



April 22-25, 2024 | St. Augustine, Florida

In response to the 2022 Hurricanes Fiona and Ian, the National Association for County and City Health Officials (NACCHO), in partnership with the Centers for Disease Control and Prevention (CDC), is planning a 2024 Vector Control Workshop. The workshop will instruct low-resource, impacted jurisdictions on how to detect, prevent, prepare for, and respond to, mosquito-borne diseases. The focus of the workshop is to educate and train local vector control professionals on best practices for mosquito surveillance and control following a hurricane. Our goal is to provide vector control professionals with a hands-on educational workshop covering best practices for integrated vector management programs.

The workshop theme is ***Managing Mosquitoes in Disaster Situations: Best Practices and Partnerships*** to emphasize the challenges and opportunities of managing mosquitoes in disaster situations, such as hurricanes, floods, or epidemics. It also focuses on best practices and partnerships that can help vector control professionals implement and maintain effective integrated vector management programs.

### Workshop Objectives

Our objective is to provide vector control professionals with a hands-on educational workshop covering best practices for integrated vector management programs in hurricane-affected regions.

- Participants will learn the essentials of implementing and maintaining a vector surveillance program, key considerations for vector control both pre- and post-hurricane, and best practices for data use and risk communication. Participants will engage with colleagues and counterparts from across the region as well as with vector-borne disease experts from the state, federal, and industry levels.

### Workshop Outcomes

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

1. Describe the key components of a mosquito 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 best practices for data collection, record keeping, and management.
4. Explain various methods of mosquito control and circumstances under which each control method might be used.
5. Understand the basics of pesticide resistance and how to prevent it. Describe how to monitor for emergence of resistance.
6. Describe the pathway for using vector surveillance data to make decisions to decrease human risk for vector-borne diseases.
7. Understand what to expect when a hurricane hits. Draft or update a disaster response plan. Explain eligible expenses that vector control programs can submit for reimbursement (e.g., funding/federal assistance) post-disaster.
8. Understand the procedure on how to collaborate with an Emergency Operations Center to plan for and respond to disasters and associated mosquito control activities.



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### Workshop Modules

- **Mosquito Surveillance** – Review of key components of a mosquito surveillance program. Demonstrations and hands-on exercises following best practices for monitoring, collecting, and identifying vectors of public health importance. Unique practices necessary for post-hurricane.
- **Mosquito Control** – Review of current best practices in mosquito control strategies. Introduction to, and demonstration of, various mosquito control equipment and practices that are most useful post-hurricane.
- **EOC Demonstration** – Learn practical knowledge to support effective mosquito control after a hurricane including collaboration, data-driven decisions, and timely action.
- **Coordinating the Response** – Learn about federal and state requirements to effectively prepare for, coordinate, and manage response on the ground immediately following a hurricane.

**Agenda At-a-Glance**

Time	Tuesday, 4/23	Wednesday, 4/24	Thursday, 4/25
7-9:30am	Breakfast at hotel (7-9am)  Shuttles run from hotel to conference center (8:30-9:30a)	Breakfast at hotel (7-9am)  Shuttles run from hotel to conference center (8:30-9:30a)	Breakfast at hotel (7-9am)  Shuttles run from hotel to conference center (8:30-9:30a)
Morning (9:30a-12p)	9:30-9:45a   Welcome (NACCHO, CDC, AMCD)  9:45-10:15a   Battling the Bites: A Post-Ian Mosquito Response Journey  10:15-10:45a   How CDC Supports Effective Mosquito Response in Emergency Situations	9:30-9:45a   Welcome Day 2  9:45-10:15a   FEMA Requirements  10:15-10:45a   Aerial Response at the Federal, State, and Local Levels	9:30-9:45a   Welcome Day 3  9:45-10:45a   Your Mosquito Response Plan and Risk Communication
	10:45-11a   Break		
	11a-12p   Swarming Together: State-Territory Mosquito Control Strategies Post-Hurricane	11a-12p   Breakouts x4 • NC/SC, FL, PR	11-11:45a   Closing Plenary: The Future of Mosquito Control in the Face of a Changing Climate
Lunch	12 – 1pm (catered, on-site)	12 – 1pm (catered, on-site)	12pm – Workshop Concludes; Shuttles from AMCD to airport
Afternoon (1-5p)	1-3:30p   St. Johns Emergency Operations Center Demonstration	1-3:30p   Demonstrations <i>Break into 4 groups, rotate through stations on Surveillance traps/landing rate counts; ULV machine; Hand-held and backpack ULV; Drone)</i>	
3:30-3:45p   Break			
	3:45-4:45p   Effective Mosquito Control in Post-Hurricane Scenarios: A Focus on Resistance Monitoring  4:45-5p   Wrap-Up/Adjourn	3:45-4:45p   Mosquito Control During a Response: You Don't Have to Do it Alone  4:45-5p   Wrap-Up/Adjourn	
	5p – Day 1 Concludes  Shuttle runs to hotel (5-6p)	5p – Day 2 Concludes  Shuttle runs to hotel (5-6p)	

**Day 1 | April 23, 2024**

**7:00 – 9:30am Breakfast at Hotel/Shuttles to AMCD Training Center**

**9:30 – 9:45 Welcome & Opening Remarks**

Chelsea Gridley-Smith (PhD), *National Association of County and City Health Officials (NACCHO)*; Ben Beard (PhD), *Centers for Disease Control and Prevention-The National Center for Emerging and Zoonotic Infectious Diseases (CDC-NCEZID)*; Whitney Qualls (PhD), *Anastasia Mosquito Control District (AMCD) - FL*

**9:45 – 10:15 Battling the Bites: A Post-Ian Mosquito Response Journey**

Aaron Lloyd (MS), *Lee County Mosquito and Hyacinth Control Districts - FL*

**10:15 – 10:45 How CDC Supports Effective Mosquito Response in Emergency Situations**

Janet McAllister (MS, PhD), *CDC-NCEZID*

**10:45 – 11:00am Break**

**11:00 – 12:00 Swarming Together: State/Territorial Mosquito Control Strategies Post-Hurricane**

Michael Doyle (MS), *North Carolina Department of Health and Human Services*; Marah Clark (CPM), *Florida Department of Agriculture and Consumer Services*; Chris Evans (BS, MS, PhD) *South Carolina Department of Health and Environmental Control*; Mayra Toro (BS, MS), *Puerto Rico Department of Health*

**12:00 – 1:00pm Lunch Break (provided)**

**1:00 – 3:30 St. Johns Emergency Operations Center Demonstration**

Kelly Wilson, *St. Johns County Emergency Management*

60 minutes – Introduction to EOC: Setting the Scene

75 minutes – Scenario Demonstration

25 minutes – Group Discussion

**3:30 – 3:45pm Break**

**3:45 – 4:55 Effective Mosquito Control in Post-Hurricane Scenarios: A Focus on Resistance Monitoring**

Janet McAllister (MS, PhD), *CDC-NCEZID*; Marah Clark (CPM), *Florida Department of Agriculture and Consumer Services*; Alden Estep (PhD), *USDA ARS Center for Medical, Agricultural, and Veterinary Entomology*; Grayson Brown (PhD), *Puerto Rico Vector Control Unit*

**Day 2 | April 24, 2024**

**7:00 – 9:30am Breakfast at Hotel/Shuttles to AMCD Training Center**

9:30 – 9:45 **Welcome to Day 2**  
Angana Roy (MPH), *NACCHO*

9:45 – 10:15 **FEMA Requirements**  
Janet McAllister (MS, PhD), *CDC-NCEZID*

10:15 – 10:45 **Aerial Response at the Federal, State, and Local Levels**  
Mark Breidenbaugh (PhD), *Northwest Mosquito and Vector Control District*

**10:45 – 11:00am Break**

11:00 – 12:00 **State/Territory Breakouts [x4]**  
North Carolina - Michael Doyle (MS), *NC Department of Health and Human Services*  
South Carolina – Chris Evans (BS, MS, PhD), *SC Department of Health and Environmental Control*  
Florida - Marah Clark (CPM), *Florida Department of Agriculture and Consumer Services*  
Puerto Rico - Noemí Martínez (JD), *Puerto Rico Vector Management Association*; Gisela Rosario (*NMEAD – Negociado Para El Manejo De Emergencias Y Administración De Desastres*) *Puerto Rico State Agency for Emergency and Disaster Management*

**12:00 – 1:00pm Lunch Break (provided)**

1:00 – 3:30 **Mosquito Control Equipment Round-Up**  
15 min – Introduction and breakout into 4 groups  
4x 30 min Rotation + 5 min to Switch

**3:30 – 3:45pm Break**

3:45 – 4:45 **Mosquito Control During a Response: You Don't Have to Do it Alone**  
Broox Boze (PhD), *Vector Disease Control International*

4:45 – 5:00 **Day 2 Wrap-Up**  
Angana Roy (MPH), *NACCHO*



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**Day 3 | April 25, 2024**

7:00 – 9:30am	<b>Breakfast at Hotel/Shuttles to AMCD Training Center</b>
9:30 – 9:45	<b>Welcome to Day 3</b> Chelsea Gridley-Smith (PhD), <i>NACCHO</i>
9:45 – 10:45	<b>Your Mosquito Response Plan and Risk Communication</b> Whitney Qualls (MS, PhD), <i>Anastasia Mosquito Control District</i> ; Nicole Graves, <i>East Flagler Mosquito Control District - FL</i> ; Andrea McKinney, <i>Collier Mosquito Control District - FL</i>
10:45 – 11:00am	<b>Break</b>
11-11:45	<b>Closing Plenary: The Future of Mosquito Control in the Face of a Changing Climate</b> C. Ben Beard (PhD), <i>CDC-NCEZID</i>
11:45a - 12:00pm	<b>Wrap-Up/Adjourn</b>