Overview of Operations

Norfolk County Mosquito Control District

Overview of Operations
What to do about mosquitoes?

• Nothing?

• Individual approach?

• Town approach?

• Regional approach? “…best applied at a regional level.”

Small enough to mold to town needs, and to the unique local geographic and watershed characteristics.
Large enough to avoid spillover from one town to another.
The Norfolk County Mosquito Control Project was established in 1954 by an Act of the Massachusetts State Legislature. The Project provides mosquito control services in the towns highlighted in yellow above. The 25 towns included in the Project comprise 381 square miles, with an estimated 37,500 acres of wetland. The 2000 population was approximately 565,500.
We are not a County agency.

- We are a Commonwealth of Massachusetts Department that has a unique funding mechanism.

- The 25 towns that are *voluntarily* a part of the District, fund the District from local aid distributions through the town Cherry Sheet.
Department of Revenue
Cherry Sheet Assessment

Based on a formula established by legislation

1) The formula takes into account both a municipality’s equalized valuation (EQV) and land area (square miles) to produce percentages for each municipality.

2) Once the State Reclamation & Mosquito Control Board “certifies” the Districts budget, the Department of Revenue then applies these percentages to establish the cherry sheet assessment for each community.
## WALPOLE

### A. County Assessments:

1. **County Tax:** *Ch. 35, ss. 30, 31*  
   - Value: 193,385

2. **Suffolk County Retirement** *Ch. 61, Acts of 2009, s. 10*  
   - Value: 0

**Sub-Total, County Assessments:** 193,385

### B. STATE ASSESSMENTS AND CHARGES:

1. **Retired Employees Health Insurance** *Ch. 32A, s. 10B*  
   - Value: 0

2. **Retired Teachers Health Insurance** *Ch. 32A, s. 12*  
   - Value: 0

3. **Mosquito Control Projects** *Ch. 252, s. 5A*  
   - Value: 93,757

4. **Air Pollution Districts** *Ch. 111, ss. 142B,142C*  
   - Value: 8,235

5. **Metropolitan Area Planning Council** *Ch. 40B, ss. 26, 29*  
   - Value: 11,869

6. **Old Colony Planning Council** *1967, Ch. 332*  
   - Value: 0

7. **RMV Non-Renewal Surcharge** *Ch. 90; Ch. 60A*  
   - Value: 20,140

**Sub-Total, State Assessments:** 134,001

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Click on the Quick link on the home page of our website to view cherry sheet assessments – www.norfolkcountymosquito.org
Department of Agricultural Resources (DAR)
Commissioner
Delegate (Chair)

Department of Environmental Protection (DEP)
Commissioner
Delegate

Department of Conservation and Recreation (DCR)
Commissioner
Delegate

State Reclamation and Mosquito Control Board (SRMCB)

5 Commissioners of the Norfolk County Mosquito Control District (NCMCD)

Director of NCMCD

Day to day operations of NCMCD
Field Operations at Norfolk County Mosquito Control
Effective mosquito control requires

✓ Interdisciplinary efforts
✓ Utilizing the best available science.
✓ Integrated pest management (IPM)

Integrated Pest Management

A strategy that is recognized world wide.

IPM is applied in all kinds of pest control environments – Agricultural, structural, public health, etc
IPM (Integrated Pest Management)

Selection of biological, cultural, physical & chemical methods to provide:

The greatest benefit in reducing burden from a pest (damage, disease, nuisance)

with

The least risk to public & environmental health, at lowest effective cost
IPM at Norfolk County Mosquito Control

- **Surveillance**
  - We need to understand the mosquito to provide the most effective control. Where? Why?

- **Source reduction** –
  - All mosquitoes need standing water to complete their life cycle. We want to remove standing water where we can.
    - This provides long term control vs. short term control from more frequent applications

- **Larvicide**
  - It is more effective to control mosquitoes as larvae in water than after they become flying adults. We have an array of very environmentally sensitive products available to us.

- **Adulticide**
  - When other efforts don’t achieve target control levels. To provide control in disease outbreaks.
Surveillance

- Important part of IPM
- Monitor adult and larval mosquito populations
- Virus testing at MDPH
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Mosquito-Borne Illness Risk Map

Current Risk Level
- Remote
- Low
- Moderate
- High
- Critical

Effective July 24, 2012

Effective August 28, 2012
2015 Cs. melanura Abundance

- **Cs. melanura** and Rainfall graphs over the epiweek.

2015 Culex pipiens/restuans Abundance

- **Cx. pipiens/restuans** and Rainfall graphs over the epiweek.

Graphs showing the abundance of mosquito species (Cs. melanura and Cx. pipiens/restuans) alongside rainfall data over the epiweeks from 23 to 39 of 2015.
2016 Surveillance Plans

- Additional trapping methods
- Asian Tiger Mosquito surveillance
IPM at
Norfolk County Mosquito Control

• Surveillance

• Source reduction

• Larvicide

• Adulticide
Residential Source Reduction

• Educating the public to recognize sources of mosquito breeding on their properties and take simple measures to prevent mosquito breeding.
Water Management
Culvert Clearing
Routine Hand Clearing
Beaver Management
The bulk of Water Management work is conducted in Fall through Winter.
IPM at
Norfolk County Mosquito Control

- Surveillance
- Source reduction
- Larvicide
- Adulticide
Aerial Larvicide

– 6,000 – 8,000 acres each spring, periodic summer applications.
– Applied by helicopter

Ground Larvicide

– Applied by hand to wetlands, catch basins, and other man-made water sources.
IPM at Norfolk County Mosquito Control

- Surveillance
- Source reduction
- Larvicide
- Adulticide
Adulticide

- “Spraying”
- Ultra Low Volume (ULV) aerosol
- Zenivex
- Active ingredient - Etofenprox
- Synthetic pyrethroid – man-made version of natural pyrethrum, found in chrysanthemum.
• Applied from truck mounted equipment
• Applied from sunset – midnight.
• ½ ounce of product per acre of coverage.
• Product breaks down in sunlight quickly.
• Very low toxicity to people and environment. Classified by EPA as ‘reduced risk’.
  It is over 200 times less acutely toxic than caffeine.
• Response to high nuisance populations and to knock down disease carrying mosquitoes.
GIS (Geographic Information Systems)

• Used in all aspects of our operations but primarily in conducting aerial larvicide applications, tracking ULV applications, and documenting water management projects.
Cost per resident

- Just over $3.00 per resident.
- Equivalent to a cup of coffee per year.
• The NCMCD is committed to:
  – Continuing to implement an effective and responsible IPM program for mosquito control
  – Serving the public to the greatest degree possible with our given resources
  – Being available and transparent to the residents and the government of the towns in the Mosquito Control District
EVERYONE SAYS I SUCK!!

MOSQUITO THERAPY