# Vector Surveillance and Control Workshop

**January 8 – 9, 2019 | Charleston, SC**

In response to the 2017 Hurricanes Harvey, Irma, and Maria, the National Association for County and City Health Officials (NACCHO), in partnership with the American Mosquito Control Association (AMCA) and the Centers for Disease Control and Prevention (CDC) Academic Centers for Excellence in Vector-borne Disease, is hosting two Vector Surveillance and Control Workshops. These workshops will instruct low-resource, impacted jurisdictions on how to detect, prevent, prepare for and respond to mosquito-borne diseases.

Our goal is to provide vector control professionals with a hands-on educational workshop covering best practices for integrated vector management programs.

Participants will:

- Learn essentials of implementing and maintaining a vector surveillance program, key considerations for vector control, and best practices for data use and risk communication.
- Engage with colleagues and counterparts from across the region as well as with vector borne disease experts from the state and federal level.

## WORKSHOP MODULES

**Vector Surveillance** – Review of key components of a vector surveillance program. Demonstrations and hands-on exercises following best practices for monitoring, collecting, and identifying vectors of public health importance.

**Vector Control** – Review of current best practices in vector control strategies.

**Tabletop Exercise** – Review AMCA Best Practices for Integrated Mosquito Management; contribute to decisions made during case study activities; and adapt new information to real-world situations.

## WORKSHOP OUTCOMES

After attending the Vector Control Workshop, attendees should be able to:

1. Describe the key components of a vector surveillance program specific to local vectors and vector-borne diseases.
2. Define the equipment and resources needed to establish a sustainable surveillance program.
3. Describe a range of suitable collection methods for relevant vectors.
4. Describe the process of vector identification including the basics for vector-borne disease testing.
5. Define best practices for data collection, record keeping, and management.
6. Explain various methods of vector control and circumstances under which each control method might be used.
7. Understand the basics of pesticide resistance and how to prevent it. Describe how to monitor for emergence of resistance.
8. Describe the pathway for using vector surveillance data to make decisions to decrease the human risk for vector-borne diseases.

## AGENDA | Day 1 – Vector Surveillance and Control | Aileron Ballroom

Day 1 of the Workshop will cover vector surveillance and control best practices. One half day will be spent on each of the topics. Best practices will be demonstrated through hands-on exercises where possible. The goal is to share practical knowledge and techniques to assist local vector control programs in performing standardized surveillance techniques and using control methods, responsibly, and based on surveillance data.

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| **7:00 – 8:00am** | **Arrival/Breakfast (Provided)** |
| **8:00 – 8:30am** | **Introductions & Opening Statements**<br>**Building Capacity in Local Vector Control Programs Across the U.S.**<br>*Oscar Alleyne, DrPH, Senior Advisor, NACCHO* |

### VECTOR SURVEILLANCE

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| **8:30 – 9:45am** | **Mosquito Identification and Key Characteristics of Local Species**<br>*Chris Evans, MS, PhD, State Public Health Entomologist, South Carolina Department of Health and Environmental Control* |
| **9:45 – 10:00am** | **Coffee and Networking Break** |
| **10:00 – 11:15am** | **Surveillance: The What, Why, When, and How of Mosquito Traps (and Landing Rate Counts)**<br>Learn the proper procedure for taking Landing Rate Counts. Learn how to properly operate the following mosquito traps: CDC Light Trap, BG Sentinel Trap, Gravid Trap, and New Jersey Light Trap<br>*Ed Harne, Taxonomist and Jon Loveland, Entomologist, Charleston County Mosquito Control* |
| **11:15am – 12:00pm** | **Surveillance Data Record Keeping & FEMA Reporting Requirements**<br>*Michael Doyle, State Public Health Entomologist, North Carolina Department of Health and Human Services; Janet McAllister, PhD, Medical Entomologist, Arboviral Disease Branch, Division of Vector-Borne Diseases, CDC* |
| **12:00 – 1:00pm** | **Lunch Break (provided)** |

### VECTOR CONTROL/ABATEMENT

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| **1:00 – 1:45pm** | **Best Practices for Vector Control: Physical vs. Chemical**<br>*Tammy Brewer, Vector Control Manager; Olin Towery, Vector Control Supervisor, Richland County Vector Control* |
| **1:45 – 3:00pm** | **Pesticide Application Basics: Pesticide Label Interpretation and Rate Calculations**<br>Attendees will learn how to prepare for their pesticide licensing exam and the parts of a pesticide label. Additionally, attendees will learn the basic principles of pesticide rate calculations and label interpretation in a scenario-based exercise, using actual pesticide labels.<br>*Andrew J Ruiz, MSPH, Health Scientist, National Center for Environmental Health, Water, Food and Environmental Health Services Branch, CDC* |
| **3:00 – 3:15pm** | **Coffee and Networking Break** |
| **3:15 – 4:45pm** | **Pesticide Resistance: Why and How to Monitor for Resistance**<br>*Janet McAllister, PhD, Medical Entomologist, Arboviral Disease Branch, Division of Vector-Borne Diseases, CDC* |
| **4:45 – 5:00pm** | **Wrap-up/Adjourn**<br>*Oscar Alleyne, DrPH, Senior Advisor, NACCHO* |

## AGENDA | Day 2 – Tabletop Exercise | Aileron Ballroom

Day 2 of the Workshop will integrate basic information from the AMCA Best Practices for Integrated Mosquito Management manual into the Day 1 exercises and demonstrations. Attendees will participate in relevant case studies; formulate intelligent and insightful questions about techniques discussed; adapt new information during discussions to apply to real-world situations; and participate in the tabletop exercise and display confidence with subject matter.

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| **7:30 – 8:30am** | **Arrival/Breakfast (provided)** |
| **8:30 – 9:00am** | **Introduction to Vector Control Collaborative**<br>*Chelsea Gridley-Smith, PhD, Senior Program Analyst, NACCHO* |
| **9:00 – 9:20am** | **Welcome**<br>*Michael Doyle, State Public Health Entomologist, North Carolina Department of Health and Human Services; Avian White, MSEH, Research Technician, East Carolina University; Brian Byrd, PhD, MSPH, Western Carolina University* |
| **9:20 – 10:00am** | **Surveillance**<br>Surveillance activity uses flash card match up to increase familiarity with different traps. |
| **10:00 – 10:15am** | **Coffee and Networking Break** |
| **10:15 – 11:15am** | **Mapping**<br>An overview of mapping and an activity including a case study with a series of questions to complete in teams. |
| **11:15am – 12:00pm** | **Action Threshold**<br>Review action threshold highlights and teams use mapping from the previous activity to complete the Action Threshold Worksheet. |
| **12:00 – 1:00pm** | **Lunch (provided)** |
| **1:00 – 2:00pm** | **Control – Larval Reduction, Biological, and Chemical**<br>Using the AMCA Best Practices manual, attendees will discuss breeding habitats. |
| **2:00 – 2:40pm** | **Monitoring and Recording**<br>Planning for change: think about what might change in their plan if a resistance becomes apparent. |
| **2:40 – 3:00pm** | **Coffee and Networking Break** |
| **3:00 – 4:45pm** | **Capstone Activity**<br>Breaking up into teams, participants will integrate all the learning from today together. Groups will meet in the Aileron Ballroom, Upper Altitude, and Lower Altitude. |
| **4:45 – 5:00pm** | **Closing** |