

CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

MOSQUITO CONTROL IN CENTRAL MASSACHUSETTS

~ AN OVERVIEW ~

TIMOTHY D. DESCHAMPS
Executive Director



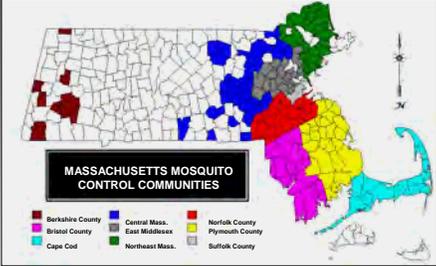
CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

9 Mosquito Districts in Mass.

- Berkshire County MCP
- Bristol County MCP
- Cape Cod MCP
- **Central Mass. MCP**
- East Middlesex MCP
- NE Mass. Wetlands Mgmt. & MC District
- Norfolk County MCP
- Plymouth County MCP
- Suffolk County MCP



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org



MASSACHUSETTS MOSQUITO CONTROL COMMUNITIES

- Berkshire County
- Bristol County
- Cape Cod
- Central Mass.
- East Middlesex
- Northeast Mass.
- Norfolk County
- Plymouth County
- Suffolk County

Mosquito Districts in Mass.



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org



LEGEND

- Yellow – CMMCP towns
- Gray – other Mosquito Districts
- White – No control program

CMMCP Service Area 2011



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

New member for 2011

- Devens

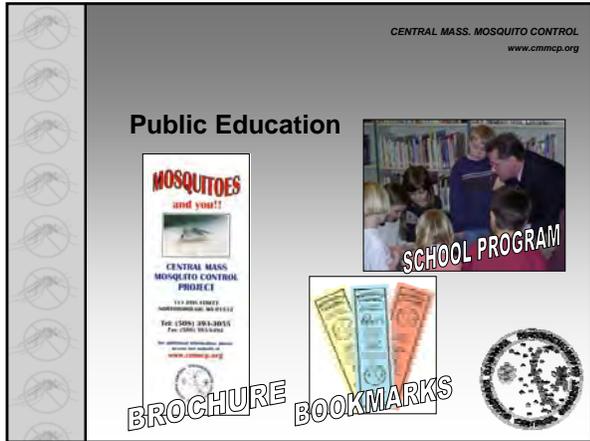
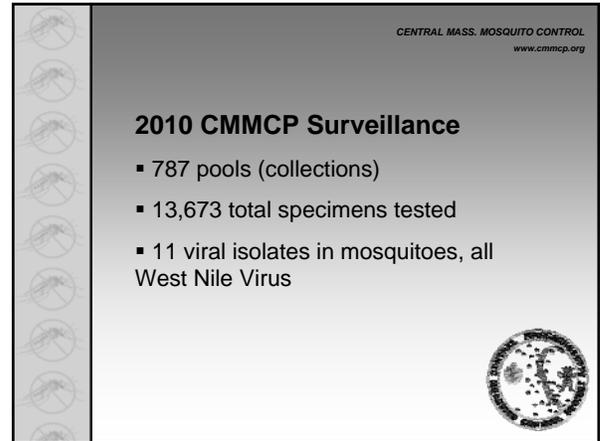


CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Components of Our Program:

1. Surveillance
2. Public Education
3. Ditch Maintenance
4. Larval Control
5. Adult Control
6. Research & Efficacy
7. Source Reduction





CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Aerial Larval Control (cont.)

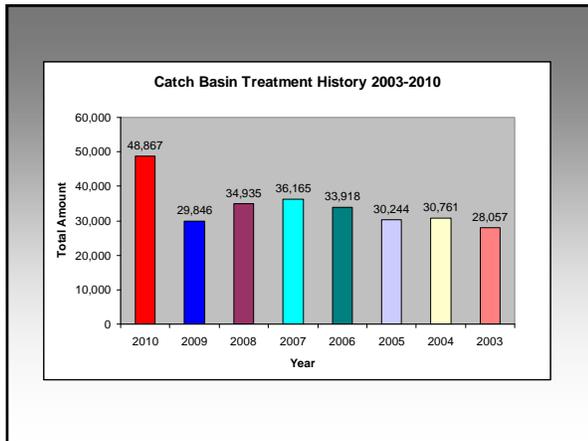
- 3 towns in program, Chelmsford (~700 acres), Billerica (~600 acres) and Boxborough (~900 acres)
- Aimed at reducing dependence on the spray program and reducing spring species, as well as possible vector species.



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Larval Control in catch basins

- Basins are the preferred habitat of the *Culex* mosquito
- Part of our West Nile Virus control program
- Anticipated more WNV in 2010, expanded basin control by 64%

CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Adult Control




CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Adult Control Product

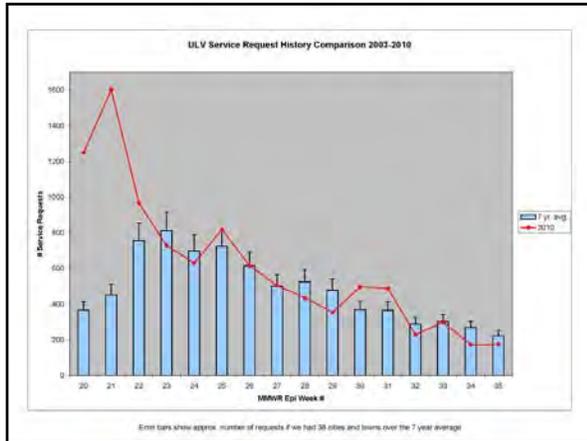
- Sumithrin, a synthetic pyrethroid
- Not a residual product, rapid decomposition in the environment
- Low toxicity to humans, pets, etc.
- **Toxic to fish & bees**



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Adult Control Product (cont.)

- **“Customer driven” - applications by request only or after confirmation of virus**
- 11,117 service requests in 2010 – 1,062 larval checks, 10,055 spray requests
- On par with 3 yr average of 11,518, but a 85% increase over the 2003-2006 average of 6,005



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Pyrethroids

- Animal Products (flea spray, flea shampoos)
- Restaurant applications
- Food & grain storage
- Available to homeowners as Yard Guard®, Repel®, etc.



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Landing Rates

- Landing rates >1 per min.*
- 98 landing rates in 2010**
- 19/98 (19%) had no application***

*from the Mass. GEIR

** Landing rates are suspended after confirmation of virus – July 10, 2010.

***either below threshold or during nights with no service requests



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Exclusion properties (No Sprays)

- Letters sent to all City/Town Clerks in January
- Can register with Clerk, CMMCP or through our website
- Detailed list sent with all pesticide applicators & on GPS units



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Spray Notifications

- Monthly schedules sent to all Boards of Health, City/Town Clerks & Police Dept. 2 weeks prior to start of each month
- Street listings on CMMCP phone system after 3:30pm each day
- Street listing on CMMCP website after 3:30pm each day.
- Detailed listing given to Police Dept. each afternoon



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Research & Efficacy

- New department for CMMCP – includes GIS capabilities
- Past studies:
 - Mosquito bloodmeal analysis
 - Pesticide resistance testing
 - Adulticide program efficacy evaluation
 - Host-seeking activity
 - Resident survey



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Research & Efficacy (cont.)

Pesticide resistance (sumithrin/resmethrin)

- Done for past 5 years, no resistance noted in area



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Research & Efficacy (cont.)

Adulticide Efficacy - 2007

- 2-3 days (avg.) of control
- Low residual nature of sumithrin
- Re-infestation from untreated areas
- New emergence



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Research & Efficacy (cont.)

Resident Survey 2010

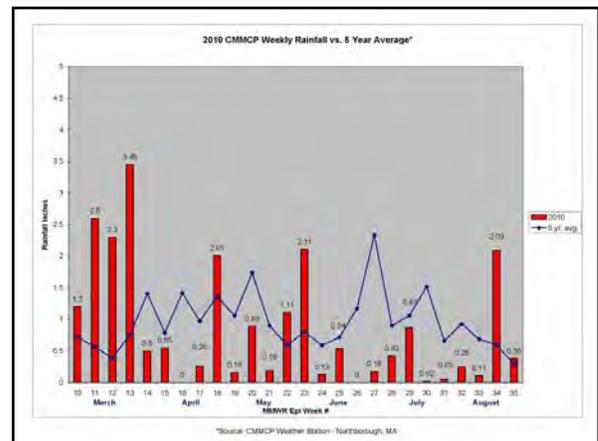
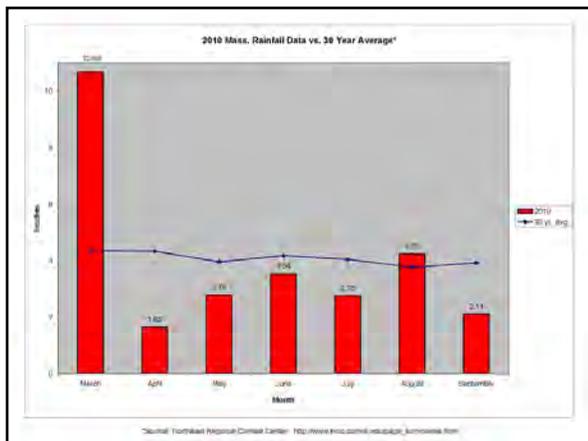
- 20 questions, plus a 1-5 rating system
- 264 respondents from 1,500, 18%
- Overall satisfaction, 94.2%
- 98.9% will use our services again
- 7,423 points from 8,950 possible, 4.14 average (from 5 max points)

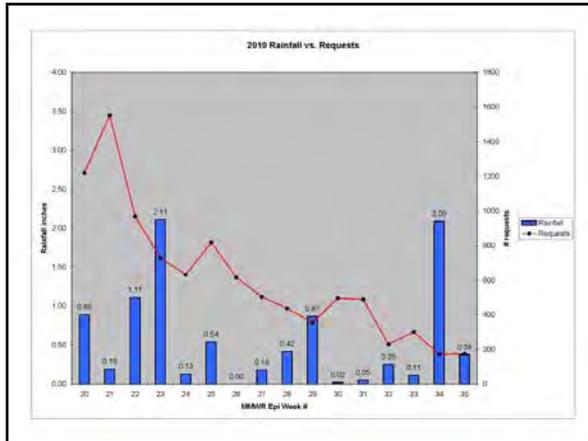
CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Research & Efficacy (cont.)

Resident Survey 2005-2010

- 92.3% (avg.) are satisfied with service
- 98.5% (avg.) will use service again
- 1,260 total respondents (from 6,000 21%)





CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Source Reduction

- New program for CMMCP
- Operates off grants & operating budget – cost is \$2.00/tire
- 3,523 tires recycled to date in 26 member cities & towns
- Brought to a recycling center in Littleton, MA




CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

Pesticide Environmental Stewardship Program (PESP)

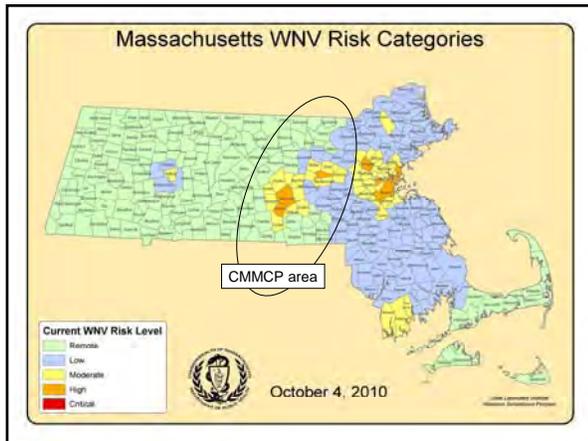
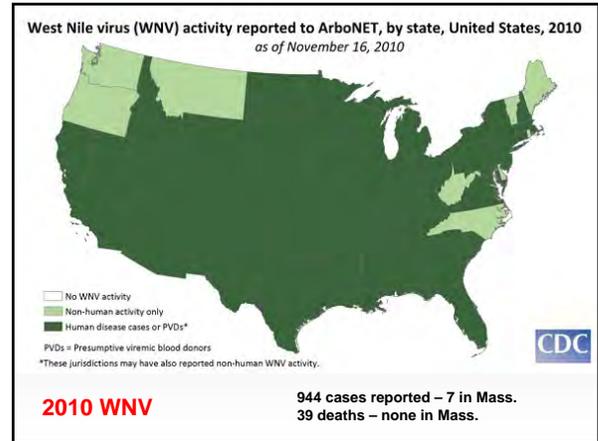
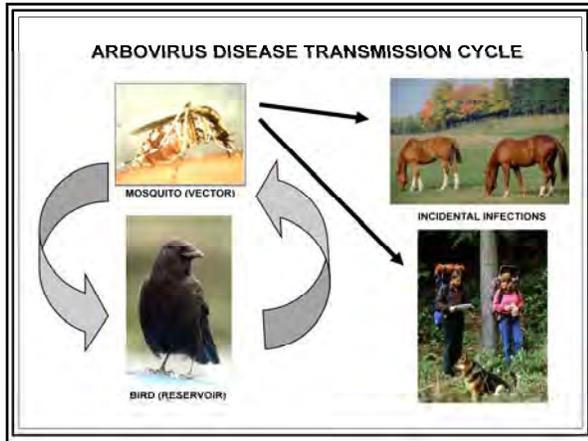
- A program of the EPA to reduce health and environmental risks associated with pesticide use.
- Awarded to CMMCP in 2007-2010




CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

MOSQUITO-BORNE DISEASES IN CENTRAL MASS.



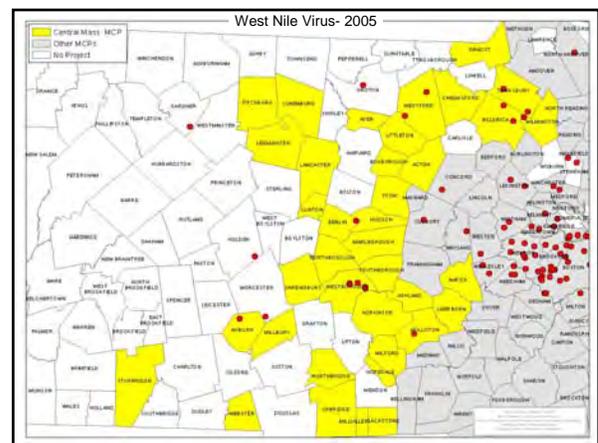
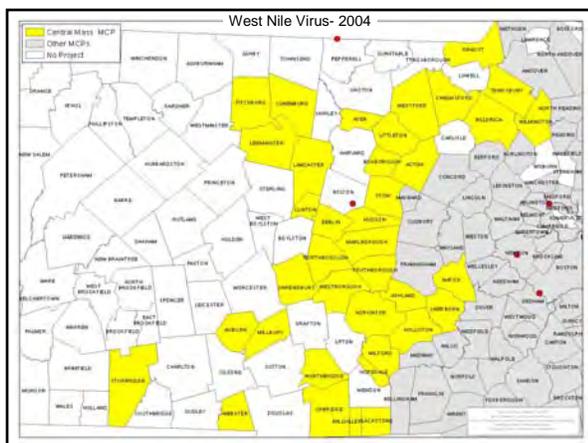


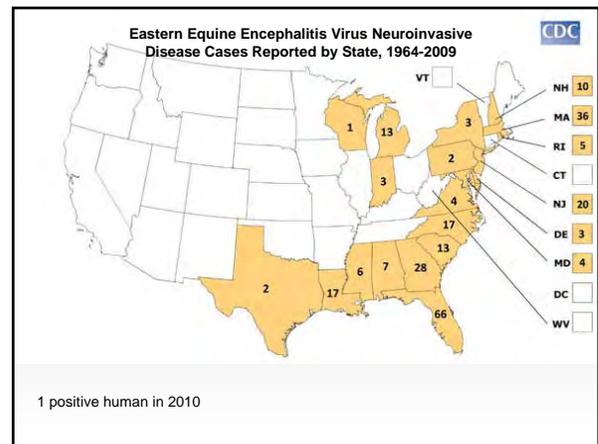
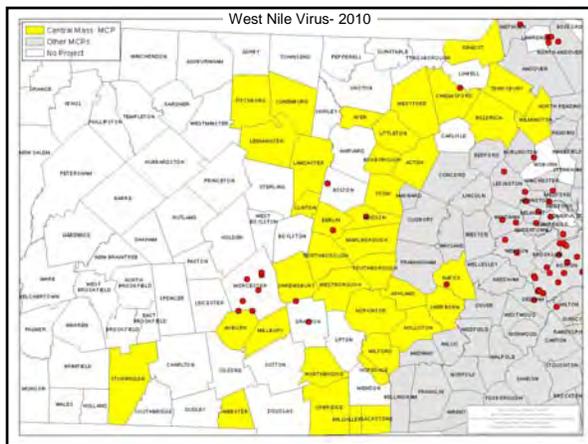
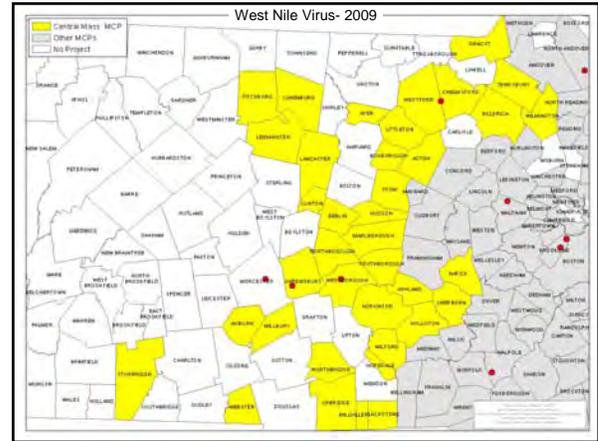
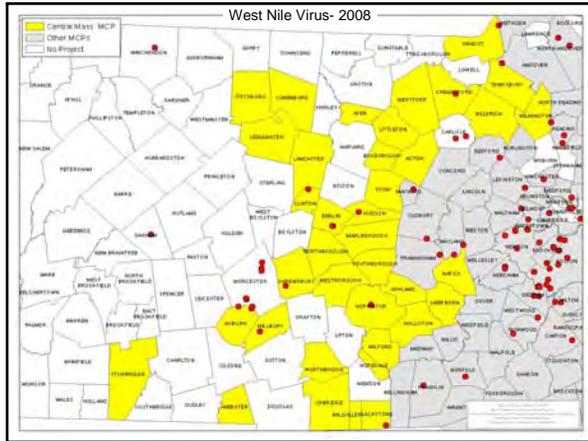
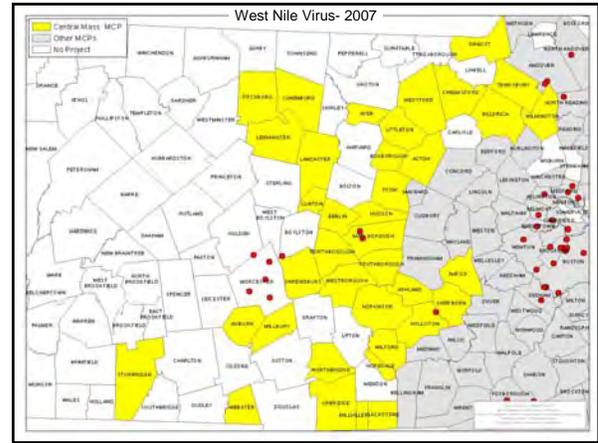
CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

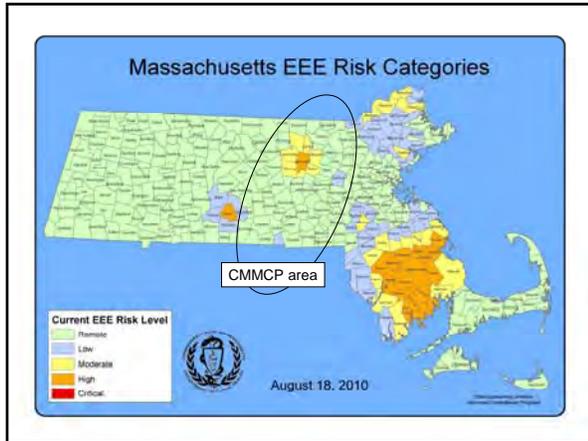
MA WNV Surveillance Summary 2010

Mosquito Pools Positive	121
Animals Positive*	1
Humans Positive**	7

(*horse, Hudson)
 (**Worcester (2), Boston (2), Holyoke, Revere & Lexington)







CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

MA EEEV Surveillance Summary

- October 22, 2010

Mosquito Pools Positive	65
Horses Positive	4
(Warren, Lancaster, Middleboro & Plympton)	
Humans Positive	1*
(Middleboro, *RI man with MA exposure)	



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

EEEV in Lancaster

- Horse mortality in northern part of Lancaster.
- Northern area sprayed Aug 19 right after notification from MDPH (Aug. 18)
- Town-wide spraying done Aug. 26 (after weather delays)



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

EEEV in Lancaster

- Press release sent to local papers and all towns in area
- Continued mosquito trapping did not show subsequent EEE



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

EEEV in Bolton

??

What to do??

Bolton is a non-member town



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

EEEV in Bolton

- Notified of EEE positive *Cq. perturbans* on Aug. 24
- CMMCP has a policy in place for intervention in non-member towns
- Began consultation with Nashoba Associated Boards of Health, state and town officials



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

EEEV in Bolton

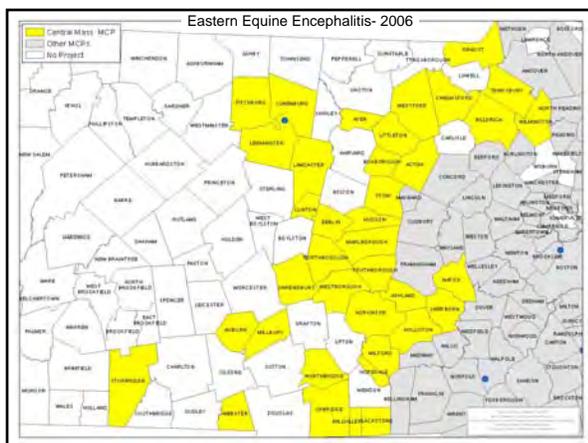
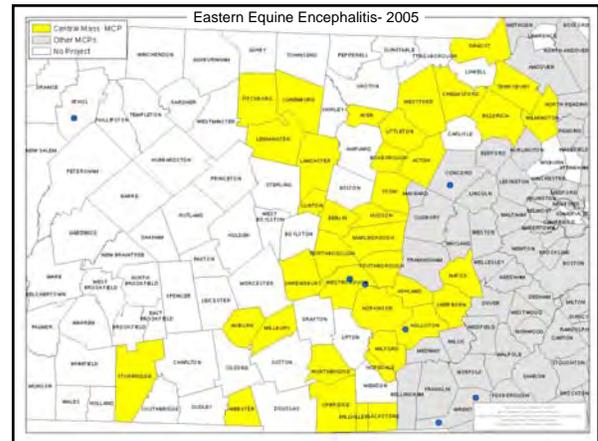
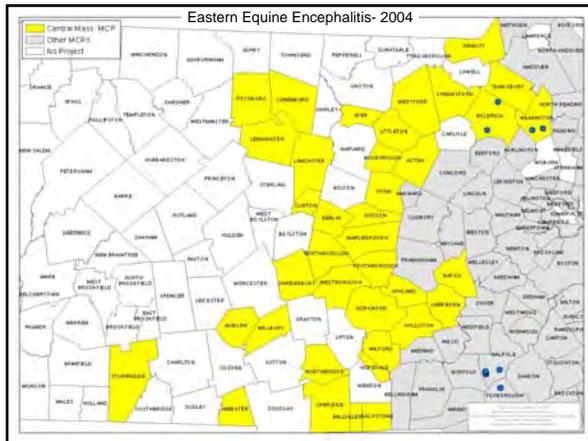
- Risk area identified
- Notification to area residents – 14 exclusion properties, 12 requests to be sprayed
- 2/3 town sprayed on Aug 30.
- No subsequent EEE found

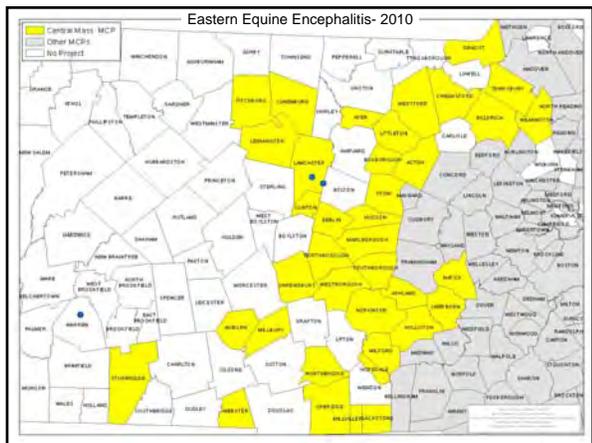
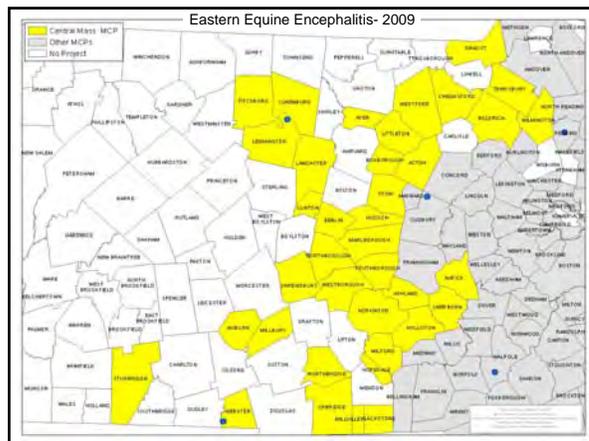
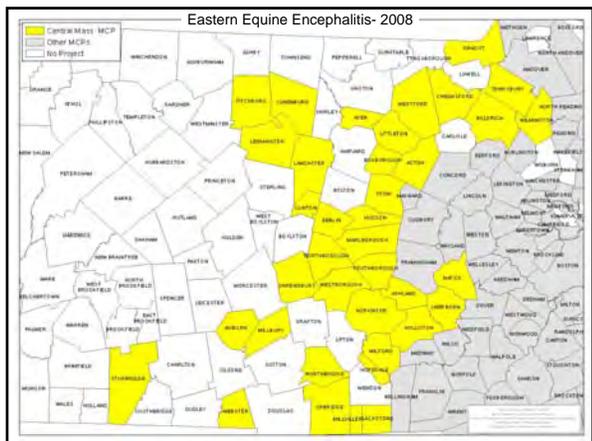


CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

EEEV in Bolton

- Selectmen agreed to sponsor an article on Annual Town Meeting warrant
- Met with Bolton BOH on Dec. 14, will be planning a public meeting before ATM



CENTRAL MASS. MOSQUITO CONTROL
www.cmmcp.org

ANY QUESTIONS

The slide features a vertical column of mosquito icons on the left side. The central text 'ANY QUESTIONS' is prominently displayed above a large, red, 3D question mark icon. In the bottom right corner, there is a circular logo containing a map of the state of Massachusetts.