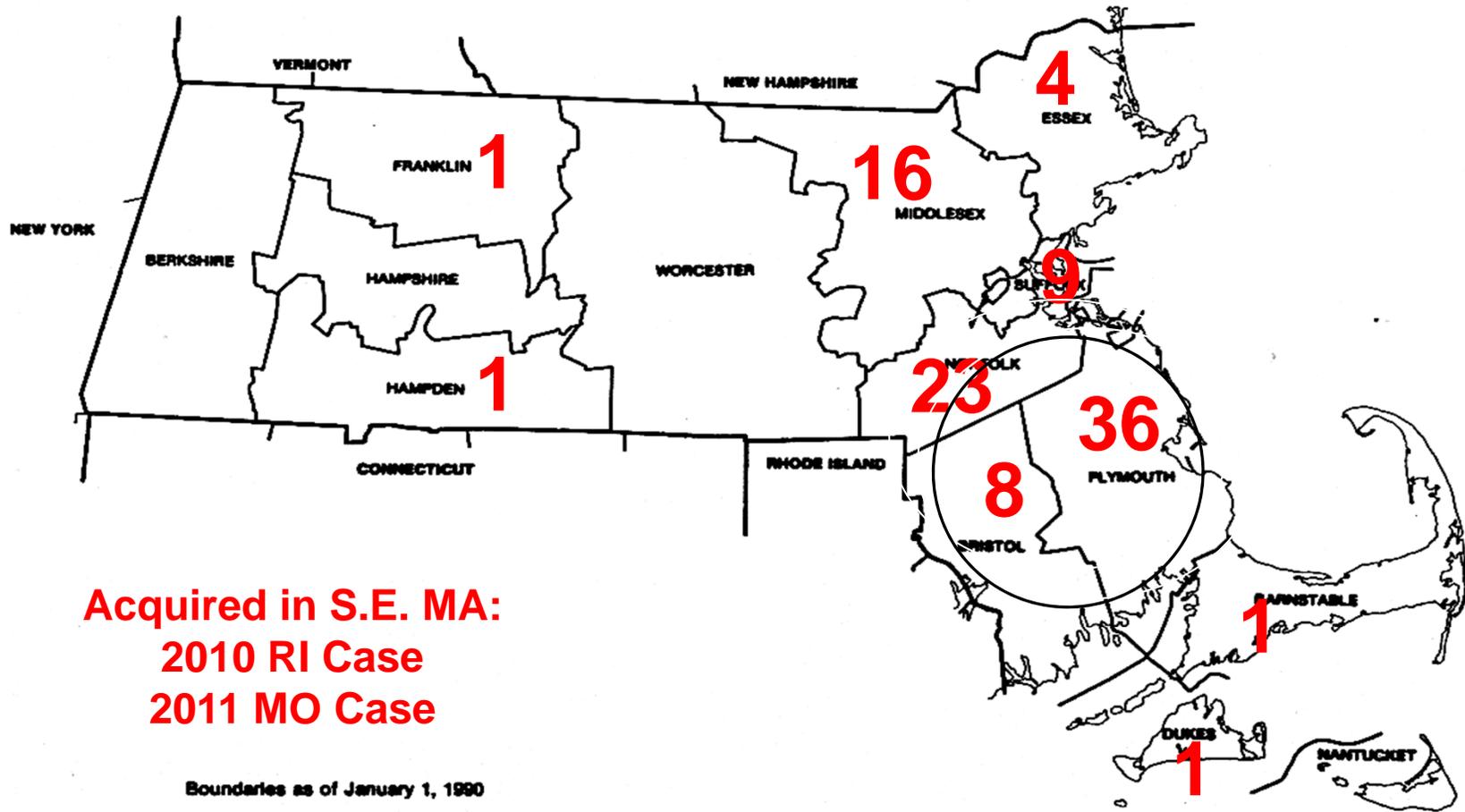
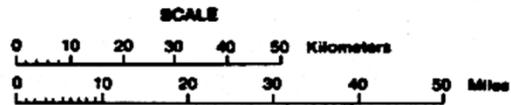


# Human EEE Cases by County of Residence, 1938-2013

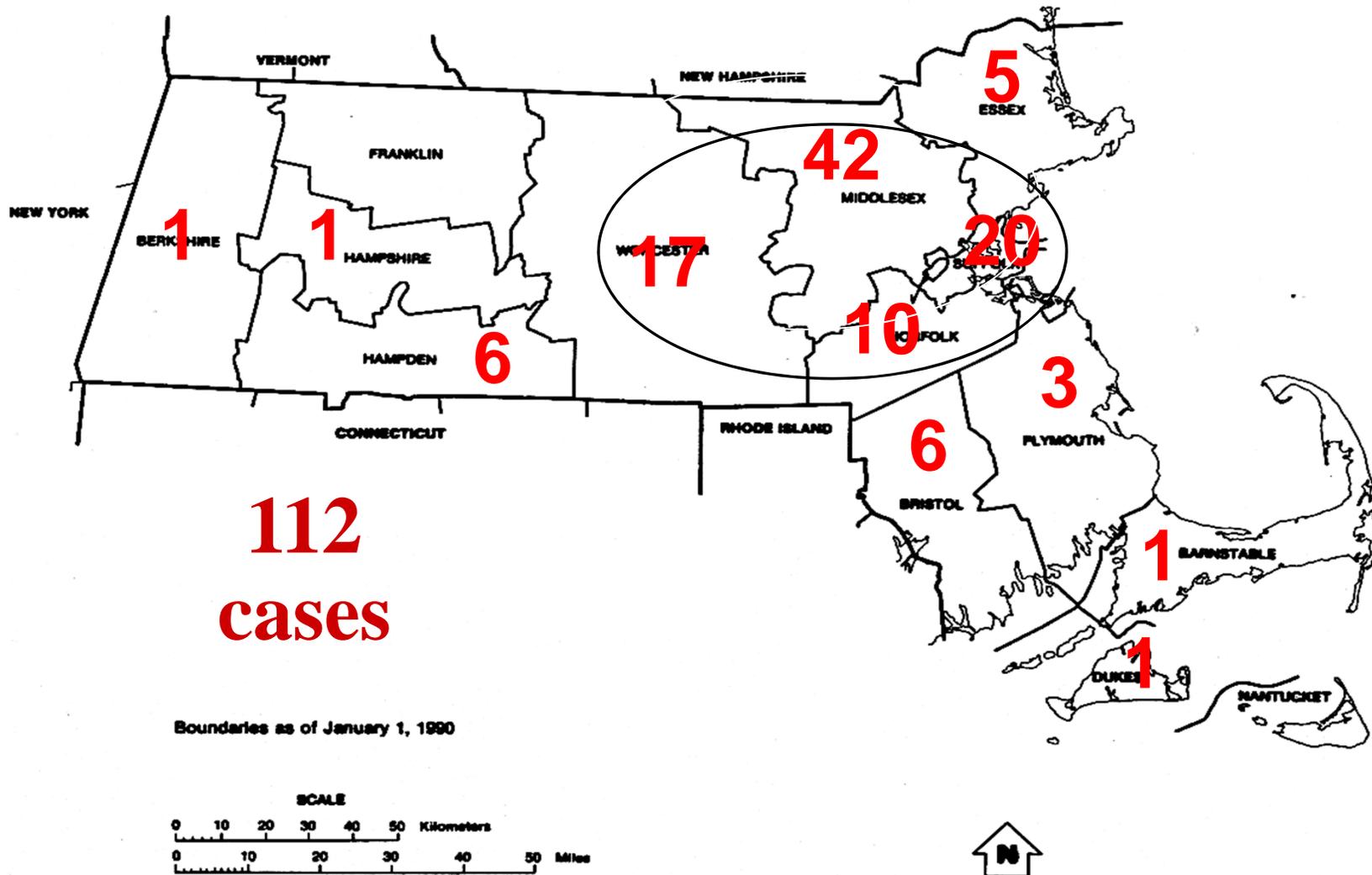


Acquired in S.E. MA:  
2010 RI Case  
2011 MO Case

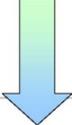
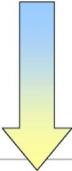
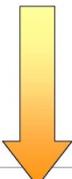
Boundaries as of January 1, 1990

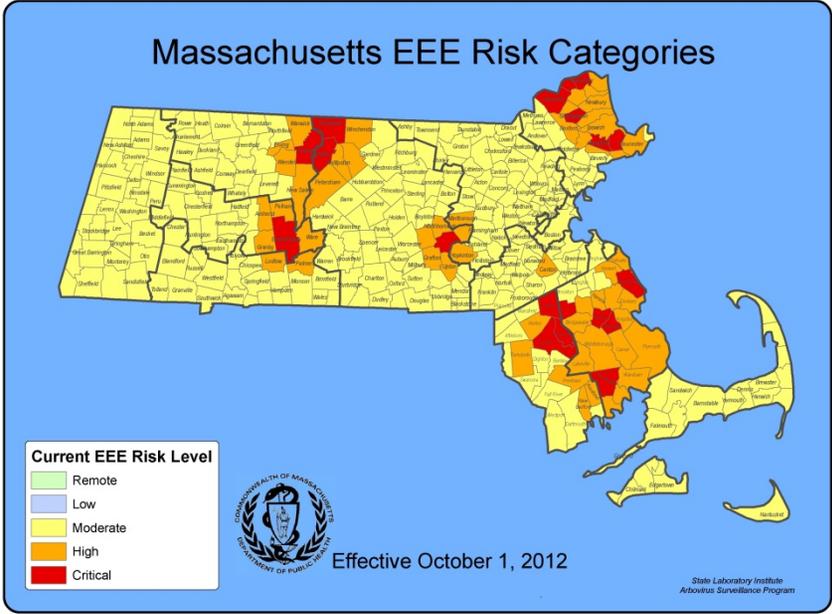


# Human WNV Cases by County of Residence, 2001-2013



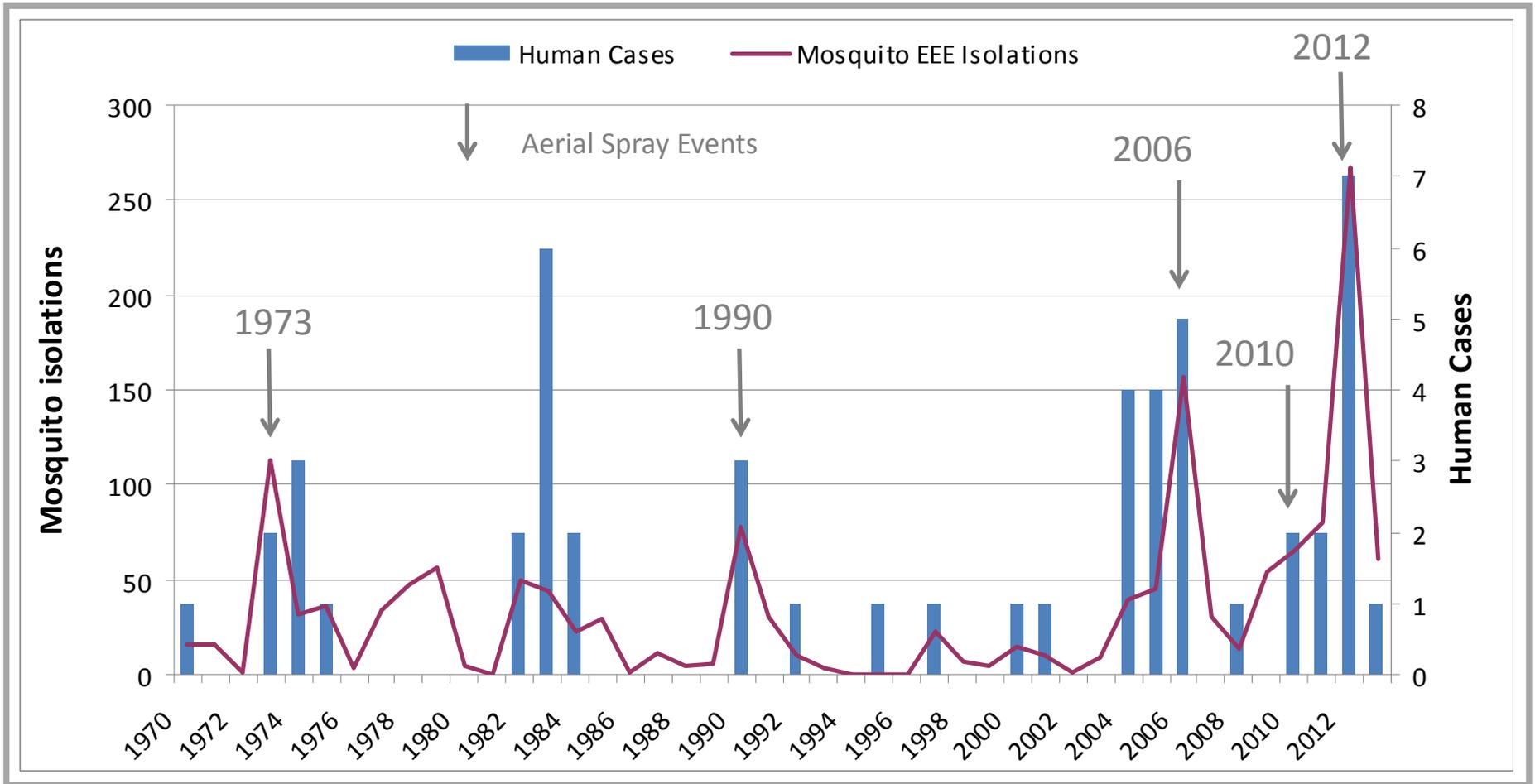
# Risk Analysis and Phased Response

Key to Color Coding on Risk Maps		
Risk	What it Means	What You Should Do
<b>Remote</b> 	<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"> <li>• Repair screens</li> <li>• Dump standing water twice weekly</li> </ul>
<b>Low</b> 	<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, but no human or animal infections.</p>	<ul style="list-style-type: none"> <li>• Repair screens</li> <li>• Dump standing water twice weekly</li> <li>• <b>Wear mosquito repellent when outdoors during peak mosquito hours (from dusk to dawn)</b></li> <li>• <b>Wear long sleeves and long pants when outdoors during peak mosquito hours (from dusk to dawn)</b></li> <li>• <b>Use mosquito netting on baby carriages and playpens outdoors</b></li> <li>• <b>Arrange neighborhood cleanups to get rid of mosquito breeding sites</b></li> </ul>
<b>Moderate</b> 	<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> in addition to human or animal cases <u>last year</u>.</p>	<ul style="list-style-type: none"> <li>• Repair screens</li> <li>• Dump standing water twice weekly</li> <li>• Wear mosquito repellent when outdoors during peak mosquito hours (from dusk to dawn)</li> <li>• Weather permitting, wear long sleeves and long pants when outdoors during peak mosquito hours (from dusk to dawn)</li> <li>• Use mosquito netting on baby carriages and playpens outdoors</li> <li>• Arrange neighborhood cleanups to get rid of mosquito breeding sites</li> <li>• <b>Be aware of stagnant water on private property (e.g. unused swimming pools) and report to the local board of health.</b></li> </ul>
<b>High</b> 	<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</p>	<ul style="list-style-type: none"> <li>• Repair screens</li> <li>• Dump standing water twice weekly</li> <li>• Wear mosquito repellent when outdoors</li> <li>• Weather permitting, wear long sleeves and long pants when outdoors during peak mosquito hours (from dusk to dawn)</li> <li>• Use mosquito netting on baby carriages and playpens outdoors</li> <li>• Arrange neighborhood cleanups to get rid of mosquito breeding sites</li> <li>• Be aware of stagnant water on private property (e.g. unused swimming pools) and report to the local board of health.</li> <li>• <b>Avoid outside areas with obvious mosquito activity</b></li> <li>• <b>Adjust outdoor activity to avoid peak mosquito hours (from dusk to dawn)</b></li> <li>• <b>Avoid overnight camping near freshwater swamps where EEE activity is likely</b></li> <li>• <b>Consider cancelling or rescheduling outdoor gatherings, organized sporting events, etc. during peak mosquito hours</b></li> </ul>
<b>Critical</b>	<p><b>Multiple cases of human disease are <u>extremely likely at this time</u>.</b></p> <p>There has been at least 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"> <li>• Repair screens</li> <li>• Dump standing water twice weekly</li> <li>• <b>Wear mosquito repellent when outdoors during peak mosquito hours (from dusk to dawn)</b></li> <li>• <b>Wear long sleeves and long pants when outdoors during peak mosquito hours (from dusk to dawn)</b></li> <li>• <b>Use mosquito netting on baby carriages and playpens outdoors</b></li> <li>• Arrange neighborhood cleanups to get rid of mosquito breeding sites</li> <li>• Be aware of stagnant water on private property (e.g. unused swimming pools) and report to the local board of health.</li> <li>• <b>Avoid outside areas with obvious mosquito activity</b></li> <li>• <b>Avoid overnight camping near freshwater swamps where EEE activity is likely</b></li> <li>• <b>Towns should work with their community around cancelling or rescheduling outdoor gatherings, organized sporting events, etc. during peak mosquito hours</b></li> </ul>



# Massachusetts 1970-2011

## Human EEE and EEEV Mosquito Isolates



# Expert Panel Winter/Spring 2012

Experts in the fields of

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

Panelists were chosen from outside Massachusetts arbovirus surveillance and mosquito control processes, to provide fresh perspectives.

# Possible Causes of Change in EEE

- evolution of land use patterns
- alterations in the relative population abundance of songbirds
- changes in bird migration patterns and timing
- climate change
- changes in mosquito abundance, community composition, feeding patterns, or movement behavior

# Action items from Expert Panel

- Reduce threshold criteria for high or critical risk assessment
- Consider aerial spraying as a risk mitigation measure at lower risk levels
- Improve communications with local health agents
- Provide specific recommendations for curtailment of outdoor activities to standardize response