

Background

- North Carolina Department of Natural Resources, Public Health Pest Management Section
 - Formed in the 1970s, Disbanded in 2011 (state budget cuts)

Organization Structure of Mosquito Control in NC (Del Rosario et al. 2014)

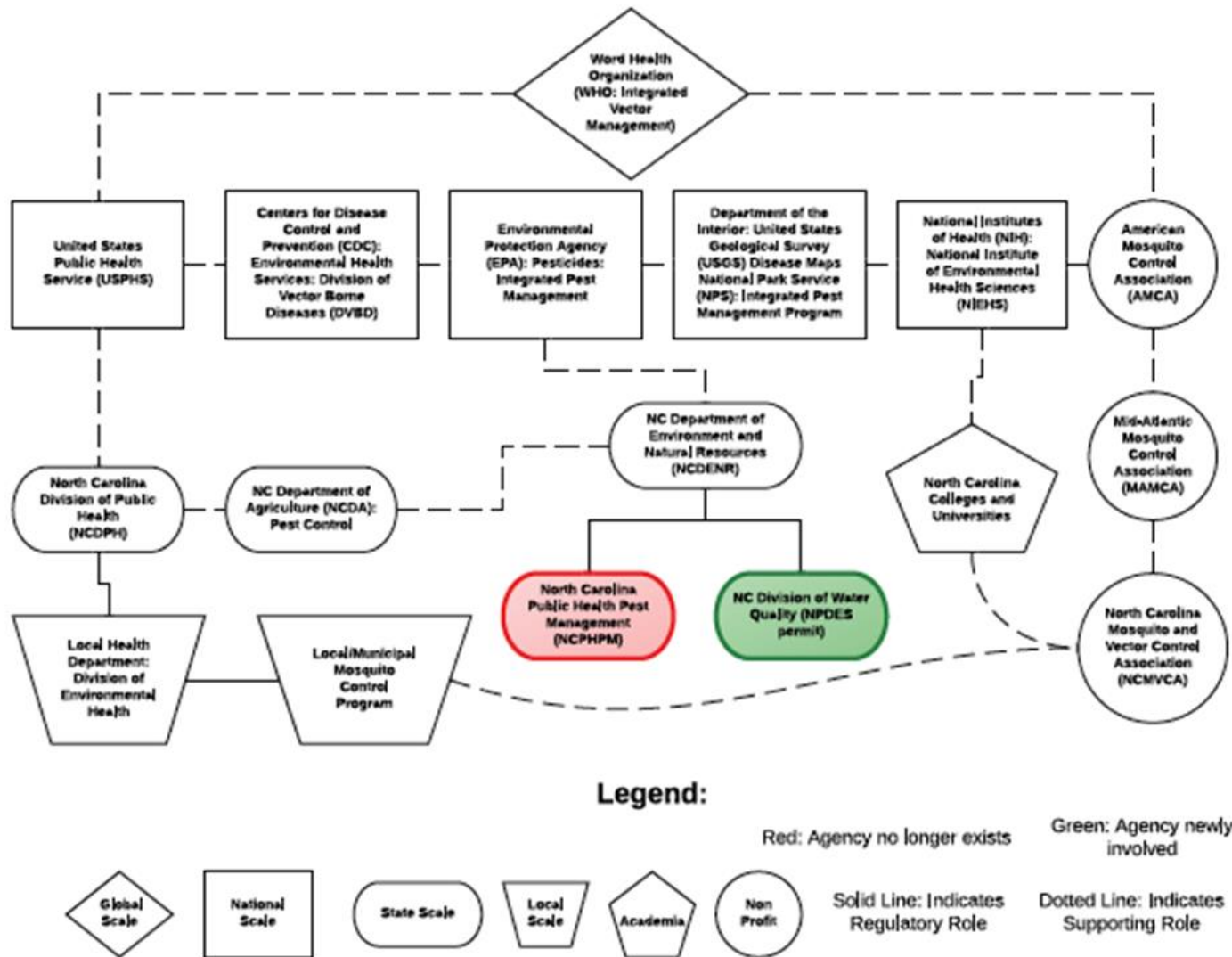


Figure 1. Organizational diagram of agencies involved in mosquito control in NC (adopted from Impoinvil et al. 2007).

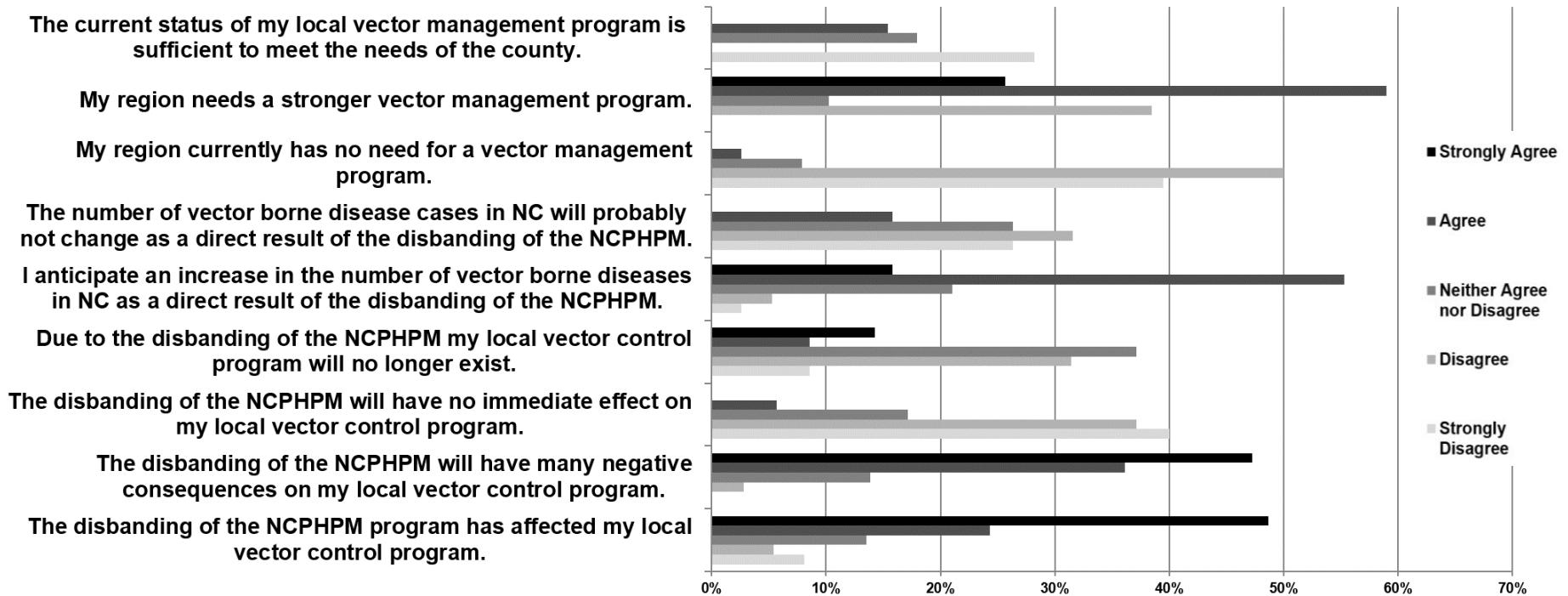
Background

- In 2011, we conducted survey of NC mosquito control programs.
 - 50-question survey distributed to departments of public and environmental health, public works, and vector control in all NC counties.
 - Assessed the current status of NC mosquito control programs.
 - Evaluated the extent to which the operational status of local programs affects public health.
 - Evaluated the impacts of losing the PHPM section in NC.
 - *Del Rosario, Richards, Anderson, Balanay (2014) Current status of mosquito control programs in North Carolina: The need for cost-effectiveness analysis. Journal of Environmental Health 76(8):8-15.*

Background

- *Del Rosario et al. (2014)* key findings:
 - Current status of mosquito control programs in NC.
 - Budget shortfalls reported.
 - 86 MCPs (39/100 counties) most with < 2 employees operating in municipal public works programs.
 - Reduced surveillance and control.
 - Operational status of local programs affects public health.
 - Few programs maintain sentinel chicken flocks for arbovirus antibody testing and/or submit mosquitoes for arbovirus testing.
 - Impacts of losing the PHPM section in NC.
 - Loss of expert resources; negative impacts to public health.

Del Rosario et al. 2014



Background

- In 2011:
- Average mosquito control budget was \$66,303.45
- Cost per citizen ranged from \$0.02 (Buncombe and Cumberland Counties) to \$68.07 (Newport in Carteret County)
- 55% of respondents reported “just barely functional” budgets
- 10% of respondents reported “highly functional” budgets

Early 2016 Survey of MCPs

- In February 2016, an informal list was compiled of all existing MCPs in NC (phone and email)
 - In response to request from AMCA (Joe Conlon)
- Programs ranged from public education-based to surveillance-based control programs
 - 93 MCPs were identified (40/100 counties)
 - No detailed data on budgets, personnel, etc. were obtained
 - Lacks detail on which programs are doing what components
 - Education, mosquito surveillance, control (chemical, biological, habitat alteration, etc.), enforcement, disease surveillance (sentinel chickens, mosquito pools)
- NCMVCA should follow up on this with a formalized survey to provide more details.

Overview of NC Zika Funding

Funding Cycles

State Appropriations, Recurring:

1 Jul 16 → 30 Jun 17

Zika and other Vectorborne Diseases



CDC Typical Grant Cycle, PHEP & ELC (Proposal due May 16)

1 Aug 16 → 31 Jul 17; ELC Funding stable over 5 year intervals

Zika, WNV, and other Arboviral diseases



CDC Zika supplement Cycle, PHEP & ELC (Proposal due Nov 16)

1 Jan 17 → 31 Jul 18; Recurrence not guaranteed

Zika Only



CDC Typical Grant Cycle, PHEP & ELC (Proposal due May 17)

1 Aug 17 → 31 Jul 18

WNV and other Arboviral diseases, Not Zika

NC Zika Funding CY 2016

(Already spent)

| Funding | Epidemiology Section | | Environmental Health Section | State Center for Health Statistics | State Laboratory for Public Health | Women and Children's Health Section |
|---------|-----------------------------|---|------------------------------|------------------------------------|------------------------------------|-------------------------------------|
| | Communicable Disease Branch | Public Health Preparedness and Response | | Birth Defects Monitoring Program | Virology & Serology | Women's Health Branch |
| Federal | | \$499,066** | | | | |
| State | \$50,000* | | | | | |

*DHHS funding made available via AA 908 to LHDs

** \$45,000 contracted to WCU

\$454,066 Unspent PHEP Ebola supplemental allowance made available via AA 613 to LHDs

NC Zika Funding FY 2016-17

(Current Cycle, obligated)

| Funding | Epidemiology Section | | Environmental Health Section | State Center for Health Statistics | State Laboratory for Public Health | Women and Children's Health Section |
|---------|-----------------------------|---|------------------------------|------------------------------------|------------------------------------|-------------------------------------|
| | Communicable Disease Branch | Public Health Preparedness and Response | | Birth Defects Monitoring Program | Virology & Serology | Women's Health Branch |
| Federal | \$700,000 | \$443,084 | \$100,000 | \$280,000 | \$144,705 | |
| State | ~\$200,000 | | \$177,500 | | ~\$100,000 | |

NC Zika Funding FY 2016-17-18

(Future Cycle, submit ELC by 20 Nov 16)

| Funding | Epidemiology Section | | Environmental Health Section | State Center for Health Statistics | State Laboratory for Public Health | Women and Children's Health Section |
|---------|-----------------------------|---|------------------------------|------------------------------------|------------------------------------|-------------------------------------|
| | Communicable Disease Branch | Public Health Preparedness and Response | | Birth Defects Monitoring Program | Virology & Serology | Women's Health Branch |
| Federal | | | | | | |
| State | | | | | | |

NC ZIKA Mosquito Activities (2016-2017)

State Funding

DHHS: \$50,000
(15 County Sites: AA 908)



2016 Mosquito Survey
(May-Oct 2016: Container-Inhabiting Aedes)

DHHS: \$177,500
(10 County Sites: AA 908)



2016-17 Mosquito Survey (10/2016-7/2017: Container-inhabiting *Aedes* survey, Resistance Profiles, and Vector Competence studies for *Ae. albopictus*)

2016-17 Aid-To-Counties
(Focus: Integrated Mosquito Management, Surveillance, and Education)

DHHS: \$130,000



2016-17 Med. Ent. Contracts
(ECU 34657, NCSU, WCU 34637)

State Medical Entomologist(s)

Emergency Vector Control
(Stand-by Contract/Surveillance)

Federal Funding

PHEP: \$45,000
Primary: WCU 33894
Subcontract: ECU & NCSU



ELC: \$150,000
Primary: WCU
Subcontract: ECU & NCSU



ELC: \$100,000



PHEP: \$95,000
Contracts: ECU, NCSU, WCU



ELC: \$50,000



ELC: \$65,000

