

Annual Arboviral Illness Meeting

January 22, 2014

Bureau of Infectious Disease Control
Division of Public Health Services

New Hampshire Department of Health and Human Services

Agenda

- Annual Meeting 1:00 – 2:30pm
 - Introductions
 - State Update
 - Contractor Reports
 - Local Reports
 - Laboratory Reports
 - Open Discussion
- Aerial Spray Plan Meeting 2:30-3:30pm

Arboviral Surveillance — New Hampshire, 2013

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New Hampshire Department of Health and Human Services

NH Arbovirus Surveillance Program

- Surveillance and control
 - Mosquito
 - Town-based decisions and financing
 - Variable local interest
 - State – no trapping and no partial reimbursement for control this year due to limited funds
 - Human and veterinary
 - Outreach and coordination with healthcare providers
- NH Public Health Laboratories testing
 - Mosquito, human, veterinary for EEEv and WNV

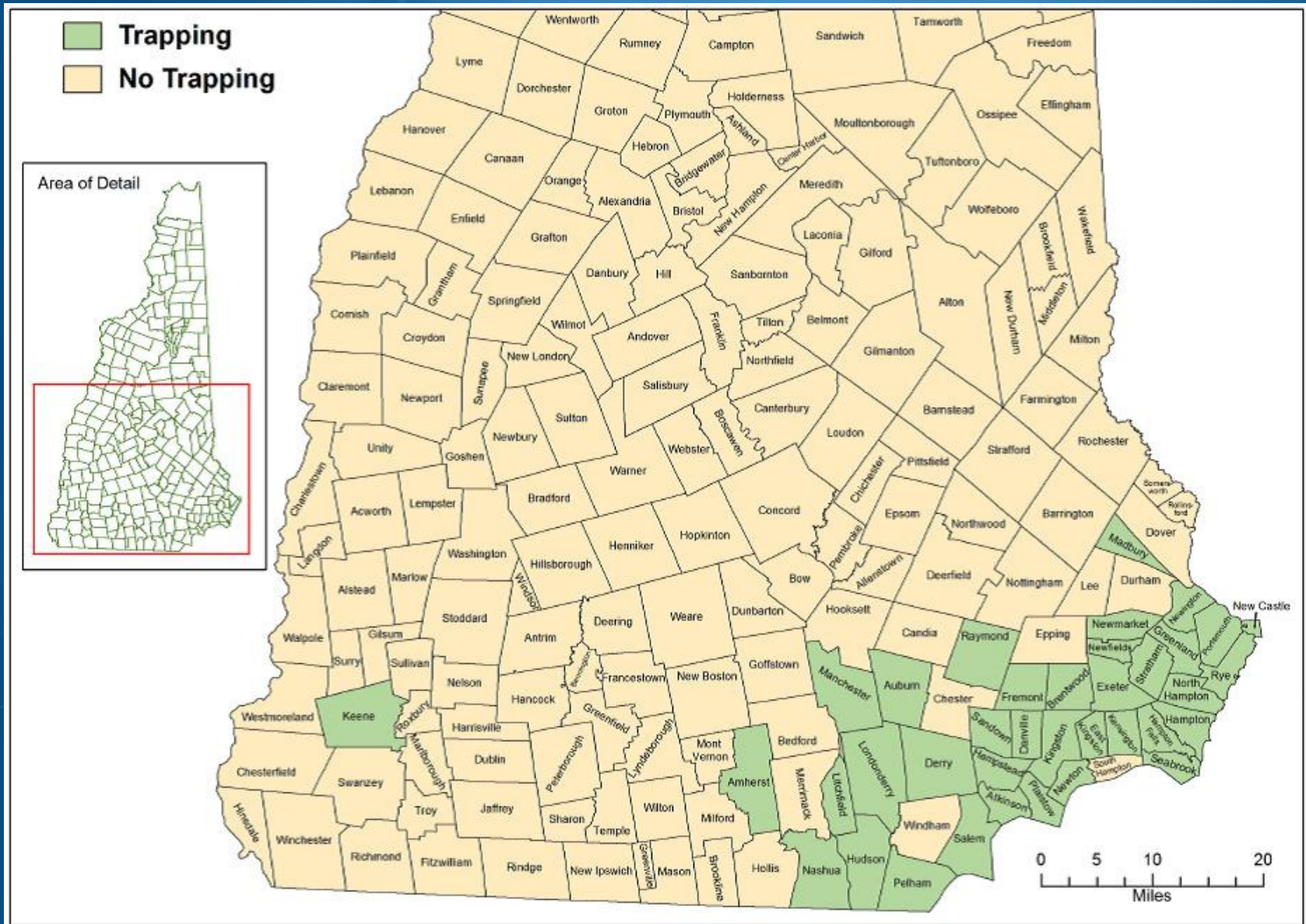
2013 Pre-Season Conditions

- Continued to maintain Arboviral Program
 - Mosquito testing season July 1st through September 30th
 - Testing extended into October
 - Number of species accepted maintained
 - Increased in 2012
 - Minimum batch size maintained
- Public Health Threat declaration was not in effect for 2013

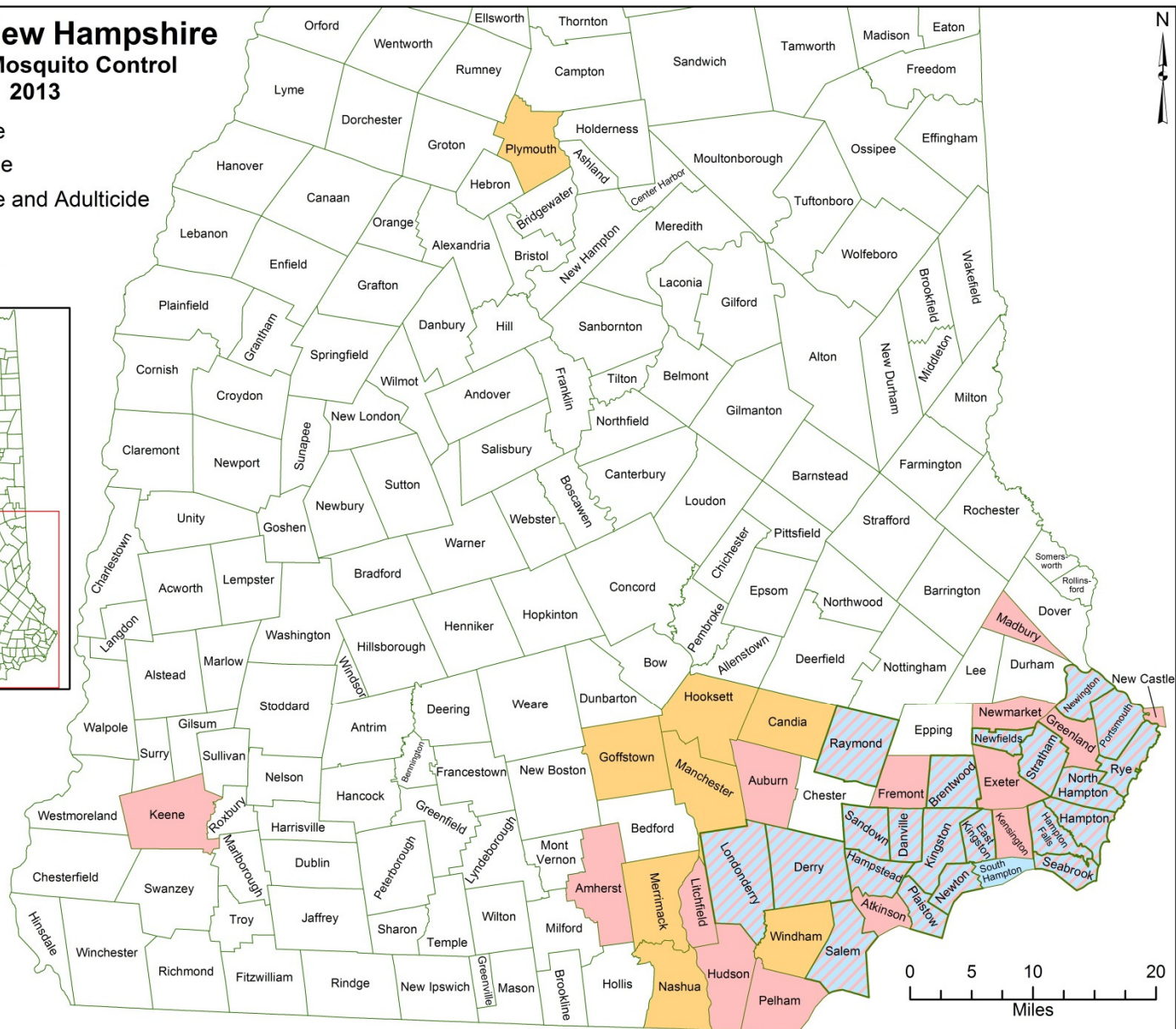
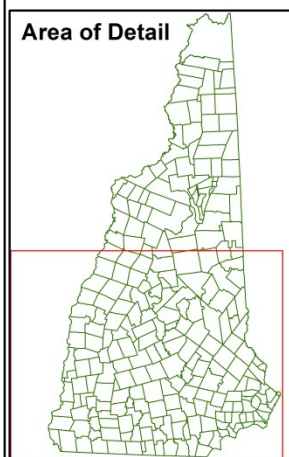
2013 Pre-Season Preparation

- NH Arboviral Illness Surveillance, Prevention, and Response Plan development and maintenance
 - Continued testing of species added in 2012
- Community Education
 - Health Officers
 - Medical providers and Veterinarians
- Strong local interest and support
 - Many towns in high-risk region financed surveillance and/or control efforts

NH Town Sponsored Mosquito Trapping, 2013

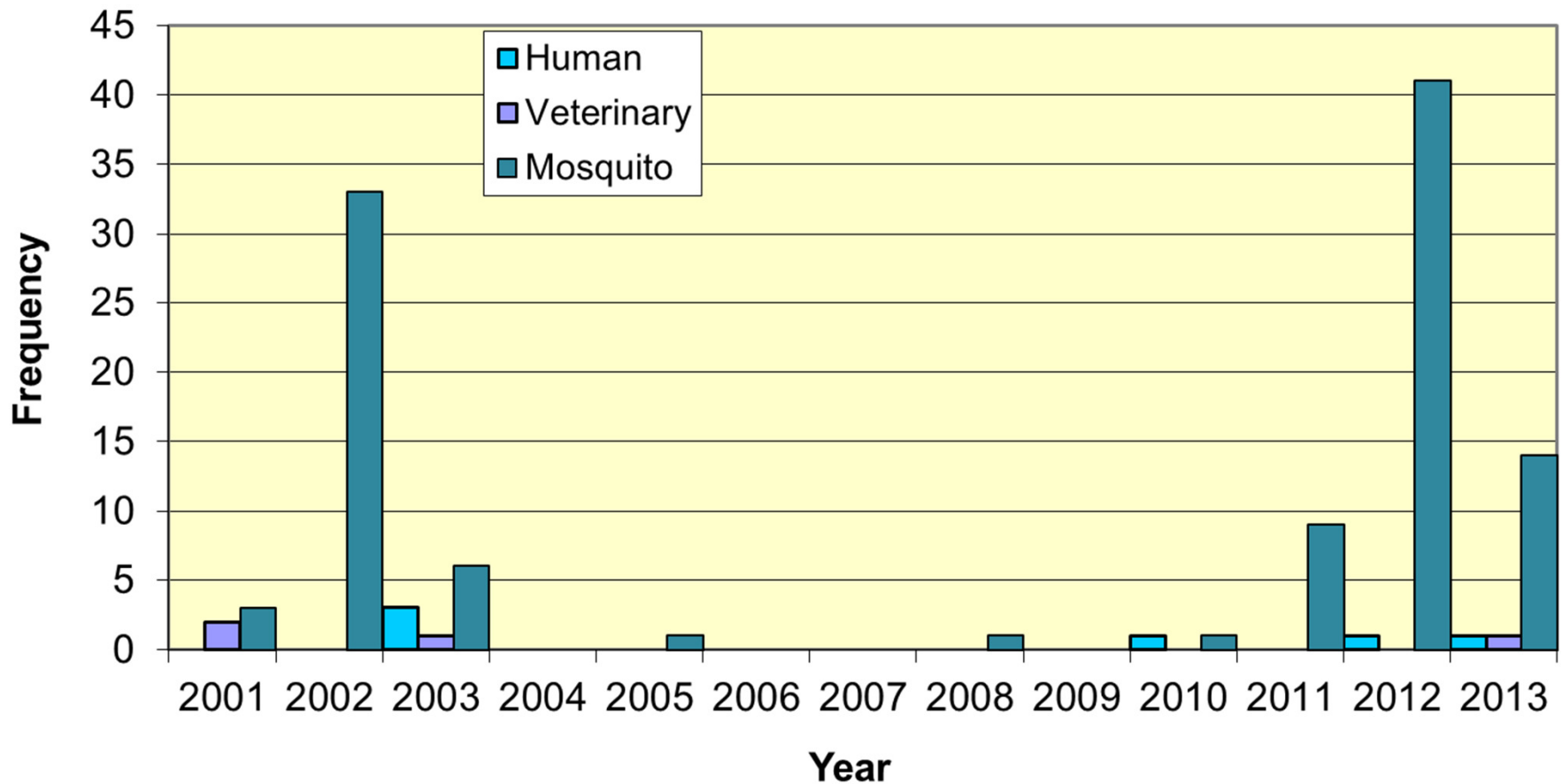


 - Larvicide
 - Adulticide
 - Larvicide and Adulticide
 - None
 - No Data



West Nile Virus New Hampshire

NH WNV Activity: 2001-2013



NH West Nile Virus Activity

- 2000 – 2010: 4 humans, 45 mosquito batches, 3 horses and 506 birds
- 2011: 9 mosquito batches
- 2012: 1 human case, 41 mosquito batches
- 2013: 1 human case, 1 horse, 14 mosquito batches

West Nile Virus - Positive Test Results, 2001 - 2013

Positive Results -



- Human (One or More)



- Wild Bird (One or More)

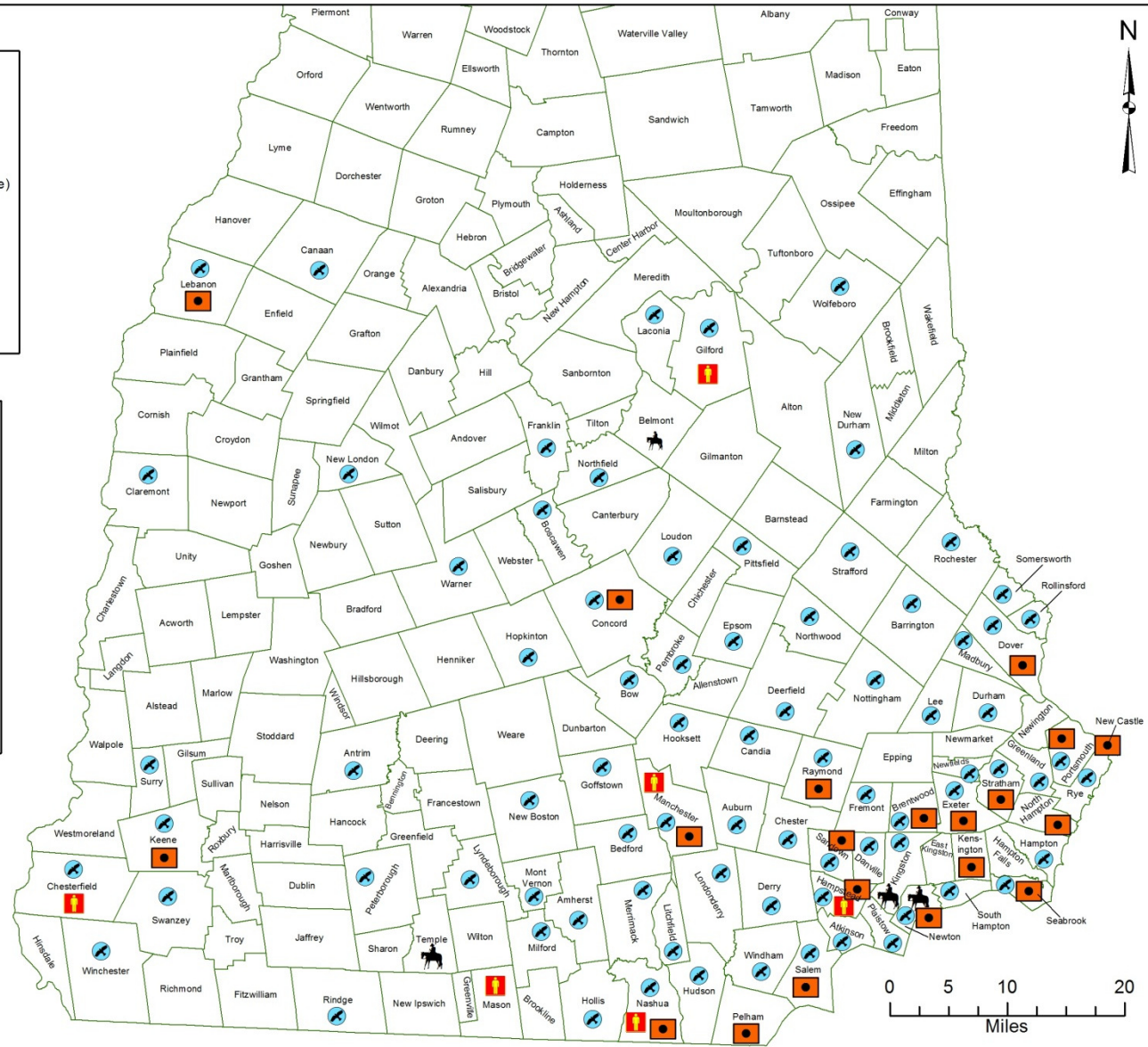
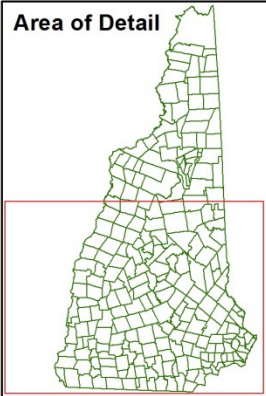


- Mosquito Pool
(One or More)



- Horse (One or More)

Area of Detail



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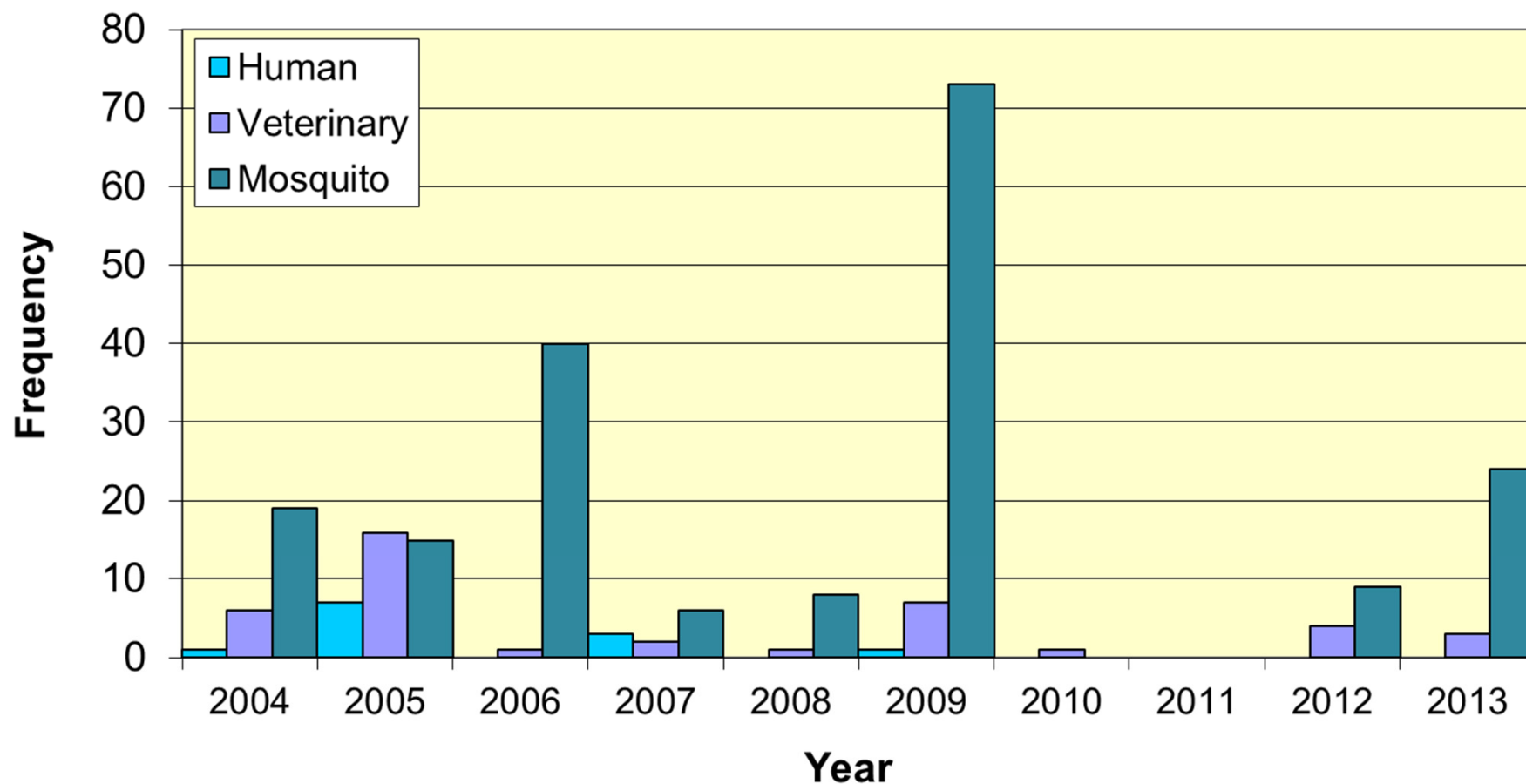
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Eastern Equine Encephalitis Virus New Hampshire

NH EEE Activity 2004 - 2013



Mosquito Testing initiated in 2004

NH EEEv Activity 2004-2013

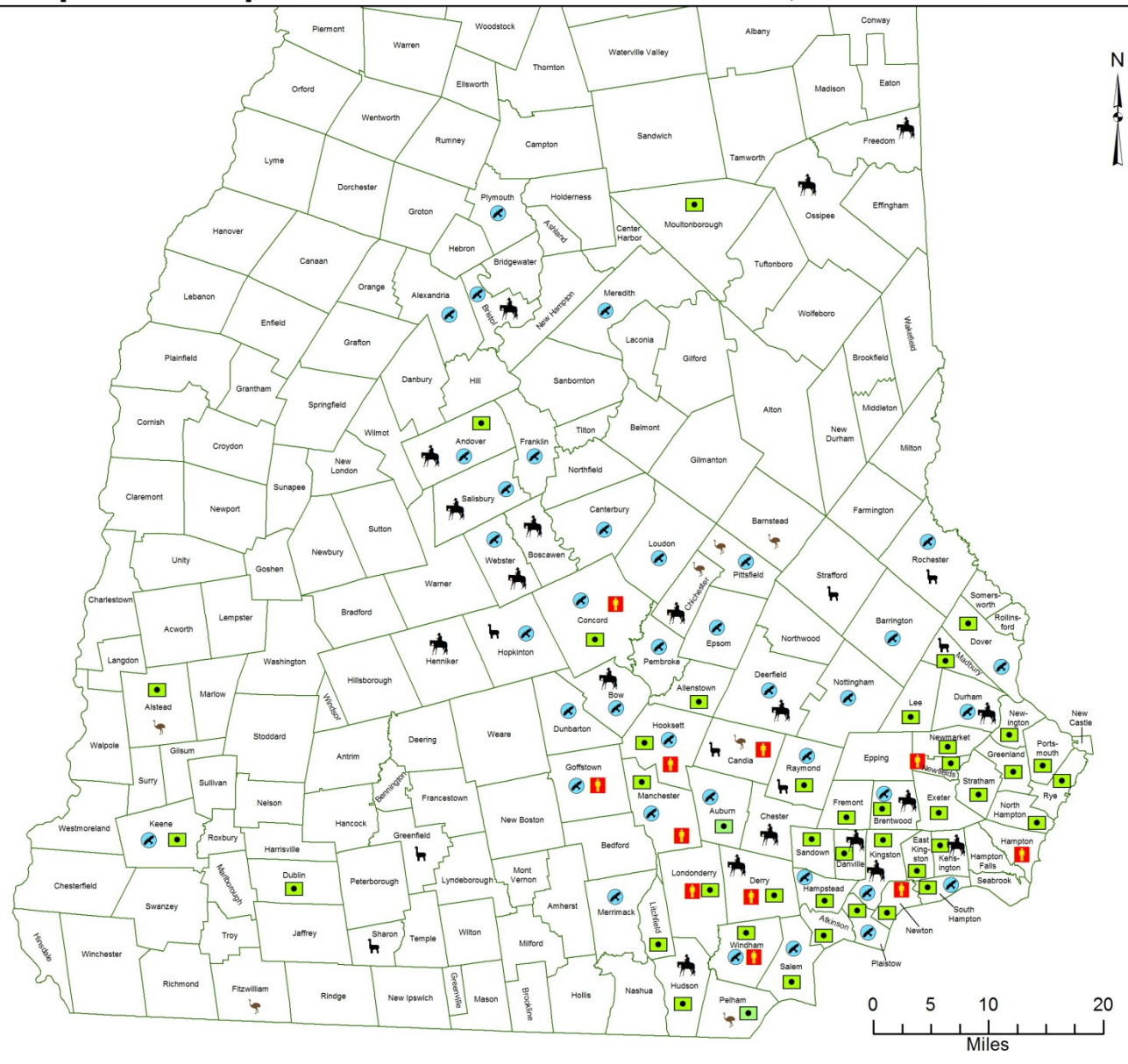
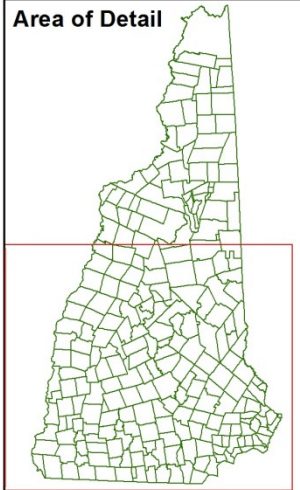
- 2004-2010: 12 human cases, 34 veterinary cases, 161 mosquito batches
- 2011: No EEE activity
- 2012:
 - 4 veterinary cases (Horses, emus)
 - 9 mosquito batches
- 2013:
 - 3 veterinary cases (Horses)
 - 24 mosquito batches

Eastern Equine Encephalitis – Positive Test Results, 2004-2013

Positive Results -

-  - Human (One or More)
-  - Wild Bird (One or More)
-  - Mosquito Pool (One or More)
-  - Horse (One or More)
-  - Alpaca/Llama (One or More)
-  - Emu (One or More)

Area of Detail



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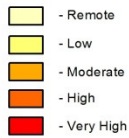
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**Arboviral Risk Categories
New Hampshire, 2013**

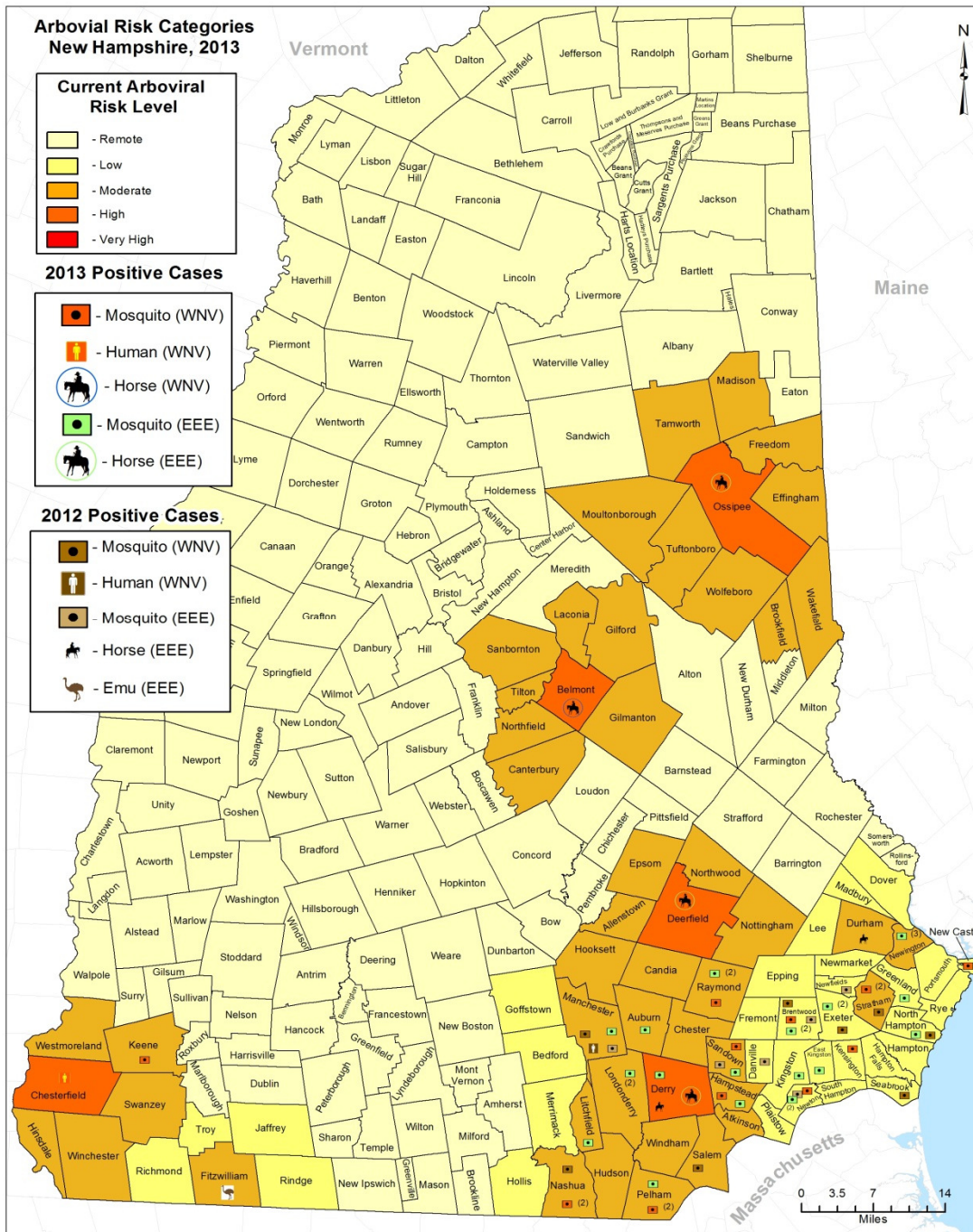
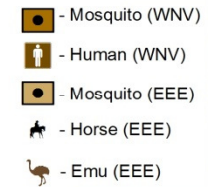
**Current Arboviral
Risk Level**



2013 Positive Cases



2012 Positive Cases



2013 Arboviral Activity

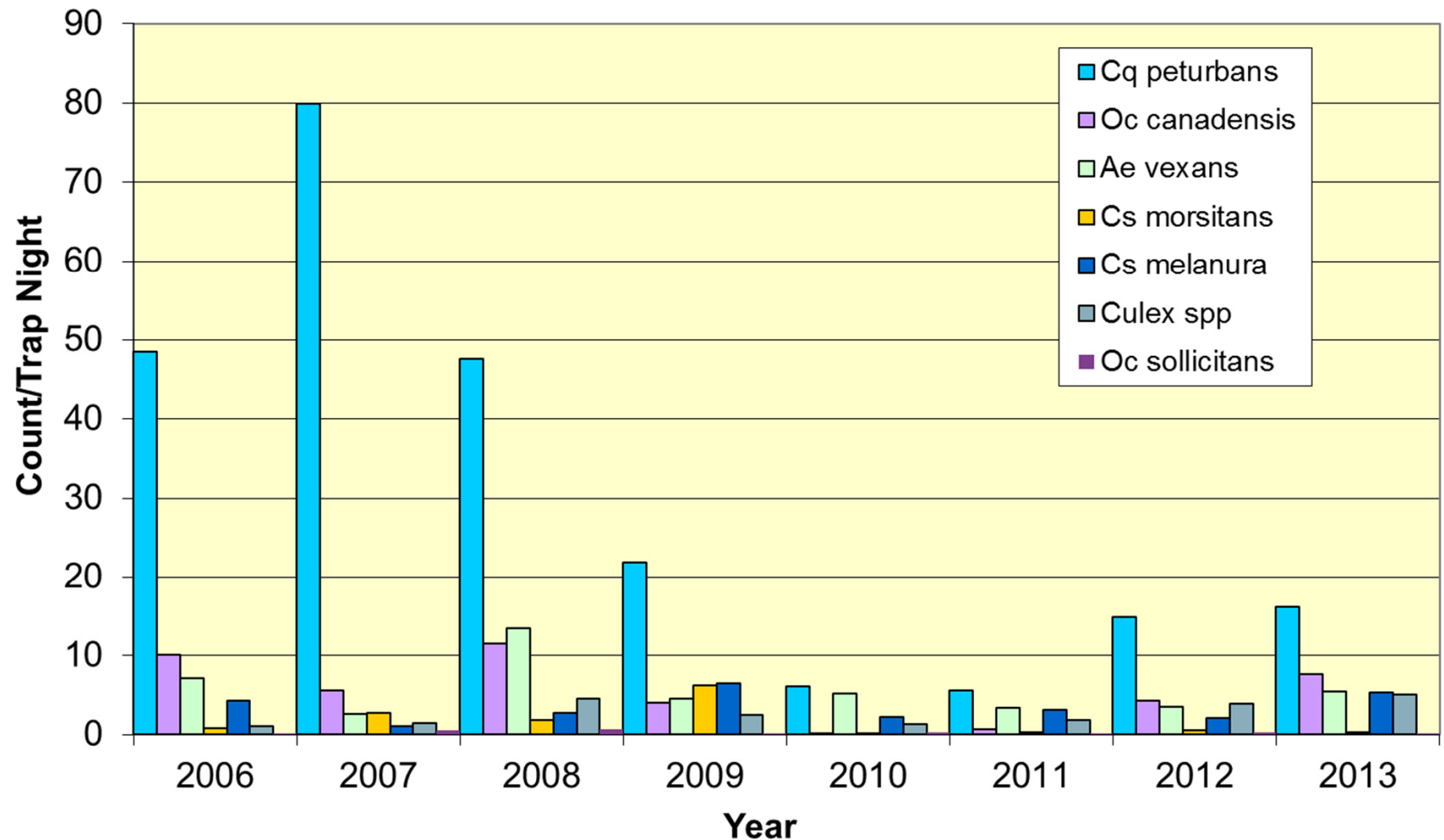
Species	Frequency	Percentage
<i>Cq. peturbans</i>	26026	37.27
<i>Oc. canadensis</i>	12273	17.58
<i>Ae. vexans</i>	8848	12.67
<i>Cs. melanura</i>	8512	12.19
<i>Cx. pipiens</i>	3298	4.72
<i>Cx. salinarius</i>	3003	4.30
<i>P. ferox</i>	1590	2.28
<i>Ae. cinereus</i>	1208	1.73
<i>Cx. restuans</i>	976	1.40
<i>Cx. pipiens/restuans</i>	935	1.34
<i>Oc. triseriatus</i>	574	0.82
<i>An. punctipennis</i>	569	0.81
<i>Oc. trivittatus</i> [^]	446	0.64
<i>Cs. morsitans</i>	396	0.57
<i>Oc. japonicus</i>	396	0.57
<i>An. walkeri</i>	333	0.48
<i>Oc. taeniorhynchus</i> [^]	156	0.22
<i>U. sapphirina</i> [^]	97	0.14
<i>An. earlei</i> [^]	71	0.10
<i>Oc. sollicitans</i>	36	0.05
<i>Cs. minnesota</i> [^]	32	0.05
<i>P. ciliata</i> [^]	16	0.02
<i>Cs. inornata</i> [^]	11	0.02
<i>Cx. territans</i> [^]	11	0.02
<i>Oc. cantator</i> [^]	6	0.01
<i>An. quadrimaculatus</i> [^]	5	0.01

[^] not on testing list

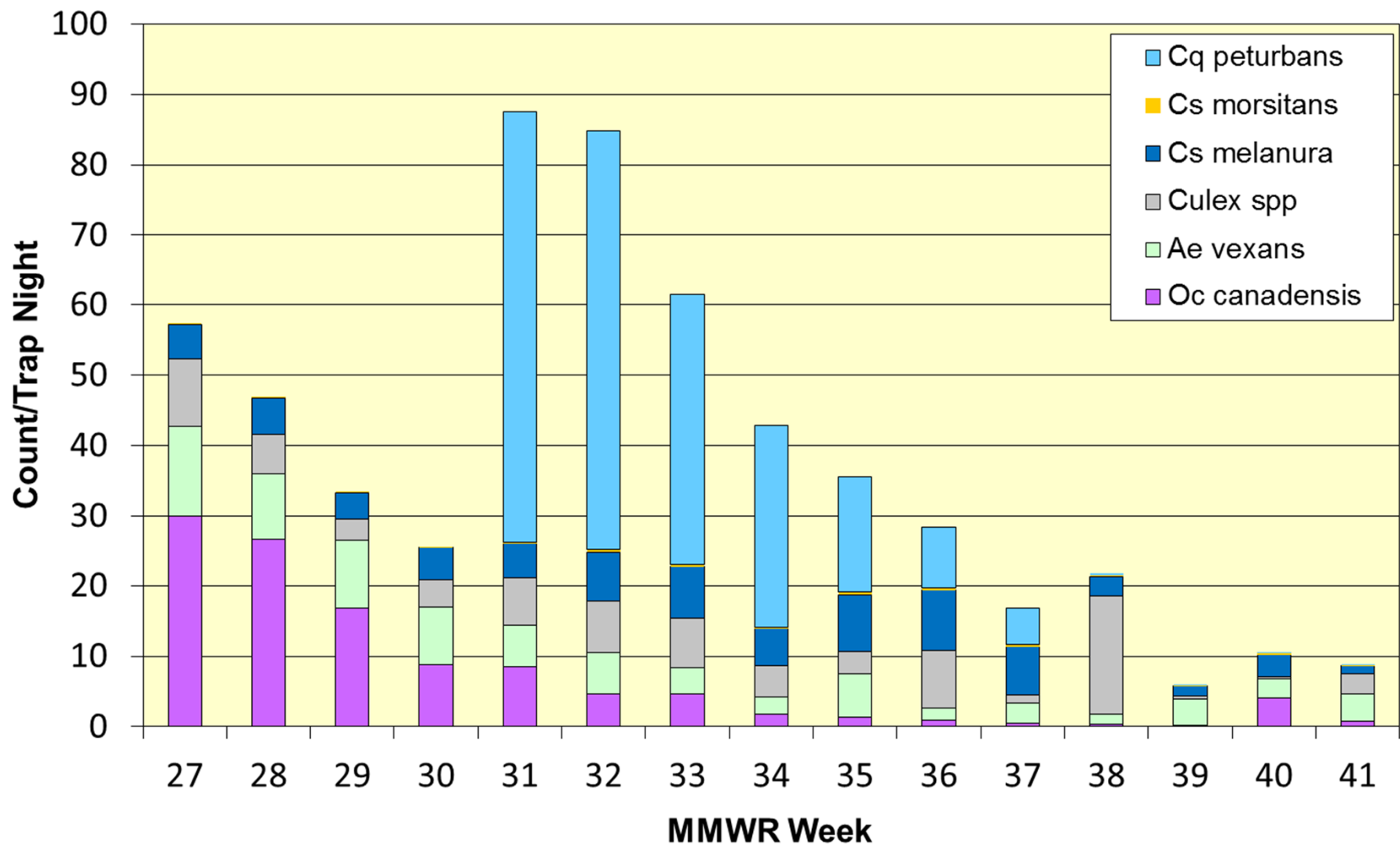
2013 Mosquito Trap Collections

- Total specimens tested 2013: 69,824 mosquitoes (5,349 batches)
- Total specimens tested 2012: 54,082 mosquitoes (4,639 batches)
- Number of mosquitoes tested increased by 22.5%

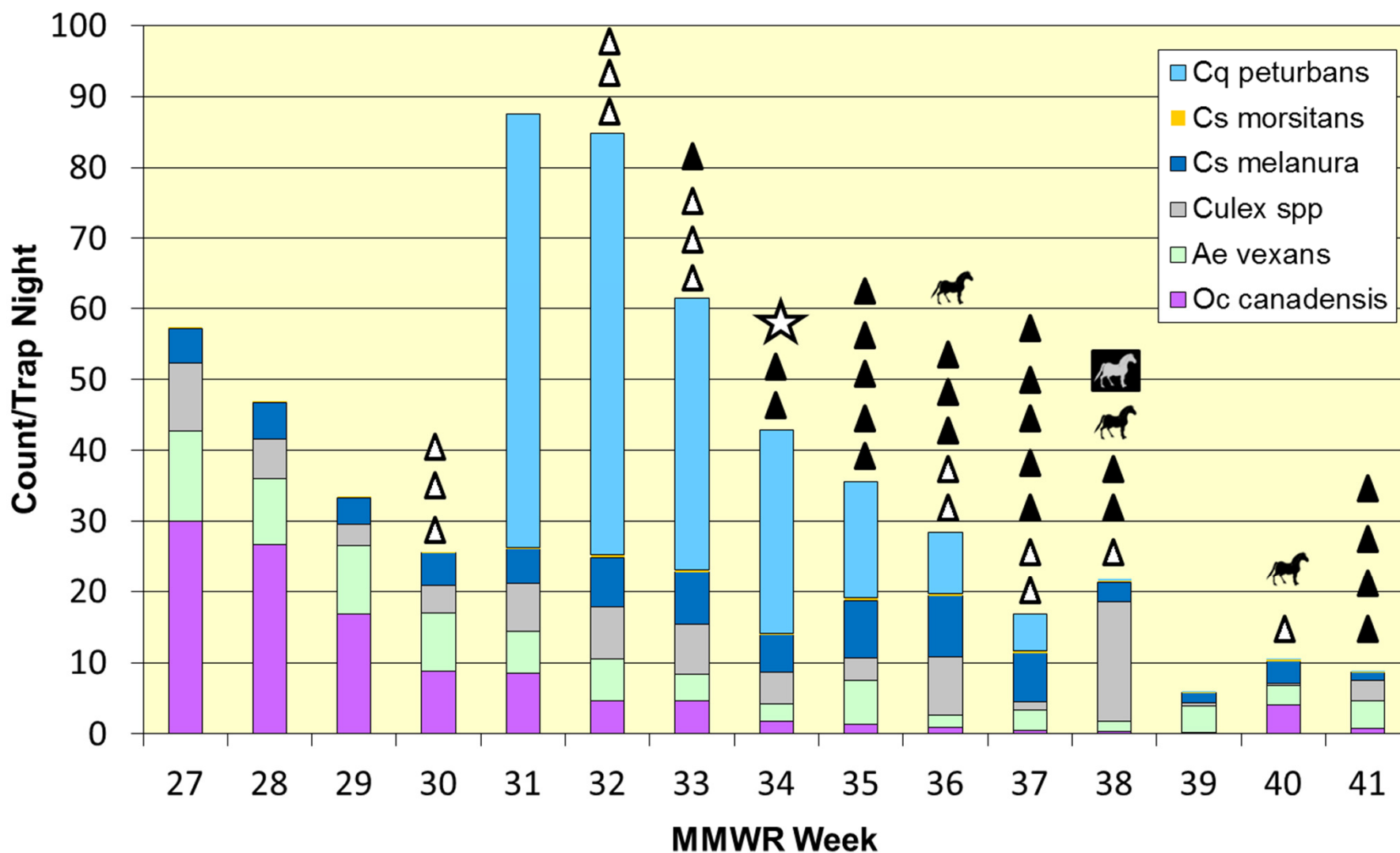
Annual Collection of Mosquito Species



2013 Collection of Mosquito Species



2013 Collection of Mosquito Species



△ WNV Mosquito Batch



WNV Horse



WNV Human

▲ EEE Mosquito Batch



EEE Horse



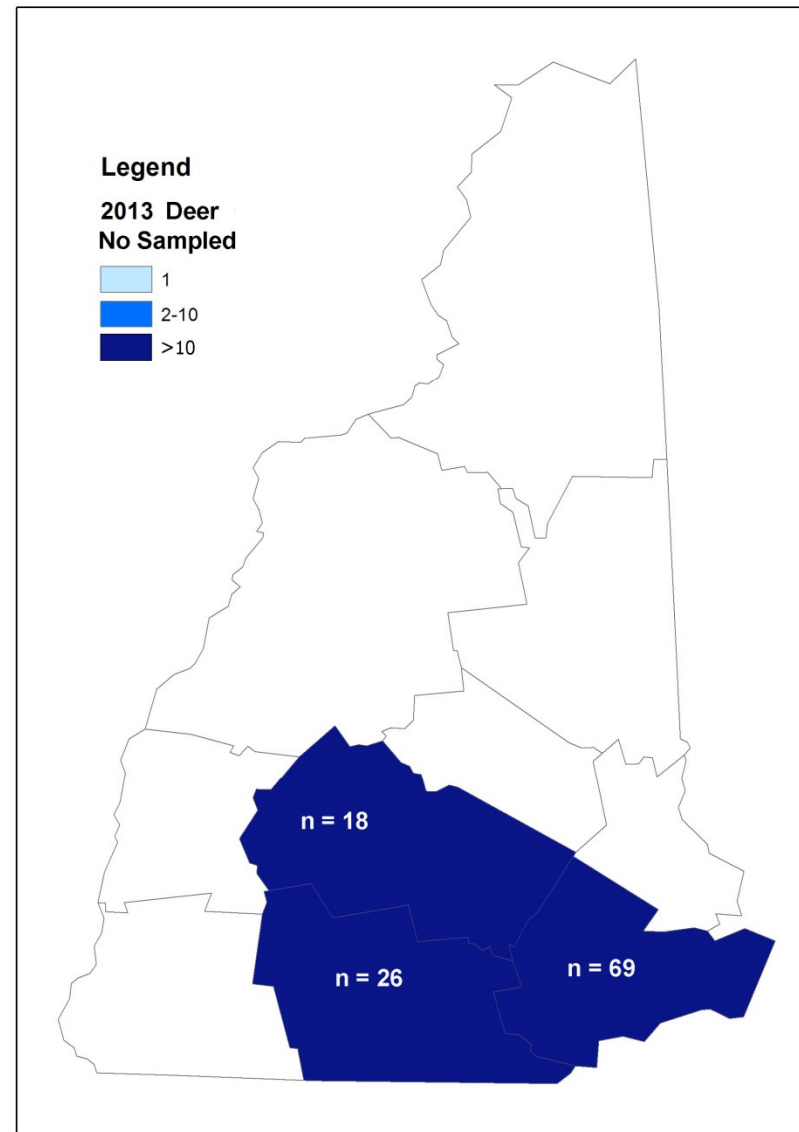
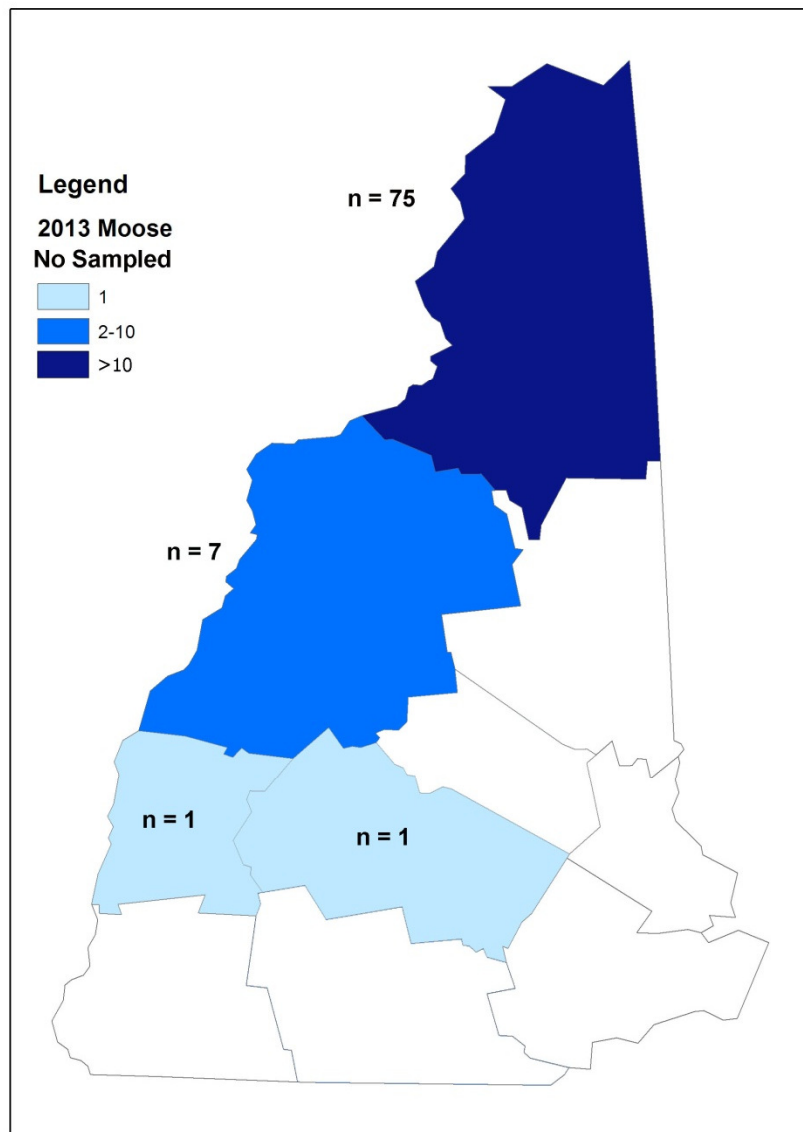
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NH EEE Serosurvey Distribution 2013



Arbovirus Surveillance Program

Goals for 2014

- Maintain current program utilizing limited funds available
- Reach out to communities not previously designated as “high-risk”
- Continue to communicate risk based on regions, not specific towns
- Finalize development of aerial spray plan

Acknowledgments

- NH DHHS Department of Public Health Services
 - Jose Montero, Sharon Alroy-Preis, Jodie Dionne-Odom, Elizabeth Daly, Tylor Young, Dianne Donovan, Abigail Mathewson
- NH Public Health Laboratories
 - Christine Bean, Fengxiang Gao, Denise Bolton, Carol Loring, Amanda Archambault, Trevor Lester
- Dragon Mosquito Control
- Municipal Pest Management
- Atlantic Pest Solutions
- NH Towns and Cities

Open Discussion

- 2013 Arboviral Prevention and Response Plan
 - Feedback on testing approach
 - Any changes required for 2014
- Reworking of the risk map
 - May modify the risk levels and how the data are presented
- General comments about the season