

## Supporting Documents for Post-Disaster Mosquito Control

The following supporting documents for post-disaster mosquito control are attached.

1. Post-Disaster Mosquito Control
  - This document describes state, county, and municipal roles in allocating resources for mosquito control following a natural disaster, as well as course of actions to take and proper documentation for FEMA reimbursement.
2. Eligibility for FEMA Assistance with Mosquito Abatement
  - This guidance document is intended to assist counties and municipalities in applying for possible reimbursement before or after mosquito control has been conducted. This guidance also describes the data needed to support an application for public assistance.
3. Public Assistance Program and Policy Guide V3.1\_Mosquito Abatement
  - This document contains extracted pages from FEMA's publication, [Public Assistance Program and Policy Guide](#), which specifically address mosquito abatement. FEMA may provide reimbursement for mosquito abatement measures at the written request of the State, Territorial, Tribal, or local public health officials after FEMA consults with the Centers for Disease Control and Prevention (CDC), based on the evidence described in this document.
    - See pages 9 and 20 in the [complete document](#) for the definition of eligible applicants and the legal responsibility to perform mosquito abatement, respectively.
    - Page 72: Requirement for providing a written request for reimbursement
    - Page 184: Appendix G. Mosquito Abatement. Types of evidence required for reimbursement
4. Conducting Mosquito Landing Rate Counts
  - This guidance document provides a protocol for conducting a Landing Rate Count, a method acceptable by FEMA for documenting an increased population of mosquitoes after a natural disaster. The document also provides a form for recording data.
5. Template Letter for Requesting Mosquito Control Reimbursement from FEMA
  - This document is a template letter to provide to FEMA for requesting reimbursement for mosquito control following a natural disaster.
6. Mosquito Control Programs in South Carolina
  - This document provides a list of mosquito control programs in South Carolina, which is useful for obtaining mutual aid from nearby jurisdictions.
7. Commercial Mosquito Control Services by County
  - This document provides a list of commercial vendors that provide mosquito control services.
8. Vendors Providing Mosquito Count Data
  - This document provides a list of commercial vendors that will perform mosquito trapping or Landing Rate Counts pre- and post-treatment for mosquitoes.
9. Suggested GIS Layers for SC counties Planning a Mosquito Spray Mission
  - This document provides a list of useful GIS layers to obtain while planning a mosquito spray mission.

## Post-Disaster Mosquito Control

*The mention of commercial vendors or trade names of commercial products is for illustration purposes and does not constitute endorsements or recommendations for use by the South Carolina Department of Health and Environmental Control.*

### **What is the difference between post-storm nuisance mosquito control and mosquito-borne disease control?**

- Adult mosquitoes do not generally survive high winds associated with a hurricane.
- An increase in mosquito populations is expected in the weeks after flooding.
- An increase in the number of people getting sick from diseases spread by mosquitoes, however, is not expected after flooding.
- Flooding causes “floodwater mosquito” eggs, which were previously laid in moist soil, to hatch. The result is very large populations of floodwater mosquitoes, most of which are considered “nuisance mosquitoes.”
- Nuisance mosquitoes do not typically spread viruses that make people sick.
- Large numbers of nuisance mosquitoes can affect recovery efforts, and mosquito control experts often take steps to limit their numbers.
- Rainfall can increase container-breeding mosquitoes that can spread diseases 2 weeks to 2 months after rains. Disease spread is not common after a hurricane, but is possible, especially in areas that received a lot of rainfall, but did not flood or have very high winds that would have dispersed mosquitoes and caused birds (virus reservoirs) to flee the area. So, cleaning up debris that may act as containers for mosquito breeding is still important, both from nuisance and disease points of view.

### **What are the goals of the SC DHEC Mosquito-Borne Disease Program?**

- Conduct surveillance activities that include sustaining capabilities to capture occurrences of mosquito-borne diseases, perform epidemiological investigations, and test people, mosquitoes, birds, and veterinary animals for infection with mosquito-borne diseases.
- Provide recommendations consistent with [Integrated Mosquito Management \(IMM\)](#) guidance as established by the American Mosquito Control Association (AMCA).
- Serve as ArboNet™ and MosquitoNet™ points of contact for South Carolina; enter all appropriate human and veterinary case data, as well as bird and mosquito surveillance data.
- Provide guidance and technical support post emergency (hurricanes, tropical storms, etc.) to local government officials or local vector control agencies.

### **What are the limitations of the SC DHEC Mosquito-Borne Disease Program?**

- SCDHEC is not a resource for operational mosquito control supplies. We assist local programs to coordinate with external resources as needed to implement various aspects of IMM.

### **What will SCDHEC do to assist with post-storm Integrated Mosquito Management?**

- Collaborate with state emergency management, FEMA, and other agencies to provide guidance and resources to local authorities.
- Provide technical guidance and expertise as requested by the State Emergency Operations Center.
- Consult on specific and/or emerging issues with local programs through the State Emergency Operations Center.

### What are county and municipal roles in post-storm Integrated Mosquito Management?

- Perform mosquito trapping and landing rate counts, and track mosquito complaint calls.
- Perform adulticiding, if deemed necessary by county or municipal officials, by using **(1)** county or municipal equipment and staff; **(2)** a Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) with a local city, county, or neighboring county/city; **(3)** a [Statewide Mutual Aid Agreement](#); or **(4)** a mosquito control contractor acquired through a county, multi-county, or state contract or by submitting a resource request to State Emergency Management *when local resources have been exhausted*.

### What are the eligibility requirements for Federal Emergency Management Agency (FEMA) reimbursement of mosquito control?

- A State, Territorial, Tribal, or local government public health official validates in writing that a mosquito population poses a specific health threat. FEMA consults with the Centers for Disease Control and Prevention (CDC) to determine the eligibility of mosquito abatement activities. FEMA only provides Public Assistance (PA) funding for the increased cost of mosquito abatement (the amount that exceeds the average amount based on the last 3 years of expenses for the same period).
- Insecticide formulations must be among those approved and registered by the U.S. Environmental Protection Agency for use in urban areas for mosquito control.
- Insecticides must be applied according to label directions and precautions by appropriately trained and certified applicators.
- Mosquito abatement measures must comply with all federal, state, territorial, and local laws, ordinances, and regulations concerning vector control.
- You must be an Eligible Applicant as defined in the [Public Assistance Program Policy Guide](#) (page 9) and have the legal responsibility (page 20) to perform mosquito abatement.

### What mosquito abatement measures are available?

- **Adulticiding** – The ground or aerial spraying of insecticides to kill adult mosquitoes
- **Larviciding** – The application of chemicals, including methoprene or *Bacillus thuringiensis israelensis (Bti)*, by ground or air to kill mosquito larvae or pupae
- **Breeding habitat removal or alteration (source reduction)** – The modification of potential breeding habitat to make it unsuitable for mosquito breeding or to facilitate larval control, including **(1) draining or removing standing water** in close proximity to homes, schools, sheltering facilities, and businesses; **(2) increased dewatering** through pumping of existing drainage systems; **(3) dissemination of information** (e.g., inserting flyers with residents' water bills, public service announcements, newspaper campaigns) to direct residents to remove mosquito breeding habitats
- For a list of complete mosquito abatement measures, consult [Best Practices For Integrated Mosquito Management: A Focused Update](#), published by the American Mosquito Control Association (January 2017)

### What are the procedures and documentation requirements for FEMA reimbursement?

- **Before spraying**, collect mosquito trap data, perform landing rate counts, document mosquito complaint calls (for adulticide use), or collect mosquito larvae dip data (for larvicide use) to verify the hazard. Prioritize counties that need to be surveyed and develop a schedule for visiting them. Finalize protocols and hire or train individuals to perform mosquito trapping or landing rate counts. Start collecting data as soon as a potential threat is identified to establish a baseline data. Data are valid for a period of two weeks only.
- **At the same time or before mosquito surveys**, begin drawing polygons on county maps of places that could/would be sprayed. Keep in mind you won't be able to spray, nor should you, the entire county. Focus on populated areas. Limitations exist as to what an aircraft can do on both the upper and lower ends of treatment areas. Short, fat polygons are easier than long, skinny ones to execute by air.
- **Before spraying**, contact FEMA Environmental and Historic Preservation (EHP) Point of Contact ([FEMA-R4EHP@fema.dhs.gov](mailto:FEMA-R4EHP@fema.dhs.gov)) to identify spray exclusion areas due to wildlife refuges or the presence of endangered, threatened, or critical habitat. State and federal wildlife refuges require special permits to spray there regardless of who is paying. The federal government must comply with the Endangered Species Act (ESA). Preparing spray

maps ahead of time (regardless of the surveillance data) is important in order to compare them to endangered species maps. Performing this step ahead of time will mean you can begin spraying much quicker where needed.

- Put contingency spray contracts (aerial, ground, or both) in place so you are ready to go once the surveillance data and ESA consultations are complete.
- Increase personal protection messaging and encourage the use of insect repellents.
- Validate in writing that a mosquito population poses a serious health threat or a mosquito nuisance that is severely hampering the recovery effort. Scientifically-backed details about specific areas that have been impacted by the disaster must be described; a general statement about county-wide flooding and mosquito problems will not suffice.
- Follow the manufacturer's label on EPA-approved chemicals for mosquito abatement by certified employees. The pesticide also must be registered in SC by the [Clemson University Department of Pesticide Regulation](#).
- For aerial spraying, consult the [Clemson University Department of Pesticide Regulation](#) to make sure the plane and pilot are in compliance with all applicable rules and regulations of the [South Carolina Pesticide Control Act](#).
- Provide documentation of the chemical, application method, and concentration used.
- Provide adulticide or larvicide area maps detailing the zones affected/treated.
- Provide date(s) of the insecticide application.

#### **What types of requests for mosquito control services are more likely to get approved?**

- If a jurisdiction *does not* have a mosquito control program, then pre-storm mosquito data are important, although these data are not expected to exist. The jurisdiction must validate mosquito control measures by monitoring the mosquito population before and after treatment, by using landing rate counts, counting numbers of mosquitoes from traps, or documenting the number and origin of mosquito complaint calls.
- If a jurisdiction *does* have a mosquito control program, then pre-storm data (3-year average) are important during the summer when mosquito numbers are high anyway, but are not as important during the fall when mosquito numbers should be dwindling.

#### **Who do I contact for vector control resources and mosquito surveillance and control methods?**

- For vector control resources (once local and county-to-county resources have been exhausted), contact your local Emergency Management office to submit a resource request to the State Emergency Management office.
- For technical information on mosquito surveillance and control methods, contact:
  - Mosquito control services: [Mosquito service providers](#)
  - Mosquito control services that perform mosquito trapping and landing rate counts: [Clarke®](#); [Gregory Pest Solutions®](#); [Mosquito Authority®](#); [Vector Disease Control International®](#)
  - Mosquito surveillance suppliers: [BioQuip®](#); [Clarke®](#); [John W. Hock®](#)
  - Pesticide and licensing: [Clemson University Department of Pesticide Regulation](#); (864) 646-2150

#### **Additional Information**

- [Aerial Spraying](#)
- [Mosquitoes and Hurricanes](#)
- [Goods and Services Statewide Contracts](#)
  - Chemicals/Gases > [Pesticide, Mosquito Control](#)
  - Services > [Mosquito Control Services](#)

## Eligibility for FEMA Assistance with Mosquito Abatement



**Introduction:** Some jurisdictions might experience higher than average mosquito populations, trap counts, and spray requests following a natural disaster, such as a flood or hurricane. This guidance document is intended to assist counties and municipalities in applying for possible reimbursement

before or after spraying has been conducted. This guidance also describes the data needed to support an application for public assistance. The need to conduct mosquito abatement is based upon the judgment of each local jurisdiction. Internal policies should not be dependent on the ability to receive federal reimbursement to recoup a portion of the costs.

**Eligibility:** Page 72 and Appendix G of the *Public Assistance Program and Policy Guide* (FP 104-009-2, rev. April 2018) describes the criteria that the Federal Emergency Management Agency (FEMA) will use to determine eligibility for vector control (mosquito abatement) measures following an emergency or major disaster declaration.

This guidance document is to assist you in gathering information to present to FEMA who will then determine whether or not federal assistance will be provided. *Scientifically-backed details about specific areas that have been impacted by the disaster must be described; a general statement about county-wide flooding and mosquito problems will not suffice.*

You must provide a letter (preferably on your official letterhead) that shows your eligibility for assistance. Submit this letter to the South Carolina Emergency Management Division (SCEMD). To expedite your request, send your letter by E-Mail. SCEMD reviews and validates the request, and then forwards the request to FEMA for approval.

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### Address the letter to SCEMD

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Kim Stenson, Director  
SC Emergency Management Division  
2779 Fish Hatchery Rd  
West Columbia SC 29172  
Phone: 803-737-8500; FAX: 803-737-8570  
[PA@emd.sc.gov](mailto:PA@emd.sc.gov)

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Vector control measures in the disaster area may be eligible for assistance under the authority of 44 CFR §206.225(a)(3)(i). FEMA may provide reimbursement for such costs at the written request of the State or local public health officials after FEMA consults with the Centers for Disease Control and Prevention (CDC), based on the following information provided by the Applicant.

**At least one of the three findings must be supported:**

<b>Finding 1:</b>	<p><b>More disease-carrying mosquitoes</b></p> <ul style="list-style-type: none"> <li>Evidence of higher levels of disease-transmitting mosquitoes in the disaster area following the event or a significant number of disease-carrying mosquitoes in the area due to the increase in event-related standing water; or</li> <li>Evidence of the <i>potential</i> for disease transmission and human exposure to disease carrying mosquitoes based on the detection of arboviral diseases in sentinel organisms (poultry, wild birds, mosquito pools) in the impacted area prior to the storm event.</li> </ul>
<b>Evidence 1:</b>	<ul style="list-style-type: none"> <li>Surveillance data identifying the local jurisdiction's mosquito population density estimates pre- and post-disaster, including information about species composition.</li> <li>Arbovirus transmission activity indices, including information about the location of surveillance activities. Indices may consist of: infection rates in mosquitoes, seroconversion in sentinel chickens, equine cases, or human cases.</li> </ul>

**OR**

<b>Finding 2:</b>	<p><b>Increased biting mosquitoes pose a threat to emergency workers</b></p> <ul style="list-style-type: none"> <li>A determination that a significant increase in the mosquito population and/or the change of biting mosquito species <u>poses a threat</u> to emergency workers who are required to work out-of-doors; thereby <u>significantly hampering response and recovery efforts</u>.</li> </ul>
<b>Evidence 2:</b>	<ul style="list-style-type: none"> <li>Documentation reflecting an abnormal rise in landing rates or trap counts, significant changes in species composition or estimate of infection rates, when compared to pre-disaster surveillance results.</li> </ul>

**OR**

<b>Finding 3:</b>	<p><b>Increased mosquito-related infections in the general public</b></p> <ul style="list-style-type: none"> <li>An increase in the general public's exposure to mosquitoes has directly resulted in secondary infections, especially among those with weakened immune systems such as the elderly, the very young, or the sick. This may occur when increased numbers of residents in disaster areas with extended power outages are forced to open buildings for air circulation.</li> </ul>
<b>Evidence 3:</b>	<ul style="list-style-type: none"> <li>Verification from medical facilities within the affected area that an increase in the general public's exposure to mosquitoes has directly resulted in secondary infections.</li> </ul>

**Additional information that assists in making an assessment of needs includes:**

- The amount and type of flooding (e.g., saltwater/freshwater, coastal/inland).
- The extent and location of damage to housing.
- The extent, location, and anticipated duration of power interruption.
- The anticipated extent and duration of cleanup and recovery operations.

**Abatement Measures**

- Regardless of basis for request, the Applicant must describe the type of mosquito management required (e.g., aerial or ground-based adulticide applications, larvicide applications, breeding habitat removal or alteration, dissemination of information to direct residents to remove mosquito-breeding habitats), the duration of application to reduce the threat, and the areas where the interventions are needed.

**Source**



Federal Emergency Management Agency (2018; Last Update 10/09/2015 15:08). *Public Assistance Program and Policy Guide*, page 72 and Appendix G. [https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG\\_3.1\\_508\\_FINAL\\_5-4-2018.pdf](https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG_3.1_508_FINAL_5-4-2018.pdf)

# Public Assistance Program and Policy Guide

FP 104-009-2 / April 2018



The following four pages were extracted from the document, *Public Assistance Program and Policy Guide*, published by the Federal Emergency Management Agency (FEMA).

**These pages specifically address mosquito abatement.** To read the entire document, please click on the link below.

Federal Emergency Management Agency (2018; Last Update 10/09/2015 15:08).

*Public Assistance Program and Policy Guide.*

[https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG\\_3.1\\_508\\_FINAL\\_5-4-2018.pdf](https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG_3.1_508_FINAL_5-4-2018.pdf)

FEMA may provide reimbursement for mosquito abatement measures at the written request of State, Territorial, Tribal, or local public health officials after FEMA consults with the Centers for Disease Control and Prevention (CDC), based on evidence described in this document.

**Page 72:** Requirement for providing a written request for reimbursement

**Page 184:** Appendix G. Mosquito Abatement. Types of evidence required for reimbursement



# Public Assistance Program and Policy Guide

*FP 104-009-2 / April 2018*



FEMA

- FEMA will reimburse a State agency from the Impact-State/Tribe for the transportation costs and related expenses to transport deceased evacuees and accompanying family members to the Impact-State/Tribe. The costs of State/Tribe-mandated embalming or cremation of the body prior to return are also eligible.

The Host-State/Tribe must determine whether any ambulance or medical service costs are covered by a patient's private insurance, Medicare, Medicaid, or a pre-existing private payment agreement as FEMA will deduct this amount from the Host-State/Tribe's eligible cost.

Fees that a Host-State/Tribe waives for the use of State parks by self-evacuees with recreational vehicles (RVs) are not eligible. Additionally, purchase and distribution of gas cards, bus passes, cash vouchers, debit cards, food vouchers, or direct payments to evacuees are not eligible.

## **11. Infectious Disease Event**

The HHS Centers for Disease Control and Prevention (CDC) has primary authority to enable support and assistance to States, Territorial, or Tribal Governments in response to an infectious disease event. FEMA may provide assistance for the rescue, evacuation, and movement of persons; movement of supplies; and care, shelter, and other essential needs of affected human populations. Any assistance provided by FEMA in response to an infectious disease event is done in coordination with the CDC. The Office of Response and Recovery Fact Sheet FP 104-009-001, *Infectious Disease Event*, provides additional details.<sup>193</sup>

## **12. Mosquito Abatement**

Mosquito abatement measures may be eligible when a State, Territorial, Tribal, or local government public health official validates in writing that a mosquito population poses a specific health threat as discussed further in [Appendix G: Mosquito Abatement](#). FEMA consults with the CDC to determine the eligibility of mosquito abatement activities. FEMA only provides PA funding for the increased cost of mosquito abatement. This is the amount that exceeds the average amount based on the last 3 years of expenses for the same period.

## **13. Residential Electrical Meters**

To reduce the number of survivors needing shelter, FEMA may provide limited PA funding to a State, Territorial, Tribal, or local government to repair residential electrical meters. To receive PA funding, the State, Territorial, Tribal, or local government must:

- Issue a finding of an immediate threat to safety due to loss of power caused by damaged meters or weather heads;
- Request participation in this program; and
- Receive FEMA approval for each identified property.

Only residential properties are eligible for this program. Commercial properties, including apartment complexes, are not eligible.

If approved, the applicable State, Territorial, Tribal, or local government will:

- Obtain a signed right-of-entry from each residential property owner;
- Take reasonable measures to document any known insurance proceeds;
- Contract with licensed electricians to perform electrical meter repair;

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<sup>193</sup> [www.fema.gov/media-library/assets/documents/99710](http://www.fema.gov/media-library/assets/documents/99710).

# APPENDIX G: MOSQUITO ABATEMENT

FEMA may provide reimbursement for mosquito abatement measures at the written request of the State, Territorial, Tribal, or local public health officials after FEMA consults with the Centers for Disease Control and Prevention (CDC), based on:

- Evidence of:
  - Higher levels of disease transmitting mosquitoes in the disaster area following the event;
  - A significant number of disease-carrying mosquitoes in the area due to the increase in event-related standing water; or
  - The potential for disease transmission and human exposure to disease carrying mosquitoes based on the detection of arboviral diseases in sentinel organisms (poultry, wild birds, mosquito pools) in the impacted area prior to the storm event, discovered during surveillance as part of mosquito abatement activities, or reported human cases in which transmission occurred prior to the storm event.
- A determination that a significant increase in the mosquito population and/or the change of biting mosquito species poses a threat to emergency workers who are required to work out-of-doors, thereby significantly hampering response and recovery efforts.

Such evidence may include an abnormal rise in landing rates or trap counts, significant changes in species composition or estimate of infection rates, when compared to pre-disaster surveillance results.

- Verification from medical facilities within the affected area that an increase in the general public's exposure to mosquitoes has directly resulted in secondary infections, especially among those with weakened immune systems such as the elderly, the very young, or the sick.

This may occur when increased numbers of residents in disaster areas with extended power outages are forced to open buildings for air circulation.

Where possible, a determination of the need for vector control measures should be based on surveillance data provided by local agencies, or on surveillance conducted as a component of the



## Terminology

An **arbovirus** is a virus utilizing arthropods as vectors and is transmitted via their feeding to a definitive host.

The **landing rate**, expressed as number of mosquitoes landing per minute, is used as an adult mosquito surveillance measure utilizing human volunteers as bait.

**Methoprene Briquettes** are formulated with methoprene (compound that mimics the action of an insect growth-regulating hormone and prevents the normal maturation of insect larvae) growth inhibitor and a timed-release carrier that resembles a charcoal briquette.

A **sentinel organism** is an organism, usually fowl, purposely exposed to mosquito bites outdoors to monitor pathogen transmission by mosquitoes.

**Seroconversion** is the development of detectable antibodies in the blood of a sentinel organism directed against an infectious agent.

**Trap count** is the number of female mosquitoes captured in a trap receptacle each night the traps are set.

emergency response. Similarly, termination of control efforts should be based on mosquito density and disease transmission monitoring, and on the degree of exposure to mosquitoes of residents and responders. Information useful in determining the need for emergency mosquito control measures includes:

- The local jurisdiction's mosquito population density estimates pre- and post-disaster, including information about species composition
- Arbovirus transmission activity indices, including information about the location of surveillance activities; indices may consist of:
  - Infection rates in mosquitoes
  - Seroconversion in sentinel chickens
  - Equine case
  - Human cases
- The amount and type of flooding (e.g., saltwater/freshwater, coastal/inland)
- The extent and location of damage to housing
- The extent, location, and anticipated duration of power interruption
- The anticipated extent and duration of cleanup and recovery operations
- A description of the type of mosquito management required (e.g., aerial or ground-based adulticide applications, larvicide applications), and duration of application to reduce the threat and the areas where the interventions are needed

To be eligible for Public Assistance (PA) funding, insecticide formulations must be among those approved and registered by the U.S. Environmental Protection Agency for use in urban areas for mosquito control, and must be applied according to label directions and precautions by appropriately trained and certified applicators. Furthermore, mosquito abatement measures must comply with all Federal, State, Territorial, and local laws, ordinances, and regulations concerning vector control. Mosquito abatement measures include, but are not limited to the following:

- Adulticiding – The ground or aerial spraying of insecticides to kill adult mosquitoes
- Larviciding – The application of chemicals, including methoprene briquettes, by ground or air to kill mosquito larvae or pupae
- Breeding habitat removal or alteration – The modification of potential breeding habitat to make it unsuitable for mosquito breeding or to facilitate larval control, including:
  - Draining or removing standing water in close proximity to homes, schools, sheltering facilities, and businesses
  - Increased dewatering through the pumping of existing drainage systems
  - Dissemination of information (e.g., inserting flyers with resident's water bills, public service announcements, newspaper campaigns) to direct residents to remove the mosquito breeding habitat

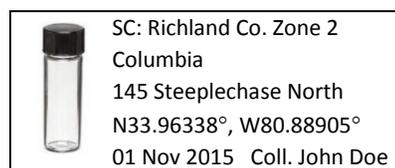
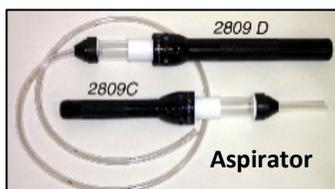
## GUIDELINES FOR CONDUCTING LANDING RATE COUNTS

The Landing Rate Count (LRC), expressed as the number of mosquitoes landing per minute, is used as an adult mosquito surveillance measure that utilizes human volunteers as bait.

- Divide the city, precinct, or county into four geographical zones and conduct landing rate counts at 4 to 5 locations within each zone.
- Counts should not be taken during the heat of the day because most mosquitoes are inactive.
- Landing rate counts should be taken the same time each day. Recommended Time Period: Early in the day (between 7:30 a.m. and 10:00 a.m.) or late in the day (between 5:00 p.m. and dark)
- Wear solid light-colored long sleeves and pants. Mosquitoes are more easily seen on solid light-colored material versus a dark-patterned background. Wear closed-toed shoes.
- If possible, the same person should perform the counts to maintain consistency of before- and after-spray data.
- No repellents, after-shave lotions, or perfumes should be used. Insect repellent may be worn on exposed skin. If repellent is on your hands, take care not to touch your shoes or clothing.

### PROTOCOL

1. Do not stand in direct sunlight. Choose a shaded site near bushes or trees.
2. Disturb surrounding vegetation before starting the counts.
3. Stand still for three minutes before beginning the count. In high density situations, this step may not be necessary as mosquitoes will start landing immediately. Keep your arms out away from your body so as not stir up air around your legs and also to minimize the effect of insect repellent on your hands.
4. Take all landing rate counts from a standing position.
5. Count (or aspirate) only those mosquitoes that land on the front of one leg from the waist to the foot.
  - a. Count for a <1- to 5-minute time period
    - i. Use 1 minute or less if mosquito numbers are high (5 to 50+ per minute).
    - ii. Use 5 minutes if mosquito numbers are low (1 to 5 per minute).
  - b. Convert all counts to per minute (e.g., 20 mosquitoes in 5 minutes = 4 mosquitoes per minute)
6. Complete the “Mosquito Landing Rate Data Sheet”, using real numbers for the mosquito landing counts. For example, 25 or 75 are much more meaningful numbers than 50+ or 100+.
7. *Optional:* If aspirating mosquitoes, label the collection vial as in the following example and place it in a cooler with gel ice packs for later identification to species.



Options:

1. Identify one collection from the four main geographic sections and use a total count for the other three sections.
2. Identify all collections.

### Mosquito Landing Rate Data Sheet

City \_\_\_\_\_ Zone \_\_\_\_\_ Date \_\_\_\_\_ (DD/MM/YYYY)  
 County \_\_\_\_\_ ZIP Code \_\_\_\_\_ Technician Performing \_\_\_\_\_  
 \_\_\_\_\_ Counting \_\_\_\_\_  
 \_\_\_\_\_ Human Subject \_\_\_\_\_

No.	Collection Site	X; Longitude -78.50 to -83.37	Y; Latitude 32.00 to 35.30	Count	Time	Count per min	Weather Conditions (temperature °F, wind, overcast, clear, etc.)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

**If not a physical street address, provide detailed directions with distances from nearby road intersections. If necessary, draw a map.**

<<Jurisdiction Name>>  
<<Jurisdiction Address>>  
<<Jurisdiction Phone Number>>

<<Current Date>>

Kim Stenson  
Director  
South Carolina Emergency Management Division  
2779 Fish Hatchery Rd  
West Columbia, SC 29172

Dear Mr. Stenson:

Since the flood event that caused so much devastation in South Carolina, there has been a rapid and significant increase in the mosquito population in <<Jurisdiction Name>>. No prior seasons compare to what is occurring in <<Jurisdiction Name>> at this time. The following data compares the time period of <<month>> <<past 3-year date range>> to <<event month>> <<event year>>:

- Our spray requests averaged <<number of spray requests>> for the past 3 years. So far this month, we have already received well over <<number of spray requests>> requests.
- The 3-year average rainfall received at <<nearby weather station, airport, etc.>> for <<month>> was <<number of inches>> inches. So far this month, we have received <<number of inches>> inches of rain.
- Our highest number of female mosquitoes captured in a <<name of trap type>> on a single night in <<month>> was <<number of mosquitoes>> in <<year>>. This month, our highest single trap catch in one night is <<number of mosquitoes>>. This number, however, does not provide a good representation of the presence of *Psorophora* species overall since they are not as attracted to light traps.
- We <<do/do not>> track Landing Rate Counts (LRC). Our LRC before the mosquito hatch-off from the flooding was <<number of mosquitoes per minute>> per minute. After the hatch-off, the LRC is now <<number of mosquitoes per minute>> per minute. <<List species of mosquitoes found while performing the LRC if known>>.
- Our 3-year average cost for pesticides (larvicides & adulticides) was \$<<dollar amount>> compared to our pesticide cost of \$<<dollar amount>> used so far this month. These costs <<do/do not>> include labor costs required to disperse the products. <<If labor costs are not included, please include the total labor cost here>>.

The above information provides evidence of <<higher levels of disease carrying mosquitos/increased risk of infection to emergency workers and the general public>>. In order to abate the threat to public health posed by the increased mosquito population in <<Jurisdiction Name>>, we will use <<aerial spraying, ground spraying, etc.>> over <<number of acres>> acres method to eliminate the threat to public health caused by the increased mosquito population. We estimate the treatment to cost \$<<dollar amount>> based on <<\_\_\_\_\_>>.

Sincerely,

Your Name  
Your Title

Mosquito Control Programs in South Carolina  
rev. 25 May 2017

<b>County</b>	<b>City</b>	<b>Mosquito Control Program</b>	<b>Phone</b>
Abbeville	Abbeville	City of Abbeville	(864) 366-6620
Aiken	Aiken	City of Aiken	(803) 642-7710
	North Augusta	City of North Augusta	(803) 441-4240
	Perry	Town of Wagener/Perry	(803) 564-3412
	Salley	Town of Wagener/Salley	(803) 564-3412
	Wagener	Town of Wagener	(803) 564-3412
Allendale	Allendale	Town of Allendale	(803) 584-4619
Bamberg	Bamberg	Bamberg County	(803) 245-3111
Barnwell	Williston	Town of Williston	(803) 266-7015
Beaufort	Beaufort	Beaufort County Mosquito Control	(843) 255-5800
	Sea Pines	Sea Pines Community Services Associates	(843) 671-1343
Berkeley	Goose Creek	City of Goose Creek	(843) 824-2200 x-4262
	Hanahan	City of Hanahan	(843) 529-3413
	Moncks Corner	Berkeley County Mosquito Abatement	(843) 719-4646
Calhoun	Saint Matthews	Calhoun County Mosquito Control	(803) 874-2914
Charleston	Kiawah Island	Kiawah Island Community Association	(843) 768-2315 x-256
	North Charleston	Charleston County Mosquito Control	(843) 202-7880
Cherokee	Gaffney	City of Gaffney	(864) 487-8510
Chesterfield	Cheraw	City of Cheraw	(843) 537-8430
Clarendon	Clarendon	Town of Turbeville	(843) 659-2781
	Manning	City of Manning	(803) 435-8477 x-5115
	Summerton	Town of Summerton	(803) 485-2525 x-102
Colleton	Walterboro	Colleton County	(843) 893-2651
Darlington	Darlington	City of Darlington	(843) 398-4035
	Hartsville	City of Hartsville	(843) 383-3019
Dillon	Dillon	City of Dillon	(843) 774-0045
Dorchester	Dorchester	Dorchester County	(843) 832-0070
Edgefield	Edgefield	City of Edgefield	(803) 637-4014
Florence	Effingham	Florence County Environmental Services	(843) 665-3053
	Florence	City of Florence	(843) 665-3236
Georgetown	Georgetown	Georgetown County Mosquito Control	(843) 545-3615
Greenville	Fountain Inn	City of Fountain Inn	(864) 409-3334
	Greenville	Greenville County	(864) 467-5988
	Mauldin	City of Mauldin	(864) 289-8904
Greenwood	Greenwood	City of Greenwood	(864) 942-8420
	Greenwood	Greenwood County Lake Management	(864) 942-8560
Horry	Conway	City of Conway	(843) 248-1730
	Conway	Horry County	(843) 381-8000
	Myrtle Beach	City of Myrtle Beach	(843) 918-2000
	North Myrtle Beach	City of North Myrtle Beach	(843) 280-5500
	Surfside Beach	City of Surfside Beach	(843) 913-6360
Jasper	Ridgeland	Jasper County	(843) 726-7740
Laurens	Clinton	City of Clinton	(864) 833-7522
	Gray Court	City of Gray Court	(864) 876-2581
Lee	Bishopville	City of Bishopville	(803) 484-5948
Lexington	Batesburg-Leesville	City of Batesburg-Leesville	(803) 532-4601

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rev. 25 May 2017

<b>County</b>	<b>City</b>	<b>Mosquito Control Program</b>	<b>Phone</b>
	Lexington	Lexington County Vector Control	(803) 785-8440
Marion	Marion	City of Marion	(843) 423-8614
Marlboro	Bennettsville	City of Bennettsville	(843) 479-9001 x-310
Newberry	Newberry	City of Newberry	(803) 321-1020
Oconee	Seneca	City of Seneca	(864) 885-2750
	Walhalla	City of Walhalla	(864) 638-4351
Orangeburg	Holly Hill	City of Holly Hill	(803) 496-5919
	Orangeburg	Orangeburg County Mosquito Control	(803) 533-6166
Pickens	Central	City of Central	(864) 639-6381
	Central	City of Clemson	(864) 653-2053
Richland	Columbia	City of Columbia	(803) 545-3430
	Columbia	Fort Jackson	(803) 751-6722
	Columbia	Richland County Vector Control	(803) 929-6000
Saluda	Saluda	Town of Saluda	(864) 445-3522
Sumter	Sumter	Sumter County Vector Control	(803) 774-0045
Williamsburg	Kingstree	Williamsburg County Environmental Services	(843) 355-9312
Power Company	Moncks Corner	Santee Cooper Vector Management Lakes: Marion, Moultrie Counties: Berkeley, Calhoun, Clarendon, Orangeburg, Sumter	(843) 761-8000 x-4407

Mosquito Control Service Providers in South Carolina

County	City	State	ZIP	Company	Street	Phone	Backpack Sprayers	Truck-mounted ULV	Aerial Spraying	Larviciding and Source Reduction	Cat. 8 License (Public Health)	Cat. 11 License (Aerial)
Aiken	BEECH ISLAND	SC	29842	TERMINIX	5183 AUGUSTA RD	(803) 278-4163	yes	no	no	yes	yes	no
Aiken	NORTH AUGUSTA	SC	29861	BORDEN PEST CTRL/GVILLE	PO BOX 6402	(864) 278-1070	yes	no	no	no	yes	no
Aiken	NORTH AUGUSTA	SC	29861	BORDEN PEST CTRL/N AUGUSTA	PO BOX 6402	(803) 278-1070	yes	no	no	no	yes	no
Allendale	FAIRFAX	SC	29827	HELENA CHEMICAL CO	PO BOX 870	(803) 632-2555	yes	no	no	yes	yes	no
Anderson	ANDERSON	SC	29625	ORKIN PEST CTRL	217 MCGEE RD	(864) 226-7631	yes	no	no	yes	yes	no
Anderson	ANDERSON	SC	29624	TERMINIX	800 S MURRAY AVENUE	(864) 224-8729	yes	no	no	yes	yes	no
Anderson	ANDERSON	SC	29622	W E BLACK TERMITE & PEST CTRL	PO BOX 1053	(864) 375-1899	yes	no	no	yes	yes	no
Anderson	EASLEY	SC	29642	CAROLINA WATER & LAWN MAINT	113 KENNEDY ST	(864) 442-3023	yes	no	no	no	yes	no
Anderson	SANDY SPRINGS	SC	29677	MACS EXTERMINATING CO	PO BOX 363	(864) 261-8118	yes	no	no	yes	yes	no
Beaufort	BEAUFORT	SC	29902	ACE ENTERPRISES	25 OLD SALEM RD	(843) 524-6613	yes	no	no	no	yes	no
Beaufort	BEAUFORT	SC	29901	J C EHRlich CO/EHRlich A RENTOKIL	PO BOX 2462	(843) 522-9183	yes	no	no	no	yes	no
Beaufort	BLUFFTON	SC	29910	COLLETON RIVER PLANTATION	58 COLLETON RIVER DR	(843) 836-4480	yes	no	no	no	yes	no
Beaufort	BLUFFTON	SC	29910	HOMETEAM PEST DEFENSE LLC	PO BOX 1468	(843) 987-0562	yes	no	no	yes	yes	no
Beaufort	BLUFFTON	SC	29910	ORKIN PEST CTRL	36 PERSIMMON STREET	(843) 815-4441	yes	no	no	yes	yes	no
Beaufort	BLUFFTON	SC	29910	PALMETTO EXTERMINATORS INC	PO BOX 3875	(843) 522-0020	yes	yes	no	yes	yes	no
Beaufort	HILTON HEAD ISLAND	SC	29928	COMMUNITY SERVICES ASSOC	175 GREENWOOD DR	(843) 671-1343	yes	yes	no	no	yes	no
Beaufort	HILTON HEAD ISLAND	SC	29926	FA BARTLETT TREE EXPERTS CO THE	20 TRELIS CT	(843) 682-2487	yes	no	no	no	yes	no
Beaufort	HILTON HEAD ISLAND	SC	29925	IMPERIAL PEST CONTROLLERS	PO BOX 22387	(843) 681-7352	yes	no	no	no	yes	no
Beaufort	HILTON HEAD ISLAND	SC	29926	ISLAND PEST CONTROL INC	142 ISLAND DR	(843) 681-5188	yes	no	no	yes	yes	no
Beaufort	HILTON HEAD ISLAND	SC	29926	MOSQUITO NIX	4 MCINTOSH RD	(843) 837-2900	yes	no	no	yes	yes	no
Beaufort	HILTON HEAD ISLAND	SC	29926	OLD SOUTH GOLF LINKS	200 MAIN ST STE 201	(843) 837-6133	yes	no	no	yes	yes	no
Beaufort	PORT ROYAL	SC	29935	TERMINIX	2212 MOSSY OAKS RD	(843) 525-0348	yes	no	no	yes	yes	no
Berkeley	CHARLESTON	SC	29492	BUG COMMANDER LLC	961 ETIWAN PARK ST	(843) 509-6721	yes	no	no	no	yes	no
Berkeley	CHARLESTON	SC	29492	DANIEL ISLAND GOLF CLUB	531 ISLAND PARK DR	(843) 971-1745	yes	yes	no	yes	yes	no
Berkeley	GOOSE CREEK	SC	29445	LIGHTNING TERMITE & PEST CTRL LLC	1239 REDBANK RD	(843) 569-0374	yes	no	no	no	yes	no
Berkeley	GOOSE CREEK	SC	29445	PEST FREE PEST CONTROL	1251 REDBANK RD	(843) 572-7092	yes	no	no	no	yes	no
Berkeley	MONCKS CORNER	SC	29461	TERMINIX	2694 HWY 52	(843) 761-4820	yes	no	no	yes	yes	no
Berkeley	SUMMERVILLE	SC	29483	ZPEST COMM	1501 YELLOW HAWTHORN CIR	(843) 901-0561	yes	no	no	no	yes	no
Berkeley	WANDO	SC	29492	TERMINIX	2043 WAMBAW CREEK ROAD	(843) 856-0103	yes	no	no	yes	yes	no
Charleston	CHARLESTON	SC	29412	ADVANCED TERMITE + PEST CONTROL LLC	PO BOX 13775	(843) 795-6767	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29415	ALLGOOD PEST SOLUTIONS	PO BOX 891	(843) 745-0203	yes	no	no	yes	yes	no
Charleston	CHARLESTON	SC	29407	ANCHOR PEST MANAGEMENT LLC	647 DUPONT RD	(843) 906-9457	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29422	ATLANTIC PEST & TERMITE MGMT INC	PO BOX 12760	(843) 795-4010	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29407	BARRIER GUARD LLC TERMITE & PEST	1643 B SAVANNAH HWY BOX 370	(843) 324-0962	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29407	BARRIER PEST SERVICES LLC	1835 BELGRADE AVE.	(843) 225-8250	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29405	CHAMPION PEST MANAGEMENT LLC	4329 FLYNN DR	(843) 860-4791	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29414	ENVIRO GUARD PEST MGMT INC	3417 FOREST GLEN DR	(843) 568-4566	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29414	FA BARTLETT TREE EXPERTS CO THE	2011C BEES FERRY RD	(843) 556-8696	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29412	FLOWERS PEST MANAGEMENT	1375 CAMP ROAD	(843) 297-0990	yes	no	no	yes	yes	no
Charleston	CHARLESTON	SC	29405	FOUR SEASONS PEST CTRL & LAWN CARE	4735 HOLBIRD DR	(843) 744-2224	yes	no	no	yes	yes	no
Charleston	CHARLESTON	SC	29417	LEDFORDS TERMITE & PEST CTRL	PO BOX 30025	(843) 766-8298	yes	no	no	yes	yes	no
Charleston	CHARLESTON	SC	29412	MCFADDEN PEST CONTROL INC	652 SCHOONER RD	(843) 763-4533	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29403	MOSQUITO MITIGATORS / MOSQUITO JOE	36 KENNEDY ST	(843) 628-7788	yes	no	no	yes	yes	no
Charleston	CHARLESTON	SC	29417	PALMETTO EXTERMINATORS INC	PO BOX 30325	(843) 766-9701	yes	no	no	yes	yes	no
Charleston	CHARLESTON	SC	29412	TARGET TERMITE & PEST CTRL INC	PO BOX 14017	(843) 762-0575	yes	no	no	yes	yes	no
Charleston	CHARLESTON	SC	29417	TERMINIX	PO BOX 30457	(843) 556-3230	yes	no	no	no	yes	no
Charleston	CHARLESTON	SC	29407	THE MOSQUITO AUTHORITY CHARLESTON	1643 B SAVANNAH HWY #193	(843) 513-8660	yes	yes	no	yes	yes	no
Charleston	CHARLESTON	SC	29423	WE CARE LAWN CARE INC	PO BOX 40055	(843) 767-3385	yes	no	no	no	yes	no
Charleston	EDISTO ISLAND	SC	29438	APEX OF EDISTO ISLAND INC	P O BOX 415	(843) 869-9006	yes	no	no	yes	yes	no
Charleston	EDISTO ISLAND	SC	29438	ISLAND LANDSCAPE MAINT LLC	1490 CREEKWOOD RD	(843) 631-0527	yes	no	no	no	yes	no
Charleston	ISLE OF PALMS	SC	29451	EAST COAST PEST MGMT INC	PO BOX 448	(843) 849-6201	yes	no	no	no	yes	no
Charleston	JOHNS ISLAND	SC	29455	COHEN PEST SOLUTIONS	1158 BROWNSWOOD RD LOT 3	(843) 300-9408	yes	no	no	no	yes	no
Charleston	JOHNS ISLAND	SC	29455	SHORELINE MOSQUITO DEFENSE	3423 PATTON AVE	(843) 437-5676	yes	no	no	yes	yes	no
Charleston	JOHNS ISLAND	SC	29455	TB MAINTENANCE	3584 OLD POND RD	(843) 559-0294	yes	no	no	no	yes	no

Mosquito Control Service Providers in South Carolina

County	City	State	ZIP	Company	Street	Phone	Backpack Sprayers	Truck-mounted ULV	Aerial Spraying	Larviciding and Source Reduction	Cat. 8 License (Public Health)	Cat. 11 License (Aerial)
Charleston	JOHNS ISLAND	SC	29455	TERMINIX	3145 MAYBANK HWY	(843) 557-0051	yes	no	no	no	yes	no
Charleston	LADSON	SC	29456	COASTAL TERMITE CTRL INC	PO BOX 1019	(843) 572-5551	yes	no	no	yes	yes	no
Charleston	LADSON	SC	29456	JPM SERV/TRULY NOLEN/GR CHARLESTON	PO BOX 323	(843) 873-6249	yes	no	no	yes	yes	no
Charleston	MOUNT PLEASANT	SC	29466	CHARLESTON MOSQUITO CONTROL INC	1416 WALKING TRAIL CT	(843) 884-8661	yes	no	no	no	yes	no
Charleston	MOUNT PLEASANT	SC	29465	EAST COOPER TERMITE & PEST SOLUTION	PO BOX 1478	(843) 330-3342	yes	no	no	yes	yes	no
Charleston	MOUNT PLEASANT	SC	29464	TUXEDO MOSQUITO CONTROL OF SC	525 MATHIS FERRY RD	(843) 566-3499	yes	no	no	no	yes	no
Charleston	NORTH CHARLESTON	SC	29420	CLARKS TERMITE & PEST CONTROL	4990 APPIAN WAY	(843) 552-4284	yes	no	no	no	yes	no
Charleston	NORTH CHARLESTON	SC	29405	EXCLUSIVE PEST CONTROL LLC	5100 MONTEREY ST	(843) 461-5169	yes	no	no	yes	yes	no
Charleston	NORTH CHARLESTON	SC	29406	FA BARTLETT TREE EXPERTS CO THE	2285 TECHNICAL PARKWAY	(843) 556-8696	yes	no	no	no	yes	no
Charleston	NORTH CHARLESTON	SC	29418	GREGORY PEST SOLUTIONS	102 DORCHESTER MANOR BLVD	(843) 766-7007	yes	yes	no	yes	yes	no
Charleston	NORTH CHARLESTON	SC	29418	HOMETEAM PEST DEFENSE LLC	3215 FORTUNE DRIVE STE 101	(843) 207-3372	yes	no	no	yes	yes	no
Charleston	NORTH CHARLESTON	SC	29418	LAWN CARE SYSTEMS OF SC DBA SCOTTS	7252 PEPPERMILL PKWY	(843) 767-0355	yes	no	no	no	yes	no
Charleston	NORTH CHARLESTON	SC	29405	ORKIN PEST CTRL	3111 MEETING ST	(843) 766-0211	yes	no	no	yes	yes	no
Charleston	NORTH CHARLESTON	SC	29415	TITAN TERMITE AND PEST CONTROL INC	PO BOX 71415	(843) 556-1449	yes	no	no	no	yes	no
Charleston	NORTH CHARLESTON	SC	29423	WEED MANAGEMENT CO INC	PO BOX 40866	(843) 760-0007	yes	no	no	no	yes	no
Charleston	SUMMERVILLE	SC	29484	ARROW TERMITE & PEST CTRL INC	PO BOX 3109	(843) 873-0800	yes	no	no	yes	yes	no
Chester	FORT MILL	SC	29708	BUGSBGONE/MOSQUITO AUTH.-FT MILL	1128 SPICEWOOD PINES RD.	(803) 396-8750	yes	yes	no	yes	yes	no
Chesterfield	CHERAW	SC	29520	TERMINIX	PO BOX 8	(843) 537-3285	yes	no	no	yes	yes	no
Colleton	WALTERBORO	SC	29488	ALPHA GENESIS INC	3870 SNIDERS HWY	(843) 538-8108	yes	no	no	yes	yes	no
Colleton	WALTERBORO	SC	29488	CAROLINA PEST PRO LLC	821 WINDING CREEK RD	(843) 538-2847	yes	no	no	no	yes	no
Colleton	WALTERBORO	SC	29488	LOW COUNTRY PEST CTRL	310 PINE RIDGE RD	(843) 549-7037	yes	no	no	no	yes	no
Darlington	HARTSVILLE	SC	29551	TERMINIX	PO BOX 1756	(843) 332-1393	yes	no	no	yes	yes	no
Dillon	DILLON	SC	29536	DENNIS A BRYANT	2906 GOODWIN CT	(843) 845-1702	yes	no	no	yes	yes	no
Dorchester	SUMMERVILLE	SC	29485	COASTAL PEST DEFENSE	PO BOX 50982	(843) 851-5557	yes	no	no	no	yes	no
Dorchester	SUMMERVILLE	SC	29485	GENERAL PEST SOLUTIONS LLC	PO BOX 50199	(843) 875-2008	yes	no	no	no	yes	no
Dorchester	SUMMERVILLE	SC	29484	MOSQUITO SQUAD OF CHARLESTON	PO BOX 2606	(843) 209-3626	yes	no	no	yes	yes	no
Dorchester	SUMMERVILLE	SC	29484	SELLERS PEST CONTROL	PO BOX 2807	(843) 871-2083	yes	no	no	no	yes	no
Dorchester	SUMMERVILLE	SC	29484	SHELTON CULPEPPER dba LAWN DOCTOR	PO BOX 576	(843) 873-5711	yes	yes	no	no	yes	no
Dorchester	SUMMERVILLE	SC	29485	TERMINIX	10503 HIGHWAY 78 E	(843) 873-4317	yes	no	no	yes	yes	no
Edgefield	JOHNSTON	SC	29832	RIDGE PEST CONTROL	110 DOVE ST	(803) 275-2775	yes	yes	no	yes	yes	no
Florence	EFFINGHAM	SC	29541	SOUTHERN PERIMETER PEST PROS. LLC	4775 PLANNER ROAD	(843) 473-2365	yes	no	no	no	yes	no
Florence	FLORENCE	SC	29501	AFFORDABLE PEST CONTROL SERVICES	3803 CLAYMONT COURT	(843) 407-8544	yes	no	no	no	yes	no
Florence	FLORENCE	SC	29504	HARRIS PEST CONTROL	PO BOX 12405	(843) 665-4325	yes	no	no	no	yes	no
Florence	FLORENCE	SC	29504	STONES PEST SERVICES	PO BOX 13443	(843) 758-3818	yes	no	no	no	yes	no
Florence	FLORENCE	SC	29504	TERMINIX	PO BOX 12026	(843) 669-1892	yes	no	no	yes	yes	no
Florence	LAKE CITY	SC	29560	EASTLAND PEST CONTROL LLC	3285 HEBRON RD	(843) 598-1303	yes	no	no	yes	yes	no
Georgetown	GEORGETOWN	SC	29440	MOORES PREMIUM T&P CTRL LLC	107C QUEEN ST	(843) 340-8100	yes	no	no	no	yes	no
Georgetown	GEORGETOWN	SC	29442	TERMINIX	PO BOX 1301	(843) 546-3363	yes	no	no	yes	yes	no
Georgetown	PAWLEYS ISLAND	SC	29585	TOTAL TREE CARE INC	PO BOX 3664	(843) 651-8733	yes	no	no	yes	yes	no
Greenville	FOUNTAIN INN	SC	29644	JORDAN PEST MANAGEMENT	106 GOLF LANE	(864) 862-5030	yes	no	no	no	yes	no
Greenville	GREENVILLE	SC	29606	ACTION PEST SERVICES	PO BOX 17435	(864) 277-4744	yes	no	no	no	yes	no
Greenville	GREENVILLE	SC	29602	CAROLINA PEST PATROL	PO BOX 1477	(864) 269-3377	yes	no	no	no	yes	no
Greenville	GREENVILLE	SC	29606	GREGORY PEST SOLUTIONS	PO BOX 6713	(864) 675-6226	yes	yes	no	yes	yes	no
Greenville	GREENVILLE	SC	29615	HENDRIX PEST SOLUTIONS	3 BRYNHURST CIRCLE	(864) 297-5364	yes	no	no	no	yes	no
Greenville	GREENVILLE	SC	29615	HOMETEAM PEST DEFENSE LLC	6037 PONDRERS COURT	(864) 987-9771	yes	no	no	yes	yes	no
Greenville	GREENVILLE	SC	29602	MACK PEST ELIMINATORS INC	PO BOX 2066	(864) 235-9611	yes	no	no	no	yes	no
Greenville	GREENVILLE	SC	29601	MOSQUITO COMMANDER	5 BILTMORE DR	(864) 356-8141	yes	no	no	yes	yes	no
Greenville	GREENVILLE	SC	29606	ORKIN PEST CTRL	PO BOX 6685	(864) 609-1500	yes	no	no	yes	yes	no
Greenville	GREENVILLE	SC	29607	OUTSIDE SOLUTIONS DBA MOSQUITO SQUAD	111 SMITH HINES RD SUITE 1	(864) 277-4299	yes	no	no	yes	yes	no
Greenville	GREENVILLE	SC	29606	PALMETTO EXTERMINATORS INC	PO BOX 16284	(864) 233-3377	yes	no	no	yes	yes	no
Greenville	GREENVILLE	SC	29609	TERMINIX	2611 RUTHERFORD RD	(864) 292-6411	yes	no	no	yes	yes	no
Greenville	GREENVILLE	SC	29605	TERMINIX	51 KITTY HAWK RD	(864) 277-2264	yes	no	no	yes	yes	no
Greenville	GREER	SC	29651	BRYANT FAMILY PEST SOLUTIONS LLC	488 AMERICAN LEGION RD	(864) 372-9458	yes	no	no	yes	yes	no
Greenville	GREER	SC	29650	LAWN CARE SYSTEMS OF SC DBA SCOTTS	35B CONCOURSE WAY	(864) 848-2090	yes	no	no	no	yes	no

Mosquito Control Service Providers in South Carolina

County	City	State	ZIP	Company	Street	Phone	Backpack Sprayers	Truck-mounted ULV	Aerial Spraying	Larviciding and Source Reduction	Cat. 8 License (Public Health)	Cat. 11 License (Aerial)
Greenville	GREER	SC	29652	POOLES TERMITE & PEST CTRL	PO BOX 2140	(864) 663-9696	yes	no	no	no	yes	no
Greenville	MAULDIN	SC	29662	SARGENT PEST SOLUTIONS INC	PO BOX 718	(864) 915-5555	yes	no	no	no	yes	no
Greenville	TAYLORS	SC	29687	GRASS NERDS	PO BOX 1457	(864) 640-3372	yes	yes	no	yes	yes	no
Greenville	TAYLORS	SC	29687	HOBART SOLUTIONS	300 CHASTAIN HILL RD	(864) 895-6906	yes	yes	no	yes	yes	no
Greenville	TRAVELERS REST	SC	29690	DEAD ON ARRIVAL PEST CTRL	31 SUNSET CT	(864) 834-4792	yes	no	no	no	yes	no
Greenwood	GREENWOOD	SC	29648	AMERICAN TERMAPEST INC	PO BOX 50267	(864) 299-3014	yes	no	no	no	yes	no
Greenwood	GREENWOOD	SC	29649	COKER AND JONES LLC	1105 HUNTERS CREEK BLVD	(864) 941-0684	yes	no	no	yes	yes	no
Greenwood	GREENWOOD	SC	29649	TERMINIX	213 ANDERSON CIR	(864) 229-4999	yes	no	no	yes	yes	no
Greenwood	NINETY SIX	SC	29666	THE MOSQUITO AUTHORITY NINETY SIX	PO BOX 549	(864) 992-1305	yes	yes	no	yes	yes	no
Hampton	HAMPTON	SC	29924	BUG BUSTERS INC	1141 ELM ST W	(803) 943-2666	yes	yes	no	yes	yes	no
Hampton	VARNVILLE	SC	29944	WOODWARD AVIATION	PO BOX 74	(704) 929-9024	no	no	yes	no	yes	yes
Horry	AYNOR	SC	29511	ALLEN AVIATION	150 SHANDA LN	(843) 358-3583	yes	yes	no	yes	yes	no
Horry	CONWAY	SC	29526	VALUEPEST.COM	200 BLINKHORN RD	(866) 366-8683	no	no	no	yes	yes	no
Horry	LITTLE RIVER	SC	29566	TERMINIX	1048 REDIMIX ROAD	(843) 399-6997	yes	no	no	yes	yes	no
Horry	MYRTLE BEACH	SC	29579	HERITAGE GOLF CLUB	1500 LEGENDS DR	(843) 236-5102	yes	no	no	no	yes	no
Horry	MYRTLE BEACH	SC	29588	HOMETEAM PEST DEFENSE LLC	100 LICHEN CT SUITE B	(843) 979-9991	yes	no	no	yes	yes	no
Horry	MYRTLE BEACH	SC	29577	MYRTLE BEACH EXT & PEST CTRL	3047 SHETLAND LN	(843) 293-5417	yes	no	no	no	yes	no
Horry	MYRTLE BEACH	SC	29578	TERMINIX	PO BOX 1345	(843) 448-3183	yes	no	no	yes	yes	no
Horry	NORTH MYRTLE BEACH	SC	29597	BEST HOME & PROPERTY SERVICES	PO BOX 536	(843) 283-8989	yes	no	no	no	yes	no
Horry	SURFSIDE BEACH	SC	29587	LANES PROFESSIONAL PEST ELIMINATION	PO BOX 14973	(843) 238-9995	yes	no	no	no	yes	no
Jasper	RIDGELAND	SC	29936	ARNOLD SERVICES	419 LAKEVIEW DR	(843) 726-6106	yes	no	no	yes	yes	no
Jasper	RIDGELAND	SC	29936	OLD SOUTH EXTERMINATORS	PO BOX 1737	(843) 726-3463	yes	no	no	yes	yes	no
Jasper	RIDGELAND	SC	29936	ORKIN PEST CTRL	37 HAZZARD CK VILLAGE DR E UT 4	(843) 524-3830	yes	no	no	yes	yes	no
Jasper	RIDGELAND	SC	29936	TERMINIX	32 BROWNS COVE RD	(843) 987-2847	yes	no	no	yes	yes	no
Kershaw	CAMDEN	SC	29020	NO MOHR ANTS LLC	984 BLACK RIVER RD	(803) 806-1898	yes	no	no	yes	yes	no
Kershaw	CAMDEN	SC	29020	TERMINIX	911 LYTTLETON ST	(803) 432-7352	yes	no	no	yes	yes	no
Kershaw	CAMDEN	SC	29020	THE MOSQUITO AUTHORITY CAMDEN	1408 SANSFIELD AVE	(803) 425-8260	yes	yes	no	yes	yes	no
Kershaw	ELGIN	SC	29045	GUARDIAN SERVICES	PO BOX 734	(843) 200-2517	yes	no	no	yes	yes	no
Lexington	CHAPIN	SC	29036	TERMINIX	PO BOX 70	(803) 345-0762	yes	no	no	yes	yes	no
Lexington	COLUMBIA	SC	29212	MOSQUITO SQUAD OF COLUMBIA	5125 BUSH RIVER RD STE A	(803) 345-7575	yes	no	no	yes	yes	no
Lexington	IRMO	SC	29063	CLARKS TERMITE & PEST CONTROL	PO BOX 465	(803) 781-4991	yes	no	no	no	yes	no
Lexington	LEXINGTON	SC	29073	AARDVARK PEST CONTROL	732 TWO NOTCH #8	(803) 356-0009	yes	no	no	yes	yes	no
Lexington	LEXINGTON	SC	29072	TERMINIX	312 CEDARCREST DR	(803) 957-3811	yes	no	no	yes	yes	no
Lexington	SWANSEA	SC	29160	PREMIER ADVANCE PEST SERVICES	2571 PINE PLAIN RD	(888) 387-1116	yes	no	no	no	yes	no
Lexington	WEST COLUMBIA	SC	29169	GREGORY PEST SOLUTIONS	705 GREENWOOD RD.	(803) 771-6281	yes	yes	no	yes	yes	no
Lexington	WEST COLUMBIA	SC	29171	HOME PEST CONTROL CO INC	PO BOX 2269	(803) 794-8078	yes	no	no	yes	yes	no
Lexington	WEST COLUMBIA	SC	29170	ORKIN PEST CTRL	1126 SILSTAR RD	(803) 791-7400	yes	no	no	yes	yes	no
Lexington	WEST COLUMBIA	SC	29170	PALMETTO PEST CONTROL	1504 METHODIST PARK RD	(803) 409-8143	yes	no	no	no	yes	no
Newberry	NEWBERRY	SC	29108	JRA EXTERMINATING LLC	PO BOX 831	(803) 532-1122	yes	no	no	no	yes	no
Oconee	SALEM	SC	29676	QUALITY PEST CONTROL	425 JOCASSEE LAKE RD	(864) 944-7300	yes	yes	no	yes	yes	no
Oconee	SENECA	SC	29679	TERMINIX	PO BOX 535	(864) 882-8799	yes	no	no	yes	yes	no
Orangeburg	EUTAWVILLE	SC	29048	L & L MOSQUITO & PEST CONTROL INC	105 AZALEA LANE	(803) 492-4191	yes	yes	no	yes	yes	no
Orangeburg	SANTEE	SC	29142	SANTEE COOPER RESORT INC	PO BOX 160	(803) 854-2702	yes	no	no	no	yes	no
Pickens	CENTRAL	SC	29630	NO MORE BUGS LLC SOUTH CAROLINA	811 ISSAQUEENA TRAIL APT 1914	(864) 518-9867	yes	yes	no	yes	yes	no
Pickens	EASLEY	SC	29640	PALMETTO EXTERMINATING CO	208 LIBERTY DR	(864) 859-3507	yes	no	no	no	yes	no
Pickens	EASLEY	SC	29642	STRICKLAND SERVICES	132 PISGAH RD	(864) 859-9880	yes	no	no	no	yes	no
Richland	COLUMBIA	SC	29224	LEDFORDS TERMITE & PEST CTRL	PO BOX 24343	(803) 754-3434	yes	no	no	yes	yes	no
Richland	COLUMBIA	SC	29202	MODERN EXTERMINATING CO	PO BOX 622	(803) 765-2315	yes	yes	no	yes	yes	no
Richland	COLUMBIA	SC	29209	MOLLY MAC dba MOSQUITO JOE OF COLUM	141 F PELHAM DR STE 130	(803) 454-9165	yes	yes	no	yes	yes	no
Richland	COLUMBIA	SC	29224	PALMETTO EXTERMINATORS INC	PO BOX 23502	(803) 254-5833	yes	no	no	yes	yes	no
Richland	COLUMBIA	SC	29290	SERICES OF SUMMER	PO BOX 91042	(803) 422-7733	yes	no	no	yes	yes	no
Richland	COLUMBIA	SC	29209	TERMINIX	1828 PINEVIEW RD	(803) 695-2610	yes	no	no	yes	yes	no
Richland	COLUMBIA	SC	29223	TERMINIX	517 RABON RD	(803) 736-4420	yes	no	no	yes	yes	no
Richland	COLUMBIA	SC	29202	TERMINIX	PO BOX 2627	(803) 772-1783	yes	no	no	yes	yes	no

Mosquito Control Service Providers in South Carolina

County	City	State	ZIP	Company	Street	Phone	Backpack Sprayers	Truck-mounted ULV	Aerial Spraying	Larviciding and Source Reduction	Cat. 8 License (Public Health)	Cat. 11 License (Aerial)
Richland	IRMO	SC	29063	BARNHILL PEST CONTROL	101 W ROCK DR	(803) 708-0741	yes	no	no	no	yes	no
Richland	IRMO	SC	29063	LAWN CARE SYSTEMS OF SC DBA SCOTTS	130 DUTCHMAN BLVD	(803) 407-5707	yes	no	no	yes	yes	no
Richland	IRMO	SC	29063	TRUGREEN LIMITED PARTNERSHIP	120 CENTRUM DR	(803) 781-4870	yes	no	no	no	yes	no
Spartanburg	CHESNEE	SC	29323	BUG DYNASTY PEST CONTROL	3231 HENRY CASH RD	(864) 703-2752	yes	no	no	no	yes	no
Spartanburg	SPARTANBURG	SC	29301	360 PEST AND LAWN SOLUTIONS INC	411 GRAMERCY BLVD	(864) 706-5404	yes	no	no	no	yes	no
Spartanburg	SPARTANBURG	SC	29305	ARROW EXTERMINATORS	PO BOX 4096	(864) 503-0608	yes	no	no	yes	yes	no
Spartanburg	SPARTANBURG	SC	29304	MOSQUITO FREE YARDS	PO BOX 5173	(864) 542-3560	yes	no	no	yes	yes	no
Spartanburg	SPARTANBURG	SC	29307	PLANT OUTLET/MOSQUITO CTRL SYSTEMS	316 FAIRLANE DR	(864) 316-2973	yes	no	no	yes	yes	no
Spartanburg	SPARTANBURG	SC	29303	TERMINIX	185 ALICE ST	(864) 582-0726	yes	no	no	yes	yes	no
Sumter	DALVELL	SC	29040	SOUTH CAROLINA AQUATICS LLC	PO BOX 14	(803) 972-3927	yes	yes	no	yes	yes	no
Sumter	SUMTER	SC	29150	CHARPYS POOLS & SPAS	332 W LIBERTY ST	(803) 773-7946	yes	no	no	no	yes	no
Sumter	SUMTER	SC	29153	TERMINIX	1550 AIRPORT RD	(803) 469-4438	yes	no	no	yes	yes	no
Williamsburg	KINGSTREE	SC	29556	AERO TECH HELICOPTERS LLC	77 BIRCHWOOD DR	(843) 687-1213	no	no	yes	no	yes	yes
Williamsburg	KINGSTREE	SC	29556	WILLIAMSBURG AIR SERVICE	77 BIRCHWOOD DR	(843) 382-8289	no	no	yes	no	yes	yes
York	FORT MILL	SC	29708	NOOSA PEST MANAGEMENT LLC	2764 PLEASANT RD #11405	(704) 499-9922	yes	no	no	yes	yes	no
York	ROCK HILL	SC	29731	DIXIE EXT CO INC	PO BOX 27	(803) 328-6815	yes	no	no	yes	yes	no
York	ROCK HILL	SC	29730	TERMINIX	920 BLACKMON ST	(803) 328-8952	yes	no	no	yes	yes	no
York	YORK	SC	29745	PEST ARREST LLC	1923 FILBERT HWY	(803) 792-8175	yes	no	no	no	yes	no
OUTOFSTATE	LITTLE ROCK	AR	72202	VECTOR DISEASE CNTL INTERNATIONAL	1320 BROOKWOOD DR STE H	(800) 413-4445	yes	yes	yes	yes	yes	yes
OUTOFSTATE	ORLANDO	FL	32804	MASSEY SERVICES INC - WEST COLUMBIA	315 GROVELAND ST	(803) 807-9360	yes	yes	no	yes	yes	no
OUTOFSTATE	ARNOLDSVILLE	GA	30619	ELMER GRAY & ASSOCIATES	479 HARGROVE LAKE RD	(706) 742-5634	yes	no	no	yes	yes	no
OUTOFSTATE	ATLANTA	GA	30350	ARROW EXTERMINATORS	PO BOX 500219	(770) 552-4943	yes	no	no	no	yes	no
OUTOFSTATE	AUGUSTA	GA	30917	ADVANCED SERVICES INC	PO BOX 212909	(706) 860-0116	yes	no	no	yes	yes	no
OUTOFSTATE	AUGUSTA	GA	30914	ARMOR EXTERMINATING CO INC	PO BOX 3533	(706) 724-2424	yes	no	no	no	yes	no
OUTOFSTATE	AUGUSTA	GA	30909	ORKIN PEST CTRL	4282 BELAIR FRONTAGE RD STE 1	(706) 860-6670	yes	no	no	no	yes	no
OUTOFSTATE	BALDWIN	GA	30511	COMPASS PEST MANAGEMENT	PO BOX 100	(706) 778-1073	yes	no	no	no	yes	no
OUTOFSTATE	BLOOMINGDALE	GA	32302	ARROW EXTERMINATORS	PO BOX 502	(912) 353-7763	yes	no	no	no	yes	no
OUTOFSTATE	BOWMAN	GA	30624	MIKES PEST CONTROL GEORGIA	1876 MASSEY ROAD	(706) 255-4354	yes	no	no	no	yes	no
OUTOFSTATE	BUFORD	GA	30518	NORTHWEST EXTERMINATING	929 BUFORD HWY	(770) 614-0220	yes	no	no	yes	yes	no
OUTOFSTATE	DUBLIN	GA	31040	ALLGOOD PEST SOLUTIONS	PO BOX 891	(800) 726-0083	yes	no	no	yes	yes	no
OUTOFSTATE	EVANS	GA	30809	ARROW EXTERMINATORS	PO BOX 776	(706) 863-5404	yes	no	no	no	yes	no
OUTOFSTATE	EVANS	GA	30809	D & D PEST CONTROL SERVICES INC	PO BOX 696	(706) 650-0830	yes	no	no	no	yes	no
OUTOFSTATE	EVANS	GA	30809	TURF PRIDE INC	4688 WASHINGTON RD	(762) 218-2745	yes	no	no	no	yes	no
OUTOFSTATE	GRAYSON	GA	30017	FUTURE SERVICES INC	PO BOX 1009	(770) 979-8180	yes	no	no	no	yes	no
OUTOFSTATE	HARTWELL	GA	30643	ARROW EXTERMINATORS	PO BOX 730	(706) 795-3152	yes	no	no	yes	yes	no
OUTOFSTATE	MARTINEZ	GA	30907	HARGROVE PEST SOLUTIONS	4345B COLUMBIA ROAD	(770) 860-2155	yes	no	no	yes	yes	no
OUTOFSTATE	MARTINEZ	GA	30907	HORNES PEST CTRL CO INC	4232 WHEELER RD	(706) 863-5354	yes	no	no	yes	yes	no
OUTOFSTATE	POOLER	GA	31322	NORTHWEST EXTERMINATING	124 E US HIGHWAY 80	(912) 998-0030	yes	no	no	yes	yes	no
OUTOFSTATE	SAVANNAH	GA	31402	THE MOSQUITO AUTHORITY COASTAL	BOX 2153	(912) 996-8570	yes	yes	no	yes	yes	no
OUTOFSTATE	STATESBORO	GA	30458	CDTR LLC DBA PESTMASTER SERVICES	834 NORTHSIDE DR. EAST	(912) 965-0733	yes	yes	no	yes	yes	no
OUTOFSTATE	THOMSON	GA	30824	DAVID M PARKER EXTERMINATING	PO BOX 1939	(706) 595-8377	yes	no	no	yes	yes	no
OUTOFSTATE	WATKINSVILLE	GA	30677	HOUSEMAN PEST CONTROL INC	PO BOX 1744	(706) 769-7826	yes	no	no	yes	yes	no
OUTOFSTATE	WOODSTOCK	GA	30189	PESTBAN	1025 ROSE CREEK DR STE 620-336	(770) 592-1121	yes	no	no	no	yes	no
OUTOFSTATE	ST CHARLES	IL	60174	CLARKE ENVIRONMENTAL MOSQUITO MGMT	675 SIDWELL COURT	(630) 671-3162	yes	yes	no	yes	yes	no
OUTOFSTATE	GREAT MILLS	MD	20634	ANGEL SYSTEMS INC	PO BOX 304	(757) 464-5040	yes	no	no	no	yes	no
OUTOFSTATE	CHARLOTTE	NC	28226	CHRISTOPHER A SCHWAB	12018 FIVE CEDARS RD	(330) 792-9005	yes	no	no	no	yes	no
OUTOFSTATE	CHARLOTTE	NC	28256	CLEGG'S TERMITE & PEST CONTROL	PO BOX 560005	(704) 583-4434	yes	no	no	yes	yes	no
OUTOFSTATE	CHARLOTTE	NC	28271	THE MOSQUITO TROOP	PO BOX 78415	(704) 588-3713	yes	yes	no	yes	yes	no
OUTOFSTATE	CHARLOTTE	NC	28205	X TERMINATOR MOSQUITO SPRAYING	1730 TIPPAN AVE	(704) 905-9683	yes	no	no	yes	yes	no
OUTOFSTATE	CONOVER	NC	28613	TAILOR MADE LAWNS INC	1003 FIRST ST WEST	(704) 964-7194	yes	no	no	yes	yes	no
OUTOFSTATE	DALLAS	NC	28034	RICE PEST CONTROL	314 ABERNATHY DRIVE	(704) 922-8822	yes	no	no	no	yes	no
OUTOFSTATE	HICKORY	NC	28601	NO MORE BUGS LLC HICKORY	326 8TH ST NW	(888) 784-2310	yes	yes	no	yes	yes	no
OUTOFSTATE	HUNTERSVILLE	NC	28078	TERMINIX	105 A CENTER LN	(704) 875-7998	yes	no	no	yes	yes	no
OUTOFSTATE	MATTHEWS	NC	28104	1202!	3800 SMITH FARM RD	(704) 821-0805	yes	no	no	yes	yes	no

Mosquito Control Service Providers in South Carolina

County	City	State	ZIP	Company	Street	Phone	Backpack Sprayers	Truck-mounted ULV	Aerial Spraying	Larviciding and Source Reduction	Cat. 8 License (Public Health)	Cat. 11 License (Aerial)
OUTOFSTATE	MATTHEWS	NC	28106	PALMETTO EXTERMINATORS INC	PO BOX 3243	(704) 821-6864	yes	no	no	yes	yes	no
OUTOFSTATE	MILLS RIVER	NC	28759	PRO PEST INC	101 HOOPER LANE	(828) 606-3931	yes	no	no	yes	yes	no
OUTOFSTATE	MINT HILL	NC	28227	TACTICAL PEST & TERMITE SOLUTIONS	7427 MATTHEWS MINT HILL RD STE 105	(704) 618-1481	yes	no	no	yes	yes	no
OUTOFSTATE	MONROE	NC	28110	BLUE RIDGE MOSQUITO CONTROL LLC	4903 SPRING MEADOW LN	(704) 779-0832	yes	no	no	no	yes	no
OUTOFSTATE	MONROE	NC	28111	VALUEPEST.COM	PO BOX 1278	(866) 366-8683	yes	no	no	no	yes	no
OUTOFSTATE	MORRISVILLE	NC	27560	NO MORE BUGS LLC NORTH CAROLINA	2200 GATEWAY CNTR BLVD STE 220	(888) 784-2310	yes	yes	no	yes	yes	no
OUTOFSTATE	RALEIGH	NC	27603	SALTRA INC	3305 DURHAM DR SUITE 115	(919) 596-0110	yes	no	no	no	yes	no
OUTOFSTATE	RALEIGH	NC	27604	THE MOSQUITO AUTHORITY MYRTLE BEACH	6304 CASTLEBROOK DR	(843) 353-0795	yes	yes	no	yes	yes	no
OUTOFSTATE	SNEADS FERRY	NC	28460	COASTAL MOSQUITO CONTROL LLC	323 OSPREY POINT DR	(910) 327-2912	yes	no	no	no	yes	no
OUTOFSTATE	SOUTHERN PINES	NC	28387	MOSQUITO CONTROL SOLUTIONS LLC	38 AUGUSTA DR	(910) 603-1409	yes	no	no	yes	yes	no
OUTOFSTATE	STANLEY	NC	28164	LAWN AMERICA	108 W POPLAR ST	(704) 964-8000	yes	no	no	yes	yes	no
OUTOFSTATE	WAXHAW	NC	28173	BAREFOOT MOSQUITO CONTROL	1222 CROFTON DR	(704) 614-2800	yes	no	no	yes	yes	no
OUTOFSTATE	WAXHAW	NC	28173	YARD GUARDS DBA MOSQUITO JOE	7521 WALNUT CREST DR	(704) 900-0311	yes	no	no	yes	yes	no
OUTOFSTATE	WILMINGTON	NC	28412	PALMETTO STATE OUTDOORS INC	3525 CAROLINA BEACH RD	(910) 350-2828	yes	no	no	yes	yes	no
OUTOFSTATE	GETTYSBURG	PA	17325	HELICOPTER APPLICATORS INC	1670 YORK RD	(717) 337-1370	no	no	yes	no	yes	yes
OUTOFSTATE	BRIDGEWATER	VA	22812	DYNAMIC AVIATION GROUP INC	PO BOX 7	(540) 828-6070	no	no	no	yes	yes	no
OUTOFSTATE	BRIDGEWATER	VA	22812	DYNAMIC AVIATION GROUP INC	PO BOX 7	(540) 828-6070	no	no	yes	no	yes	yes
OUTOFSTATE	CULPEPER	VA	22701	KRITTER CROPDUSTING INC	20634 MT PONY RD	(703) 507-2554	no	no	yes	no	yes	yes
OUTOFSTATE	VIRGINIA BEACH	VA	23466	LICENSE TO KILL INC	PO BOX 62482	(757) 233-0110	yes	no	no	yes	yes	no
OUTOFSTATE	VIRGINIA BEACH	VA	23451	SOLITUDE LAKE MANAGEMENT	PO BOX 969	(888) 480-5253	yes	yes	no	yes	yes	no



## Vendors that Provide Mosquito Count Data for possible FEMA reimbursement associated with Mosquito Abatement

*The mention of commercial vendors or trade names of commercial products is for illustration purposes, and does not constitute endorsements or recommendations for use by the South Carolina Department of Health and Environmental Control.*

PRICES AS OF OCTOBER 2018

### **Gregory Pest Control (on state contract)**

- Performs trapping or landing rate counts
- Contact person: Tim Teague
  - phones: 803-309-6844; 800-922-2596
  - email: [teague@gregorypestsolutions.com](mailto:teague@gregorypestsolutions.com)
- Contact person: Larry Motes
  - phone: 843-729-7852
  - email: [lmotes@gregorypestsolutions.com](mailto:lmotes@gregorypestsolutions.com)
- Rate: \$138/hr for a two-man team to conduct landing rate counts or mosquito trapping

### **Mosquito Authority (on state contract)**

- Does not perform trapping, but can perform landing rate counts
- Contact person: Joey Osborne
  - phone: 828-308-2181
  - email: [osborne.joey@gmail.com](mailto:osborne.joey@gmail.com) or [joey@themosquitoauthority.com](mailto:joey@themosquitoauthority.com)
- Contact person: Craig Stoops
  - phone: 904-294-4073
  - email: [craig.stoops@bugsbite.com](mailto:craig.stoops@bugsbite.com)
- Rate: \$30/hr for a technician to conduct landing rate counts

### **Clarke Mosquito Control (please confirm cost information)**

- Performs trapping or landing rate counts
- Contact person: Joe Strickhouser
  - phone: 704-756-5837; 704-333-2523
  - email: [jstrickhouser@clarke.com](mailto:jstrickhouser@clarke.com)
- Rate: \$2,500/day for a two-man team to conduct landing rate counts or trapping (5-day minimum)
- Rate: \$180 per trap night (CDC light or gravid trap)

### **Vector Disease Control International (please confirm cost information)**

- Performs trapping or landing rate counts
- Contact person: Cristina Flores
  - phone: 312-718-1181
  - email: [cflores@vdc.net](mailto:cflores@vdc.net)
- General contact information: VDCI <http://www.vdc.net/>
  - phone: 800-413-4445
  - email: [info@vdc.net](mailto:info@vdc.net)
- Rate: \$209 per mosquito trap; recommend 5-10 traps per county
- Rate: \$104 per site per landing rate count; recommend 10 sites (10 sites X 20 pre-spray and post-spray counts = \$2,080).

## Suggested List of GIS layers for South Carolina Counties When Preparing for Truck or Aerial Adulticiding Against Mosquitoes

### Standard GIS files available from state, federal, or county sources:

- **State boundaries** – Census Bureau (<https://www.census.gov/geo/maps-data/data/tiger-cart-boundary.html>)
- **County boundaries** – Census Bureau (<https://www.census.gov/geo/maps-data/data/tiger-cart-boundary.html>)
- **Municipal boundaries** – Census Bureau (<https://www.census.gov/geo/maps-data/data/tiger-cart-boundary.html>)
- **State Park boundaries** – SC Parks, Recreation and Tourism [Data can be requested – Resource Management Biologist, Caity Homan (803-734-0532; [choman@scprt.com](mailto:choman@scprt.com))]
- **Federally managed areas** – National Map ([https://nationalmap.gov/small\\_scale/atlasftp.html#fedlanp](https://nationalmap.gov/small_scale/atlasftp.html#fedlanp))
- **USFWS endangered and threatened species boundaries** – SCDNR (<http://www.dnr.sc.gov/species/index.html>)
- **Military bases** – SCDHEC GIS created layer titled Military Bases. Data was acquired by contacting individual bases for boundary layers and merging into a statewide dataset.
- **Streets** (all primary and secondary for truck ULV; only main thoroughfares for aerial ULV) – SC Dept. of Transportation (<http://scdot.maps.arcgis.com/home/item.html?id=bb03dbeb48a440d187b9276d062587f2#overview>)
- **Water bodies (all ponds, lakes)** – National Hydrography Dataset (<http://www.horizon-systems.com/NHDPlus/V2NationalData.php>)
- **Major and minor hydrography (rivers, streams - spray must be shut off near some of them)** – National Hydrography Dataset (<http://www.horizon-systems.com/NHDPlus/V2NationalData.php>)
- **Schools** – SCDHEC GIS created a layer titled Schools from geocoding tabular information from the SC Department of Education
- **Agricultural land (some chemicals adulticides cannot drift over particular food crops)** – National Land Use (<https://www.nrlc.gov/nlcd2011.php>)
- **Beehives** – SC State Beekeepers Association (<https://scstatebeekeepers.com/contact/>)
- **Organic Farms**
  - **Organic Farms** – Clemson University Regulatory Services Organic Certification Program (<https://www.clemson.edu/public/regulatory/organic/index.html>); [organic@clemson.edu](mailto:organic@clemson.edu); 803-646-2120
  - **National Land Cover Dataset** – USDA National Resources Conservation Service (NRCS) (<https://datagateway.nrcs.usda.gov/>). Land is classified into several different categories, including Cultivated Crops and Hay/Pasture, which are two land types associated with farms.
  - **Cropland Data Layer** – USDA National Agricultural Statistics Service (NASS) (<https://nassgeodata.gmu.edu/CropScape/>). Data can be download by defining an area of interest by using this interactive mapping site.

### Custom-created for Mosquito ULV spraying events

- **Truck Spray routes**
  - Areas that can be covered in 1 hour when the spray truck is driving 10 miles per hour (10 linear miles of street surface per route)
  - Truck spray routes are created individually by county, city, or town GIS staff, or their mosquito control contractors
- **Aerial Spray blocks**
  - Areas created by aerial contractors or USAF, based on the geographic areas provided to them by county, state, mosquito district, or CDC officials.
- **Mosquito surveillance locations** (latitude and longitude data for traps or landing rate counts)
- **Medically sensitive individuals**
- **Spray exclusions areas** due to the presence of endangered or threatened or critical habitat.
  - Source: FEMA EHP Point of Contact