



AGENCY OF AGRICULTURE, FOOD & MARKETS

Public Health & Agricultural Resource Management Division

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UNCREWED AERIAL SYSTEMS PESTICIDE APPLICATION GUIDANCE MAY 2024



The Agency of Agriculture, Food & Markets facilitates, supports and encourages the growth and viability of agriculture in Vermont while protecting the working landscape, human health, animal health, plant health, consumers and the environment.

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Introduction

The Public Health and Agricultural Resource Management (PHARM) Division of the Vermont Agency of Agriculture, Food and Markets (VAAFAM) is the lead regulatory agency for regulating pesticides and pesticide applicators in Vermont including the administering authority of the Vermont Rule for Control of Pesticides (Rule). With the recent popularity of Uncrewed Aerial Systems (UAS) being used for pesticide applications, there is a need to communicate the regulations governing commercial operation of a UAS for pesticide application. This document serves as guidance to become a licensed aerial applicator using a UAS in Vermont.

I. Applicability

This guidance shall apply to persons seeking to make an application of a pesticide via a UAS in Vermont under 6 V.S.A. Chapters 85 and 87. Any person who applies a pesticide via a UAS shall meet all applicable State and federal laws and regulations. Any information provided concerning the Federal Aviation Agency (FAA) or other State Agencies is for information only. For more detailed information related to any FAA or other State Agency requirements, please contact the appropriate representative.

II. Federal and State Aviation Requirements

Any person seeking to make an aerial application of pesticides is required to meet all applicable laws and regulations including those of the Federal Aviation Administration (FAA) and Vermont Agency of Transportation (VTrans).

The FAA requires certification for the commercial operation of a UAS.¹ The certification required to operate a UAS that weighs less than 55 pounds is found under 14 CFR Part 107.² A UAS weighing 55 pounds or more can be operated under Part 107 with waivers and exemptions from 14 CFR Part 91, and requires exemption from several 14 CFR Part 61, 91, and 137 regulations. The link is provided below for 49 U.S.C. §44807 exemptions.³ In addition, operators must register the UAS with the FAA who will then assign a registration number to the UAS. The application for a registration number can be accessed using the link provided below.⁴

An applicator applying a pesticide must also operate under 14 CFR Part 137 (Agricultural Aircraft Operations) of the FAA regulations.⁵ 14 C.F.R. Part 137 is a certificate that allows for the dispensing of a pesticide. A Vermont pesticide company license holder can have a CFR 14 Part 137 certification and have several Vermont certified pesticide applicators operate under that federal certification.

VAAFAM encourages prospective UAS operators to thoroughly review the current FAA regulations to determine all applicable requirements.

¹ [FAA Drones \(general information\)](#)

² [Become a Drone Pilot \(Part 107—Small Unmanned Aircraft Systems\)](#)

³ [Section 44807: Special Authority for Certain Unmanned Aircraft Systems](#)

⁴ [FAA Drone Zone Register](#)

⁵ [Dispensing Chemicals and Agricultural Products \(Part 137\) with UAS](#)

Lastly, VTrans requires an AOT-OPS Aviation Spray permit for aerial applications of pesticide where the pilot is utilizing a State controlled runway. The application for the permit can be accessed in the link provided below.⁶

III. VAAFM Requirements

Any person who applies pesticides by air from a manned fixed wing aircraft, rotary aircraft, or from a UAS within the State shall be in compliance with all pertinent requirements of the Rule.⁷ For commercial applications via UAS, VAAFM requires the following certifications and permits:

- VT Commercial Pesticide Applicator Certification
- VT Pesticide Applicator Company License
- Category 11 Aerial Pest Control Certification
- UAS Permit

Where applicable, prospective commercial applicators must also possess the relevant category certification. VAAFM limits commercial UAS applications to the following categories:

- Category 1A Agricultural Plant Pest Control
- Category 2 Forest Pest Control
- Category 3A Ornamental & Shade Tree Pest Control
- Category 3B Turf Pest Control
- Category 5 Aquatic Pest Control
- Category 6 Right-of-Way Pest Control
- Category 7B Vector Pest Control
- Category 8 Public Health Pest Control
- Category 10 Demonstration & Research Pest Control
- Category 14 Terrestrial Invasive Plant Pest Control

For private applications via UAS, VAAFM requires the following:

- VT Private Pesticide Applicator Certification
- Sub-Category Aerial Pest Control Certification
- UAS Permit

For more information on registration, exam sites, fees associated with taking an exam, and study manuals, please see the link provided below.⁸ The process of becoming a licensed UAS pesticide applicator can be lengthy, involving several licenses and certifications. A person who applies pesticide without the appropriate licenses and certifications is subject to penalties.

IV. VAAFM UAS Permit Process

The applicant must first Complete the Aerial Application Permit application and attach:

- the pesticide label(s) and SDS for requested products;
- maps with proposed treatment areas, upon request; and
- other items specified in the application.

⁶ [VTrans Spray Permit](#)

⁷ [The Vermont Rule for Control of Pesticides](#)

⁸ [VAAFM Applicator Types and Resources](#)

Once the UAS Permit Application has been submitted, VAAFM will review the materials, request any needed changes, and issue a UAS Permit upon approval.

V. DEC Requirements

In addition to VAAFM requirements, there may be other State regulatory requirements pertaining to an application of pesticides via a UAS. For example, the Agency of Natural Resources' Department of Environmental Conservation (DEC) administers a variety of environmental regulatory programs including administration of the Vermont Pesticide General Permit (PGP).⁹ The 2022 PGP became effective on July 15, 2022 and expires on July 15, 2027. The PGP provides coverage for discharges from the application of pesticides to waters of the State for the following pesticide use patterns:

- mosquito and other flying insect pest control;
- weed and algae control;
- animal pest control; and
- forest canopy pest control.

More specifically, DEC requires operators to submit a Notice of Intent (NOI)¹⁰ to gain coverage under the PGP if:

- the application of a pesticide is conducted by an insect control district;
- if the total area to be treated in any one water exceeds 80 acres in any calendar year;
- if the activity is a wide area application for the control of pests to an area exceeding 6,400 acres in any calendar year;
- if the area of shoreline to be treated with a pesticide for the control of aquatic or terrestrial pests in any calendar year exceeds 20 miles measured linearly; or
- if the application is being conducted by a state agency whose use of pesticides is part of its primary responsibility relating to the control of pest species, regardless of the total area to be treated

Additionally, operators are required to submit a Pesticide Discharge Management Plan at the same time as the NOI with the exception of applications made in response to a Declared Pest Emergency Situation.¹¹ For further information, VAAFM encourages prospective UAS applicators to contact DEC program staff.

⁹ [Vermont Pesticide General Permit](#)

¹⁰ [Notice of Intent for Coverage under the 2022 PGP](#)

¹¹ [Pesticide Discharge Management Plan Template](#)

VI. Checklist

Provided below is a checklist of applicable federal and State regulatory requirements:

FAA:

- FAA Part 107 (small UAS certificate less than 55 pounds) if greater than 55 pounds a waiver from FAA must be granted (§44807).
- FAA Part 137 (Economic Poisons) certificate
- FAA Certificate of Authorization
- Registration of the Drone with FAA (nontransferable)

VAAF:

- Commercial Applicator:
 - VT Commercial Pesticide Applicator License
 - Category 11 Aerial Pest Control Certification
 - Other categories where applicable
 - UAS Permit
- Private Applicator:
 - VT Private Applicator License
 - Sub-Category Aerial Pest Control Certification
 - UAS Permit

DEC:

- For discharges from application of pesticides to waters of the state
 - Pesticide General Permit (PGP) Notice of Intent (NOI)
 - Pesticide Discharge Management Plan (PDMP)

Contact Information

For certification and licensure questions:

Bethany Creaser

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