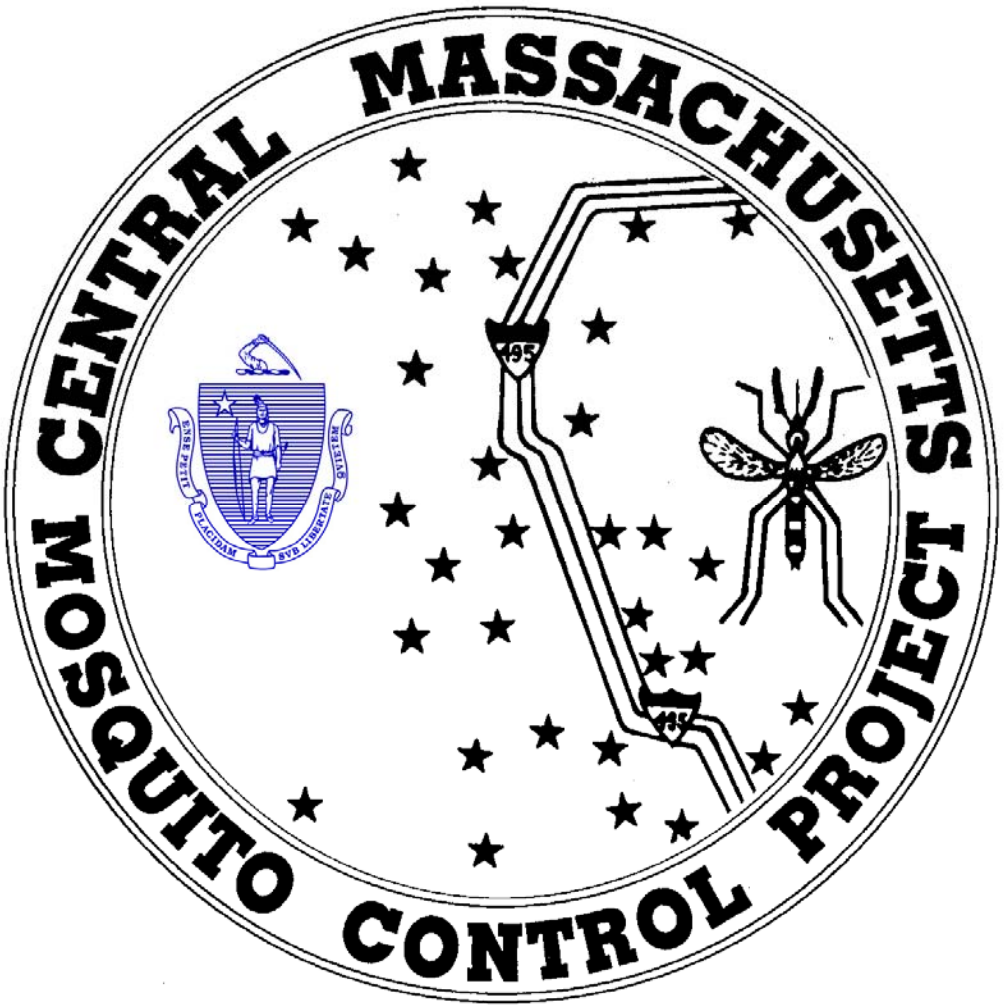
CMMCP WEEKLY SURVEILLANCE REPORT



EPI week #34
Aug. 21 – Aug. 27, 2016

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Tim McGlinchy, *Director of Operations*
Tim Deschamps, *Executive Director*

Central Mass. Mosquito Control Project
Weekly Report- 8/21/16-8/27/16
EPI Week #34

Cumulative Surveillance Summary

Target Species	*Ae. vex*	*Cq. per*	*Cs. mel*	*Oc. can*	*Culex*	All Species
No. Pools	26	494	29	98	533	1458
Total Specimens	330	50670	565	4820	11850	73939
No. Pools WNV +	0	2†	0	0	3†	5†
No. Pools EEE +	0	0	0	0	0	0

†Pool of WNV+ *Culex pipiens/restuans* complex collected in Auburn on 8/2/16
†Pool of WNV+ *Coquillettidia perturbans* collected in Auburn on 8/2/16
†Pool of WNV+ *Coquillettidia perturbans* collected in Hopkinton on 8/5/16
†Pool of WNV+ *Culex pipiens/restuans* complex collected in Chelmsford on 8/16/16
†Pool of WNV+ *Culex* species collected in Millbury on 8/19/16

Weather Summary (Northborough, MA): The weather for this particular week averaged 72.44°F with a recorded high temperature of 89.00°F and a recorded low temperature of only 50.90°F. There was 0.92 inches of precipitation observed this week. Compared to the previous week, it was approximately 3.20°F cooler on average, and rained 0.48 inches more. There has been 2.75 inches of rain accumulated in August, after 1.62 inches for the month of July.

CMMCP Mosquito Summary*-

Target Species	Δ From Last Week	Δ From Last Year	Predominant Trap Site(s)
Aedes vexans	+642.9%	+5100%	Millbury, Webster, Leominster
Coquillettidia perturbans	-59.29%	+93.22%	Westford, Webster, Boxborough
Culiseta melanura	-57.14%	-40.00%	Tewksbury
Ochlerotatus canadensis	-50.00%	+400.0%	Webster
Culex Species	-78.07%	+46.43%	Northbridge, Westford, Westborough
All Species	-48.07%	+225.3%	Northbridge, Westford, Webster

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

The temperature for EPI week 34 averaged approximately 3.20 degrees cooler than the previous week, with almost 0.92 inches of precipitation observed. At the CMMCP historical surveillance trap sites, the overall collection numbers continued to decrease (-48.07%) over EPI week 33. This was due primarily to a decrease in *Coquillettidia perturbans* and *Culex* mosquitoes. Of the target species, only *Aedes vexans* increased in population this surveillance period. Despite the decrease from EPI week 33, the long-term surveillance locations once again showed a significant overall increase when compared to the 2015 season. The elevated levels of *Cq*. *perturbans* and *Ae*. *vexans*

influenced this yearly change. *Culex* species are currently the most abundant target mosquito in the CMMCP service area, with *Cq. perturbans* the second most abundant mosquito. Thirty-five egg papers were collected from CMMCP ovitraps this week. These produced 1,929 eggs which will help gauge the presence of Aedes albopictus in central Massachusetts. This was the largest weekly collection of eggs from ovitraps this year.

Enhanced Surveillance for *Aedes albopictus* - Ovitrap Collections

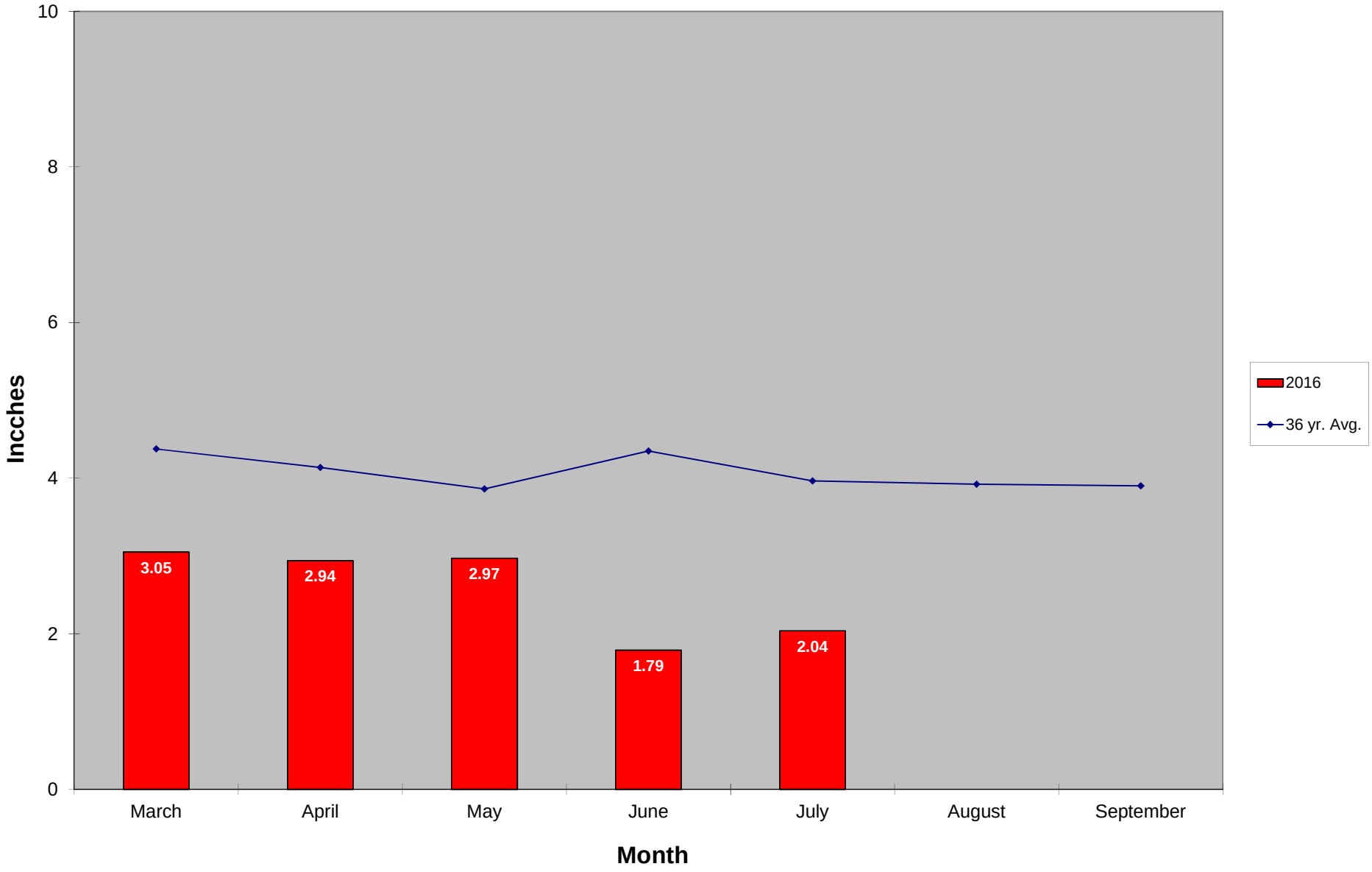
	# Ovitraps	# Egg Papers	# Eggs
EPI Week #22	15	7	0
EPI Week #23	-	-	-
EPI Week #24	5	2	49
EPI Week #25	15	6	93
EPI Week #26	17	17	19
EPI Week #27	25	19	1180
EPI Week #28	25	25	1020
EPI Week #29	10	7	62
EPI Week #30	15	12	632
EPI Week #31	15	10	524
EPI Week #32	20	19	985
EPI Week #33	10	10	147
EPI Week #34	35	33	1929
2016 Totals	207	167	6640

Two virus confirmations were received in Epi week 34, in Chelmsford and Millbury. Chelmsford was sprayed August 24, and Millbury August 25 after consultation with both LBOH. Catch basins were treated in the Chelmsford area, and in Millbury we retreated the catch basins. Enhanced adult mosquito surveillance was performed.

For the year we received 154% more service requests than average; 15,020 requests compared to the 13 year average of 9,705. Service requests increased 2.2% from the previous week; 374 in Epi week 34 compared to 306 in Epi week 33. Routine adulticiding will end Sept. 1 due to decreasing service requests from residents and declining mosquito populations, but CMMCP work crews will be ready for arbovirus interventions as needed until the season ends.

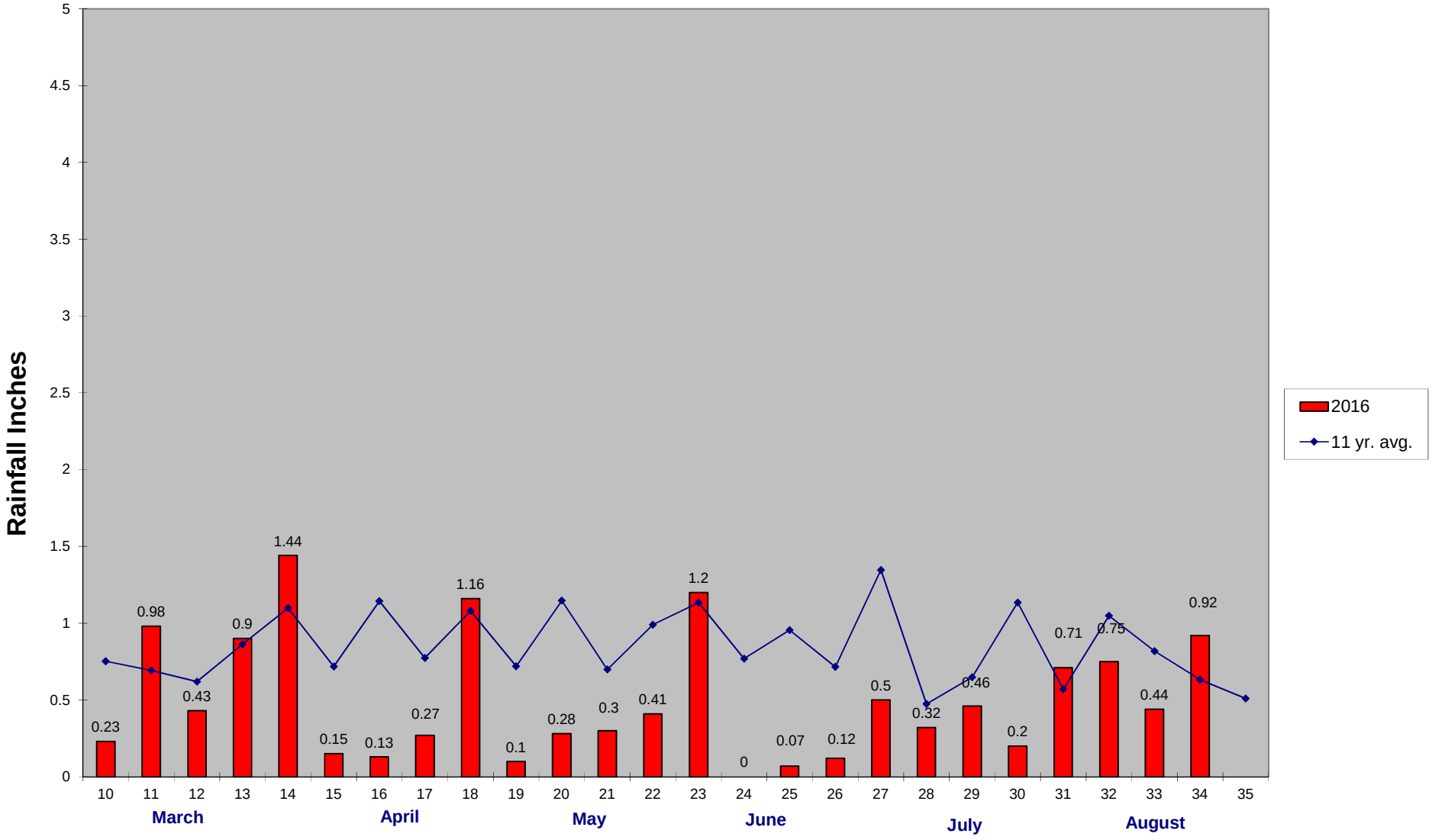
Standard catch basin treatments (currently totaling 63,353) will continue in all member communities and will wind down soon. With scattered reports of rain in our region, we have been pushing the message through social media and other outlets to “Dump and Drain” to minimize larval populations that use these habitats to develop. Our tire program has come off hiatus and we have again begun collecting tires. We have 2 large tire piles to remove along with local stakeholder assistance, plus numerous curbside pickups to be scheduled. Standard ditch maintenance jobs are lined up in all districts and will begin in a few weeks, and we have begun some low flow maintenance projects with the excavator that will need to be completed by October 1 as per Army Corps regulations.

2016 Mass. Rainfall Data vs. 36 Year Average*

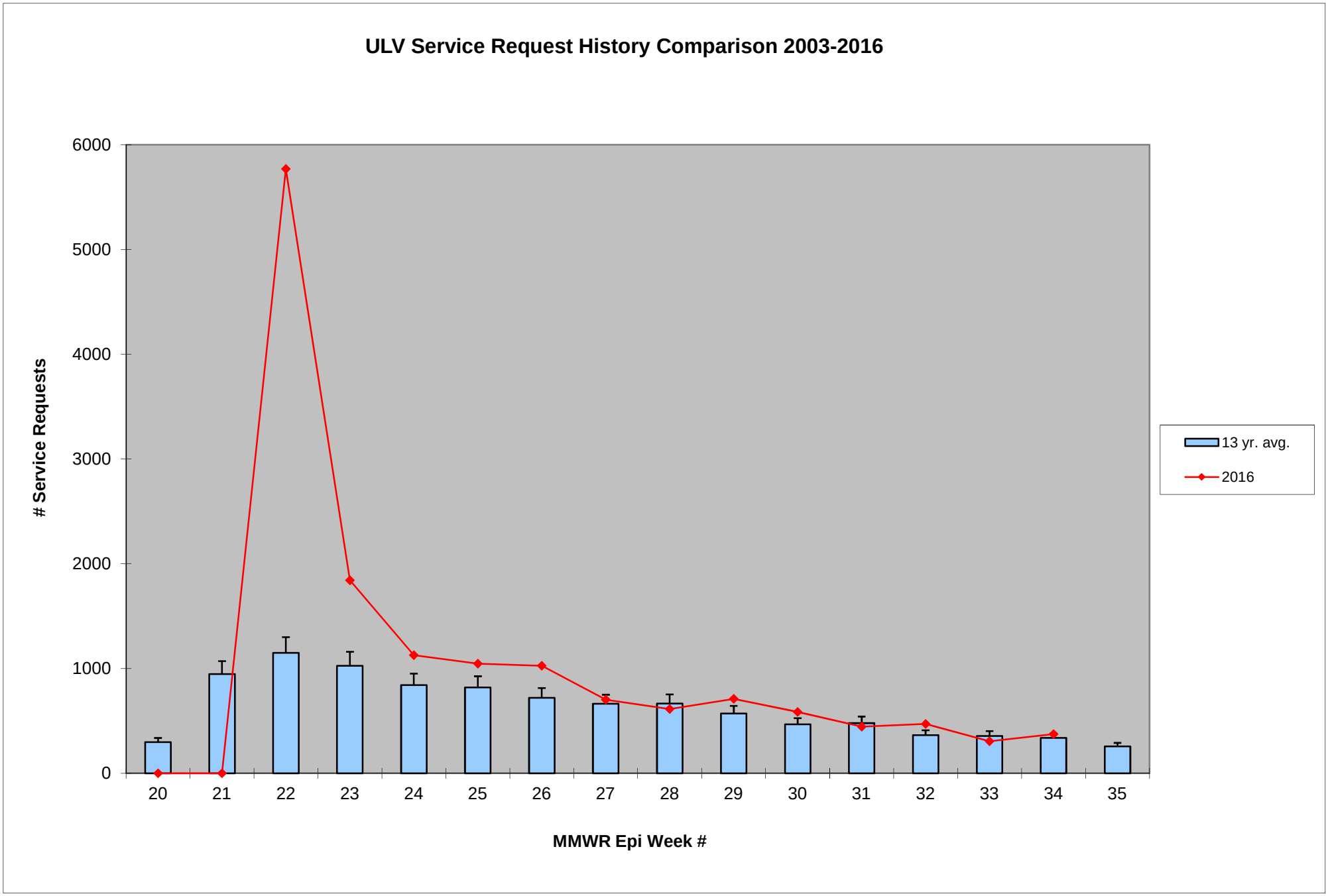


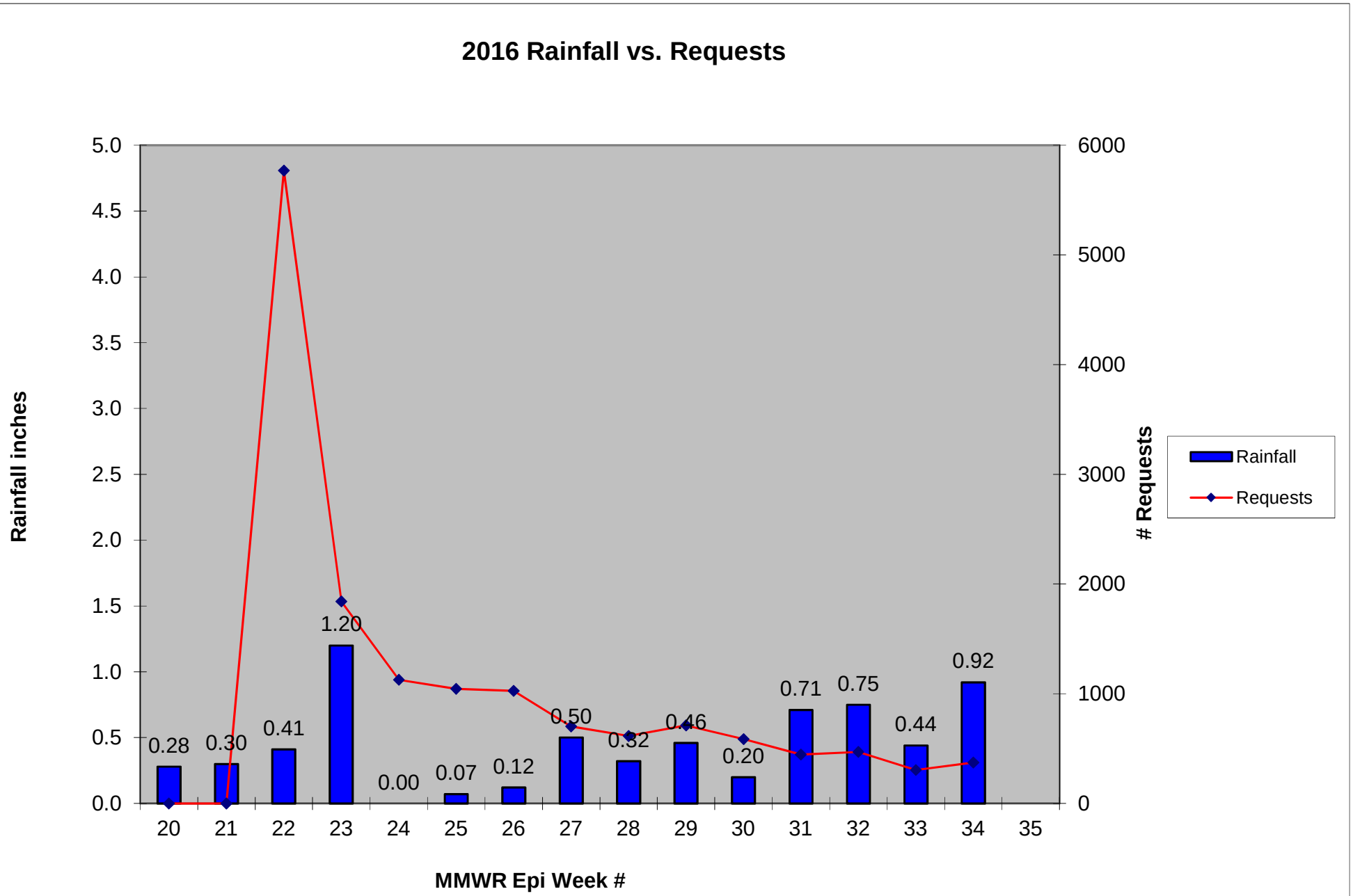
*source: http://www.nrcc.cornell.edu/regional/tables/tables.html

2016 CMMCP Weekly Rainfall vs. 11 Year Average*



*source: CMMCP weather station Northborough, MA


ULV Service Request History Comparison 2003-2016
Service Requests
6000
5000
4000
3000
2000
1000
0
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
MMWR Epi Week #
13 yr. avg.
2016


2016 Rainfall vs. Requests
Rainfall inches
Requests
MMWR Epi Week #
Rainfall
Requests
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
6000
5000
4000
3000
2000
1000
0
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
0.28
0.30
0.41
1.20
0.00
0.07
0.12
0.50
0.32
0.46
0.20
0.71
0.75
0.44
0.92