

Integrated Vector Management

Adult Mosquito Application Guidelines

Initiation Criteria

Mosquito-borne disease isolated from a mosquito or mosquito pool within the District boundaries?	yes →	Delineate treatment area
no ↓		
Serological conversion to a mosquito-borne disease in a sentinel chicken or other animal within the District boundaries?	yes →	Delineate treatment area
no ↓		
Mosquito-borne disease detected in a live or dead bird or other animal within the District boundaries?	yes →	Delineate treatment area
no ↓		
Human illness caused by mosquito-borne pathogen within the District boundaries?	yes →	Delineate treatment area
no ↓		
Mosquito Magnet*1 or EVS Trap collection within the District boundaries of	100 or more female <i>Culex tarsalis</i> a collection for three consecutive days → and/or 150 or more female of any <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> , species a collection for three consecutive days → and/or 200 or more total female mosquitoes a collection for three consecutive days →	Delineate treatment area
less than 100 female <i>Culex tarsalis</i> a collection for three consecutive days and/or less than 150 female of any <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species a collection for three consecutive days and/or less than 200 total female mosquitoes a collection for three consecutive days ↓		
American Light or Gravid Trap collection within the District boundaries of	10 or more female <i>Culex tarsalis</i> a collection for three consecutive days → and/or 25 or more female of any <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species a collection for three consecutive days → and/or 50 or more total female mosquitoes a collection for three consecutive days →	Delineate treatment area
less than 10 female <i>Culex tarsalis</i> a collection for three consecutive days and/or less than 25 female of any <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species a collection for three consecutive days and/or less than 50 total female mosquitoes a night for three consecutive days ↓		
One-minute sweep net or landing count collection within the District boundaries	10 or more female <i>Aedes</i> or <i>Ochlerotatus</i> species → and/or 25 or more female mosquitoes →	Delineate treatment area
less than 10 female <i>Aedes</i> or <i>Ochlerotatus</i> species and/or less than 25 female mosquitoes ↓		
Do Not Institute Adult Mosquito Management Measures		

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Delineate Treatment Area

Define the Boundaries of the Treatment Area and Consider Agricultural and Land Use Practices

Agricultural and Land Use Practices

Are endangered or threatened species present?

yes →

Consider the presence of Endangered or Threatened Species then Consider Meteorological Conditions within the Delineated Treatment Area

no
↓

Environmentally sensitive habitat?

yes →

Consider Treatments Compatible with a Sensitive Habitat then Consider Meteorological Conditions within the Delineated Treatment Area

no
↓

Organically grown crops?

yes →

Consider Treatments That Meet Organic Standards then Consider Meteorological Conditions within the Delineated Treatment Area

no
↓

Consider Meteorological Conditions within the Delineated Treatment Area

Meteorological Conditions

Temperature inversion?

Less than 1° →

Delay Instituting Adult Mosquito Management Measures

Greater than 1°
↓

Wind speed?

more than 8 mph →

Delay Instituting Adult Mosquito Management Measures

less than 8 mph
↓

Institute Ground ULV Adult Mosquito Management Measures with Appropriate Public Health Pesticide or other Adult control measures

Airplane ULV Adult Mosquito Management Measures

Follow Above Criteria EXCEPT:

- 1° Inversion is not necessary to conduct Adult Mosquito Management Measures**
- Wind Speed criteria will be established by label of Public Health Pesticide used**

Continuance Criteria mosquito-borne disease not detected (mosquito-borne disease detected)

24 hour EVS trap or Mosquito Magnet Trap collection with	100 (25) or more female <i>Culex tarsalis</i> → and/or 150 (50) or more of any female <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species → and/or 200 (75) or more total female mosquitoes →	Consider Environmental Conditions
less than 100 (25) female <i>Culex tarsalis</i> and/or less than 150 (50) female of any <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species and/or less than 200 (75) total female mosquitoes ↓		
24 hour American Light or Gravid Trap collection with	25 (10) or more female <i>Culex tarsalis</i> → and/or 50 (25) or more female of any <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species → and/or 75 (50) or more total female mosquitoes →	Consider Environmental Conditions
less than 25 (10) female <i>Culex tarsalis</i> and/or less than 50 (25) female of any <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> , species and/or less than 75 (50) total female mosquitoes ↓		
One-Minute Sweep Net or Landing Count collection with	10 or more female <i>Aedes or Ochlerotatus</i> species → and/or 25 or more female mosquitoes →	Consider Environmental Conditions
less than 10 female <i>Aedes or Ochlerotatus</i> species and/or less than 25 female mosquitoes ↓		
Do Not Institute Adult Mosquito Management Measures		

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Termination Criteria

Date?	after December 1 st →	<div style="border: 2px solid black; padding: 5px;"> Terminate Adult Mosquito Applications within the rice culture production area or delineated treatment area </div>
before December 1 st ↓		
Mosquito Magnet or EVS Trap collection with	less than 100 (25) female <i>Culex tarsalis</i> a collection for five consecutive days → and/or less than 150 (50) of any female <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species a collection for five consecutive days → and/or less than 200 (75) total female mosquitoes a collection for five consecutive days →	<div style="border: 2px solid black; padding: 5px;"> Terminate Adult Mosquito Applications within the rice culture production area or delineated treatment area </div>
100 (25) or more female <i>Culex tarsalis</i> a collection for five consecutive days and/or 150 (50) or more of any female <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species a collection for five consecutive days and/or 200 (75) or more total female mosquitoes a collection for five consecutive days ↓		
American Light or Gravid Trap collection with	less than 25 (10) female <i>Culex tarsalis</i> a collection for five consecutive days → and/or less than 50 (25) of any female <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species a collection for five consecutive days → and/or less than 50 (25) total female mosquitoes a collection for five consecutive days →	<div style="border: 2px solid black; padding: 5px;"> Terminate Adult Mosquito Applications within the rice culture production area or delineated treatment area </div>
25 (10) or more female <i>Culex tarsalis</i> a collection for five consecutive days and/or 50 (25) or more of any female <i>Aedes, Anopheles, Coquillettidia, Culex, Culiseta, Ochlerotatus, or Orthopodomyia</i> species a collection for five consecutive days and/or 50 (25) or more total female mosquitoes a collection for five consecutive days ↓		
One-minute Sweep Net or Landing Count collection with	less than 10 female <i>Aedes or Ochlerotatus</i> during the next sampling period → and/or less than 25 female mosquitoes a night for next sampling period →	<div style="border: 2px solid black; padding: 5px;"> Terminate Adult Mosquito Applications within the ricefield production area or delineated treatment zone </div>
10 or more female <i>Aedes or Ochlerotatus</i> species for the next sampling period and/or 25 or more female mosquitoes a night next sampling period ↓		
Environmental conditions?	10 consecutive nights unfavorable for ULV treatments →	<div style="border: 2px solid black; padding: 5px;"> Terminate Adult Mosquito Applications within the rice culture production area or delineated treatment area </div>
favorable for adult mosquito management measures ↓		
Continue to Consider Continuance Criteria		

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Factors that may influence the implementation or modify the program

1. Availability of a suitable adulticiding material
2. Susceptibility of mosquito populations to adulticiding materials
3. Environmental conditions not listed in the program
4. Availability of District funding or resources
5. Legal or political legislation
6. Unforeseen biological conditions
7. Presence or absence of mosquito-borne disease

*1 Adult Mosquito Surveillance Devices

All geographic areas delineated as ricefield production regions should have at least one adult mosquito surveillance device within that area.

*2 Delineation of Treatment Area

The Adulticide Airplane Coordinator, or designee determined by the Manager, will define the boundaries of the treatment area.

Public health pesticide (PHP) use and resistance management

1. Consult PHP's label before treatment
2. Apply PHP's within the same class or mode of activity on a rotational basis by the following guidelines unless no other alternatives are available:
 - a. Rotate to a new class **after five consecutive applications** to the same site.

Note: applications can be over more than one year