health programs.

- (3) Category 7C Food Processing Pest Control applies to an applicator who uses or supervises the use of a pesticide to control pests in, on, or around food processing plants that may include, but are not limited to, bakeries, dairy product processing, canning and frozen food packing, confection manufacturing, and meat product processing plants.
- (4) Category 7D Wood and Fiber Product Pest Control applies to an applicator who uses or supervises the use of a pesticide for control of pests that degrade or prematurely destroy the service, life and usefulness of wood and fiber products.
- (5) Category 7E Cooling Towers and Biocides (non-potable water) applies an applicator who uses or supervises the use of a pesticide to control pests in non-potable cooling waters and in water or slurries used in industrial processing, in, on or around human dwellings, commercial establishments, institutions, including, schools and hospitals, industrial establishments and any other structures and adjacent areas whether public or private.
- (6) Category 7F Disinfection and Antimicrobial Pest Control applies to an applicator who uses or supervises the use of a pesticide to treat mold or microbial growth in residential and commercial settings including commercial disinfection services.
- (h) Category 8 Public Health Pest Control applies to an applicator who is employed by the government and who uses or supervises the use of a pesticide in public health programs for the management and control of pests for medical and public health importance.
- (i) Category 9 Regulatory Pest Control applies to an applicator who uses or supervises the use of a pesticide by State, federal, and other governmental subdivisions for control of regulated pests.
- (j) Category 10 Demonstration and Research Pest Control applies to an applicator who uses or supervises the use of a pesticide for the purpose of demonstrating pest control to the public, supervising demonstrations or conducting field research with a pesticide. Included in this category are those individuals who demonstrate, sell, or recommend a pesticide to applicators, dealers or the public.
- (k) Category 11 Aerial Pest Control applies to an applicator who performs an aerial application for the control of pests. This is a concurrent category and must be used in conjunction with valid certification in another category as described in Sections 9.02(a)-(j) and (p).
- (l) Category 12 Soil Fumigation applies to an applicator who uses or supervises the use of a pesticide to fumigate soil. This is a concurrent category and must be used in conjunction with valid certification in another category as described in Sections 9.02(a)-(j) and (p).

- (m) Category 13 Non-soil Fumigation applies to an applicator who uses or supervises the use of a pesticide to fumigate anything other than soil. This is a concurrent category and must be used in conjunction with valid certification in another category as described in Sections 9.02(a)-(j) and (p).
- (p) Category 14 Terrestrial Invasive Plants applies to an applicator who uses or supervises the use of a pesticide in a wide variety of settings, including but not limited to forests, sensitive ecosystems, residential, fallow crop land, predominantly targeted at the control of designated terrestrial invasive plant species.

9.03 Core standards for All Categories and Concurrent Categories

- (a) Any non-commercial applicator who uses a pesticide other than Class C and any commercial applicator, except those who work under the direct supervision of a certified applicator, seeking certification shall demonstrate practical knowledge of the principles and practices of pest control and the proper and effective use thereof by passing a written examination of core pesticide use standards.
- (b) Written examinations for all commercial and non-commercial applicator certifications will address the following areas of core competency:
 - (1) Label and labeling comprehension. Ability to read and understand pesticide labels, labeling, and their functions, including all the following:
 - (A) Understanding the general format and terminology of pesticide labels and labeling.
 - (B) Understanding instructions, warnings, terms, symbols, and other information commonly appearing on pesticide labels and labeling.
 - (C) Understanding that it is a violation to use any pesticide in a manner inconsistent with its labeling.
 - (D) Understanding that applicators must comply with all use restrictions and directions for use contained in pesticide labels and labeling, including being certified in the certification category appropriate to the type and site of the application.
 - (E) Understanding the meaning of product classification as either federally-restricted, State-restricted, controlled-sale, or homeowner as related to Vermont Class A, B, and C classifications, and that a product may be unclassified.
 - (F) Understanding and complying with product-specific notification requirements.
 - (G) Recognizing and understanding the difference between mandatory and advisory labeling language.
 - (2) Safety. Measures to avoid or minimize adverse health effects, including:

- (A) Understanding the different natures of the risks of acute toxicity and chronic toxicity, as well as the long-term effects of a pesticide.
 - (B) Understanding that a pesticide's risk is a function of exposure and the pesticide's toxicity.
 - (C) Recognition of likely ways in which dermal, inhalation, and oral exposure may occur.
 - (D) Common types and causes of pesticide accidents.
 - (E) Precautions to prevent injury to applicators and other individuals in or near treated areas.
 - (F) Need for, and proper use of, protective clothing and personal protective equipment.
 - (G) Symptoms of pesticide poisoning.
 - (H) First aid and other procedures to be followed in case of a pesticide accident.
 - (I) Proper identification, storage, transport, handling, mixing procedures, and disposal methods for a pesticide and used pesticide containers, including precautions to be taken to prevent children from having access to a pesticide and pesticide containers.
- (3) Environment. The potential environmental consequences of the use and misuse of a pesticide, including the influence of:
- (A) Weather and other indoor and outdoor climatic conditions.
 - (B) Types of terrain, soil, or other substrate.
 - (C) Presence of fish, wildlife, and other non-target organisms.
 - (D) Drainage patterns.
- (4) Pests. The proper identification and effective control of pests, including:
- (A) The importance of correctly identifying target pests and selecting the proper pesticide product(s) for effective pest control.
 - (B) Verifying that the label does not prohibit the use of the product to control the target pest(s).
 - (C) Pest development and biology as it may be relevant to problem identification and control.
- (5) Pesticides. Characteristics of pesticides, including:
- (A) Types of pesticides.
 - (B) Types of formulations.
 - (C) Compatibility, synergism, persistence, and animal and plant toxicity of the formulations.
 - (D) Hazards and residues associated with use.
 - (E) Factors that influence effectiveness or lead to problems such as pesticide resistance.
 - (F) Dilution procedures.

- (6) Equipment. Application equipment, including:
 - (A) Types of equipment and advantages and limitations of each type.
 - (B) Use, maintenance, and calibration procedures.
 - (7) Application methods. Selecting appropriate application methods, including:
 - (A) Methods used to apply various forms and formulations of pesticides.
 - (B) Knowledge of which application method to use in a given situation and that use of a fumigant or aerial application requires additional certification.
 - (C) How selection of application method and use of a pesticide may result in proper use, unnecessary or ineffective use, and misuse.
 - (D) Prevention of drift and pesticide loss into the environment.
 - (8) Laws and regulations. Knowledge of applicable State and Federal laws and regulations.
 - (9) Direct Supervision. Comprehension of what “direct supervision” entails, including an ability to recognize which Class A pesticides allow for direct supervision.
 - (10) Professionalism. Understanding the importance of:
 - (A) Maintaining chemical security for pesticides.
 - (B) How to communicate information about pesticide exposures and risks with customers and the public.
 - (C) Appropriate product stewardship for certified applicators.
- (c) All applicators seeking certification shall demonstrate practical knowledge of the principles and practices of pest control and safe use of a pesticide. Examination shall be based on examples of problems and situations appropriate to the particular category or categories of the applicator's certification and the following areas of competence in Sections 9.05 – 9.18.

9.04 Specific Standards of Competency for Each Category of Commercial and Noncommercial Applicators

In addition to satisfying the requirements of Section 9.03, to be certified as commercial and non-commercial applicators, a person must demonstrate through written examinations practical knowledge of the principles and practices of pest control and proper and effective use of pesticides for each category that they intend to use pesticides as listed in Sections 9.05 – 9.18.

9.05 Category 1 Agricultural Pest Control

- (a) Category 1A Agricultural Plant. Applicators must demonstrate a practical knowledge of:
 - (1) Crops, grasslands, non-crop agricultural lands, and the specific pests of those areas on which they may be using a pesticide.
 - (2) Pre-harvest intervals.
 - (3) Restricted entry intervals.

- (4) Phytotoxicity.
 - (5) Potential for environmental contamination such as soil and water problems, non-target injury and other problems resulting from the use of a pesticide in agricultural areas.
 - (6) The potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.
- (b) Category 1B Animal. Applicators applying a pesticide directly to animals or to places on or in which animals are confined shall demonstrate a practical knowledge of:
- (1) The animals to be treated and their associated pests.
 - (2) Specific pesticide toxicity and residue potential.
 - (3) The relative hazards associated with such factors as formulation, application techniques, age of animals, stress and extent of treatment.
- (c) Category 1C Apiculture. Applicators applying a pesticide in or on beehives shall demonstrate a practical knowledge of:
- (1) Honeybee life cycle, and their associated pests;
 - (2) Specific pesticide toxicity, residue potential, and tolerances for honey, wax, or other hive components that will enter into the food supply.
 - (3) The relative hazards associated with such factors as formulation, application techniques, age of animals, stress and extent of treatment.
 - (4) Best management practices of pests and diseases associated with honeybees.
 - (5) Methods to quantify mite loads in hives.

9.06 Category 2 Forest Pest Control

Applicators shall demonstrate a practical knowledge of:

- (a) Types of forests, forest nurseries, and seed production within the jurisdiction of the certifying authority and the pests involved.
- (b) The cyclic occurrence of certain pests and specific population dynamics as a basis for programming pesticide applications.
- (c) The relevant organisms causing harm and their vulnerability to the pesticides to be applied.
- (d) How to determine when pesticide use is proper.
- (e) Selection of application method and proper use of application equipment to minimize non-target exposures.
- (f) Appropriate responses to meteorological factors and adjacent land use.
- (g) The potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.

9.07 Category 3 Ornamental and Turf Pest Control

- (a) Category 3A Ornamental and Shade Tree. Applicators shall demonstrate practical knowledge of pesticide problems associated with the production and maintenance of ornamental plants including:

- (1) The potential for phytotoxicity.
 - (2) Application methods that will minimize or prevent hazards to humans, pets, and other domestic animals due to the frequent proximity of human habitations to application activities.
 - (3) Knowledge of State-required posting.
 - (b) Category 3B Turf. Applicators shall demonstrate practical knowledge of pesticide problems associated with the production and maintenance of turf including:
 - (1) The potential for phytotoxicity.
 - (2) Application methods that will minimize or prevent hazards to humans, pets, and other domestic animals.
 - (3) Knowledge of State-required posting.
- 9.08 Category 4 Seed Treatment
 Applicators shall demonstrate a practical knowledge including:
 - (a) The types of seeds to be treated in a seed treatment facility.
 - (b) The effects of carriers and surface-active agents on pesticide binding and germination.
 - (c) The hazards associated with handling, sorting and mixing, and misuse of treated seeds.
 - (d) The importance of proper application techniques to avoid harm to non-target organisms.
 - (e) The proper disposal of unused treated seeds.
- 9.09 Category 5 Aquatic Pest Control
 Applicators shall demonstrate a practical knowledge of:
 - (a) The secondary effects which can be caused by improper application rates, incorrect formulations and faulty application of pesticides used in this category.
 - (b) Various aquatic use situations and the potential of downstream effects.
 - (c) Potential pesticide effects on plants, fish, birds, beneficial insects and other organisms that may be present in aquatic environments.
 - (d) The principles of limited-area application.
- 9.10 Category 6 Right-of-way Pest Control
 Applicators shall demonstrate a practical knowledge of:
 - (a) The types of environments (terrestrial and aquatic) traversed by rights-of-way.
 - (b) Recognition of target pests.
 - (c) Techniques to minimize non-target exposure, runoff, drift, and excessive foliage destruction.
 - (d) The potential for phytotoxicity due to a wide variety of plants and pests to be controlled, and for persistence beyond the intended period of pest control.
- 9.11 Category 7 Industrial, Institutional, Structural and Health Related Pest Control
 - (a) Category 7A General. Applicators shall demonstrate a practical knowledge of:
 - (1) A wide variety of pests, including their life cycles, biology, and behavior.
 - (2) Appropriate types of formulations to control a target pest.
 - (3) Methods of application that

- (A) avoid contamination of habitat and exposure of people and pets;
 - (B) avoid contamination of food;
 - (C) minimize damage to and contamination of areas treated;
 - (D) minimize acute and chronic exposure of people and pets; and
 - (E) minimize environmental impacts of outdoor applications.
- (b) Category 7B Vector Pest (non-public health). Applicators shall demonstrate a practical knowledge of:
- (1) Vector pests, including recognizing the pests and signs of their presence, their habitats, their life cycles, biology, and behavior where it is relevant to problem identification and control.
 - (2) The importance of such non-chemical control methods as sanitation, waste disposal, and drainage.
 - (3) Application methods that minimize acute and chronic exposure of people and pets.
 - (4) Methods to minimize environmental impacts of outdoor applications.
- (c) Category 7C Food Processing. Applicators shall demonstrate a practical knowledge of:
- (1) A wide variety of pests, including their life cycles;
 - (2) Types of formulations appropriate for the control of a target pest; and
 - (3) Application methods that
 - (A) avoid contamination of food, food processing equipment, and packaging materials;
 - (B) avoid damage and contamination of the processing area and exposure of people;
 - (C) minimize acute and chronic exposure of people and pets; and
 - (D) minimize environmental impacts of outdoor applications.
- (d) Category 7D Wood and Fiber Product. Applicators shall demonstrate a practical knowledge of:
- (1) A wide variety of pests, including their life cycle; types of formulations for their control; and
 - (2) Application methods that:
 - (A) avoid contamination of food or feed;
 - (B) avoid damage and contamination of habitat and exposure to people, pets and domestic animals;
 - (C) avoid contamination, minimize damage to and contamination of areas treated;
 - (D) minimize acute and chronic exposure of people and pets; and

- (E) minimize environmental impacts of outdoor applications.
- (e) Category 7E Cooling Towers and Biocides (non-potable water). Applicators shall demonstrate a practical knowledge of:
 - (1) Wide array of pests (algae, bacteria, fungi and shellfish) that infest a cooling water system or water used in industrial processing and the methods and reasons for their control;
 - (2) A practical knowledge of the pesticide formulations and hazards associated with the use of a pesticide in non-potable cooling waters or water used in industrial processing, in, on or around human dwellings, commercial establishments, institutions, industrial establishments, pulp mills and any other structures and adjacent areas, public or private;
 - (3) The different types of cooling water systems or water used in industrial processing and the various methods of testing for and identifying pest infestations.
- (f) Category 7F Disinfection and Antimicrobial. Applicators shall demonstrate a practical knowledge of:
 - (1) Microbial pests, including their life cycles, types of formulations appropriate for their control; and
 - (2) Methods of application that:
 - (A) avoid contamination of habitat and exposure of people and pets;
 - (B) minimize damage to and contamination of areas treated;
 - (C) minimize acute and chronic exposure of people and pets; and
 - (D) minimize environmental impacts of outdoor applications.

9.12 Category 8 Public Health Pest Control

Applicators shall demonstrate practical knowledge of:

- (a) Vector-disease transmission as it relates to and influences application programs.
- (b) Types of pests that are important vectors of disease, including recognizing the pests and signs of their presence, their habitats, their life cycles, biology, and behavior.
- (c) Application methods to minimize damage to and contamination of areas treated, acute and chronic exposure of people and pets, and non-target exposures.
- (d) The importance and employment of such non-chemical control methods as sanitation, waste disposal and drainage.

9.13 Category 9 Regulatory Pest Control

- (a) Applicators shall demonstrate practical knowledge of:
 - (1) Regulated pests.
 - (2) Applicable laws relating to quarantine and other regulation of pests.

- (3) The potential impact on the environment of a pesticide used in suppression and eradication programs.
 - (4) Factors influencing introduction, spread and population dynamics or relevant pests.
 - (b) The knowledge referenced in Section 9.13(a) shall extend beyond that required in other areas of the country where emergency measures are invoked to control regulated pests and where individual judgments must be made in new situations.
- 9.14 Category 10 Demonstration and Research Pest Control.
- (a) Applicators shall demonstrate practical knowledge of:
 - (1) Potential problems, pests, and population levels reasonably expected to occur in a demonstration situation;
 - (2) The effects of a pesticide on target and non-target organisms; and
 - (3) Pesticide-organism interactions and the importance of integrating pesticide use with other control methods.
 - (b) Applicators shall demonstrate competency in each pest control category applicable to their activity.
- 9.15 Category 11 Aerial Pest Control
- Applicators shall demonstrate practical knowledge of the pest problems and pest control practices associated with performing an aerial application of a pesticide, including:
- (a) Label and labeling comprehension. Ability to read and understand pesticide labels, labeling, and restrictions specific to aerial application of a pesticide including:
 - (1) Spray volumes.
 - (2) Buffers and no-spray zones.
 - (3) Weather conditions specific to wind and inversions.
 - (b) Application equipment. Understand how to choose and maintain aerial application equipment, including:
 - (1) The importance of inspecting application equipment to ensure it is in proper operating condition prior to beginning an application.
 - (2) Selecting proper nozzles to ensure appropriate pesticide dispersal and to minimize drift.
 - (3) Knowledge of the components of an aerial pesticide application system, including pesticide hoppers, tanks, pumps, and types of nozzles.
 - (4) Interpreting a nozzle flow rate chart.
 - (5) Determining the number of nozzles for intended pesticide output using nozzle flow rate chart, aircraft speed, and swath width.
 - (6) How to ensure nozzles are placed to compensate for uneven dispersal due to uneven airflow from wingtip vortices, helicopter rotor turbulence, and aircraft propeller turbulence.
 - (7) Where to place nozzles to produce the appropriate droplet size.
 - (8) How to maintain the application system in good repair, including pressure gauge accuracy, filter cleaning according to schedule, and checking nozzles for excessive wear.
 - (9) How to calculate required and actual flow rates.

- (10) How to verify flow rate using fixed timing, open timing, known distance, or a flowmeter.
- (11) When to adjust and calibrate application equipment.
- (c) Application considerations. The applicator shall demonstrate knowledge of factors to consider before and during application, including:
 - (1) Weather conditions that could impact application by affecting aircraft engine power, take-off distance, and climb rate, or by promoting spray droplet evaporation.
 - (2) How to determine wind velocity, direction, and air density at the application site.
 - (3) The potential impact of thermals and temperature inversions on aerial pesticide application.
- (d) Minimizing drift. The applicator shall demonstrate knowledge of methods to minimize off-target pesticide movement, including:
 - (1) How to determine drift potential of a product using a smoke generator.
 - (2) How to evaluate vertical and horizontal smoke plumes to assess wind direction, speed, and concentration.
 - (3) Selecting techniques that minimize pesticide movement out of the area to be treated.
 - (4) Documenting special equipment configurations or flight patterns used to reduce off-target pesticide drift.
- (e) Performing an aerial application. The applicator shall demonstrate competency in performing an aerial pesticide application, including:
 - (1) Selecting a flight altitude that minimizes streaking and off-target pesticide drift.
 - (2) Choosing a flight pattern that ensures applicator and bystander safety and proper application.
 - (3) The importance of engaging and disengaging spray precisely when entering and exiting a predetermined swath pattern.
 - (4) Tools available to mark swaths, such as global positioning systems and flags.
 - (5) Recordkeeping requirements for aerial pesticide applications including application conditions if applicable.

9.16 Category 12 Soil Fumigation

Applicators shall demonstrate practical knowledge of the pest problems and pest control practices associated with performing soil fumigation applications, including:

- (a) Label and labeling comprehension. Ability to read and understand pesticide labels and labeling for products used to perform soil fumigation, including:
 - (1) Labeling requirements specific to soil fumigants.
 - (2) Requirements for certified applicators of fumigants, fumigant handlers and permitted fumigant handler activities, and the safety information that certified applicators must provide to noncertified applicators using fumigants under their direct supervision.
 - (3) Entry-restricted periods for tarped and untarped field application scenarios.

- (4) Recordkeeping requirements.
 - (5) Labeling provisions unique to fumigant products containing certain active ingredients.
- (b) Safety. Measures to minimize adverse health effects, including:
- (1) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, field workers, and bystanders can become exposed to fumigants.
 - (2) Common problems and mistakes that can result in direct exposure to fumigants.
 - (3) Signs and symptoms of human exposure to fumigants.
 - (4) Air concentrations of a fumigant that require that applicators wear respirators or exit the work area entirely.
 - (5) Steps to take if a fumigant applicator experiences sensory irritation.
 - (6) Understanding air monitoring, when it is required, and where and when to take samples.
 - (7) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.
 - (8) First aid measures to take in the event of exposure to a soil fumigant.
 - (9) Label and labeling requirements for transportation, storage, spill clean-up, and emergency response for soil fumigants, including safe disposal of containers and contaminated soil, and management of empty containers.
- (c) Soil fumigant chemical characteristics. Characteristics of soil fumigants, including:
- (1) Chemical characteristics of soil fumigants.
 - (2) Specific human exposure concerns for soil fumigants.
 - (3) How soil fumigants change from a liquid or solid to a gas.
 - (4) How soil fumigants disperse in the application zone.
 - (5) Compatibility concerns for tanks, hoses, tubing, and other equipment.
- (d) Application. Selecting appropriate application methods and timing, including:
- (1) Application methods, including but not limited to water-run and non-water-run applications, and equipment commonly used for each soil fumigant.
 - (2) Site characteristics that influence fumigant exposure.
 - (3) Understanding temperature inversions and their impact on soil fumigant application.
 - (4) Weather conditions that could impact timing of soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications during specific weather conditions.
 - (5) Conducting pre-application inspection of application equipment.
 - (6) Understanding the purpose and methods of soil sealing, including the factors that determine which soil sealing method to use.

- (7) Understanding the use of tarps, including the range of tarps available, how to seal tarps, and labeling requirements for tarp removal, perforation, and repair.
- (8) Calculating the amount of product required for a specific treatment area.
- (9) Understanding the basic techniques for calibrating soil fumigant application equipment.
- (e) Soil and pest factors. Soil and pest factors that influence fumigant activity, including:
 - (1) Influence of soil factors on fumigant volatility and movement within the soil profile.
 - (2) Factors that influence gaseous movement through the soil profile and into the air.
 - (3) Soil characteristics, including how soil characteristics affect the success of a soil fumigant application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigant application.
 - (4) Identifying pests causing the damage and verifying they can be controlled with soil fumigation.
 - (5) Understanding the relationship between pest density and application rate.
 - (6) The importance of proper application depth and timing.
- (f) Personal protective equipment. Understanding what personal protective equipment is necessary and how to use it properly, including:
 - (1) Following labeling directions for required personal protective equipment.
 - (2) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.
 - (3) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.
 - (4) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.
- (g) Fumigant management plans and post-application summaries. Information about fumigant management plans, including:
 - (1) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.
 - (2) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.
 - (3) The person responsible for verifying that a fumigant management plan is accurate.
 - (4) The elements, purpose, and content of a post-application summary, who must prepare it, and when it must be completed.

- (h) Buffer zones and posting requirements. Understanding buffer zones and posting requirements, including the following:
 - (1) Buffer zones and the buffer zone period.
 - (2) Identifying who is allowed in a buffer zone during the buffer zone period and who is prohibited from being in a buffer zone during the buffer zone period.
 - (3) Using the buffer zone table from the labeling to determine the size of the buffer zone.
 - (4) Factors that determine the buffer zone credits for application scenarios and calculating buffer zones using credits.
 - (5) Distinguishing buffer zone posting and treated area posting, including the pre-application and post-application posting timeframes for each.
 - (6) Proper choice and placement of warning signs.

9.17 Category 13 Non-soil fumigation

Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing fumigation applications of a pesticide to sites other than soil, including:

- (a) Label & labeling comprehension. Ability to read and understand pesticide labels and labeling for products used to perform non-soil fumigation, including labeling requirements specific to non-soil fumigants.
- (b) Safety. Measures to minimize adverse health effects, including:
 - (1) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, and bystanders can become exposed to fumigants.
 - (2) Common problems and mistakes that can result in direct exposure to fumigants.
 - (3) Signs and symptoms of human exposure to fumigants.
 - (4) Air concentrations of a fumigant that require applicators to wear respirators or to exit the work area entirely.
 - (5) Steps to take if a fumigant applicator experiences sensory irritation.
 - (6) Understanding air monitoring, when it is required, and where and when to take samples.
 - (7) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.
 - (8) First aid measures to take in the event of exposure to a fumigant.
 - (9) Labeling requirements for transportation, storage, spill clean-up, and emergency response for non-soil fumigants, including safe disposal of containers and contaminated materials, and management of empty containers.
- (c) Non-soil fumigant chemical characteristics. Characteristics of non-soil fumigants, including:
 - (1) Chemical characteristics of non-soil fumigants.
 - (2) Specific human exposure concerns for non-soil fumigants.
 - (3) How fumigants change from a liquid or solid to a gas.

- (4) How fumigants disperse in the application zone.
- (5) Compatibility concerns for tanks, hoses, tubing, and other equipment.
- (d) Application. Selecting appropriate application methods and timing, including:
 - (1) Application methods and equipment commonly used for non-soil fumigation.
 - (2) Site characteristics that influence fumigant exposure.
 - (3) Conditions that could impact timing of non-soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications under specific conditions.
 - (4) Conducting pre-application inspection of application equipment and the site to be fumigated.
 - (5) Understanding the purpose and methods of sealing the area to be fumigated, including the factors that determine which sealing method to use.
 - (6) Calculating the amount of product required for a specific treatment area.
 - (7) Understanding the basic techniques for calibrating non-soil fumigant application equipment.
 - (8) Understanding when and how to conduct air monitoring and when it is required.
- (e) Pest factors. Pest factors that influence fumigant activity, including:
 - (1) Influence of pest factors on fumigant volatility.
 - (2) Factors that influence gaseous movement through the area being fumigated and into the air.
 - (3) Identifying pests causing the damage and verifying they can be controlled with fumigation.
 - (4) Understanding the relationship between pest density and application rate.
 - (5) The importance of proper application rate and timing.
- (f) Personal protective equipment. Understanding what personal protective equipment is necessary and how to use it properly, including:
 - (1) Following labeling directions for required personal protective equipment.
 - (2) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.
 - (3) Understanding the types of respirators required when using specific non-soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.
 - (4) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.
- (g) Fumigant management plans and post-application summaries. Information about fumigant management plans and when they are required, including:

- (1) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.
- (2) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.
- (3) The person responsible for verifying that a fumigant management plan is accurate.
- (4) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.
- (h) Posting requirements. Understanding posting requirements, including:
 - (1) Understanding who is allowed in an area being fumigated or after fumigation and who is prohibited from being in such areas.
 - (2) Distinguishing fumigant labeling-required posting and treated area posting, including the pre-application and post-application posting timeframes for each.
 - (3) Proper choice and placement of warning signs.

9.18 Category 14 Terrestrial Invasive

Applicators shall demonstrate a practical knowledge of:

- (a) Types of terrestrial invasive plants, their life cycles and management techniques.
- (b) Specific population dynamics as a basis for programming pesticide applications.
- (c) Application techniques in a variety of nonagricultural sites, including sensitive environmental areas.
- (d) Knowledge of non-target impacts of a pesticide in aquatic, residential and forest stands.
- (e) Proper techniques of application and pesticide selection.
- (f) Control methods that will minimize the possibility of secondary problems such as unintended effects on wildlife.
- (g) How to determine when pesticide use is proper.
- (h) Selection of application method and proper use of application equipment to minimize non-target exposures.
- (i) Appropriate responses to meteorological factors and adjacent land use.
- (j) Proper use of specialized equipment especially as it may relate to meteorological factors and adjacent land use.

Section 10. Certification Standards for Private Applicators

10.01 General Requirements

- (a) A person applying a Class A pesticide on property owned by them or on land rented by them to produce agricultural commodities shall be certified as having the necessary competency in accordance with the core standards in Section 10.02, that shall include the ability to read and understand pesticide labels and labeling requirements. Competency shall be established by passing a written examination.

- (b) In addition to satisfying the requirements set forth in Section 10.02, a private applicator who intends to use a pesticide in aerial, soil, and non-soil fumigation applications shall obtain further certification by written examination in the relevant sub-category as provided in Sections 10.03 – 10.05.

10.02 Core Standards of Competency for Private Applicators

Persons seeking certification as private applicators must demonstrate a practical knowledge of the principles and practices of pest control associated with the production of agricultural commodities and effective use of Class A pesticides. This knowledge includes:

- (a) Label and labeling comprehension. Ability to read and understand pesticide labels, labeling, and their functions, including:
 - (1) The general format and terminology of pesticide labels and labeling.
 - (2) Understanding instructions, warnings, terms, symbols, and other information commonly appearing on pesticide labels and labeling.
 - (3) Understanding that it is a violation of Federal law to use any registered pesticide in a manner inconsistent with its labeling.
 - (4) Understanding when a certified applicator must be physically present at the site of the application based on labeling requirements.
 - (5) Understanding that applicators must comply with all use restrictions and directions for use contained in pesticide labels and labeling, including being certified in the appropriate subcategory to use a pesticide for fumigation or aerial application.
 - (6) Understanding the meaning of product classification.
 - (7) Understanding and complying with product-specific notification requirements.
 - (8) Recognizing and understanding the difference between mandatory and advisory labeling language.
- (b) Safety. Measures to avoid or minimize adverse health effects, including:
 - (1) Understanding the different natures of the risks of acute toxicity and chronic toxicity, as well as the long-term effects of a pesticide.
 - (2) Understanding that a pesticide's risk is a function of exposure and the pesticide's toxicity.
 - (3) Recognition of likely ways in which dermal, inhalation, and oral exposure may occur.
 - (4) Common types and causes of pesticide mishaps.
 - (5) Precautions to prevent injury to applicators and other individuals in or near treated areas.
 - (6) Need for, and proper use of, protective clothing and personal protective equipment.
 - (7) Symptoms of pesticide poisoning.
 - (8) First aid and other procedures to be followed in case of a pesticide mishap.

- (9) Proper identification, storage, transport, handling, mixing procedures, and disposal methods for pesticides and used pesticide containers, including precautions to be taken to prevent children from having access to a pesticide and pesticide containers.
- (c) Environment. The potential environmental consequences of the use and misuse of pesticides, including the influence of:
 - (1) Weather and other climatic conditions.
 - (2) Types of terrain, soil, or other substrate.
 - (3) Presence of fish, wildlife, and other non-target organisms.
 - (4) Drainage patterns.
- (d) Pests. The proper identification and effective control of pests, including:
 - (1) The importance of correctly identifying target pests and selecting the proper pesticide product(s).
 - (2) Verification that the labeling does not prohibit the use of the product to control the target pest(s).
- (e) Pesticides. Characteristics of pesticides, including:
 - (1) Types of pesticides.
 - (2) Types of formulations.
 - (3) Compatibility, synergism, persistence, and animal and plant toxicity of the formulations.
 - (4) Hazards and residues associated with use.
 - (5) Factors that influence effectiveness or lead to problems such as pesticide resistance.
 - (6) Dilution procedures.
- (f) Equipment. Application equipment, including:
 - (1) Types of equipment and advantages and limitations of each type.
 - (2) Uses, maintenance, and calibration procedures.
- (g) Application methods. Selecting appropriate application methods, including:
 - (1) Methods used to apply various forms and formulations of pesticides.
 - (2) Knowledge of which application method to use in a given situation and that use of a fumigant, aerial application, or predator control device containing sodium cyanide or sodium fluoroacetate requires additional certification.
 - (3) How selection of application method and use of a pesticide may result in proper use, unnecessary or ineffective use, and misuse.
 - (4) Prevention of drift and pesticide loss into the environment.
- (h) Laws and regulations. Knowledge of applicable State and federal laws and regulations, including understanding the Worker Protection Standard in 40 CFR part 170 and the circumstances in which compliance is required.
- (i) Stewardship. Understanding the importance of:
 - (1) Maintaining chemical security for pesticides.
 - (2) How to communicate information about pesticide exposures and risks with agricultural workers and handlers and other persons.
- (j) Agricultural pest control. Practical knowledge of pest control applications to agricultural commodities including:

- (1) Specific pests of relevant agricultural commodities.
- (2) How to avoid contamination of ground and surface waters.
- (3) Understanding pre-harvest and restricted entry intervals and entry-restricted periods and areas.
- (4) Understanding specific pesticide toxicity and residue potential when a pesticide is applied to animal or animal product agricultural commodities.
- (5) Relative hazards associated with using a pesticide on animals or places in which animals are confined based on formulation, application technique, age of animal, stress, and extent of treatment.

10.03 Sub-category: Aerial Pest Control

In addition to satisfying the requirements in Section 10.02, a private applicator that makes an aerial application of a Class A pesticide by fixed or rotary wing aircraft must demonstrate practical knowledge of the pest problems and pest control practices associated with performing aerial application of a pesticide, including:

- (a) Labeling. Labeling requirements and restrictions specific to aerial application of a pesticide including:
 - (1) Spray volumes.
 - (2) Buffers and no-spray zones.
 - (3) Weather conditions specific to wind and inversions.
 - (4) Labeling-mandated recordkeeping requirements for aerial pesticide applications including application conditions if applicable.
- (b) Application equipment. Understand how to choose and maintain aerial application equipment, including the following:
 - (1) The importance of inspecting application equipment to ensure it is in proper operating condition prior to beginning an application.
 - (2) Selecting proper nozzles to ensure appropriate pesticide dispersal and to minimize drift.
 - (3) Knowledge of the components of an aerial pesticide application system, including pesticide hoppers, tanks, pumps, and types of nozzles.
 - (4) Interpreting a nozzle flow rate chart.
 - (5) Determining the number of nozzles for intended pesticide output using nozzle flow rate chart, aircraft speed, and swath width.
 - (6) How to ensure nozzles are placed to compensate for uneven dispersal due to uneven airflow from wingtip vortices, helicopter rotor turbulence, and aircraft propeller turbulence.
 - (7) Where to place nozzles to produce the appropriate droplet size.
 - (8) How to maintain the application system in good repair, including pressure gauge accuracy, filter cleaning according to schedule, and checking nozzles for excessive wear.
 - (9) How to calculate required and actual flow rates.
 - (10) How to verify flow rate using fixed timing, open timing, known distance, or a flowmeter.

- (11) When to adjust and calibrate application equipment.
- (c) Application considerations. The applicator must demonstrate knowledge of factors to consider before and during application, including the following:
 - (1) Weather conditions that could impact application by affecting aircraft engine power, take-off distance, and climb rate, or by promoting spray droplet evaporation.
 - (2) How to determine wind velocity, direction, and air density at the application site.
 - (3) The potential impact of thermals and temperature inversions on aerial pesticide application.
- (d) Minimizing drift. The applicator must demonstrate knowledge of methods to minimize off-target pesticide movement, including:
 - (1) How to determine drift potential of a product using a smoke generator.
 - (2) How to evaluate vertical and horizontal smoke plumes to assess wind direction, speed, and concentration.
 - (3) Selecting techniques that minimize pesticide movement out of the area to be treated.
 - (4) Documenting special equipment configurations or flight patterns used to reduce off-target pesticide drift.
- (e) Performing aerial application. The applicator must demonstrate competency in performing an aerial pesticide application, including:
 - (1) Selecting a flight altitude that minimizes streaking and off-target pesticide drift.
 - (2) Choosing a flight pattern that ensures applicator and bystander safety and proper application.
 - (3) The importance of engaging and disengaging spray precisely when entering and exiting a predetermined swath pattern.
 - (4) Tools available to mark swaths, such as global positioning systems and flags.
 - (5) Recordkeeping requirements for aerial pesticide applications including application conditions if applicable.

10.04 Sub-category: Soil Fumigation

In addition to complying with the requirements in Section 10.02, private applicators that use Class A pesticides to fumigate soil must demonstrate practical knowledge of the pest problems and pest control practices associated with performing soil fumigation applications, including:

- (a) Label and labeling comprehension. Ability to read and understand pesticide labels and labeling for products used to perform soil fumigation, including:
 - (1) Labeling requirements specific to soil fumigants.
 - (2) Requirements for certified applicators of fumigants, fumigant handlers and permitted fumigant handler activities, and the safety information that certified applicators must provide to noncertified applicators using fumigants under their direct supervision.
 - (3) Entry-restricted periods for tarped and untarped field application scenarios.

- (4) Recordkeeping requirements.
 - (5) Labeling provisions unique to fumigant products containing certain active ingredients.
 - (6) Labeling requirements for fumigant management plans, such as when a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it; the elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan; the person responsible for verifying that a fumigant management plan is accurate; and the elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.
- (b) Safety. Measures to minimize adverse health effects, including the following:
- (1) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, field workers, and bystanders can become exposed to fumigants.
 - (2) Common problems and mistakes that can result in direct exposure to fumigants.
 - (3) Signs and symptoms of human exposure to fumigants.
 - (4) Air concentrations of a fumigant that require that applicators wear respirators or exit the work area entirely.
 - (5) Steps to take if a fumigant applicator experiences sensory irritation.
 - (6) Understanding air monitoring, when it is required, and where and when to take samples.
 - (7) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.
 - (8) First aid measures to take in the event of exposure to a soil fumigant.
 - (9) Labeling requirements for transportation, storage, spill clean-up, and emergency response for soil fumigants, including safe disposal of containers and contaminated soil, and management of empty containers.
- (c) Soil fumigant chemical characteristics. Characteristics of soil fumigants, including the following:
- (1) Chemical characteristics of soil fumigants.
 - (2) Specific human exposure concerns for soil fumigants.
 - (3) How soil fumigants change from a liquid or solid to a gas.
 - (4) How soil fumigants disperse in the application zone.
 - (5) Compatibility concerns for tanks, hoses, tubing, and other equipment.
- (d) Application. Selecting appropriate application methods and timing, including the following:

- (1) Application methods, including but not limited to water-run and non-water-run applications, and equipment commonly used for each soil fumigant.
 - (2) Site characteristics that influence fumigant exposure.
 - (3) Understanding temperature inversions and their impact on soil fumigant application.
 - (4) Weather conditions that could impact timing of soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications during specific weather conditions.
 - (5) Conducting pre-application inspection of application equipment.
 - (6) Understanding the purpose and methods of soil sealing, including the factors that determine which soil sealing method to use.
 - (7) Understanding the use of tarps, including the range of tarps available, how to seal tarps, and labeling requirements for tarp removal, perforation, and repair.
 - (8) Calculating the amount of product required for a specific treatment area.
 - (9) Understanding the basic techniques for calibrating soil fumigant application equipment.
- (e) Soil and pest factors. Soil and pest factors that influence fumigant activity, including the following:
- (1) Influence of soil factors on fumigant volatility and movement within the soil profile.
 - (2) Factors that influence gaseous movement through the soil profile and into the air.
 - (3) Soil characteristics, including how soil characteristics affect the success of a soil fumigant application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigant application.
 - (4) Identifying pests causing the damage and verifying they can be controlled with soil fumigation.
 - (5) Understanding the relationship between pest density and application rate.
 - (6) The importance of proper application depth and timing.
- (f) Personal protective equipment. Understanding what personal protective equipment is necessary and how to use it properly, including the following:
- (1) Following labeling directions for required personal protective equipment.
 - (2) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.
 - (3) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

- (4) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.
- (g) Fumigant management plans and post-application summaries. Information about fumigant management plans, including the following:
 - (1) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.
 - (2) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.
 - (3) The person responsible for verifying that a fumigant management plan is accurate.
 - (4) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.
- (i) Buffer zones and posting requirements. Understanding buffer zones and posting requirements, including the following:
 - (1) Buffer zones and the buffer zone period.
 - (2) Identifying who is allowed in a buffer zone during the buffer zone period and who is prohibited from being in a buffer zone during the buffer zone period.
 - (3) Using the buffer zone table from the labeling to determine the size of the buffer zone.
 - (4) Factors that determine the buffer zone credits for application scenarios and calculating buffer zones using credits.
 - (5) Distinguishing buffer zone posting and treated area posting, including the pre-application and post-application posting timeframes for each.
 - (6) Proper choice and placement of warning signs.

10.05 Sub-category: Non-soil Fumigation

In addition to complying with the requirements in Section 10.02, private applicators that use Class A pesticides to fumigate soil must demonstrate practical knowledge of the pest problems and pest control practices associated with performing fumigation applications of a pesticide to sites other than soil, including:

- (a) Label & labeling comprehension. Ability to read and understand pesticide labels and labeling for products used to perform non-soil fumigation, including labeling requirements specific to non-soil fumigants.
- (b) Safety. Measures to minimize adverse health effects, including the following:
 - (1) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, and bystanders can become exposed to fumigants.
 - (2) Common problems and mistakes that can result in direct exposure to fumigants.
 - (3) Signs and symptoms of human exposure to fumigants.
 - (4) Air concentrations of a fumigant that require applicators to wear respirators or to exit the work area entirely.

- (5) Steps to take if a fumigant applicator experiences sensory irritation.
 - (6) Understanding air monitoring, when it is required, and where and when to take samples.
 - (7) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.
 - (8) First aid measures to take in the event of exposure to a fumigant.
 - (9) Labeling requirements for transportation, storage, spill clean-up, and emergency response for non-soil fumigants, including safe disposal of containers and contaminated materials, and management of empty containers.
- (c) Non-soil fumigant chemical characteristics. Characteristics of non-soil fumigants, including the following:
- (1) Chemical characteristics of non-soil fumigants.
 - (2) Specific human exposure concerns for non-soil fumigants.
 - (3) How fumigants change from a liquid or solid to a gas.
 - (4) How fumigants disperse in the application zone.
 - (5) Compatibility concerns for tanks, hoses, tubing, and other equipment.
- (d) Application. Selecting appropriate application methods and timing, including the following:
- (1) Application methods and equipment commonly used for non-soil fumigation.
 - (2) Site characteristics that influence fumigant exposure.
 - (3) Conditions that could impact timing of non-soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications under specific conditions.
 - (4) Conducting pre-application inspection of application equipment and the site to be fumigated.
 - (5) Understanding the purpose and methods of sealing the area to be fumigated, including the factors that determine which sealing method to use.
 - (6) Calculating the amount of product required for a specific treatment area.
 - (7) Understanding the basic techniques for calibrating non-soil fumigant application equipment.
 - (8) Understanding when and how to conduct air monitoring and when it is required.
- (e) Pest factors. Pest factors that influence fumigant activity, including the following:
- (1) Influence of pest factors on fumigant volatility.
 - (2) Factors that influence gaseous movement through the area being fumigated and into the air.
 - (3) Identifying pests causing the damage and verifying they can be controlled with fumigation.

- (4) Understanding the relationship between pest density and application rate.
- (5) The importance of proper application rate and timing.
- (f) Personal protective equipment. Understanding what personal protective equipment is necessary and how to use it properly, including the following:
 - (1) Following labeling directions for required personal protective equipment.
 - (2) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.
 - (3) Understanding the types of respirators required when using specific non-soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.
 - (4) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.
- (g) Fumigant management plans and post-application summaries. Information about fumigant management plans and when they are required, including:
 - (1) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.
 - (2) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.
 - (3) The person responsible for verifying that a fumigant management plan is accurate.
 - (4) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.
- (h) Posting requirements. Understanding posting requirements, including:
 - (1) Understanding who is allowed in an area being fumigated or after fumigation and who is prohibited from being in such areas.
 - (2) Distinguishing fumigant labeling-required posting and treated area posting, including the pre-application and post-application posting timeframes for each.
 - (3) Proper choice and placement of warning signs.

10.06 Certification and Renewal

Private applicator certificates shall be issued for a five-year period after which recertification will be required. Recertification requirements may be met by participation in additional training approved by the Secretary or by reexamination.

Subchapter 4 – Transportation and Storage of Pesticides; Bulk Pesticide Storage; Disposal of Pesticides and Containers

Section 11. Transportation and Storage of Pesticides

11.01 Transportation

- (a) To prevent any discharges, applicators and dealers shall ensure:

- (1) containers are secured during transportation so they may not shift, become punctured, or otherwise compromised; and
 - (2) vehicles owned, leased, rented, or borrowed by them for the purpose of transporting a pesticide are placarded in accordance with State and federal transportation rules.
- (b) Any pesticide held or stored in or on a vehicle shall be secured to prevent access by unauthorized persons or wildlife during use or transport.

11.02 Pesticide and Container Storage by Applicators and Class A and B Dealers

Applicators and Class A and B Dealers shall ensure:

- (a) Any pesticide shall be stored in accordance with requirements and precautionary storage instructions contained on the product label.
- (b) Any container shall have a legible manufacturer label indicating the contents.
- (c) Any pesticide or container that has not been triple rinsed shall be stored in a separate room and in such a manner as to prevent contamination to food, feed, seed, livestock remedies, drugs, plants, and other products or materials from the volatilization of a pesticide, the leakage or breakage of containers, or other causes.
- (d) Any pesticide shall be stored inside and protected and secured in such a manner to prevent access from unauthorized persons and wildlife.
- (e) The floor surface of the pesticide storage area shall be smooth, facilitating the complete recovery of any discharge. Floor surfaces may include sealed concrete and plastic.
- (f) Earthen floors shall be prohibited in a pesticide storage area unless all containers are placed in a containment vessel designed to recover and contain any discharge.
- (g) The pesticide storage area shall be identified by legible signage clearly indicating that a pesticide is in storage, as follows:
 - (1) Sign(s) shall include the word "Warning," "Danger," or "Pesticides" followed by wording that indicates a pesticide is in storage.
 - (2) Lettering of the words "Warning," "Danger," or "Pesticides" shall be a minimum of one and 1/2 inches in height.
- (h) The pesticide storage area shall be adequately vented to the outdoors prior to entry.
- (i) Containment vessels used for pesticide storage and handling shall be of materials and construction compatible with the pesticide stored and the conditions of storage and maintained in a manner as to minimize the possibility of a discharge.
- (j) In conjunction with pesticide storage, ambulance and fire department phone numbers or the 911 number shall be displayed at a central location where all persons have access.
- (k) A pesticide storage area shall maintain sufficient lighting to allow the observation of containers and their labeling.
- (l) Storage of pesticide in bulk shall comply with the bulk pesticide storage rules under Section 12.

- (m) Cabinets, storage bins, lockers, or similar type storage compartment shall be considered a pesticide storage area provided that the storage compartment complies with subsections (a) – (d), and (i) – (k) of this section.
- (n) Floor drains not used in conjunction with catch basins shall be prohibited in a pesticide storage area.
- (o) A pesticide storage area may be equipped with a catch basin, provided that:
 - (1) there are no pipes attached;
 - (2) it is constructed for complete recovery of a discharge; and
 - (3) it is located within the floor where liquids can be transferred to an above ground container in the event of a spill or discharge onto the floor.
- (p) A pesticide storage area shall be maintained in a clean condition.
- (q) At a minimum, any discharge shall be cleaned up within 60 minutes.
- (r) Any container, held by an end user, having the capacity for holding greater than 55 gallons but less than 300 gallons of bulk pesticide, known as mini-bulk containers, shall be exempt from subsections (c), (e) – (h), (j) – (p) of this section provided that:
 - (1) the container is identified with pesticide labeling that is affixed to the mini-bulk container by the dealer or person who sold or distributed the product;
 - (2) there is a mechanism attached to the container for the purpose of securing the dispensing apparatus; and
 - (3) within 90 days of receipt of the pesticide in the mini-bulk container, the container is returned to the dealer.
- (s) The following minimum buffer distances are maintained around any public water source:
 - (1) 100-foot buffer for all public non-community groundwater drinking water sources; and
 - (2) 200-foot buffer for all public community drinking water sources and intakes, and surface water public non-community drinking water intakes.

Section 12. Bulk Pesticide Storage

12.01 Dry Bulk Pesticide

- (a) Dry bulk pesticide shall be covered by an impermeable roof or tarpaulin.
- (b) Dry bulk pesticide stored outdoors shall be kept in bulk storage containers.
- (c) Dry bulk storage containers shall be placed on pallets or on a raised concrete platform.

12.02 Bulk Pesticide Security

- (a) Bulk storage containers at facilities that are within the 100-year flood plain shall be anchored.
- (b) Bulk pesticide storage facilities shall be secured against entry by unauthorized persons, livestock, or wildlife.
- (c) Outdoor bulk storage containers and containment facilities shall be located within a permanent fenced area or equivalent security system approved by the

Secretary that is designed to reasonably prevent access by unauthorized persons, provide reasonable protection against access by livestock or wildlife and prevent deterioration from weather.

- (d) Appurtenances shall be fenced or otherwise secured to provide reasonable protection against vandalism or unauthorized access that may result in a discharge.
- (e) Valves on bulk storage containers shall be locked or otherwise secured except when persons responsible for facility security are present at the facility.
- (f) Valves on rail cars, nurse tanks and other mobile pesticide containers parked overnight at a storage facility shall be locked or secured except when persons responsible for facility security are present at the facility.

12.03 Bulk Storage Containers and Appurtenances

- (a) Design, construction, and maintenance of bulk storage containers and appurtenances.
 - (1) Bulk storage containers and appurtenances shall be constructed, installed, and maintained to prevent the discharge of liquid bulk pesticide.
 - (2) Bulk storage containers and appurtenances shall be constructed of materials that are resistant to corrosion, puncture, or cracking.
 - (3) Materials used in the construction or repair of bulk storage containers and appurtenances shall meet or exceed the manufacturer's recommendations for all materials used in the construction or repair of a storage container or appurtenance.
 - (4) Materials used in the construction or repair of bulk storage containers and appurtenances shall not be constructed of materials that react chemically or electrolytically with stored bulk pesticide in a way that may weaken the storage container or appurtenance, create a risk of discharge, or adulterate the pesticide.
 - (5) Materials used for valves, fittings and repairs on metal containers shall be compatible with the metals used in the construction of the bulk storage container, so that the combination of metals does not cause or increase corrosion that may weaken the storage container or its appurtenances or create a risk of discharge.
 - (6) Bulk storage containers and appurtenances shall be designed and constructed to handle all operating stresses, taking into account static head, pressure buildup from pumps and compressors and any other mechanical stresses to which the storage containers and appurtenances may be subject in the foreseeable course of operation.
 - (7) Bulk pesticide storage structures (buried tank of any size; aboveground tank greater than 1,500 gallons; dry or liquid; and piping serving a nonresidential facility) shall maintain the buffer distances related to any potable water sources as established in Table 11-1 of the Wastewater and Potable Water Supply Rules.
 - (8) Bulk pesticide storage facilities shall maintain the following minimum buffers around any public water sources:

- (i) 100-foot buffer for public non-community groundwater drinking water sources; and
 - (ii) 200-foot buffer for all public community drinking water sources and intakes, and surface water public non-community drinking water intakes.
- (b) Appurtenances.
 - (1) Every bulk storage container connection, except a safety relief connection, shall be equipped with a shut-off valve located on the storage container or at a distance from the bulk storage container dictated by standard engineering practices.
 - (2) Valves shall be secured to protect against vandalism or accidental valve openings that may result in a discharge.
 - (3) Pipes and fittings shall be adequately supported to prevent sagging and possible breakage due to gravity and other forces that may be encountered in the ordinary course of operations.
- (c) Vents.
 - (1) Any airtight bulk storage container used for liquid bulk pesticide shall be equipped with a pressure relief vent that opens and closes within the designed pressure limits of the container, so as to relieve excess pressure, prevent evaporative losses and prevent the entry of precipitation into the container.
 - (2) All other bulk storage containers used for liquid bulk pesticide shall be equipped with a cover or closure that will relieve excess pressure, prevent evaporative losses and prevent the entry of precipitation.
- (d) Liquid level gauging devices.
 - (1) Every bulk storage container shall be equipped with a liquid level gauging device by which the level of liquid in the bulk storage container can be readily and safely determined.
 - (2) A liquid level gauging device is not required if the level of liquid in a bulk storage container can be readily and reliably measured by other means. External sight gauges made of glass are prohibited.
- (e) Filling. Bulk storage containers may not be filled to more than 95 percent of rated capacity unless the storage container construction or location provides for constant temperature control.

12.04 Mixing, Loading, and Rinsate Collection Areas

- (a) Paved surfaces and catch basins.
 - (1) Any mixing, loading and unloading, including mini-bulk filling, of pesticide or washing or rinsing of pesticide application equipment that takes place at commercial pesticide application and bulk storage facilities shall take place on a pad that is paved with asphalt or concrete.
 - (2) The paved surface shall be curbed or constructed with sufficient slope to drain into a liquid-tight catch basin.

- (3) The curbed surface and catch basin shall be of adequate size and design to contain 125 percent of the capacity of the largest mobile container used.
- (b) Protection against damage by moving vehicles. Bulk storage containers and appurtenances, including pipes and transfer hoses, shall be protected against reasonably foreseeable risks of damage by trucks and other moving vehicles engaged in the loading or unloading of pesticide.
- (c) Recovery of discharges.
 - (1) Any discharge incidental to loading or unloading of pesticide shall be promptly recovered, immediately upon detection, using brooms or manually activated pumps, from the paved surface and catch basin.
 - (2) If recovery of any of the spill for use as originally intended is not feasible, then procedures shall be employed to dispose of the discharged pesticide and any resulting clean up material as a hazardous waste in accordance with 10 V.S.A. Chapter 159: Waste Management.

12.05 Secondary Containment for Liquid Bulk Pesticide

- (a) General requirements.
 - (1) Liquid bulk storage containers shall be enclosed in a secondary containment facility which is adequate, in the event of a discharge, to prevent the movement of liquid pesticide to surface or groundwater.
 - (2) A secondary containment facility shall consist of a wall and liner as provided under subsections (d) and (e) or a prefabricated facility as provided under subsection (f) of this section. Precipitation shall not be permitted to accumulate within a secondary containment facility. Empty pesticide containers shall not be stored or accumulated within secondary containment facilities.
- (b) Capacity. The capacity of a secondary containment facility shall be at least equal to the sum of the following: (1) 110 percent of the greatest volume of liquid that could be discharged from the largest storage container within the secondary containment facility; and (2) the total volume of discharged liquid that would be displaced by the submerged portions of all other storage containers, fixtures and materials located within the secondary containment facility.
- (c) Storage with other commodities. No other commodity, except liquid pesticide, pesticide rinsate or recovered pesticide discharges shall be stored within a liquid pesticide secondary containment facility.
- (d) Walls. The walls of a secondary containment facility shall be constructed of earth, steel, concrete or solid masonry and be designed to withstand a full hydrostatic head of any discharged liquid. Cracks and seams shall be sealed to prevent leakage. Walls constructed of earth or other permeable materials shall be lined as provided under subsection (e) of this section. Earthen walls shall have a horizontal-to-vertical slope of at least three to one, unless a steeper slope is consistent with good engineering practice and shall be protected from

- erosion. Walls may not exceed 6 feet (1.8 meters) in height above interior grade.
- (e) Linings. The base of a secondary containment facility, and any earthen walls of the containment facility, shall be lined with asphalt, concrete, or an approved synthetic liner in accordance with the following requirements.
 - (1) Asphalt or concrete liners. Asphalt or concrete liners shall be designed according to good engineering practices to withstand any foreseeable loading conditions, including a full hydrostatic head of discharged liquid. Cracks and seams shall be sealed to prevent leakage.
 - (2) Synthetic liners.
 - (A) Synthetic liners shall have a minimum thickness of 30 mils (0.8 millimeters) and be chemically compatible with the materials being stored within the facility.
 - (B) The synthetic liner shall be protected by a 6-inch (15 centimeter) soil layer below the liner, and a 12-inch (30 centimeter) soil layer above the liner.
 - (C) Both soil layers shall be free of large rocks, angular stones, sticks or other materials that may puncture the liner.
 - (D) The use of synthetic liners for the construction of secondary containment facilities shall be approved by the Secretary provided the manufacturer of the liner provides the Agency with a written confirmation of chemical compatibility and a written estimate of the life of the liner.
 - (E) Synthetic liners shall be installed under the supervision of a qualified representative of the manufacturer, and all field constructed seams shall be tested and repaired if necessary, in accordance with the manufacturer's recommendations.
 - (f) Prefabricated facilities.
 - (1) A prefabricated facility shall be composed of a rigid prefabricated basin having both a base and walls constructed of steel or synthetic materials that are resistant to corrosion, puncture, or cracking.
 - (2) Materials used in the facility shall be chemically compatible with the products being stored within the secondary containment facility.
 - (3) The prefabricated facility shall be designed and installed to withstand all foreseeable loading conditions, including the tank load and a full hydrostatic head of any discharged liquid.
 - (4) Upon request, a manufacturer shall provide a written confirmation of chemical compatibility to the Secretary.
 - (g) Recovery of discharges.

- (1) Discharges incident to the storage, loading, or unloading of pesticide shall be promptly recovered from within the secondary containment facility.
- (2) If recovery of any of the spill for use as originally intended is not feasible, then procedures shall be employed to dispose of the discharged pesticide and any resulting clean up material as a hazardous waste in accordance with 10 V.S.A. Chapter 159: Waste Management.

12.06 Inspection and Maintenance

The operator of a pesticide storage facility shall routinely inspect and maintain storage facilities, bulk storage containers, and appurtenances in accordance with the following schedule to minimize the risk of a discharge.

- (a) Valves and other appurtenances shall be inspected for leakage and proper operation at least weekly.
- (b) The contents of each bulk storage container shall be measured and recorded at least weekly to facilitate the monthly inventory reconciliation as required by Section 12.06(a)(3).
- (c) Secondary containment facilities shall be inspected annually to assure compliance with Section 12.04.
- (d) All equipment and supplies mandated by the Discharge and Response Plan shall be maintained in sound working order at all times.
- (e) A written record of all inspections and maintenance shall be made on the day of the inspection or maintenance, and kept at the storage facility, or at the nearest local office from which the storage facility is administered.

12.07 Recordkeeping

- (a) Every storage facility shall prepare and maintain the following records at the facility, or at the nearest local office from which the storage facility is administered.
 - (1) A record of all discharges at the storage facility, including the date and time of discharge, the type of liquid bulk pesticide discharged, the volume of the discharge, the cause of the discharge, any action taken to control or recover the discharge, and the method of use or disposal of any recovered discharge. The discharge record shall be completed on the day the discharge is discovered and shall be promptly updated to show measures taken to control, recover, use or dispose of the discharge.
 - (2) A regular record of the liquid pesticide levels in each storage container. The level in each storage container shall be measured and recorded at least weekly, as provided in Section 12.05(b).
 - (3) A monthly inventory reconciliation, showing the amount of liquid bulk pesticide from each storage container that is lost or unaccounted for at the end of each monthly period.
 - (4) Inspection and maintenance records pertaining to storage containers, appurtenances, and secondary containment facilities, as provided under Sections 12.05(a) and (c).

- (5) A record of manufacturers' compatibility statements as provided under Sections 12.04(e)(2)(D), and 12.04(f)(4).
- (b) Records shall be maintained for at least five years and shall be made available for inspection and copying by the Secretary upon request.

12.08 Preparations for Control and Recovery of Pesticide Discharges

- (a) The operator of a storage facility shall:
 - (1) prepare a written discharge response plan for the storage facility;
 - (2) keep the discharge response plan current at all times;
 - (3) keep a copy of the discharge response plan so that it is readily available at the storage facility or at the nearest local office from which the storage facility is administered and shall be available for inspection and copying by the Agency; and
 - (3) inform the local fire and police departments of the existence of the plan and shall provide a current copy of the plan to the local fire department.
- (b) The discharge response plan shall include the following:
 - (1) The identity and telephone number of the persons or agencies who are to be contacted in the event of a discharge, including persons responsible for the stored pesticide.
 - (2) For each bulk pesticide stored at the facility, a copy of the label affixed to the bulk storage container, the Safety Data Sheet (SDS) and a complete copy of the labeling that would ordinarily accompany sale of the pesticide.
 - (3) A map identifying the location of bulk pesticide storage containers located at the storage facility.
 - (4) For each type of bulk pesticide stored at the facility, the procedures to be used in controlling and recovering, or otherwise responding to a discharge.
 - (5) Procedures to be followed in using or disposing of a recovered discharge.
- (c) Storage facilities shall also comply with applicable requirements of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Chapter 116, including the requirements for accident reporting under that Act.
- (d) Equipment and supplies.
 - (1) Applicators, manufacturers, and distributors who store bulk pesticide shall have access to pumps and recovery containers that can be used to control and recover discharges, and to personal protective equipment and clothing for use by persons involved in discharge control and recovery.
 - (2) Pumps, recovery containers, personal protective equipment and clothing and persons capable of deploying and operating them, shall be readily available in an emergency.
 - (3) Pumps, recovery containers, personal protective equipment and clothing required under this subsection may include those provided by a local fire department or other persons, if the use and

availability of such equipment is arranged in advance as part of a discharge response plan.

- (4) Pumps, recovery containers, personal protective equipment, and other materials used in control and recovery of discharges shall be decontaminated promptly after the discharge has been recovered and may not be used for other purposes until they have been decontaminated.
 - (5) Absorbent materials suitable for the control and cleanup of small liquid discharges shall be kept readily available at every storage facility.
- (e) Training. Persons employed at the storage facility shall be made aware of and trained in discharge response procedures, pursuant to the discharge response plan.

12.09 Prohibition of Underground Liquid Storage

No liquid bulk pesticide or pesticide rinsate shall be stored underground. This prohibition does not apply to a watertight catch basin used for temporary collection of discharges or runoff.

12.10 Alternative Technology

- (a) The Secretary may exempt any person or company from a requirement under this rule if compliance is not technically feasible, but only if the Secretary finds that alternative measures provide substantially similar protection for the waters of the State.
- (b) A person desiring to implement technology inconsistent with the provisions of this rule shall make such a request in writing and shall provide the Secretary with adequate information to show that the alternative measures requested provide substantially similar protection for the environment.

12.11 Emergency Actions and Notification

- (a) A person responsible for the application, storage or handling of a pesticide upon knowledge of an accident involving such pesticide shall immediately take actions intended to protect human health and the environment, including but not limited to emergency containment measures, and notification as described within this section.
- (b) All Class A, B, and C Dealers, certified commercial and non-commercial applicators, certified private applicators, licensed pesticide applicator companies, pesticide producing establishments and persons working for licensed applicator companies under the supervision of a certified applicator, shall report pesticide accidents immediately by telephone to either:
 - (1) Vermont Agency of Agriculture, Food and Markets, 116 State Street, Montpelier, VT 05620-290, (802) 828-2431; or
 - (2) Vermont Department of Public Safety, 45 State Dr, Waterbury Village Historic District, VT 05676, 1-800-641-5005.

Section 13. Disposal of Pesticides and Containers

13.01 Management of Pesticide Containers Prior to Disposal

- (a) Unused or unwanted pesticide being stored prior to disposal, whether in a sealed or previously opened container, and any pesticide container that has not been or cannot be rinsed shall be:
 - (1) kept in a secure enclosure; and
 - (2) maintained to prevent:
 - (A) deterioration of containers;
 - (B) unauthorized use;
 - (C) mishandling;
 - (D) loss;
 - (E) contamination of the environment; and
 - (F) risk to the public health.
- (b) Disposal of pesticide containers shall comply with labeling instructions and State and federal rules.
- (c) If practical, pesticide drums shall be shipped to recycling centers capable of handling pesticide containers.
- (d) Empty pesticide containers shall not be stored or accumulated within a secondary containment facility.

13.02 Obsolete, Excess, and Mixtures of Pesticides

Obsolete, excess, and mixtures of pesticide shall be returned to the manufacturer, supplier or formulator for recycling, destruction or disposal or disposed of according to the statutes and rules established by 10 V.S.A. Chapter 159: Waste Management.

13.03 Disposal of Empty Containers

All containers made of materials other than paper shall be triple-rinsed and punctured prior to disposal.

Subchapter 5 – Severability; Effective Date

Section 14. Severability

If any provision of this rule, or the application thereof to any person or circumstance, is held invalid, such determination shall not affect other provisions or applications of this rule that can be given effect without the invalid provision or application, and to that end the provisions of this rule are severable.

Section 15. Effective Date

This rule shall become effective on [15 days after adoption].