

THE TOWN OF *Batesburg-Leesville*

Mosquito-borne Disease Response Plan

The Town of Batesburg-Leesville is committed to ensuring the public's health and wellbeing in the event of a mosquito-borne disease outbreak. To this end, a program has been created to limit mosquito-borne diseases, detect exposures, and outline the Town's response to known outbreaks. The Mosquito-borne Disease Response Plan, herein called "The Plan," has been developed utilizing best practices and information obtained from SC Department of Health and Environmental Control (DHEC) and the Centers for Disease Control and Prevention (CDC).

Mosquito-borne Diseases

The CDC and S.C. Department of Health and Environmental Control (DHEC) describe mosquito-borne diseases as those that spread to people by the bite of an infected mosquito. The most common or those with the greatest impact to people include West Nile Virus, Zika Virus, Chikungunya virus, dengue, and malaria. In South Carolina, the most common diseases found include West Nile, Eastern Equine Encephalitis, La Crosse encephalitis, Saint Louis encephalitis virus, and dog/cat heartworm. Because there are 61 different species of mosquitoes in SC, a mosquito control program is essential to reduce the likelihood of mosquito-borne disease throughout the community.

The Role of Residents

Residents play an important role in reducing the number of adult mosquitoes by eliminating standing water that may support the development of mosquito larva and pupa. For example, residents can properly dispose of discarded tires, cans, buckets, maintain pools correctly, unclog blocked gutters and drains, dump water from bird baths and pet dishes at least every 2-3 days, ensure air conditioning condensate is not pooling for several days, control irrigation so standing water is not produced, irrigate so runoff is not produced, and perform similar activities around homes and businesses. Water that cannot be eliminated should be treated with a biological mosquito larvicide, in accordance with manufacturer's recommendations.

Mosquito Surveillance

The risk of mosquito-borne diseases depends upon the size of mosquito populations and the incidence rate of disease, as well as the prospect of the mosquito population changing in response to environmental factors. In order to ensure public safety and health, staff will work closely with state and regional partners to share data and provide samples for routine testing. Samples may include trapped mosquitos, dead birds, or other information as requested. Surveillance activities will occur on a regular basis throughout the year.

Mosquito Control Strategies

Human activities can greatly affect the ecology of mosquito populations. Large concentrations of people or animals, for example, can increase exposure rates and the probability of disease outbreak. The use of irrigation, development of drainage networks, elimination of mosquito

predators, prevalence of improperly maintained birdbaths and other water holding containers can increase the numbers of certain types of mosquitoes.

All mosquitoes begin their lives in water. Mosquito breeding can therefore be prevented by either eliminating the source of water (source reduction) or by killing larvae (larviciding). Larviciding programs use a combination of source reduction, biological, and possibly chemical measures to control mosquito larvae before they develop into biting adults. If properly implemented, this strategy can be the most effective, economical, and safest method for mosquito control because mosquito larvae are minimized, thus reducing the need for adult mosquito control. Subsequently, this reduces the impacts of control measures on non-target organisms and lessens the risk of chemical exposures to the public. Using biological controls also minimizes the chance of pesticide resistance in mosquito populations. Inarguably, the most effective and economical way to reduce mosquito populations is by larval source reduction. The goal of this program should be to monitor mosquito populations and initiate controls before diseases are transmitted to humans or domestic animals.

When larval control is not possible, or more immediate control measures are needed, adult mosquito control may be required to diminish populations of infected mosquitoes and interrupt viral transmission. Chemical usage should be only implemented when there are occasional episodes of heavy, uncontrolled breeding concurrent with a high degree of public health risk. The most efficient and effective program is one in which mosquito larvae are prevented from becoming biting adults through the use of biological control agents. The chemicals used are considered to be among the most environmentally acceptable, commercially available biological control agents. For these reasons, the Town will rely upon source reduction, larviciding, and adulticiding for mosquito control.

The primary objective of mosquito control is to decrease the risk of mosquito-borne human diseases. This objective will be accomplished by:

- Stressing the importance of source reduction as a viable means of control, both by residents and on municipal properties, including enforcement actions for stagnant water located on private property.
- Aggressively larviciding where such activities are feasible, practical, and likely to be effective.
- Promoting the use of personal mosquito protection measures, especially for the elderly and those individuals with compromised immune systems, through public education and outreach.
- Providing public information so citizens are informed about the current risks and what can be done to help reduce risks.
- Regularly implement adult mosquito control measures through targeted ultra-low volume (ULV) pesticide applications (adulticiding).

Public Education

Public education is a key component of a successful mosquito control program. The Town regularly informs the public and provides information electronically and physically related to mosquito control and disease prevention. Going forward, techniques used to disseminate information may include any, or all, of the following:

- Televised public service announcements using the local cable channel,
- Brochures for public use placed in municipal buildings,
- Postings describing the current risks placed in municipal buildings,
- Brochures and/or fact sheets to be distributed to community-based organizations, community boards, elected officials, schools, nursing homes and libraries,
- Presentations to elected officials and/or community groups concerning the current risk, mosquito population and disease status, and mosquito control activities, and
- Press releases describing West Nile virus response activities.

Preparation

The Town will maintain an active vector control (mosquito spraying) program to limit the growth and development of mosquitos in town. Control activities will take place as necessary during the entire mosquito season (typically May through September) to prevent mosquito growth by using a mixture of larvicide and adulticide.

Response Plan

Generally, in the event a mosquito-borne disease is suspected or detected within the community, the following action steps will be taken to alert the public and eliminate/minimize the threat:

- Notify the public and town leadership of the presence of the mosquito-borne disease;
- Specifically notify area bee keepers of the issue and the steps the Town intends to take including time and location of future sprays/applications of chemical agents;
- Begin an aggressive larvicide and adulticide application process to destroy potential disease carrying mosquitos throughout the community;
- Provide DHEC all information related to spraying and public notification; and
- Continue trapping/reporting efforts to ensure the disease has been eliminated.

In the event of a known disease outbreak, the Town will implement the strategies as outlined in Risk Category 1 and Risk Category 2 as developed by DHEC. These strategies can be found in Appendix A.