

THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS



Department of Agricultural Resources

State Reclamation and Mosquito Control Board

251 Causeway Street, Suite 500, Boston, MA 02114

617-626-1700 fax: 617-626-1850 www.mass.gov/agr



DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR
Secretary

GREGORY C. WATSON
Commissioner

MEMBERS

Lee Corte-Real, **Chairman**
Department of Agricultural
Resources (DAR)

Anne Carroll
Department of Conservation
And Recreation (DCR)

Gary Gonyea
Department of Environmental
Protection (DEP)

ADMINISTRATION

Mark S. Buffone
Executive Director

Alisha Bouchard
Project Administrator

MOSQUITO CONTROL PROJECTS & DISTRICTS

Berkshire County Mosquito
Control Project

Bristol County Mosquito Control
Project

Central Massachusetts
Mosquito Control Project

Cape Cod Mosquito
Control Project

East Middlesex Mosquito
Control Project

Norfolk County Mosquito
Control Project

Northeast Massachusetts
Mosquito & Wetland
Management District

Plymouth County Mosquito
Control Project

Suffolk County Mosquito Control
Project

DATE: Thursday, June 7, 2012

TIME: 10:00 AM to 12:30 PM

LOCATION: MassDEP Boston Office
Conference Room A - 2nd Floor
One Winter Street
Boston, Massachusetts 02108

Meeting Agenda

- A. **Start: Call to Order** by Chairman Corte-Real, and Attendance.
- B. **Minutes/Summary:** The Board will consider for approval the meeting minutes of the May 23, 2012 meeting. **(Vote Required)**
- C. **FY 13 Budget Certification and Approval for Berkshire and Bristol County Mosquito Control Project:** The Board will consider certification and approval of FY 13 Budgets for the Berkshire and Bristol County Mosquito Control Projects. **(Vote Required)**
- D. **New Commissioner Candidate Interviews for the Northeast MA Mosquito & Wetland Management District:** The Board will interview 3 candidates who applied for Commissioners. **(Vote Required)**
- E. **Other Business: (If any)**
- F. **Adjournment:** The Board will officially adjourn the meeting.

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Management District

Plymouth County Mosquito
Control Project

Suffolk County Mosquito
Control Project

Subject: Meeting Minutes

Date: Thursday, June 7, 2012

Place: **MassDEP Boston Office**
Conference Room A-2212, 2nd Floor,
One Winter Street (Downtown Crossing Area)
Boston, Massachusetts 02108

Time: **10 AM -2:30 PM**

Present for the:
Board and Administration:

Lee Corte-Real, Department of Agricultural Resources, Chairman
Bruce Hansen, Department of Conservation and Recreation, Member
Gary Gonyea, Department of Environmental Protection, Member
Mark Buffone, Executive Director

Mosquito Control Project Commissioners:

Bob Davis, Bristol County Mosquito Control Project
Arthur Tobin, Bristol County Mosquito Control Project

Mosquito Control Project Directors/ Superintendents /Assistants:

Ellen Bidlack, Plymouth County Mosquito Control Project
Steve Burns, Bristol County Mosquito Control Project
Jack Card, Northeast MA Mosquito Control & Wetlands Management District
Dan Daley, Plymouth County Mosquito Control Project
Tim Deschamps, Central MA Mosquito Control Project
Priscilla Matton, Bristol County Mosquito Control Project
Timothy McGlinchy, Central MA Mosquito Control Project

Others in Attendance:

Paul A. Sevigny
Joseph T. Giarrusso
Andrew H. Petty
Dr. Catherine Brown, MDPH
Suzanne Condon, MDPH
Michael Celona, MDPH
Kevin Cranston, MDPH

A. Start: Call to Order by Chairman Corte-Real, and Attendance.

Chairman Lee Corte-Real called the meeting to order promptly at 10:10 AM. The Chairman stated that the first order of business was attendance and began by conducting the roll call of members present. Those present were Bruce Hansen representing Commissioner Edward M. Lambert Jr. of the Department of Conservation and Recreation, Gary Gonyea representing Commissioner Kenneth L. Kimmel of the Department of Environmental Protection, and Chairman Lee Corte-Real recognized himself representing Commissioner Gregory C. Watson, of the Department of Agricultural Resources. The Chairman stated that three members were present and noted there was a quorum. Chairman Corte-Real proceeded to the next order of business being the minutes of May 23, 2012.

B. Minutes/Summary: The Board will consider for approval the meeting minutes of the May 23, 2012 meeting. **(Vote Required)**

B.1: Background: The Chairman asked members, if there were any comments, corrections, changes, or amendments regarding the minutes. Hearing none, he entertained a motion to approve the minutes of meeting minutes of May 23, 2012.

B.2: Questions and Discussions: G. Gonyea noted that he had reviewed the minutes and sent edits to the Executive Director for amendment. M. Buffone stated that all changes received were incorporated into the minutes.

B.3: Actions Taken:

G. Gonyea moved to approve the meeting minutes of May 23, 2012. The motion was seconded by B. Hansen and the minutes were voted unanimously 3-0.

C: FY 13 Budget Certification and Approval for Berkshire and Bristol County Mosquito Control Projects: The Board considered certification and approval of FY 13 Budgets for the Berkshire and Bristol County Mosquito Control Projects. **(Vote Required)**

C.1: Background: At the May 23, 2012 Board meeting, members agreed to schedule a meeting on June 7th to reconsider both the Berkshire and Bristol County Mosquito Control Projects budgets. The Chairman, in particular, requested that the two mosquito control projects send to their member communities the appropriate form (SRB-3) per the Board's budget policy and obtain "sign off" of these forms within the next 10 days.

C.2: Questions and Discussion: The Executive Director, M. Buffone reported that the Board obtained from both of the mosquito control projects several SRB-3 forms noting they have demonstrated a good faith effort to comply with the Board's request in a short time period. M. Buffone reported that Bristol submitted 7 (SRB-3 forms) and more are coming which equated to more than a 35% response rate. He noted that the Berkshire program submitted 3 (SRB-3 forms) with more coming equating to 43% response. L. Corte-Real acknowledged that great strides were taken by both projects within the limited time period. He remarked that he was pleased to see that the Bristol County Commission reduced their budget in particular and applauded efforts to enhance cooperation with the project.

- C.3: Actions Taken:** 2 motions were made, seconded, and voted by the Board for each mosquito control project as cited below.

Motion 1-Berkshire County Mosquito Control Project

G. Gonyea made a motion to certify and approve the Berkshire County Mosquito Control Project FY 13 budget in the amount of \$207,573 dollars. The motion was seconded by B. Hansen and voted unanimously 3-0.

Motion 2-Bristol County Mosquito Control Project

B. Hansen made a motion to certify and approve the Bristol County Mosquito Control Project FY 13 budget in the amount of \$1,299,095 dollars. The motion was seconded by G. Gonyea and voted unanimously 3-0.

- D: *New Commissioner Candidate Interviews for the Northeast MA Mosquito & Wetland Management District:*** The Board interviewed 3 candidates who applied for Commissioner position to fill current vacancies. **(Vote Required)**

- D.1: Background:** The Board interviewed the 3 individuals who applied to be Commissioners of the Northeast MA Mosquito & Wetland Management District

- D.2: Questions and Discussion:** The Board members agreed that all 3 candidates were qualified. They asked the Executive Director to research and determine if the Commissioner whose term expired on 11/30/11 was still interested since that individual did not re-apply or express interest to continue to serve. If that candidate was no longer interested, the Board recommended that one of the remaining candidates be voted to replace that individual. M. Buffone was asked to report back to the Board by Tuesday, June 12th.

- D.3: Actions Taken:** Gary Gonyea made motion to appoint Mr. Paul A. Sevigny, Health Agent for the town of West Newbury to the Northeast MA Mosquito & Wetland Management District to fill the existing vacancy effective June 7, 2012 until November 30, 2017. The motion was seconded by Bruce Hansen and unanimously voted 3-0.

NOTE: *After the Board took action on agenda item D, the Chairman moved to take up agenda item F (see agenda item F below) before opening agenda Item E.*

- F: *Other Business (if any):*** *Northeast MCD Mosquito Collections Drop Off Date and Time to DPH*

- F.1: Background:** M. Buffone informed the Board of a potential issue that had been brought to his attention concerning the submission of mosquito collections to the State Laboratory for testing of EEEV and WNV. Dr. Sandra Smole, Ph.D., Director, Division of Molecular Diagnostics and Virology, Bureau of Laboratory has expressed concern about drop off time scheduling for some of the mosquito control districts. In particular, she noted in e-mails that the Northeast district must submit samples no later than 10 AM on Thursday's of any week. This would insure that accurate and timely laboratory results for all parties involved in detecting mosquito-borne illnesses such as EEEV. M. Buffone reported that the issue was resolved as the Director of the Northeast District, Jack Card committed to the schedule recommended by DPH state laboratory manager.

- F.2: Questions and Discussion:** G. Gonyea and other Board members agreed that along with proposed changes to the DPH arbovirus plan such as the new Abundance Infection Factor (AIF) formula proposed, it was important that all the mosquito control districts work closely with the State Laboratory as a partner and collaborator. Further, he thanked Mr. Card for changing their schedule to make the proposed schedule work. Finally, he applauded all the districts who have maintained a cooperative relationship with the DPH state laboratory.
- F.3: Actions Taken:** None
- E: *DPH EEEv and Arbovirus Surveillance and Response Plan Recommendations (From 12:30 PM - 1:30 PM)***
- E.1: Background:** After a short recess, the Board reconvened the meeting at 12:30 PM to hear a presentation by the Department of Public Health by Mr. Kevin Cranston, Director of the Bureau of Infectious Disease. G. Gonyea chaired the meeting at this point since Chairman Corte-Real had to leave. G. Gonyea introduced Mr. Cranston who presented the results and recommendations of the EEEv Expert Panel convened over the winter by the Commissioner of Public Health. He highlighted changes in the 2012 Arbovirus Surveillance and Response Plan for the foreseeable future to address how to respond to threat of EEEv primarily in SE Massachusetts. The presentation will be posted with these minutes.
- E.2: Questions and Discussion:** A myriad of interesting questions and exchanges occurred between mosquito control and public health professionals
- E.3: Actions Taken:** None
- G: *Adjournment and Next Meeting Date:*** After announcing the next meeting date and location, a motion was made to officially adjourn the meeting.
- G.1: Background:** Tuesday, June 12, 2012 in Amherst, MA will be the next meeting of the Board to interview new candidates to fill existing vacancies to the Berkshire County Mosquito Control Project Commission. Also, the Chairman had to leave before the DPH presentation was over and asked G. Gonyea to adjourn the meeting.
- G.2: Questions and Discussions:** None
- G.3: Action Taken:** G. Gonyea made a motion to adjourn the meeting at 2:00 PM, seconded by Bruce Hansen and unanimously voted 2-0.

Respectfully submitted,



Mark S. Buffone
Executive Director

Arbovirus Surveillance and Risk Communication

Massachusetts Department of Public Health

Kevin Cranston, MDiv

Director, Bureau of Infectious Disease



DPH Briefing

- Overview of EEE
 - Transmission cycle
 - Disease
- Overview of DPH Surveillance Program
- Surveillance & Response Plan
 - Expert Panel Process
- Communications Strategy & Risk Reduction
- Multi-Agency Response

Eastern Equine Encephalitis (EEE)

- First documented in the US in a horse with encephalitis in New Jersey in 1933.
- First human case occurred in MA in 1938.
- Most pathogenic arbovirus in the US

Options for reducing human risk

- Personal protection: use of clothing and insect repellents, limiting outdoor activities at dusk to reduce mosquito bites
- Larviciding: applying pesticides to kill or disrupt the development of juvenile mosquitoes (larvae) to prevent formation in biting adults
- Adulticiding: applying pesticides to kill adult mosquitoes
 - Ground spraying: truck-based application of pesticide
 - Aerial spraying: airplane-based low volume application of pesticide to kill flying mosquitoes

EEE Symptoms

- Incubation period of 2-10 days
 - Headache
 - High fever (103-106 degrees)
 - Nausea, vomiting, diarrhea
 - Lack of energy
 - Seizures
 - Coma
- Two out of three people infected will either not survive or suffer severe neurological complications

Eastern Equine Encephalitis Virus Neuroinvasive Disease Cases Reported by State, 1964-2010



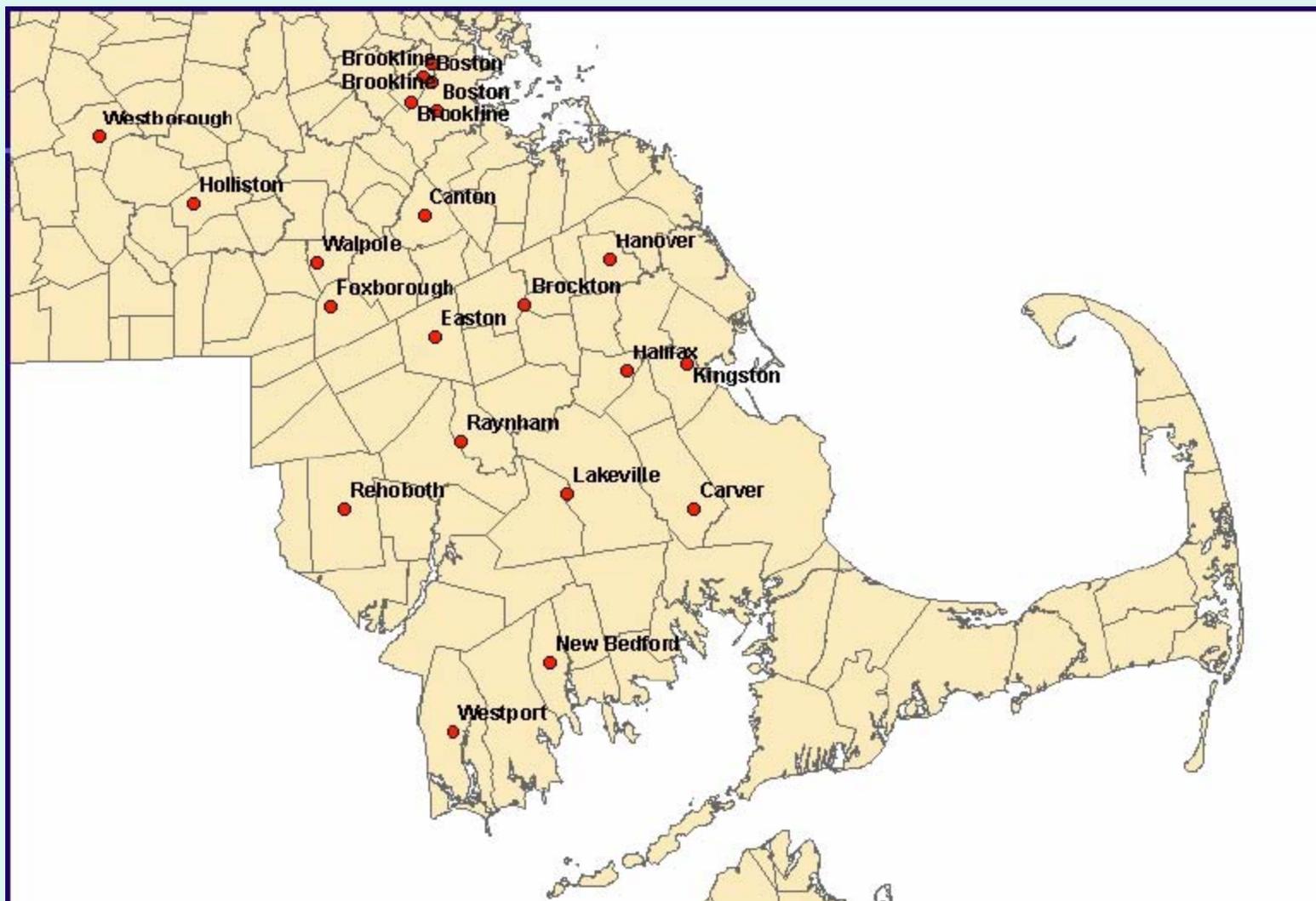
DPH Roles in Responding to EEE/WNV Threats

- Tests mosquitoes, specimens from appropriate suspect animals and from humans for evidence of infection.
- Identifies areas of disease risk.
- Provides information to guide decision-making to reduce the risk of disease.
- Informs the public of where and when there is an increased risk of infection.
- Educates the public about personal risk reduction including if decisions are made relative to aerial application of pesticides.

Primary MDPH Collaborators

- Department of Agricultural Resources
State Reclamation and Mosquito Control Board
- Mosquito Control Projects
 - Berkshire County
 - Bristol County
 - Central Massachusetts
 - Cape Cod
 - East Middlesex
 - Norfolk County
 - Northeast Massachusetts
 - Plymouth County
 - Suffolk County

DPH Long Term Trap Sites in High Risk Region



Guidance Document

- 2012 Massachusetts Arbovirus Surveillance and Response Plan
 - Reviewed and updated annually
 - Updated with input from expert panel process 2012
 - Outlines activities
 - Discusses phased response
 - Will be made available online to the public

EEE Expert Panel

Experts in the fields of

- mosquito control
- toxicology,
- ecology,
- climate change,
- public health
- infectious disease were invited to participate.

Panelists were chosen specifically because they were not already involved in the Massachusetts arbovirus surveillance and mosquito control processes and could be expected to provide fresh perspectives.

Panelists

- John-Paul Mutebi, PhD: Entomologist, Centers for Disease Control and Prevention, Division of Vector-borne Diseases
- Nicholas Komar, SD: Biologist, Centers for Disease Control and Prevention, Division of Vector-borne Diseases
- Cathleen Drinan, MEd: Health agent, Town of Halifax, MA
- Richard Primack, PhD: Conservation biologist and plant ecologist, Boston University
- Barbara Beck, PhD: Environmental toxicology consultant, Gradient Corporation, Cambridge, MA
- Alan Dupuis, BS: Zoonotic disease research scientist, Arbovirus Laboratories, Wadsworth Center, New York State Department of Health
- Laura Kramer, PhD: Zoonotic disease research scientist, Arbovirus Laboratories, Wadsworth Center, New York State Department of Health
- Marm Kilpatrick, PhD: Disease Ecologist, University of California, Santa Cruz
- John Howard, DrPH: Research scientist, Arthropod-Borne Disease Program, New York State Department of Health (retired)

Process

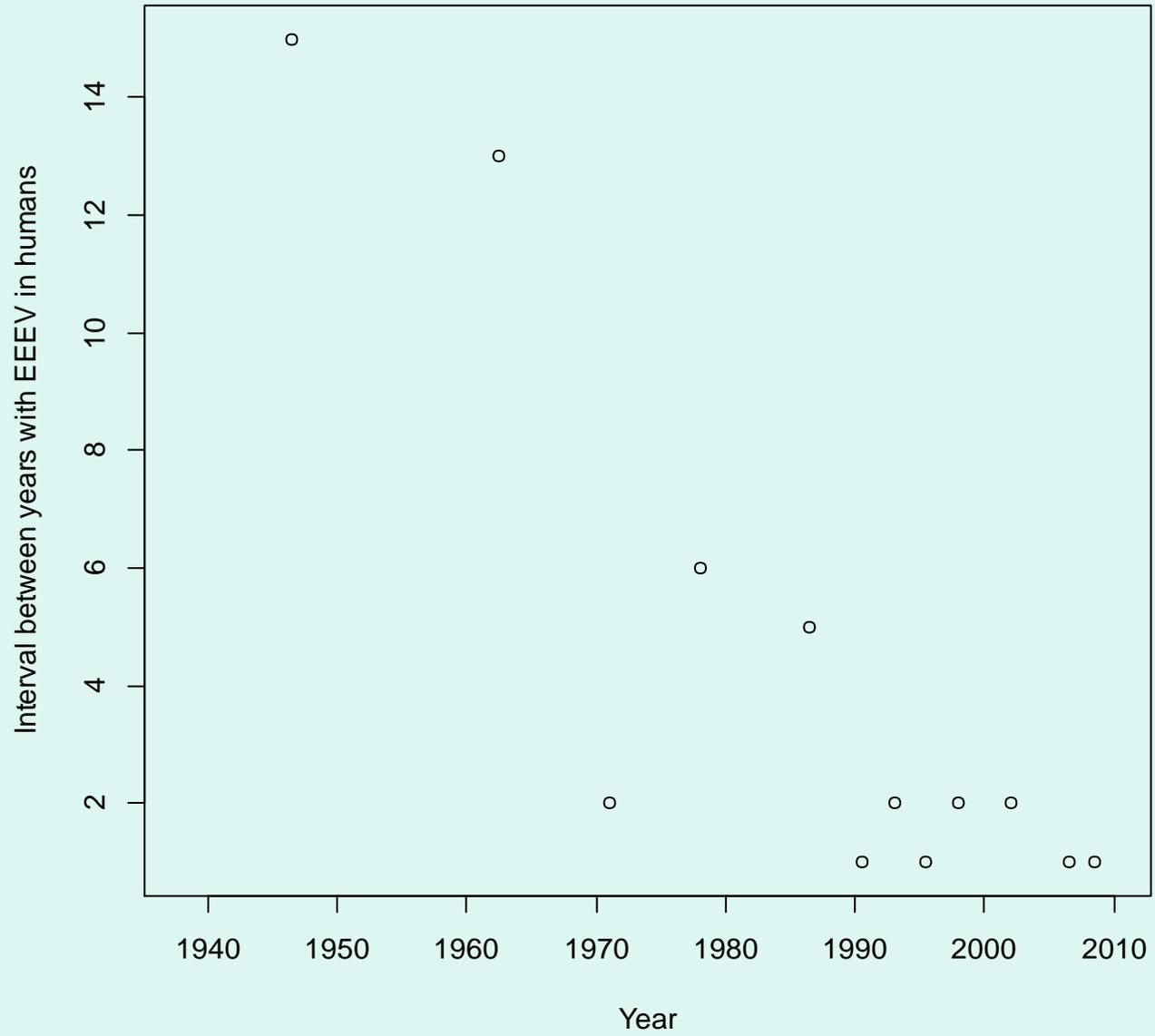
- Orientation webinar February 3
- Four conference calls
 - Feb 21
 - March 8 and 23
 - April 13
- In-person meeting April 23

Questions

- Is there evidence that the historical EEE cycle in Massachusetts has changed; i.e. has there been an increase in the frequency of human cases?
- If yes, is it attributable to anything specific, such as climate change?
- Are there indicators of human risk that we are not utilizing or are under-appreciating?
- Is there evidence to support the use of some type of pre-emptive aerial mosquito control activity, either larviciding or adulticiding?
- What indicators should be used to trigger an aerial adulticide intervention?
- What are the human and ecological health impacts of aerial applications of sumethrin?

Evidence of increasing EEE risk

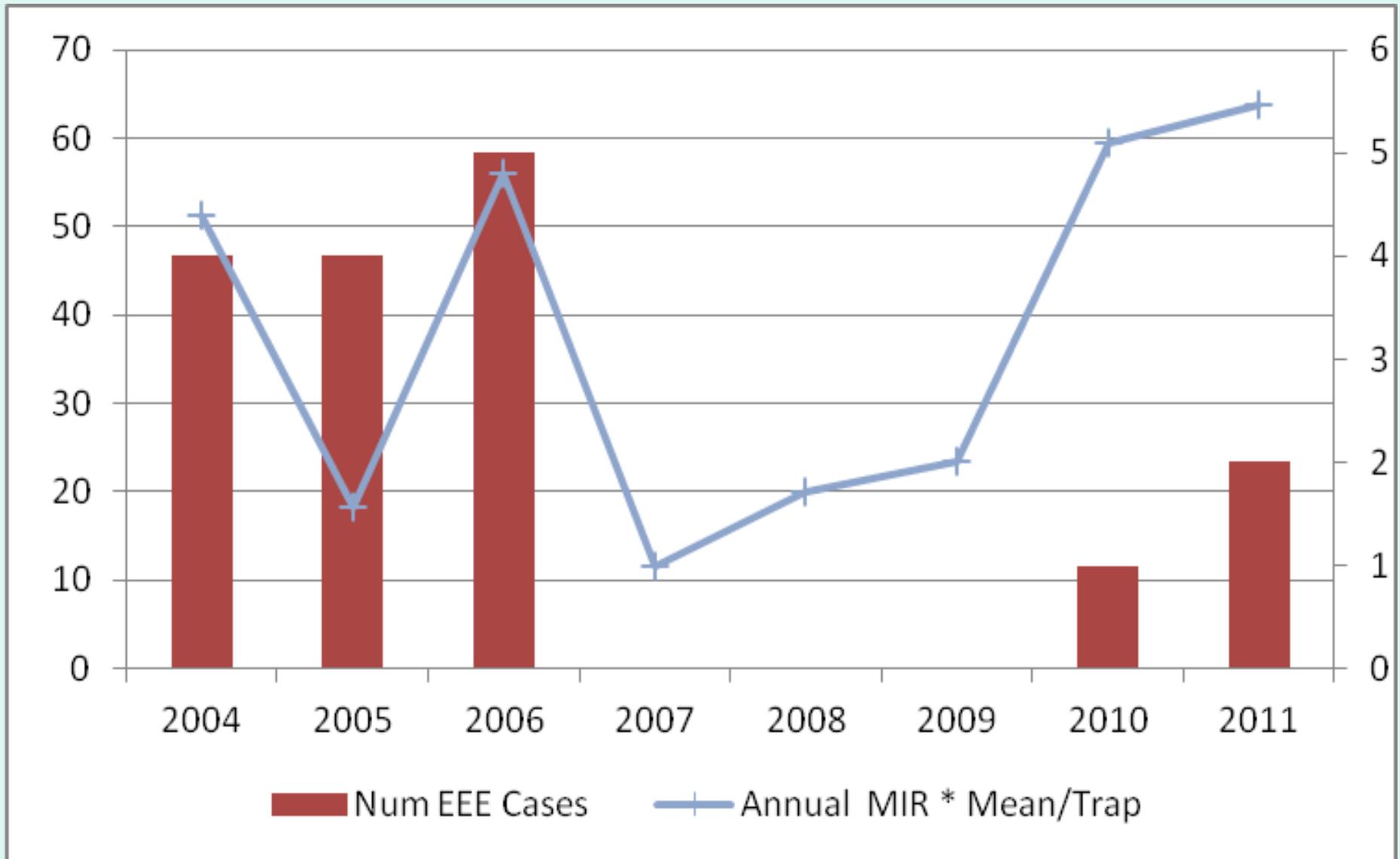
- Absolute numbers of human EEE cases is substantially down from previous years (1930s, 1950s, and 1970s)
- The period of time between clusters of years appears to be reducing
- The risk of a human case in any one year in SE MA appears to be increasing



Indicators of human risk

- History of EEE activity in the region
- Weather conditions
- Mosquito abundance (collected in traps)
- Mosquito infection rates
- Abundance Infection Factor (AIF): multiply abundance by infection rate
- Local time/risk analysis (3D maps of local EEE risk over time)
- EEE infection in animals (mammals/large birds)
- EEE infection in humans

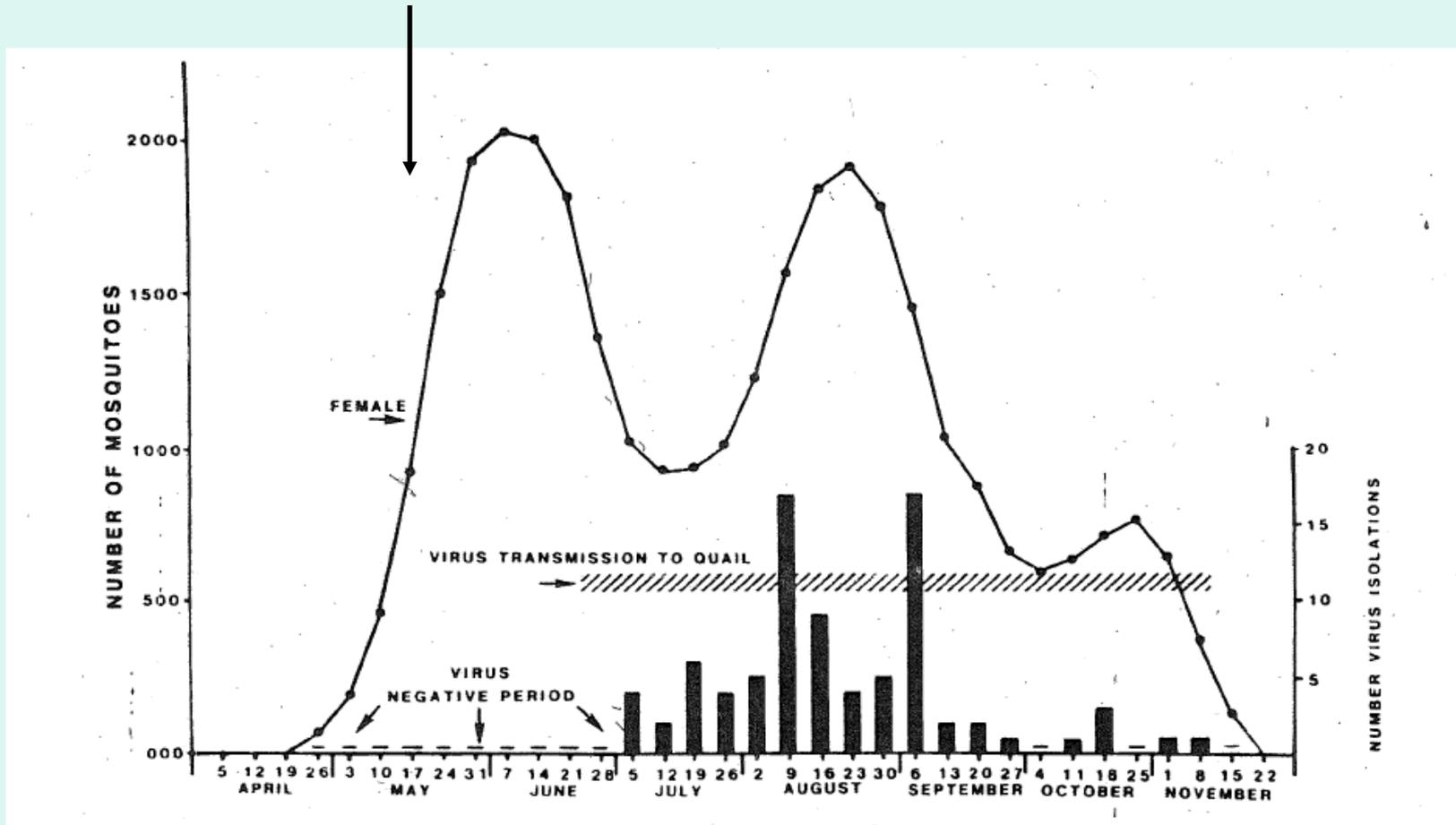
Abundance Infection Factor



Larviciding

- Bti
 - Poor crypt penetration due to lack of persistence
 - Difficult to formulate to penetrate swamp canopy
- Methoprene
 - Too toxic and persistent for ecologically sensitive areas

Pre-emptive Aerial Application



Aerial Application of Pesticide

- Aerial applications are one tool that can be employed to reduce, but not eliminate, risk
- Personal prevention should form the basis of all risk reduction efforts; aerial spraying risks conveying a false sense of security

The panel recommended:

- **Lowering the threshold for consideration of aerial spraying to “High”**
- **Consider options for focal area aerial spraying as an alternative to full regional spraying; explore potential local assets/airplane-based equipment to support more rapid and focused spray actions**

Human Health Effects of Sumethrin and Piperonyl butoxide (PBO)

- When applied in a manner consistent with its labeling, the panel agreed that data suggest aerial application should not result in negative health effects for the general public.
- DPH recommends precautions be taken to avoid any opportunity for exposure.
- During 2006 and 2010 aerial applications, individuals who reported health impacts to DPH after aerial applications were among those who did not take precautions (e.g. were outside during actual application or left windows open during application).

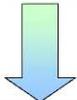
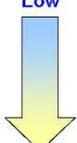
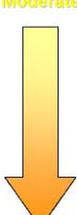
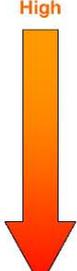
Ecological Health Effects of Sumethrin and Piperonyl butoxide

- Studies indicate that there are effects on non-target insects associated with these ingredients. The panel agreed that widespread adulticiding for disease risk mitigation should be limited to public health emergencies.

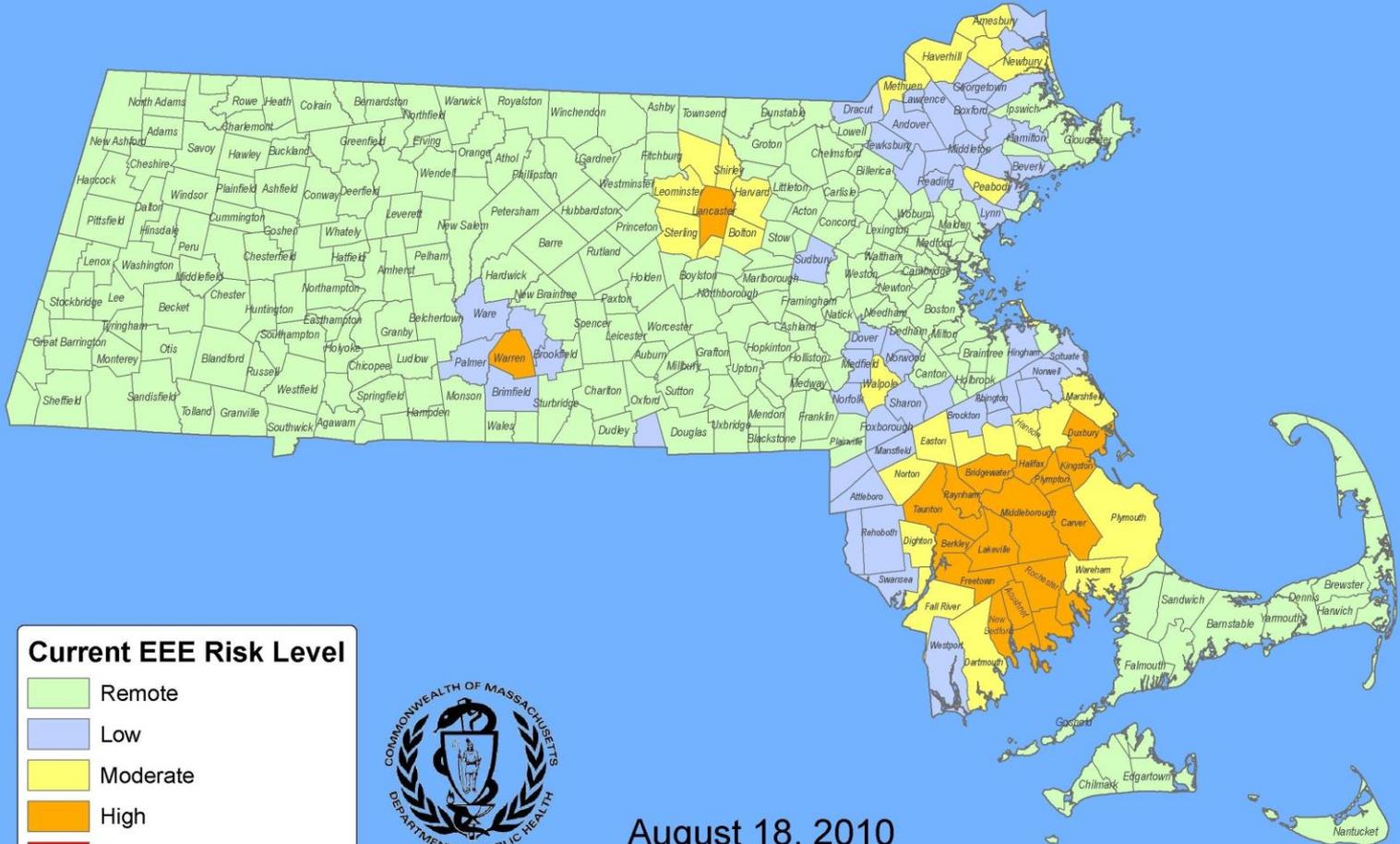
Phased Response

- Risk Assessment
 - Five stages: Remote to Critical
 - Based on history and current data
 - Provides evolving set of recommendations for agencies and locals

Key to Color Coding on Risk Maps

Risk	What it Means	What You Should Do
<p>Remote</p> 	<p>Multiple cases of human disease caused by EEE or WNV are considered <u>highly unlikely at this time</u>.</p> <p>No human, animal or mosquito infections have been identified in the area so far this year.</p>	<ul style="list-style-type: none"> • Repair screens • Dump standing water twice weekly
<p>Low</p> 	<p>Multiple cases of human disease caused by EEE or WNV are considered <u>unlikely at this time</u>.</p> <p>Infected mosquitoes <u>have been found</u> in the area this year or last year, but no human or animal infections.</p>	<ul style="list-style-type: none"> • Repair screens • Dump standing water twice weekly • Wear mosquito repellent when outdoors during peak mosquito hours (from dusk to dawn) • Wear long sleeves and long pants when outdoors during peak mosquito hours (from dusk to dawn) • Use mosquito netting on baby carriages and playpens outdoors • Arrange neighborhood cleanups to get rid of mosquito breeding sites
<p>Moderate</p> 	<p>Multiple cases of human disease caused by EEE or WNV are considered <u>moderately likely at this time</u>.</p> <p>There have been multiple infected mosquitoes <u>this year</u>, or sustained mosquito activity, human or animal cases <u>last year</u>.</p>	<ul style="list-style-type: none"> • Repair screens • Dump standing water twice weekly • Wear mosquito repellent when outdoors during peak mosquito hours (from dusk to dawn) • Wear long sleeves and long pants when outdoors during peak mosquito hours (from dusk to dawn) • Use mosquito netting on baby carriages and playpens outdoors • Arrange neighborhood cleanups to get rid of mosquito breeding sites • Be aware of stagnant water on private property (e.g. unused swimming pools) and consult the local board of health.
<p>High</p> 	<p>Multiple cases of human disease are considered <u>very likely at this time</u>.</p> <p>There have been infected mosquitoes repeatedly in the area or a human or animal case in the area this year.</p>	<ul style="list-style-type: none"> • Repair screens • Dump standing water twice weekly • Wear mosquito repellent when outdoors during peak mosquito hours (from dusk to dawn) • Wear long sleeves and long pants when outdoors during peak mosquito hours (from dusk to dawn) • Use mosquito netting on baby carriages and playpens outdoors • Arrange neighborhood cleanups to get rid of mosquito breeding sites • Be aware of stagnant water on private property (e.g. unused swimming pools) and consult the local board of health. • Avoid outside areas with obvious mosquito activity • Adjust outdoor activity to avoid peak mosquito hours (from dusk to dawn) • Avoid overnight camping near freshwater swamps where EEE activity is likely
<p>Critical</p>	<p>Multiple cases of human disease are <u>extremely likely at this time</u>.</p> <p>There has been more than one human and/or animal case of disease or rapid escalation of indications of risk in the area this year.</p>	<ul style="list-style-type: none"> • Repair screens • Dump standing water twice weekly • Wear mosquito repellent when outdoors during peak mosquito hours (from dusk to dawn) • Wear long sleeves and long pants when outdoors during peak mosquito hours (from dusk to dawn) • Use mosquito netting on baby carriages and playpens outdoors • Arrange neighborhood cleanups to get rid of mosquito breeding sites. • Be aware of stagnant water on private property (e.g. unused swimming pools) and consult the local board of health • Avoid outside areas with obvious mosquito activity • Adjust outdoor activity to avoid peak mosquito hours (from dusk to dawn) • Avoid overnight camping near freshwater swamps where EEE activity is likely • Consider cancelling or rescheduling outdoor gatherings, organized sporting events, etc. during peak mosquito hours

Massachusetts EEE Risk Categories



Current EEE Risk Level

- Remote
- Low
- Moderate
- High
- Critical



August 18, 2010

State Laboratory Institute
Arbovirus Surveillance Program

Risk Category 4: High probability of human outbreak

Definition of Risk Category for a Focal Area	Recommended Response
<p><u>Current Year</u></p> <p>1. Sustained or increasing Cs. melanura EEE activity with above average infection rates.</p> <p>Or</p> <p>2. Two or more EEE isolates from bridge vectors</p> <p>Or</p> <p>3. Sustained or increasing EEE activity in mosquitoes plus multiple meteorological or ecological conditions (rainfall, temperature, seasonal conditions, or larval abundance) associated with elevated mosquito abundance and thus very likely to increase the risk of human disease.</p>	<p>Response as in category 3, plus:</p> <p>1. <u>Recommend</u> towns and schools to consider rescheduling outdoor events and <u>provision of recommended times for activity restriction based on time of sunset.</u></p> <p>2. Local officials may proceed with focal area aerial adulticiding.</p> <p><u>3. Discuss need for large-scale aerial intervention</u></p>

Risk Category 5: Critical probability of human outbreak

Definition of Risk Category for a Focal Area ^[1]	Recommended Response
<p data-bbox="63 219 289 258"><u>Current Year</u></p> <p data-bbox="63 268 852 358">1. <u>A single</u> confirmed human or <u>animal</u> EEE case</p> <p data-bbox="63 396 115 435">Or</p> <p data-bbox="63 474 836 768">3. Multiple quantitative measures indicating critical risk of human infection (e.g. early season positive surveillance indicators, and sustained high mosquito infection rates, and horse or mammal case indicating escalating epizootic activity)</p>	<p data-bbox="937 219 1489 258">Response as in category 4, plus:</p> <ol data-bbox="937 297 1831 1096" style="list-style-type: none"><li data-bbox="937 297 1831 386">1. Intensify public education on personal protection with multiple press releases<li data-bbox="937 448 1843 644"><u>2. Strong recommendation for rescheduling outdoor, evening events and provision of recommended times for activity restriction based on time of sunset.</u><li data-bbox="937 705 1792 743">3. Discuss need for large-scale aerial intervention<li data-bbox="937 833 1831 923">4. DPH to do active surveillance for adverse events related to pesticide exposure if aerial spray is done<li data-bbox="937 1005 1823 1095">5. DPH to designate high risk areas where no-spray requests are pre-empted

Additional action items

- Improve communications with local health agents through at least biweekly conference calls during risk season and through targeted HHAN messages with local risk updates
- Have DPH issue specific recommendations for curtailment of outdoor activities near dusk for common adoption by affected cities/towns

RECOMMENDED CANCELLATION TIMES FOR OUTDOOR ACTIVITIES IN AREAS OF HIGH RISK FOR EASTERN EQUINE ENCEPHALITIS (EEE) 2012

The types of mosquitoes most likely to transmit EEE infection are likely to be out searching for food (an animal to bite) at dusk, the time period between when the sun sets and it gets completely dark. **The exact timing of this increased activity is influenced by many factors including temperature, cloud cover, wind and precipitation and cannot be predicted precisely for any given day.** Here, the approximate time of sunset was used to establish standardized recommendations for cancellation times of outdoor activities during periods of high EEE risk.

This does not eliminate risk nor does it alleviate the need for the use of repellants or clothing for protection from mosquitoes.

August 2012						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
July 29	July 30	July 31	1	2	3	4
←			8:00 PM	→		
5	6	7	8	9	10	11
←			8:00 PM	→		
12	13	14	15	16	17	18
←			7:30 PM	→		
19	20	21	22	23	24	25
←			7:30 PM	→		
26	27	28	29	30	31	Sept 1
←			7:00 PM	→		

September 2012						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
2	3	4	5	6	7	8
←			7:00 PM	→		
9	10	11	12	13	14	15
←			6:45 PM	→		
16	17	18	19	20	21	22
←			6:45 PM	→		
23	24	25	26	27	28	29
←			6:15 PM	→		

October 2012						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
Sept 30	1	2	3	4	5	6
←			6:15 PM	→		
7	8	9	10	11	12	13
←			6:00 PM	→		
14	15	16	17	18	19	20
←			6:00 PM	→		
21	22	23	24	25	26	27
←			5:30 PM	→		
28	29	30	31	Nov 1	Nov 2	Nov 3
←			5:30 PM	→		

Multi-Agency Emergency Response

- DPH
 - Risk assessment
 - Characterization of Risk Area
 - Consult on need for aerial application
 - State Reclamation and Mosquito Control Board
 - Mosquito Advisory Group
 - Mosquito Control Projects
 - Request Commissioner Certification

Multi-Agency Emergency Response continued

- DPH and Dept. of Agricultural Resources (DAR)
 - select pesticide
- Dept. of Agricultural Resources
 - review waivers and ensure compliance with pesticide laws
- Dept. of Environmental Protection and the DF&G Division of Fisheries & Wildlife
 - review priority habitats
- Dept. of Environmental Protection, DAR and DPH
 - plan for environmental monitoring
- DPH and DAR
 - notification to public, local Boards of Health, emergency departments and Poison Control

Multi-Agency Emergency Response continued

- Dept. of Agricultural Resources and State Reclamation and Mosquito Control Board
 - initiate and coordinate aerial spray operation according to the State Reclamation and Mosquito Control Board Operational Response Plan