

# Division of Public Health

## Agreement Addendum

### FY 21-22

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Brunswick County Health and Human Services  
**Local Health Department Legal Name**

908 Mosquito and Tick Suppression  
**Activity Number and Description**

02/01/2022 – 05/31/2022  
**Service Period**

03/01/2022 – 06/30/2022  
**Payment Period**

Epidemiology Section /  
Communicable Disease Branch  
**DPH Section / Branch Name**

Michael Doyle (919) 546-1637  
michael.doyle@dhhs.nc.gov

**DPH Program Contact**  
(name, phone number, and email)

**DPH Program Signature** **Date**  
(only required for a negotiable agreement addendum)

- ☒ **Original Agreement Addendum**  
☐ **Agreement Addendum Revision #** \_\_\_\_\_

#### I. **Background:**

To remain prepared for the continuing threat of mosquito and tick-borne diseases in North Carolina, such as Zika virus, West Nile virus, La Crosse Encephalitis, Powassan virus, and Lyme disease, it is imperative to give environmental health professionals the tools to identify and control vector arthropods in their jurisdictions.

In addition, severe nuisance mosquito issues that exist in high tourist areas and which occur after hurricanes pose a threat both to the quality of life and to the economies of several regions of North Carolina.

The North Carolina Department of Health and Human Services (NCDHHS) Epidemiology Section is funding multiple local health departments across the state and designating each as either a Basic Surveillance county or as a County of Regional Expertise (CRE). Those designated as Basic Surveillance counties are to establish or continue basic vector surveillance with the goal of developing a local Integrated Mosquito Management (IMM) surveillance program and may also choose to develop a tick surveillance program. Those designated as CREs are to improve existing IMM programs and assist surrounding counties in improving their own IMM programs.

#### II. **Purpose:**

This Agreement Addendum provides funding for the Local Health Department (LHD) to become a County of Regional Expertise (CRE) on IMM and tick surveillance. Specifically, the state expects the LHD to use the funds to become competent in operating all common surveillance methods, contribute to baseline state and national mosquito knowledge, and effectively suppress mosquitoes using Integrated Mosquito Management methods. This will allow the LHD to lead efforts in its

  
Health Director Signature

(use blue ink)

1/19/22  
Date

Local Health Department to complete:  
(If follow-up information is needed by DPH)

LHD program contact name: \_\_\_\_\_  
Phone number with area code: \_\_\_\_\_  
Email address: \_\_\_\_\_

**Signature on this page signifies you have read and accepted all pages of this document.**

Revised July 2017

region, and aid other local health departments.

This Agreement Addendum also provides funding to supplement the LHD's investment in combating mosquito-borne disease. Specifically, this funding is to be used to gain the skills needed to perform basic mosquito surveillance using standard traps, and contribute to state and national mosquito maps.

In the event of a local vector-borne disease outbreak, or during post-hurricane mosquito suppression, local staff will be capable of setting and retrieving traps, and possibly identifying disease vectors. Due to the high variation of mosquito species and numbers across the state, this specific county-level mosquito data will assist local officials in responding to the situation with the correct chemicals, timing of spray events, and customized education messages.

Between disease events, the local trap results will have three functions: (1) to assist local staff in improving local preventative mosquito suppression efforts; (2) to assist counties in securing FEMA reimbursements for post-hurricane Ultra Low Volume mosquito spraying; and (3) to contribute to North Carolina's NCSurv mosquito database). This county-by-county data will add to state and nationwide knowledge of mosquito species distribution and seasonality.

### III. Scope of Work and Deliverables:

#### A. Mandatory Vector Surveillance and Training

The LHD shall perform the following surveillance strategy:

1. Outside County Assistance: Provide assistance to one or more North Carolina counties with vector surveillance, control, or education during the Agreement Addendum period. This may include use of inter-county vector control agreements, lending of equipment, one-on-one training in mosquito identification, surveillance methods, or suppression methods.
2. Aedes aegypti Verification: If *Ae. aegypti* or container mosquitoes resembling *Ae. aegypti* (adults or larva) are collected, the LHD must submit them for verification to one of the state's university partners within 30 days of collecting them.
3. NCSurv Entry: During the Agreement Addendum's Service Period, record mosquito collections data in NCSurv within 30 days of collection, including Landing Rate Counts, unless otherwise arranged with the State Entomologist.
4. Vector Training: A staff member shall attend a minimum of one training event within the Agreement Addendum period involving mosquito surveillance and/or vector control, and provide evidence of continuing education units (CEUs), if offered at the event. Training events include those sponsored by the North Carolina Mosquito and Vector Control Association (NCMVCA), the Mid-Atlantic Mosquito and Vector Control Association (MAMCA), the Centers for Disease Control and Prevention (CDC), and the American Mosquito Control Association (AMCA). Other training events may be approved upon request if they directly apply to vector management issues.
5. Applicator License or Public Health Contract: During the Agreement Addendum's Service Period, the LHD shall either:
  - a. Have a minimum of one county staff member hold an NCDA Category B "Public Health" Applicator license (<https://www.ncagr.gov/SPCAP/pesticides/RECREDRE.HTM>), **or**
  - b. Maintain an active (or no-cost contingency) contract with a Category B-licensed pest control company in case of a disease outbreak requiring suppression of infected adult mosquitoes.
6. Vector Organization Membership: Provide evidence of at least one staff member, or a department within the county, holding membership in good standing in one of the following

organizations during the Agreement Addendum's Service Period: NCMVCA, MAMCA, or AMCA. An alternative organization focusing on Integrated Mosquito or Tick Management may be substituted upon approval by the State Public Health Entomologist.

## **B. Enhanced Vector Surveillance, Vector Control, and Education**

The Local Health Department shall perform at least one activity in each of the following three sections (i.e., one in Enhanced Vector Surveillance, one in Vector Control, and one in Education). Activities which result in improving vector suppression are preferred (e.g., surveillance which results in establishing action thresholds, evaluation of suppression methods, and suppression equipment):

### **1. Enhanced Vector Surveillance:**

- a. ID Funding: Fund university partners to conduct regular mosquito surveillance or identification (e.g., more than occasional assistance with identification).
- b. Tick Surveillance: Conduct tick surveillance using standard methodologies (tick drags or counts) with species identified and species counts recorded.
- c. Testing: Perform pathogen testing on mosquito and tick specimens, as determined in consultation with the State Public Health Entomologist.
- d. IMP: Conduct surveillance by participating in the Invasive Mosquito Project (<http://www.citizenscience.us/imp/>).
- e. Surveillance Equipment: Purchase surveillance equipment, including traps and laboratory equipment (e.g., microscopes and bioassay bottles) and additional trapping or testing supplies (e.g., dry ice, batteries, CO2 tanks, equipment access subscriptions).
- f. Outside Surveillance: Subcontract or create a formal agreement (e.g., MOA, MOU) with external partners (e.g., other county vector programs, university partners, or contractors) to conduct vector surveillance activities on behalf of the Local Health Department, following the same methods as described in this Agreement Addendum.
- g. Surveillance Training: Improve surveillance skills through County staff receiving on-site training from outside sources, participating in distant training events (i.e., AMCA, NCMVCA, CSTE, CDC, Dodd Courses, etc.), or sponsoring training events for internal and/or external staff.

### **2. Vector Control:**

- a. Create one of the following:
  - 1) Mosquito Control Districts (See NC §130A-352 Creation and purpose of mosquito control districts, available at <https://codes.findlaw.com/nc/chapter-130a-public.../nc-gen-st-sect-130a-352.html>); or
  - 2) County-based mosquito and tick suppression program or mosquito suppression program.
- b. Control Equipment: Purchase equipment and supplies for conducting vector control activities (e.g., backpack and trailer-mounted barrier sprayers, ULV dispersal machines, aerial and/or ground adulticiding/larviciding equipment, lethal ovitraps, ATSB [attractive toxic sugar bait] traps, larvicides, and/or adulticides).
- c. Calibration and Repair: Calibrate and repair existing equipment, provided the equipment is used for mosquito and tick control activities.
- d. Spray Thresholds: Determine "spray thresholds" for larviciding and adulticiding, and other activities resulting in increased effectiveness of suppression tools.

- e. Contingency Control Contract: Establish a contingency contract, MOA, or similar agreement, with external partners (e.g., university partners or contractors, towns, and/or a private company) to conduct vector suppression activities on behalf of the Local Health Department, following established IMM methods.

### 3. Education:

- a. Educate the public about tick and mosquito bite avoidance using educational and public health campaigns designed by the LHD or adapted for LHD use from other sources (e.g., AMCA, CDC, PAHO, WHO). Educational information can be provided to the public via printed leaflets or flyers, billboards, radio advertisements, or other methods deemed most effective by the LHD. The majority of the educational information shall be in English and Spanish, and also may be in another language of importance in the area.
- b. Educate the public about specific vector-borne diseases of importance in its geographic area. Consult with other staff members within the LHD or the Communicable Disease Branch to identify which diseases have the greatest impact on the LHD's community.

## IV. Performance Measures/Reporting Requirements:

### A. Mandatory and Enhanced Vector Surveillance

The LHD shall submit the following to the State Public Health Entomologist by June 15, 2022:

1. Surveillance Summary: A surveillance summary for the period February 1 through May 31, 2022. This surveillance summary shall include:
  - a. Surveillance data shall be converted to the format used by NCSurv.
  - b. Descriptions of mosquito traps and tick collection methods used.
  - c. General mosquito surveillance strategy used (e.g., "six CDC light traps set weekly from March through October in six static locations, ten ovitraps set bi-weekly from March through October, four gravid traps set monthly" or "two BG sentinels, set based on mosquito complaints or during enforcement actions").
  - d. Results of any pathogen testing or a statement that no pathogen testing was performed.
  - e. Results of any Insecticide Resistance Testing or a statement that no Insecticide Resistance Testing was performed which includes the reason it was not performed.
  - f. A statement regarding whether *Ae. aegypti* or container mosquitoes resembling *Ae. aegypti* (adults or larva) were collected and submitted for verification to one of the university partners and the results received.
  - g. Upcoming Surveillance: A summary statement of what mosquito and tick surveillance are planned for the 2022 field season (i.e., June–October 2022), using the format described in this Subparagraph 1.
2. Mosquito and tick identification training events attended, including names, locations, and dates of events.
3. External partners funded (e.g., university partners) to conduct vector surveillance activities.

### B. Vector Control

The Local Health Department shall submit a written description of the following activities that occurred for the period February 1 through May 31, 2022 and about plans for the remainder of the 2022 calendar year to the State Public Health Entomologist by June 15, 2022:

1. Equipment calibration conducted between February 1 and May 31, 2022.
2. Equipment calibration plans for the remainder of the 2022 calendar year.

3. Spray thresholds used for larviciding and adulticiding conducted between February 1 and May 31, 2022.
4. , Any plans to change spray thresholds used for larviciding and adulticiding for the remainder of the 2022 calendar year.
5. Training for vector control activities. The summary is to include the training event names, course names, dates, and names/titles of those who attended.
6. Copies of Vector control contracts and/or MOAs for vector control with neighboring governmental entities.
7. Vector control methods, including a description of:
  - a. Larviciding tools used (e.g., hand treatments, power backpack granular spreader, drones, hand-pumped liquid sprayers, hand-pumped backpack sprayers ATV-mounted liquid larviciding machines, liquid larvicide blowers [Buffalo Turbine, A-1 Mister, etc.], truck-mounted tank sprayers)
  - b. Larvicide types (e.g., trade names and/or description of formulation types)
  - c. Adulticiding tools (e.g., ATV and truck-mounted ULV machines, drones, truck and trailer-mounted barrier sprayers, Powered backpacks)
  - d. Adulticide types (e.g., trade names and/or description of formulation types)
  - e. Lethal traps
  - f. Other tools or methods attempted and/or used

### C. Education

The Local Health Department shall submit a written description of the following activities that occurred for the period February 1 through May 31, 2022 to the State Public Health Entomologist by June 15, 2022:

1. A description of all educational materials created by the Local Health Department. Such materials include but are not limited to fliers, school outreach materials, and social media recordings such as videos. The materials description shall include:
  - a. A list of what educational materials were created
  - b. Numbers of materials distributed
  - c. Number of billboards
  - d. Number of radio spots
  - e. Number of online postings
2. Electronic copies of all new educational materials and copies of externally acquired materials.

### D. Other Requirements

1. Name and license number of the staff members holding a Public Health Category B license or a description of outside mosquito suppression contract.
2. Name and vector control organizations of which staff are members.
3. Outside Assistance: A statement describing the assistance provided to one or more North Carolina counties with vector surveillance. In the event that nearby counties did not accept the LHD's offers of assistance, provide documentation of the assistance offers made to a minimum of three counties and the responses received by the counties declining the assistance.

4. IMP: A statement regarding the LHD's involvement in the Invasive Mosquito Project for the 2022 calendar year. (The Invasive Mosquito Project is a citizen science project aimed at monitoring invasive container-inhabiting mosquito species across the United States.)

**E. Expense Summary**

The LHD shall submit a summary of how the Agreement Addendum Activity 908 funds were spent during the Feb. 1, 2022 – May 31, 2022 Service Period to the State Public Health Entomologist by June 15, 2022.

**V. Performance Monitoring and Quality Assurance:**

- A. The State Public Health Entomologist shall review the reports, summaries, descriptions, and materials for accuracy and completeness. Missing or incomplete data will be addressed with the LHD via phone conference or site visit. Complications will be addressed by the entomologist on a case by case basis. Failure to provide complete data may result in a corrective action plan being issued and could result in loss of future funding.
- B. One site visit will be completed during the Agreement Addendum period to review Integrated Mosquito Management methods and equipment.

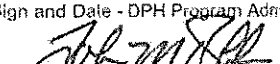
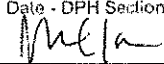
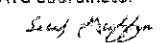

**VI. Funding Guidelines or Restrictions:**


- A. Requirements for pass-through entities: In compliance with 2 CFR §200.331 – *Requirements for pass-through entities*, the Division of Public Health provides Federal Award Reporting Supplements to the local health department receiving federally funded Agreement Addenda.
  1. Definition: A Supplement discloses the required elements of a single federal award. Supplements address elements of federal funding sources only; state funding elements will not be included in the Supplement. Agreement Addenda (AAs) funded by more than one federal award will receive a disclosure Supplement for each federal award.
  2. Frequency: Supplements will be generated as the Division of Public Health receives information for federal grants. Supplements will be issued to the local health department throughout the state fiscal year. For federally funded AAs, Supplements will accompany the original AA. If AAs are revised and if the revision affects federal funds, the AA Revisions will include Supplements. Supplements can also be sent to the local health department even if no change is needed to the AA. In those instances, the Supplements will be sent to provide newly received federal grant information for funds already allocated in the existing AA.
- B. Travel costs associated with participating in vector surveillance and control training is an allowable expense.

Activity 908	AA	1175 4801 00	Total Allocated	Proposed Total	New Total
Service Period		06/01-05/31			
Payment Period		07/01-06/30			
01 Alamance		0	\$0.00	0	0
D1 Albemarle		0	\$16,000.00	0	16,000
02 Alexander		0	\$0.00	0	0
04 Anson		0	\$0.00	0	0
D2 Appalachian		0	\$0.00	0	0
07 Beaufort		0	\$0.00	0	0
09 Bladen		0	\$0.00	0	0
10 Brunswick	* 0	16,000	\$0.00	16,000	16,000
11 Buncombe		0	\$0.00	0	0
12 Burke		0	\$0.00	0	0
13 Cabarrus	* 0	4,000	\$0.00	4,000	4,000
14 Caldwell		0	\$0.00	0	0
16 Carteret		0	\$0.00	0	0
17 Caswell		0	\$0.00	0	0
18 Catawba		0	\$0.00	0	0
19 Chatham		0	\$0.00	0	0
20 Cherokee		0	\$0.00	0	0
22 Clay		0	\$0.00	0	0
23 Cleveland		0	\$0.00	0	0
24 Columbus		0	\$0.00	0	0
25 Craven		0	\$4,000.00	0	4,000
26 Cumberland		0	\$0.00	0	0
28 Dare		0	\$0.00	0	0
29 Davidson		0	\$0.00	0	0
30 Davle		0	\$0.00	0	0
31 Duplin		0	\$0.00	0	0
32 Durham		0	\$0.00	0	0
33 Edgecombe		0	\$0.00	0	0
D7 Foothills		0	\$0.00	0	0
34 Forsyth		0	\$25,500.00	0	25,500
35 Franklin		0	\$0.00	0	0
36 Gaston		0	\$4,000.00	0	4,000
38 Graham		0	\$0.00	0	0
D3 Gran-Vance		0	\$0.00	0	0
40 Greene		0	\$0.00	0	0
41 Guilford		0	\$0.00	0	0
42 Halifax		0	\$0.00	0	0
43 Harnett		0	\$0.00	0	0
44 Haywood		0	\$4,000.00	0	4,000
45 Henderson		0	\$0.00	0	0
47 Hoke		0	\$0.00	0	0
48 Hyde		0	\$0.00	0	0
49 Iredell		0	\$0.00	0	0
50 Jackson		0	\$0.00	0	0
51 Johnston		0	\$0.00	0	0
52 Jones		0	\$0.00	0	0
53 Lee		0	\$0.00	0	0
54 Lenoir		0	\$0.00	0	0
55 Lincoln		0	\$0.00	0	0
56 Macon		0	\$0.00	0	0
57 Madison		0	\$0.00	0	0
D4 M-T-W		0	\$0.00	0	0
60 Mecklenburg		0	\$16,000.00	0	16,000



62 Montgomery		0	\$0.00	0	0
63 Moore		0	\$0.00	0	0
64 Nash		0	\$16,000.00	0	16,000
65 New Hanover		0	\$16,000.00	0	16,000
66 Northampton		0	\$0.00	0	0
67 Onslow		0	\$4,000.00	0	4,000
68 Orange		0	\$0.00	0	0
69 Pamlico		0	\$0.00	0	0
71 Pender		0	\$4,000.00	0	4,000
73 Person		0	\$0.00	0	0
74 Pitt		0	\$16,000.00	0	16,000
75 Polk		0	\$0.00	0	0
76 Randolph		0	\$0.00	0	0
77 Richmond		0	\$0.00	0	0
78 Robeson		0	\$0.00	0	0
79 Rockingham		0	\$0.00	0	0
80 Rowan		0	\$0.00	0	0
82 Sampson		0	\$0.00	0	0
83 Scotland		0	\$0.00	0	0
84 Stanly		0	\$0.00	0	0
85 Stokes		0	\$0.00	0	0
86 Surry		0	\$0.00	0	0
87 Swain		0	\$0.00	0	0
D6 Toe River		0	\$0.00	0	0
88 Transylvania		0	\$16,000.00	0	16,000
90 Union		0	\$0.00	0	0
92 Wake		0	\$0.00	0	0
93 Warren		0	\$0.00	0	0
96 Wayne		0	\$0.00	0	0
97 Wilkes		0	\$0.00	0	0
98 Wilson		0	\$0.00	0	0
99 Yadkin		0	\$0.00	0	0
Totals		20,000	141,500	20,000	161,500

Sign and Date - DPH Program Administrator  1-5-22	Sign and Date - DPH Section Chief  01-05-22
Sign and Date - DPH Contracts Office - ATC Coordinator Budget  1/5/2022	Sign and Date - DPH Budget Officer  1/5/2022

 1/5/2022