

# ***BEFORE THE SWARM:***

**Emergency vector  
control in communities  
with limited resources**



**Tom Dunlop, Dunlop  
Environmental Consulting,  
Inc., and the ASTHO MCC  
Team**

**The State Public Health Vector  
Control Conference**

**Fort Collins, CO**

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## **Public Health Confronts the Mosquito**

**Developing Sustainable State and Local  
Mosquito Control Programs**



# Collaborative membership

Doneen Hollingsworth, Chair – Secretary of Health, South Dakota

## **Member groups:**

- Air Force Reserve Spray Flight
- American Mosquito Control Association (AMCA)
- Association of Public Health Laboratories (APHL)
- Assoc. of State & Territorial Health Officials (ASTHO)
- Centers for Disease Control and Prevention (CDC)
- Council of State and Territorial Epidemiologists (CSTE)
- Health and Habitat, Inc.
- National Assoc. of Counties (NACo)
- National Assoc. of County & City Health Officials (NACCHO)
- National Association of Local Boards of Health (NALBOH)
- National Assoc. of State Depts. of Agriculture (NASDA)
- National Emergency Management Association (NEMA)
- National Environmental Health Assoc. (NEHA)
- State Public Health Vector Control Conference (SPHVCC)

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## The Collaborative has the following objectives:

- Produce and distribute consensus recommendations on developing sustainable state & local mosquito control programs
- Focus on locally developed, managed, & funded mosquito control programs, and the state role in planning & supporting localities
- Provide a blueprint for program development
  - Not a “one size fits all” approach; define the range of options & best practices (depending on resources)
  - Dynamic document—Guidelines may evolve with local experience

# Organizational and legal issues of forming a mosquito control program

## Organizational format

- Independent tax-supported agency
- Local health agency
- Other government agency (Streets, Parks & Natural Areas, etc.)
- Private contractor

## Legal issues

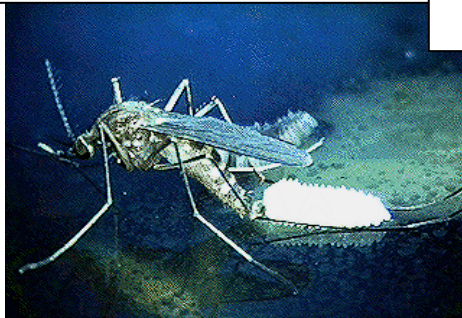
- Existing agency vs. new agency/program
- Enabling legislation
  - Allows creation of special taxing districts
  - Present in many but not all states
- Access to public nuisance laws

## Stakeholders

- Who should sit at the table?
- Who makes the final decision?
  - The buck stops...
  - Citizens will have the final say for any program

# Resource and staffing issues

- What resources are available/required to respond?
- What is magnitude of the problem?
  - What disease agents are present?
  - What vector species are present?
- What environmental predictors are available (e.g., rainfall, temperature, snow pack, etc.)?
- What resources are available for the program?
  - Staffing and budget
  - Equipment and supplies
  - Medical and diagnostic laboratory support



- **Taxonomic resources**
  - What are the locally important species?
- **Behavior and ecology resources**
  - Where, when are they active?
- **Control technology resources**
  - Insecticide resistance?
  - Restricted access habitats?
- **Epidemiology resources**
  - Disease surveillance programs?



- **Staffing needs**
  - **Taxonomist**—able to identify all common species in the area, knows when/where to seek help
  - **Biologist/ecologist**—responsible for habitat mapping, surveillance & trapping, control evaluation, etc.
  - **Other** (admin., epidemiology, resistance testing, etc.)
- **Training and licensing**
  - Basic mosquito biology instruction for crews
  - Pesticide applicator licensing (Public Health)

# Program assessment is critical



## Program evaluation

- Assessing program effectiveness
  - Trap/dipper counts
  - Complaint call reduction
  - Reduction in disease cases
- Cost of program vs. benefit to the community



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# Structure of the new document-Sections

- Plan Ahead
  - Failing to plan=Planning to fail
- Involve Others
- Use the Best Science and Data
- Inform the Public
- Normalcy versus Emergency
- Quick Reference Guide for Emergency Situations

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# Three Foci of “Before the Swarm”

- **Existing Disease**
  - WN virus, EEE, etc.
- **Natural Disasters**
  - Floods, severe storms, hurricanes, drought, etc.
- **Exotic Diseases**
  - Chikigunya, Rift Valley Fever, etc.



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## Emergency Management: Coordinate & Integrate With Other Programs

- Vector control should be included in state & local emergency response plans
  - Know your state disaster coordinator
  - Get included in emergency response exercises
- Plan ahead
  - Not only Plan A, but Plans B, C, and D
  - The 5 “P’s” – **P**rior **P**lanning **P**revents **P**oor **P**erformance

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## **Emergency Management:**

### **Anticipate media and communications issues**

- Which issues should be handled by your program and what should be handled by disaster coordinator's office?
- Establish contacts and build relationships before the disaster occurs

# Emergency Management: Where do you go for resources?

- Adjoining cities or counties
- State resources
- Emergency Management Assistance Compact (EMAC)
  - Sharing agreement between states
- Federal Emergency Management Agency (FEMA)
- US Air Force Aerial Spray Flight, Vienna, Ohio



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# Questions?

Tom Dunlop

970-923-4820

[Dunlopenv@aol.com](mailto:Dunlopenv@aol.com)