



**Program Response Guidelines to  
Mosquito-Borne Arboviral Activity  
March 2013**

**Off Season Activities**

**Status:**

- No human cases occurring
- Mosquito activity none to very low
- Mosquito infection rates 0
- Vector index 0

**Operational Response:**

1. Routine post-season analysis of previous season's data; assess response and efficacy.
2. Analyze and map data from prior years to develop surveillance strategy and select mosquito-trapping sites.
3. No mosquito testing.

**Communication Activities:**

1. Updating of public outreach plan with any new information (e.g. at-risk populations).
2. Update FAQ's and other information that may be needed if spraying occurs.

**Level I      Early Season - June**

**Status:**

- No human cases reported
- Evidence of average or lower than average *Culex* species mosquito populations (as compared to available historical population data for the area)
- Mosquito infection rates < 2 per thousand (0.2%)
- Vector index < 0.5

**Probability of Human Outbreak:** Low

**Operational Response:**

1. Initiate surveillance program.
2. Initiate larval control activities June 1st.
3. Brief City Manager on surveillance activities, mosquito-borne virus epidemiology and trigger points for recommendation of emergency control measures.

**Communication Activities:**

1. Establish communication channels between appropriate City and County staff.
2. Ensure online information is up to date and prepare for ongoing, timely updates.
3. Initiate public education program on mosquito source reduction and risk reduction practices

**Communication Topics:**

- West Nile Virus basics
- Wear repellent
- Eliminate breeding sites

## **Level II      Peak Season – July thru August – Low West Nile Virus Activity**

### **Status:**

- Sporadic human cases are being reported
- No infected human blood donors have been reported
- *Culex* mosquito populations increasing, but below historical average for that time period
- Mosquito infection rate < 2 per thousand (0.2%)
- Vector index < 0.5

**Probability of Human Outbreak:** Low – Moderate

### **Operational Response:**

1. Analyze and map surveillance data to identify areas of increased risk.
2. Continue mosquito pool submissions from surveillance program for West Nile virus testing with Colorado State University.
3. Brief City Manager on surveillance findings and need for quick action if activity rapidly increases.
4. Increase larval monitoring and control where necessary.
5. Begin planning for adulticide control in the event that virus activity and *Culex* populations rapidly rise.

### **Communication Activities:**

1. Notify local agencies, media and the public of positive findings.
2. Increase public education activities
3. Continue to regularly update online information, including maps illustrating risk areas.
4. Optional: targeted outreach to high-risk areas including:
  - a. Door hangers
  - b. Online outreach via NextDoor
  - c. Posters and signage
  - d. Coordination with Poudre School District and Colorado State University

### **Communication Topics Overall:**

- West Nile Virus Basics
- Wear repellent
- Eliminate breeding sites
- WNV policy and spraying decision parameters
- How to get notified of mosquito spraying

### **Communication Topics To Targeted Areas:**

- West Nile Virus risks and symptoms
- Wear repellent
- WNV policy and spraying decision parameters
- How to get notified of mosquito spraying

### **Level III Peak Season – July thru August – Increasing West Nile Virus Activity**

#### **Status:**

- More than one human case being reported per week in Fort Collins – OR –
- More than one positive human blood donor reported for the season.

-AND-

- Culex mosquito populations increasing and at or above historical average by 1 standard deviation for that time period– OR –
- Mosquito infection rates of > 3.0 per thousand (0.3%) and increasing – OR –
- Vector index  $\geq 0.75$  and increasing

#### **Probability of Human Outbreak: High**

#### **Operational Response:**

1. Enhanced communications between City and County regarding positive findings and anticipated response activities. City Manager apprised of threat levels and activities on an ongoing basis.
2. Identify geographic areas, by mapping surveillance data, where virus transmission appears most active.
3. Continue larviciding activities.
4. In the event the Health Department recommends adulticide spraying and the City Manager decides to proceed, commence adulticide operations.

#### **Communication Activities:**

1. Coordinate press releases and a wide range of other activities to keep the public informed of affected areas, focusing on exposure risk reduction practices and public education of the disease threat.
2. Intensify existing public education activities and initiate public education/information on the adulticide program
3. Notify residents of affected and adjacent areas and people on the subscription notification list.
4. Notify appropriate agricultural interests (i.e. bee keepers, organic growers, etc.) and individuals on the Pesticide Sensitivity Registry of intended adulticiding activities, times, affected areas, etc. Also notify residents in areas that will *not* be part of the adulticide applications.

#### **Communication Topics**

- West Nile Virus risks and symptoms
- Wear repellent
- WNV policy and spraying decision parameters
- How to get notified of mosquito spraying

## **Level IV      Peak Season – July thru August – Emergency Level**

### **Status:**

- Multiple neuroinvasive human cases being reported in Fort Collins
  - AND –
- Culex mosquito populations increasing and at or above historical average by 1 standard deviation for that time period
  - AND –
- Sustained mosquito infection rates of > 5.0 per thousand (0.5%) – OR –
- Vector index > 0.75.

**Probability of Human Outbreak:** In progress

### **Operational Response:**

1. Expand mosquito surveillance activities (i.e. population densities, vector index and infection rates) to direct mosquito control efforts where risk to exposure is greatest and to monitor pre- and post-adulticide treatment conditions.
2. In the event the Health Department recommends additional adulticide spraying and the City Manager decides to proceed, continue spraying.
3. Secure any needed emergency funding and document costs associated with outbreak control.

### **Communication Activities:**

1. Focus as many resources as possible on public education and information; intensify all activities and involve public officials as spokespersons. Consider emergency measures to restrict outdoor activities.
2. Continue public education and information on the adulticide program including pesticides to be used, toxicity, application times, area of application, exposure reduction suggestions, justification, FAQ's, etc. Notify residents of affected and adjacent areas and people on the subscription notification list.
3. Notify appropriate agricultural interests (i.e. bee keepers, organic growers, etc.) and individuals on the Pesticide Sensitivity Registry of any continued adulticiding activities, times, affected areas, etc. Also notify residents in areas that will *not* be part of the adulticide applications

### **Communication Topics:**

- West Nile Virus risks and symptoms
- Wear repellent
- WNV policy and spraying decision parameters
- How to get notified of mosquito spraying

### **Spraying Communication Activities**

1. Coordinate communication with Colorado State University and Poudre School District for assistance in communicating spraying activities.
2. Focus all available resources on spraying notification.

### **Communication Topics:**

- Spraying details: where and when
- High quality map (interactive?)
- Chemical used
- Precautions to take: people, pets, gardens
- Opt-out ability
- Future spray notifications
- WNV policy and spraying decision parameters
- Special event contact (i.e., if you are planning a special event outside, please contact PERSON to coordinate spraying activities)

### **PENDING IDEAS UNDER FURTHER INVESTIGATION**

- GPS tracking and real-time mapping of spray trucks
- Mobile app to notify of spraying activities
- Interactive online map of searchable addresses and spray zones
- Opt-in phone notification system
- Advisory Panel Orientation and Communication