

CMMCP WEEKLY SURVEILLANCE REPORT



EPI week #31
Jul. 29 – Aug. 4, 2012

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Central Mass. Mosquito Control Project
Weekly Report- 7/29/12-8/4/12
EPI Week #31

Cumulative Surveillance Summary

Target Species	<i>Ae. vex</i>	<i>Cq. per</i>	<i>Cs. mel</i>	<i>Oc. can</i>	<i>Culex</i>	All Species
No. Pools	23	206	162	77	588	1679
Total Specimens	42	6479	1463	352	13465	23959
No. Pools WNV +	0	0	0	0	4 [†]	4 [†]
No. Pools EEE +	0	0	0	0	2 [†]	2 [†]

[†]Pool of EEE+ *Culex* Species collected in Westborough on 7/17/12

[†]Pool of WNV+ *Culex* Species collected in Shrewsbury on 7/18/12

[†]Pool of WNV+ *Culex* Species collected in Tewksbury on 7/20/12

[†]Pool of WNV+ *Culex* Species collected in Westford on 7/25/12

[†]Pool of WNV+ *Culex* Species collected in Chelmsford on 7/25/12

[†]Pool of EEE+ *Culex* Species collected in Westborough on 7/27/12

Weather Summary (Northborough, MA): The weather for this particular week averaged 74.04°F with a recorded high temperature of 93.2°F and a recorded low temperature of only 56.1°F. For this week there was also a total of 0.58 inches of rain observed. Compared to the previous week, it was approximately 0.98°F warmer on average, and rained about 1.05 inches less. There was 2.48 inches of rain accumulated in July, while the total rainfall for the month of June was 2.98 inches at the CMMCP weather station (3.86 statewide). For the year we have received 28% more requests than average; 8,878 requests to date compared to the 9 year average of 6,957. Requests were 22% less than the 2011 totals for the same time frame, 10,834 in 2011 against 8,878 in 2012. Service requests increased 49% from EPI week 30 to Epi week 31 for 2012 (558 vs. 830) likely due to virus confirmations in our service area.

CMMCP Mosquito Summary-

Target Species	Δ From Last Week	Δ From Last Year	Predominant Trap Site(s)
<i>Aedes vexans</i>	0.00%	-100.0%	N/A
<i>Coquillettidia perturbans</i>	-15.95%	+44.49%	Acton, Hopkinton
<i>Culiseta melanura</i>	-22.73%	-24.44%	Holliston, Hopkinton
<i>Ochlerotatus canadensis</i>	+600.0%	+133.3%	Hopkinton, Southborough
<i>Culex</i> Species	-22.85%	+28.19%	Hopedale, Auburn
All Species	-17.21%	+27.70%	Hopedale, Acton, Auburn

The predominant mosquito for the week was *Culex* Species,
followed by *Coquillettidia perturbans*.

CMMCP Westborough Eastern Equine Encephalitis Surveillance Activity

Eastern Equine Encephalitis was isolated from a gravid trap collection in Westborough on 7/17/12. CMMCP responded by establishing additional local trap sites and conducting an adulticide application on 7/30/12 of the area surrounding the positive collection. The post-application trap collections from Westborough suggest that the *Culex* population and mammal biting mosquito species have lowered from the time of the virus isolation as well as the week prior. A second isolation of EEE from Westborough was collected from a response trap on 7/27/12, which was prior to the adulticide application. Despite these mosquitoes being collected before the 1st application, a second adulticide event has been scheduled for 8/2/12 as a precaution. More mosquito samples are scheduled to be collected soon from Westborough. Virus testing will continue for key mosquito species found in Westborough.

CMMCP Surveillance Data Westborough

EPI Week	Pool ID	Collection Date	Trap Type	Trap Site	Pool Size	Species	Town
29	CM12-0318	7/17/2012	Gravid Trap	Hadley Lane	50	<i>Culex species (EEE+)</i>	Westborough
29	CM12-0319	7/17/2012	Gravid Trap	Hadley Lane	30	<i>Culex species</i>	Westborough
30	CM12-0403	7/27/2012	CDC Trap	Hadley Lane	50	<i>Cq. perturbans</i>	Westborough
30	CM12-0404	7/27/2012	CDC Trap	Hadley Lane	17	<i>Cq. perturbans</i>	Westborough
30	CM12-0405	7/27/2012	CDC Trap	Hadley Lane	18	<i>Oc. canadensis</i>	Westborough
30	CM12NS-1045	7/27/2012	CDC Trap	Hadley Lane	3	<i>Culex species</i>	Westborough
30	CM12NS-1046	7/27/2012	CDC Trap	Hadley Lane	2	<i>Cs. melanura</i>	Westborough
30	CM12NS-1047	7/27/2012	CDC Trap	Hadley Lane	3	<i>Ae. cinereus</i>	Westborough
30	CM12NS-1048	7/27/2012	CDC Trap	Hadley Lane	5	<i>An. punctipennis</i>	Westborough
30	CM12NS-1049	7/27/2012	CDC Trap	Hadley Lane	5	<i>An. quadrimaculatus</i>	Westborough
					103	Total (Pre-spray)	

EPI Week	Pool ID	Collection Date	Trap Type	Trap Site	Pool Size	Species	Town
30	CM12-0407	7/27/2012	Gravid Trap	Maynard Street	9	<i>Culex species</i>	Westborough
30	CM12-0408	7/27/2012	Gravid Trap	Summer Street Ext.	21	<i>Culex species (EEE+)</i>	Westborough
30	CM12NS-1050	7/27/2012	Gravid Trap	Summer Street Ext.	1	<i>Cs. melanura</i>	Westborough
30	CM12-0418	7/27/2012	Gravid Trap	Chestnut Street	28	<i>Culex species</i>	Westborough
30	CM12NS-1065	7/27/2012	Gravid Trap	Chestnut Street	2	<i>An. punctipennis</i>	Westborough
30	CM12NS-1066	7/27/2012	Gravid Trap	Chestnut Street	1	<i>Oc. japonicus</i>	Westborough
30	CM12NS-1067	7/27/2012	Gravid Trap	Chestnut Street	1	<i>An. quadrimaculatus</i>	Westborough
ADULTICIDE APPLICATION 7/30							
31		8/1/2012	CDC Trap	Hadley Lane	1	<i>An. punctipennis</i>	Westborough
31		8/2/2012	CDC Trap	Hadley Lane	1	<i>An. quadrimaculatus</i>	Westborough
					2	<u>Total (Post-spray)</u>	

CMMCP Shrewsbury West Nile Virus Surveillance Activity

West Nile virus was isolated from a gravid trap collection in Shrewsbury on 7/18/12. CMMCP responded by performing additional mosquito surveillance and conducting an adulticide application on 7/31/12 of the area surrounding the positive collection. The post-application trap collections from Shrewsbury suggest that the local mosquito population has been lowered from the time of the virus isolation as well as the week prior. An overall reduction of 72% has been observed with specific reductions of 63% and 83% in the *Culex* and *Coquillettidia perturbans* (mammal-biting) species respectively. CMMCP will continue to monitor the mosquito populations in the area. Additional mosquito samples are scheduled to be collected from Shrewsbury with virus testing continuing for key mosquito species.

CMMCP Surveillance Data- Shrewsbury

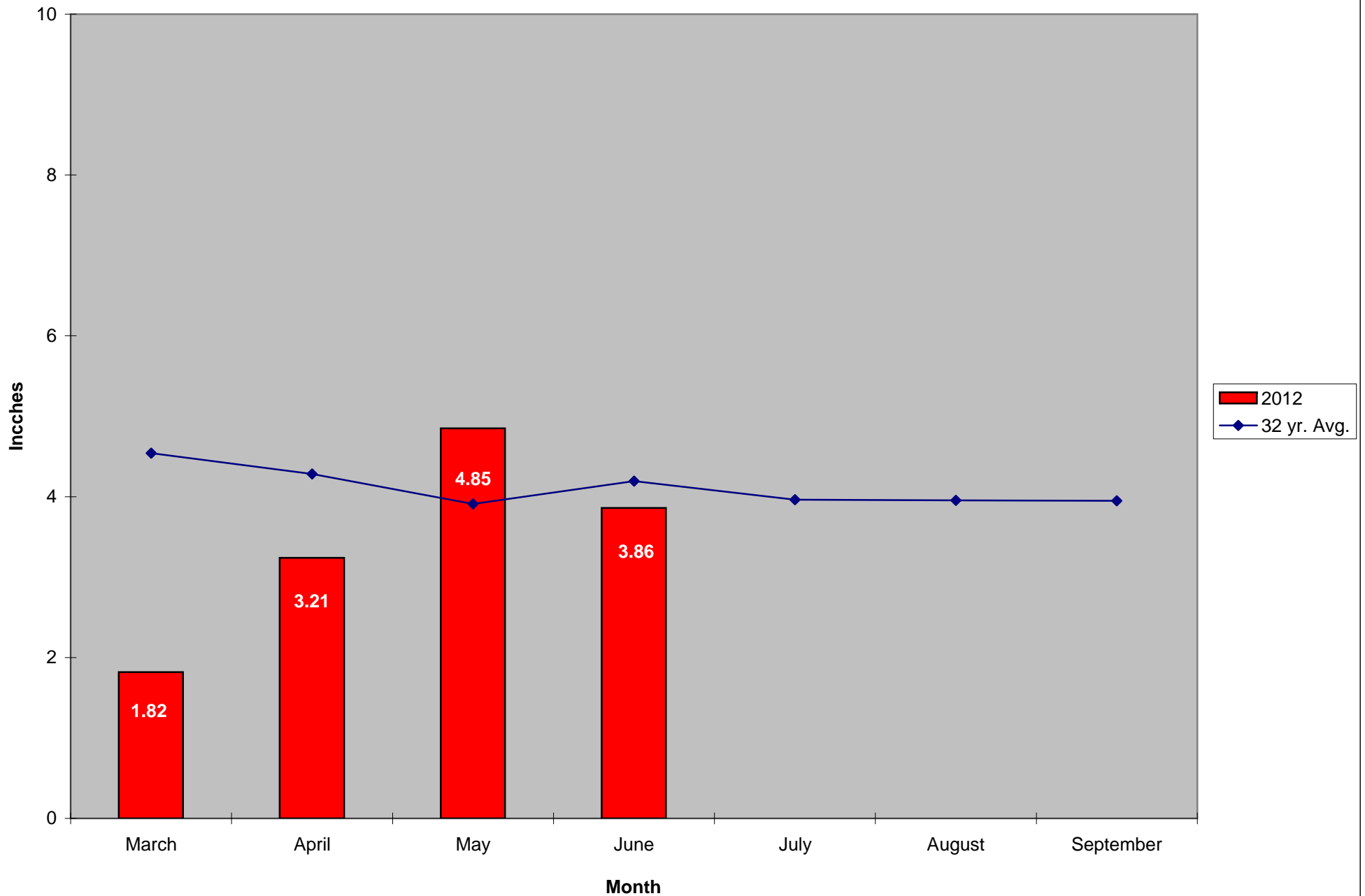
EPI Week	Pool ID	Collection Date	Trap Type	Trap Site	Pool Size	Species	Town
29	CM12NS-0881	7/18/2012	Canopy CDC Trap	Dalphen Road	274	<i>Culex species</i>	Shrewsbury
29	CM12NS-0882	7/18/2012	Canopy CDC Trap	Dalphen Road	3	<i>Cs. melanura</i>	Shrewsbury
29	CM12NS-0883	7/18/2012	Canopy CDC Trap	Dalphen Road	93	<i>Cq. perturbans</i>	Shrewsbury
29	CM12-0327	7/18/2012	Gravid Trap	Dalphen Road	50	<i>Culex species</i>	Shrewsbury
29	CM12-0328	7/18/2012	Gravid Trap	Dalphen Road	50	<i>Culex species</i>	Shrewsbury
29	CM12-0329	7/18/2012	Gravid Trap	Dalphen Road	50	<i>Culex species (WNV+)</i>	Shrewsbury
29	CM12NS-0884	7/18/2012	Gravid Trap	Dalphen Road	8	<i>Culex species</i>	Shrewsbury
29	CM12NS-0885	7/18/2012	Gravid Trap	Dalphen Road	1	<i>Cs. melanura</i>	Shrewsbury
29	CM12NS-0886	7/18/2012	Gravid Trap	Dalphen Road	35	<i>An. punctipennis</i>	Shrewsbury
30	CM12-0394	7/25/2012	Gravid Trap	N. Quinsigamond Ave.	50	<i>Culex species</i>	Shrewsbury
30	CM12NS-1040	7/25/2012	Gravid Trap	N. Quinsigamond Ave.	125	<i>Culex species</i>	Shrewsbury
30	CM12NS-1041	7/25/2012	Gravid Trap	N. Quinsigamond Ave.	2	<i>Oc. japonicus</i>	Shrewsbury

EPI Week	Pool ID	Collection Date	Trap Type	Trap Site	Pool Size	Species	Town
30	CM12-0413	7/27/2012	CDC Trap	Dalphen Road	50	<i>Cq. perturbans</i>	Shrewsbury
30	CM12-0414	7/27/2012	CDC Trap	Dalphen Road	50	<i>Cq. perturbans</i>	Shrewsbury
30	CM12-0415	7/27/2012	CDC Trap	Dalphen Road	50	<i>Cq. perturbans</i>	Shrewsbury
30	CM12NS-1024	7/27/2012	CDC Trap	Dalphen Road	17	<i>Cq. perturbans</i>	Shrewsbury
30	CM12NS-1025	7/27/2012	CDC Trap	Dalphen Road	202	<i>Culex species</i>	Shrewsbury
30	CM12NS-1026	7/27/2012	CDC Trap	Dalphen Road	62	<i>An. punctipennis</i>	Shrewsbury
30	CM12NS-1027	7/27/2012	CDC Trap	Dalphen Road	53	<i>An. quadrimaculatus</i>	Shrewsbury
30	CM12NS-1028	7/27/2012	CDC Trap	Dalphen Road	2	<i>Cs. melanura</i>	Shrewsbury
30	CM12NS-1029	7/27/2012	CDC Trap	Dalphen Road	1	<i>Oc. triseriatus</i>	Shrewsbury
					<u>487</u>	<u>Total (Pre-spray)</u>	

ADULTICIDE APPLICATION
7/31

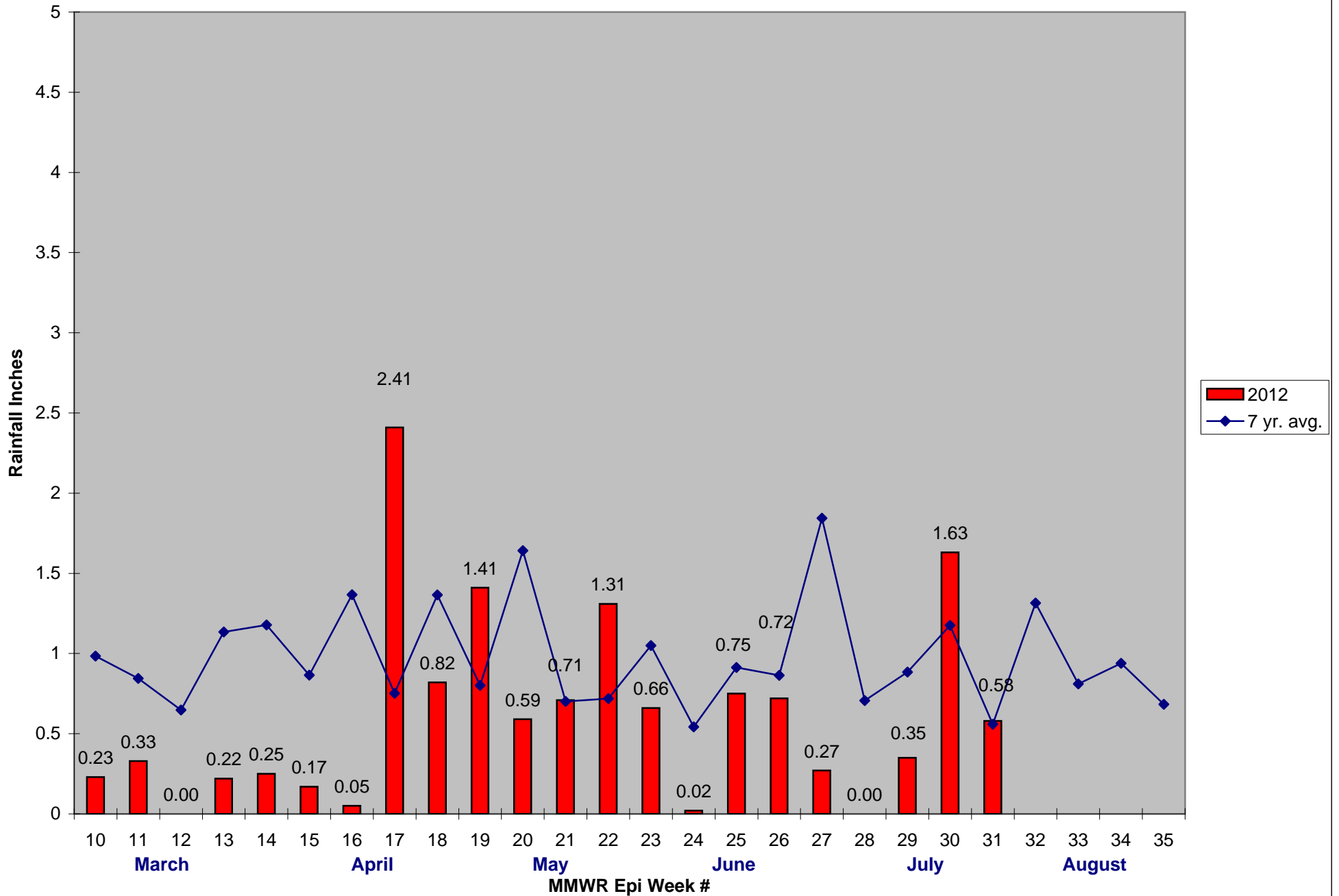
31		8/2/2012	CDC Trap	Dalphen Road	26	<i>An. punctipennis</i>	Shrewsbury
31		8/2/2012	CDC Trap	Dalphen Road	11	<i>An. quadrimaculatus</i>	Shrewsbury
31		8/2/2012	CDC Trap	Dalphen Road	26	<i>Cq. perturbans</i>	Shrewsbury
31		8/2/2012	CDC Trap	Dalphen Road	74	<i>Culex species</i>	Shrewsbury
					<u>137</u>	<u>Total (Post-spray)</u>	

2012 Mass. Rainfall Data vs. 32 Year Average*



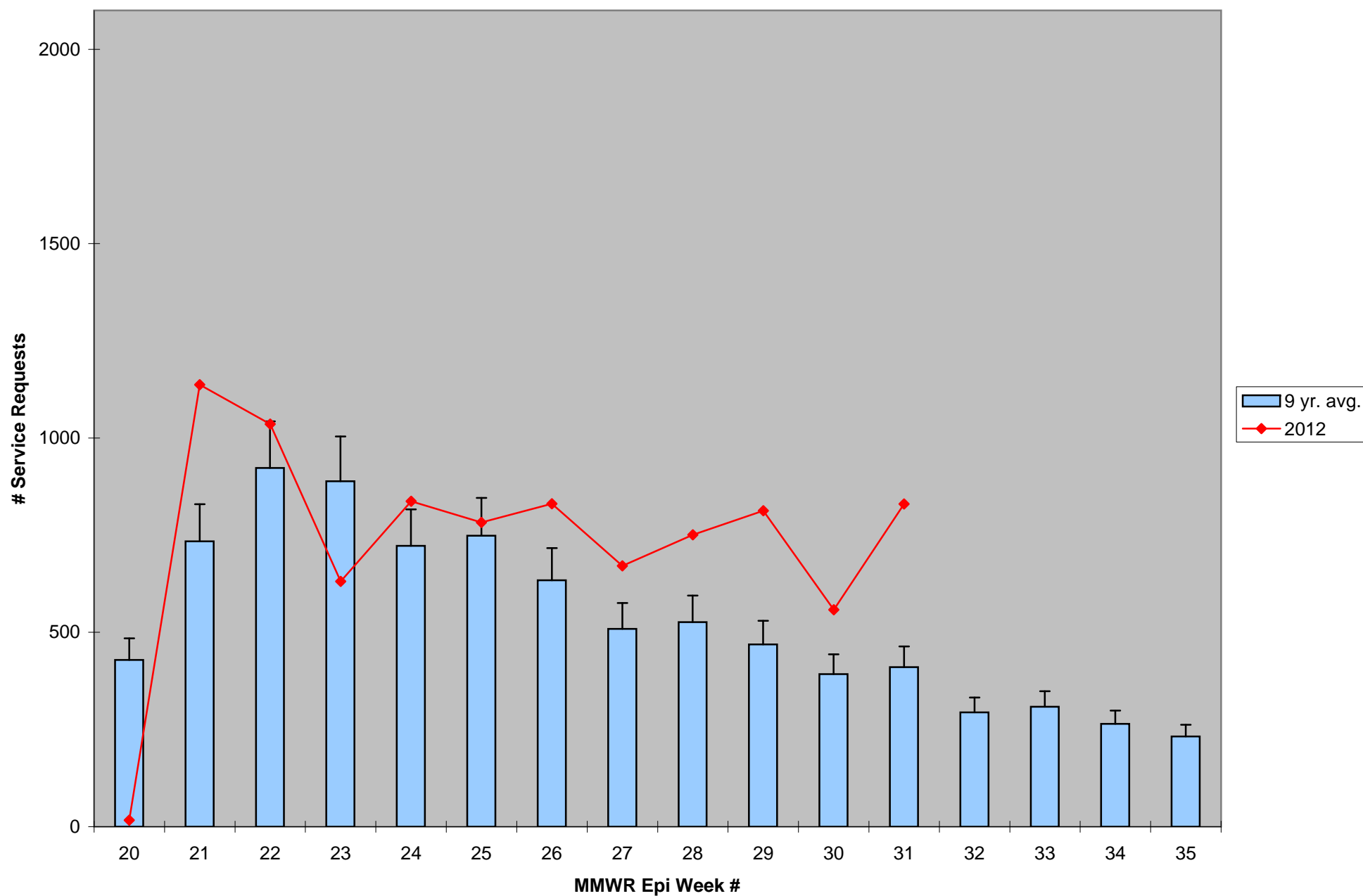
*Source: Northeast Regional Climate Center: http://www.nrcc.cornell.edu/page_summaries.html

2012 CMMCP Weekly Rainfall vs. 7 Year Average*



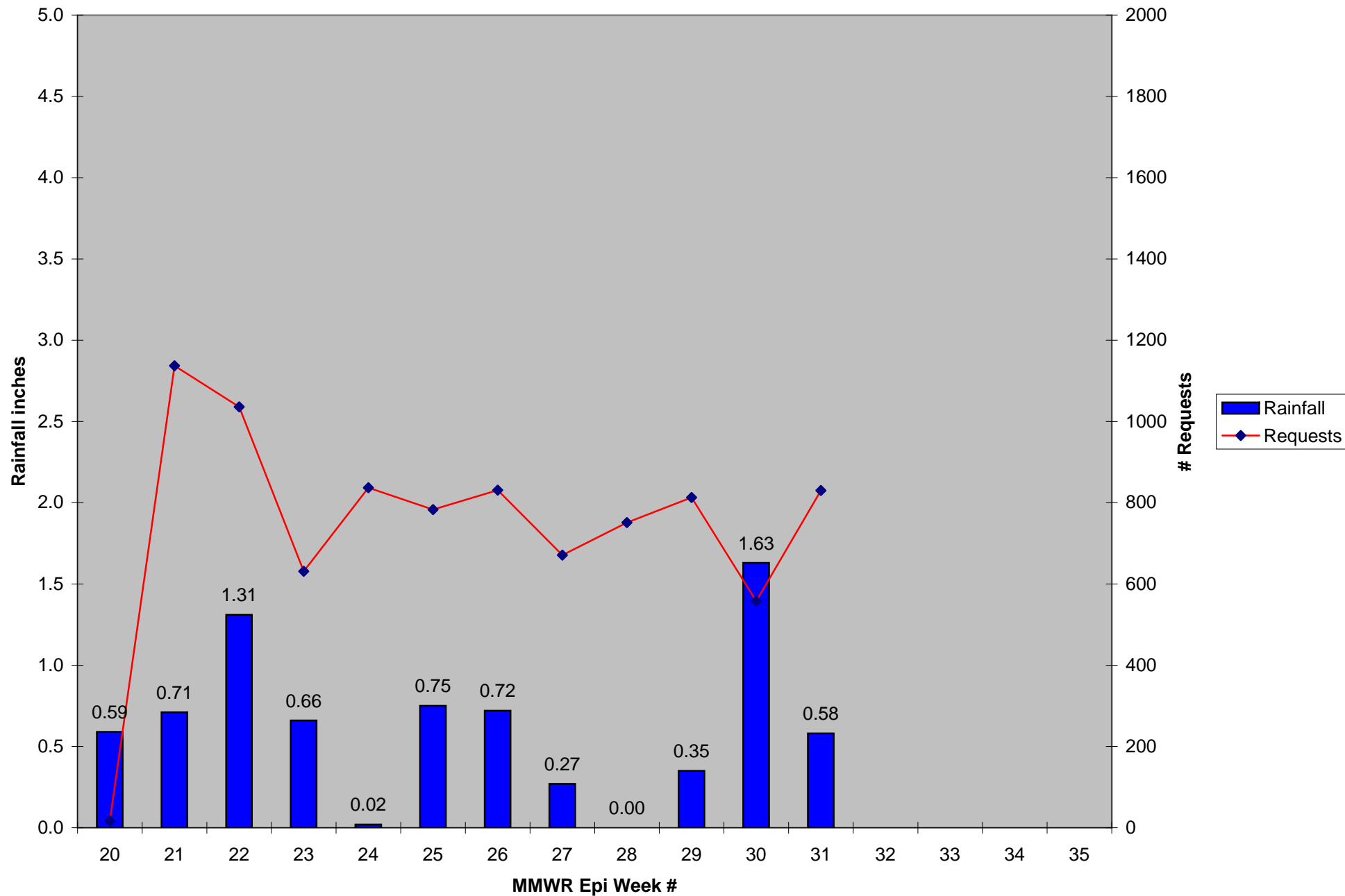
*Source: CMMCP Weather Station - Northborough, MA

ULV Service Request History Comparison 2003-2012



Error bars show approx. number of requests if we had 40 cities and towns over the 9 year average

2012 Rainfall vs. Requests



2012 Temp vs. Requests

