

Clarke Environmental Mosquito Management, Inc.
Operational Plan
For the City of Jonesboro, Arkansas 2007

The Clarke Team

Clark Wood – VP, Business Development
Michelle Selander – Regional Operations Manager – Midwest
Wes Gruenberg – Operations Supervisor – Arkansas

Jonesboro Headquarters

700 Burke Avenue
Jonesboro, AR 72401
Mosquito Hotline: 1-800-353-6693
Supervisor on location: Wes Gruenberg
Local number: 932-1703.

Fleet

-Four ULV-mounted Trucks (for Day/Night Crews)
-One Surveillance Truck

Staffing

- 4 Field Technicians: Cross-trained in: Field Inspection, Larviciding, Catchbasin, and Night ULV.
- 2 Night Crew: Specifically Dedicated to Nightly Adulticiding.
- 1 Surveillance and Laboratory Assistant: Collect trap data and identify prevalent mosquito larvae and adult species.
- 1 Office Assistant: Answering mosquito hotline, scheduling, etc.

Part I. General Service

- A. Aerial Survey and Geographic Information System (GIS) Mapping –
 - a. Completed as of February 1st.
- B. Computer System and Record Keeping Database
- C. Public Relations and Educational Brochures
- D. Mosquito Hotline Citizen Response –
 - a. Operational as of April 11th.
- E. Comprehensive Insurance Coverage naming the City additionally insured
- F. Program Consulting and Quality Control Staff
- G. Monthly Operational Reports, Periodic Advisories, and Annual Report – Utilize Datamaster software and Operations Database to generate monthly reports in following months.
- H. Regulatory compliance on local, state, and federal levels – State certified technicians, with additional Clarke specific training.

Part II. Surveillance and Monitoring

- A. Floodwater Mosquito Migration Model:
The use of weather data and computer model to predict the arrival of *Aedes vexans* brood (hatch) and peak annoyance periods. (Clarke will contact the customer representative and inform him of the impending brood arrival and information from the surveillance database).

- B. Arbovirus Surveillance:
 - 1. Gravid Trap: Operation of two (2) traps to collect *Culex* mosquitoes. Mosquitoes will be collected, identified to species, and pooled for disease assay. Samples will be tested at Clarke laboratories utilizing VecTest® technology for West Nile virus.
 - i. These will start June and operate through September.
 - ii. Data collected every Monday/Tuesday
 - 2. Clarke New Jersey Light Trap Network: Operation of six (6) traps within the City to monitor and evaluate adult mosquito activity.
 - i. These will start by May 1st and run to about October 1st.
 - ii. Data collected every M/W/F.

- C. Weather Monitoring – Operational Forecasts

Part III. Larval Control

- A. Targeted and Complete Inspections

- B. Larval Site Monitoring:
 - 1. Bi-weekly targeted inspections of targeted mosquito-breeding sites.
 - 2. Inspections of sites called in by residents on the Mosquito Hotline.

- C. Prescription Larval Control with VectoLex® (*Bacillus sphaericus*).
 - 1. The program provides for application of prescription larvicides with backpack or hand equipment, as required.

- D. Stocking of 5,000 mosquitofish (*Gambusia affinis*) for biological control of mosquito larvae.
 - 1. Stocked in early June.

- E. Catch Basin Control:
 - 1. One treatment of up to 5,000 catch basins, inlets and manholes with Altosid® XR for 150 day sustainable control of *Culex* mosquito larvae.
 - i. Treatment in Mid-May
 - 2. As required, a late season, booster catch basin treatment of up to 5,000 catch basins, inlets and manholes with Vectolex WSP to maintain *Culex* larval control.
 - i. To be determined

Part IV. Adult Control

- A. Adulthooding in mosquito harborage and recreational areas:
 - 1. Twenty (20) truck ultra-low volume (ULV) treatments for community special events with Biomist synthetic pyrethroid insecticide of up to 1.0 miles. A spray schedule will be developed with the City staff for special events, such as, 4th of July fireworks, *Blue Fest* band concerts, *The Big Great A-State Tailgate-Annual Paint the Town Red Week*, football games, etc.
 - 2. Twenty (20) backpack barrier treatments with Flit synthetic pyrethroid insecticide of up to 0.5 miles for residual control of adult mosquitoes in special event areas.

- B. Adulthooding in Residential Areas:
 - 1. City-wide ULV treatments, or zoned ULV treatments by spray zone based upon surveillance data, with Biomist® synthetic pyrethroid insecticide.
 - 2. Two (2) fixed-wing aerial ULV applications with Anvil® insecticide of a targeted 20,000 acre spray zone based on surveillance data and population density

- C. Adulthooding Operational Procedures
 - 1. Notification of community contact.
 - 2. Weather limit monitoring and compliance.
 - 3. Notification of residents on Clarke Call Notification List.
 - 4. ULV particle size evaluation.
 - 5. Insecticide dosage and quality control analysis.