CMMCP WEEKLY SURVEILLANCE REPORT

EPI week #35
Aug. 28 – Sept. 3, 2016

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Central Mass. Mosquito Control Project
Weekly Report- 8/28/16-9/3/16
EPI Week #35

Cumulative Surveillance Summary

Target Species	*Ae. vex*	*Cq. per*	*Cs. mel*	*Oc. can*	*Culex*	All Species
No. Pools	38	512	30	99	577	1554
Total Specimens	612	50959	566	4821	12761	75606
No. Pools WNV +	0	2†	0	0	8†	10†
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
†Pool of WNV+ *Culex* species collected in Auburn on 8/23/16
†Pool of WNV+ *Culex* species collected in Westborough on 8/24/16
†Pool of WNV+ *Culex* species collected in Boylston on 8/25/16
†Pool of WNV+ *Culex* species collected in Millbury on 8/25/16
†Pool of WNV+ *Culex* species collected in Millbury on 8/25/16

Weather Summary (Northborough, MA): The weather for this particular week averaged 70.01°F with a recorded high temperature of 87.70°F and a recorded low temperature of only 51.90°F. There was no significant precipitation observed this week. Compared to the previous week, it was approximately 2.43°F cooler on average, and rained 0.92 inches less. There has been 0.00 inches of rain accumulated in September, after 2.75 inches for the month of August.

CMMCP Mosquito Summary*-

Target Species	Δ From Last Week	Δ From Last Year	Predominant Trap Site(s)
Aedes vexans	+271.2%	+19200%	Webster, Gardner, Millbury
Coquillettidia perturbans	+7.02%	+52.50%	Webster, Westford
Culiseta melanura	-66.67%	-83.33%	Tewksbury
Ochlerotatus canadensis	-80.00%	+100.0%	Webster
Culex Species	-39.02%	-48.98%	Boxborough, Millbury, Gardner
All Species	+58.25%	+256.9%	Webster, Boxborough, Millbury

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

The temperature for EPI week 35 averaged approximately 2.43 degrees cooler than the previous week, with zero significant precipitation observed. At the CMMCP historical surveillance trap sites, the overall collection numbers increased (+58.25%) over EPI week 34. This was due primarily to an increase in *Aedes vexans* and *Coquillettidia perturbans*, but additionally there was a large emergence of *Psorophora ferox*.

All other target species decreased in population this surveillance period. 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. Twenty-five egg papers were collected from CMMCP ovitraps this week. These produced 262 eggs which will help gauge the presence/absence of *Aedes albopictus* in central Massachusetts. No *Ae. albopictus* has been identified in our service area in 2016.

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
EPI Week #35	25	15	262
2016 Totals	232	182	6902

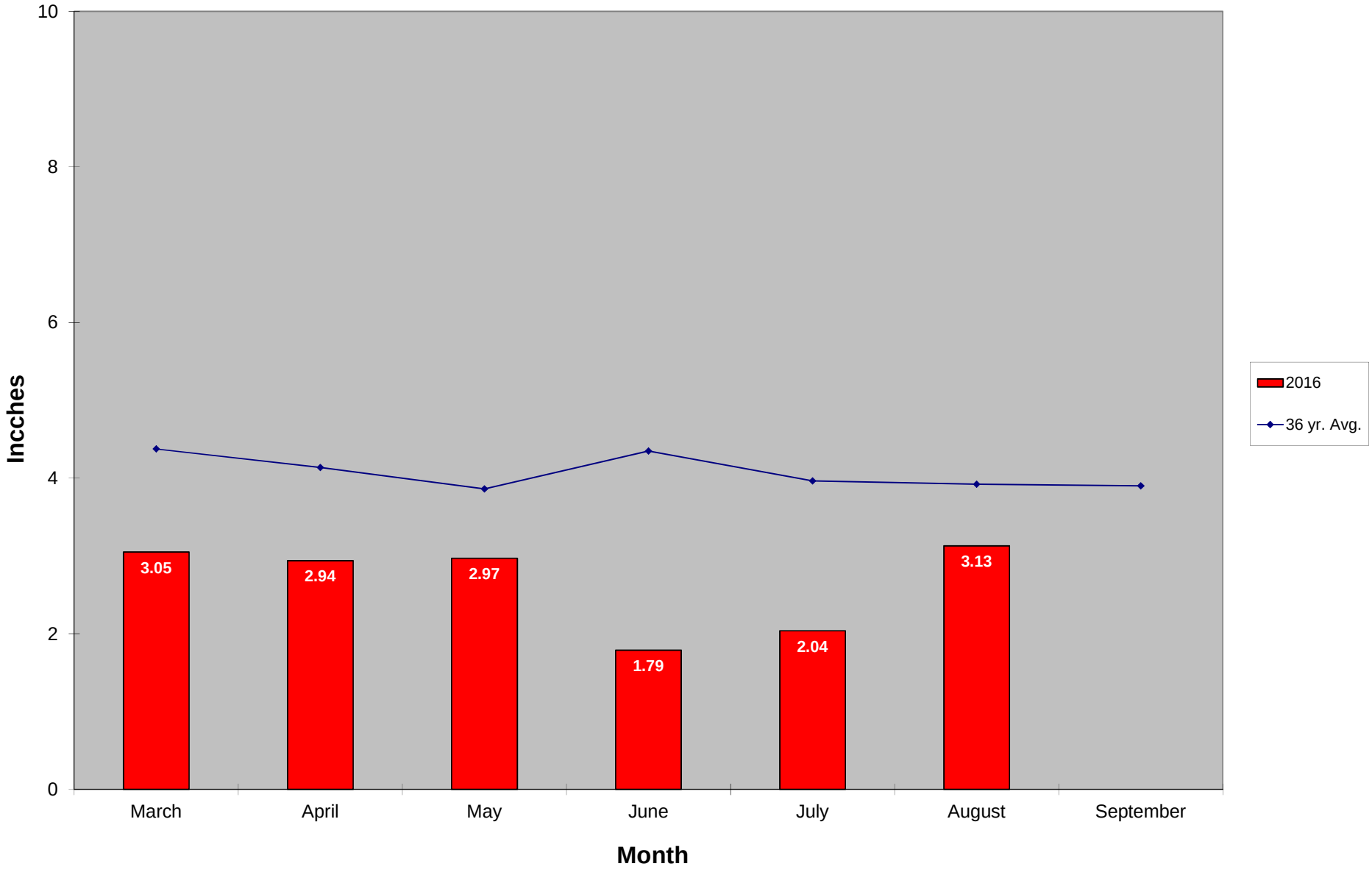
Four virus confirmations were received in Epi week 35, in Auburn, Boylston, Millbury and Westboro. Auburn and Westboro were sprayed September 1 after consultation with the LBOH, and the Millbury area was previously treated. Boylston asked to wait until Epi week 36 for an application to get the word out to the public. Impacts from TD Hermine may affect/delay the application. Catch basins were treated or retreated in the affected areas. Enhanced adult mosquito surveillance was performed.

For the year we received 153% more service requests than average; 15,281 requests compared to the 13 year average of 9,962. Service requests decreased 43.2% from the previous week; 261 in Epi week 35 compared to 374 in Epi week 34. Routine adulticiding ended 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.

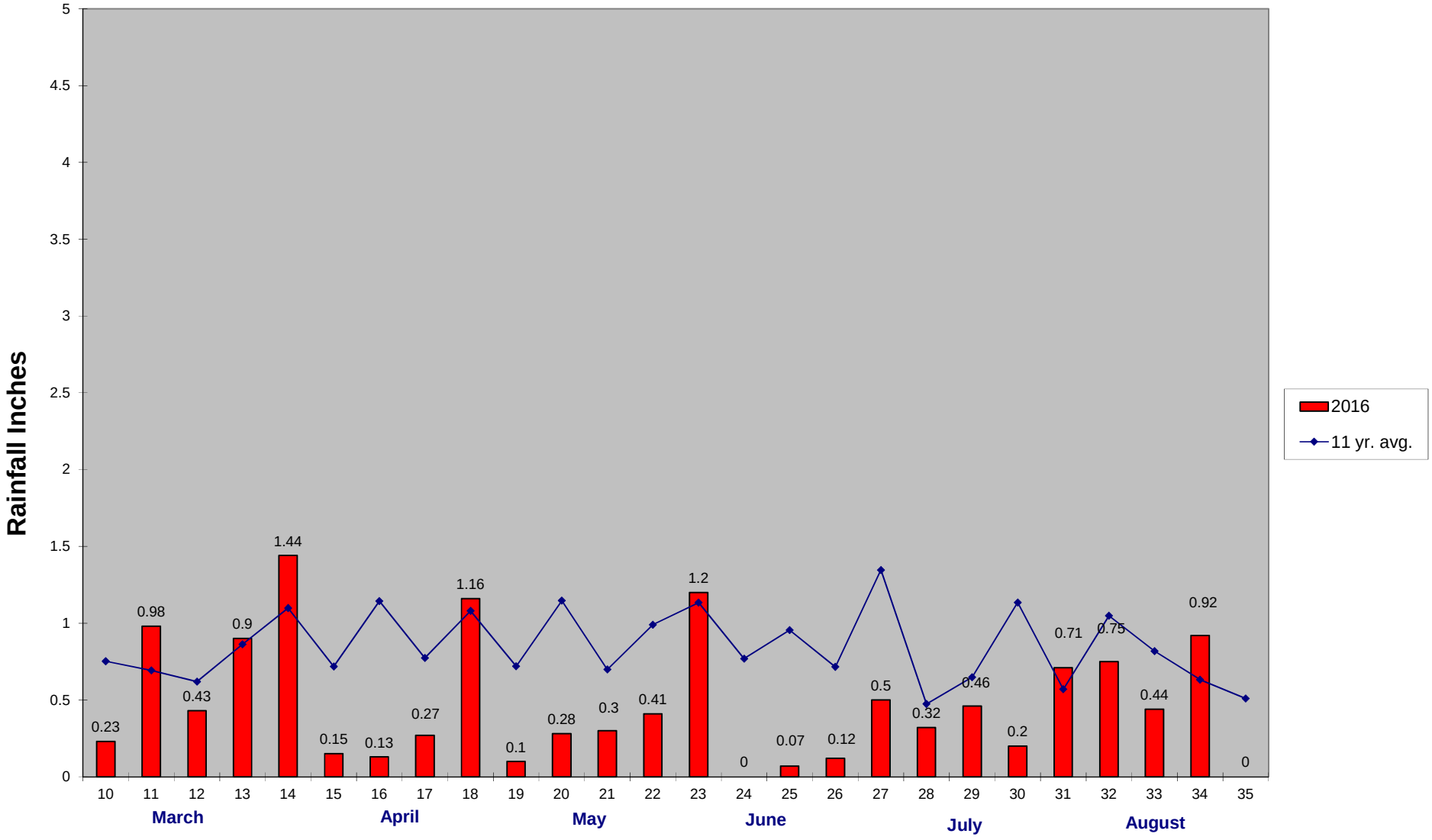
Standard catch basin treatments (currently totaling 67,687) will continue in all member communities and will wind down soon. With scattered reports of rain in our region, we have been pushing the message through social media and other outlets to “Dump and Drain” to minimize larval populations that use these habitats to develop. Our tire program has come off hiatus and we have 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*

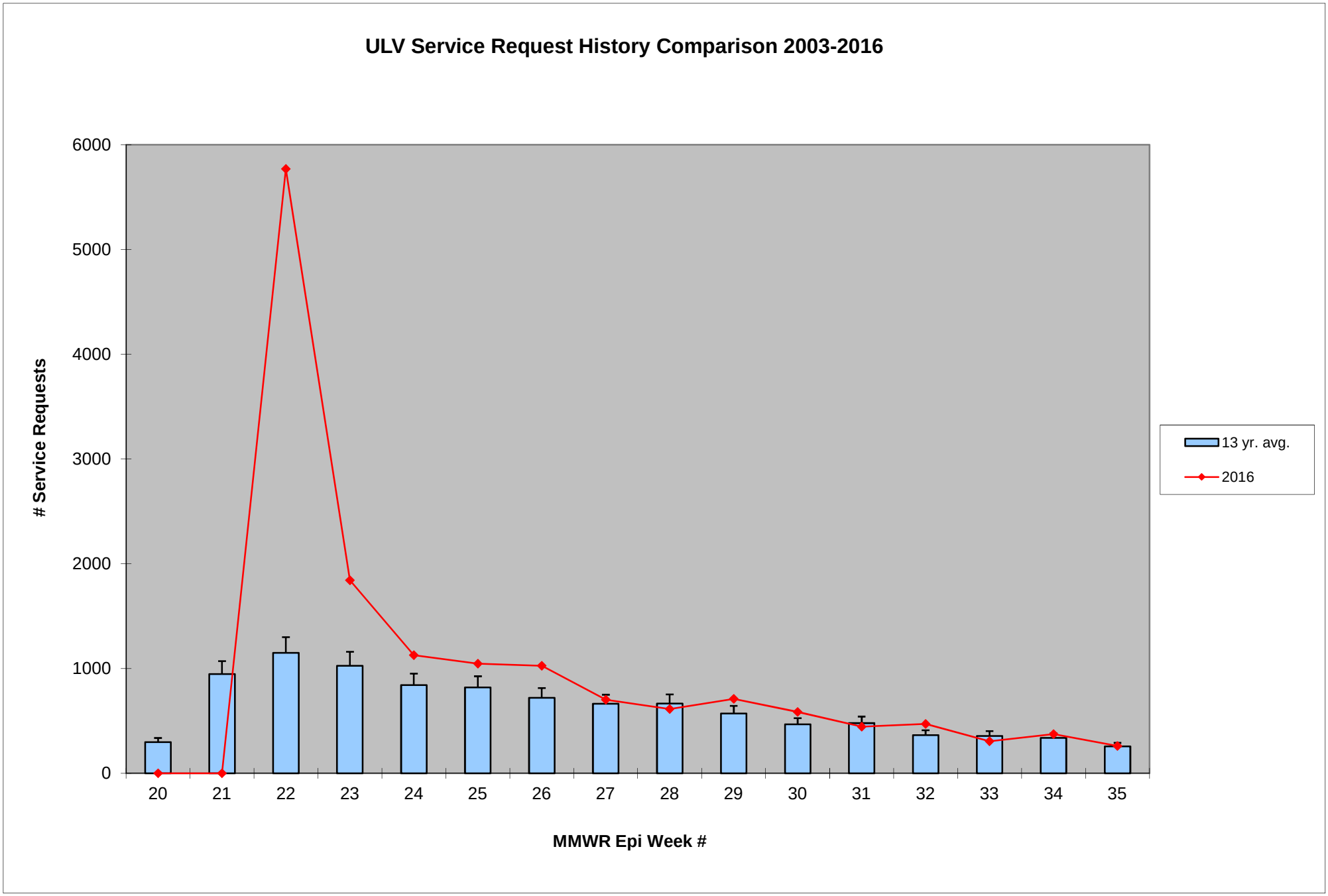


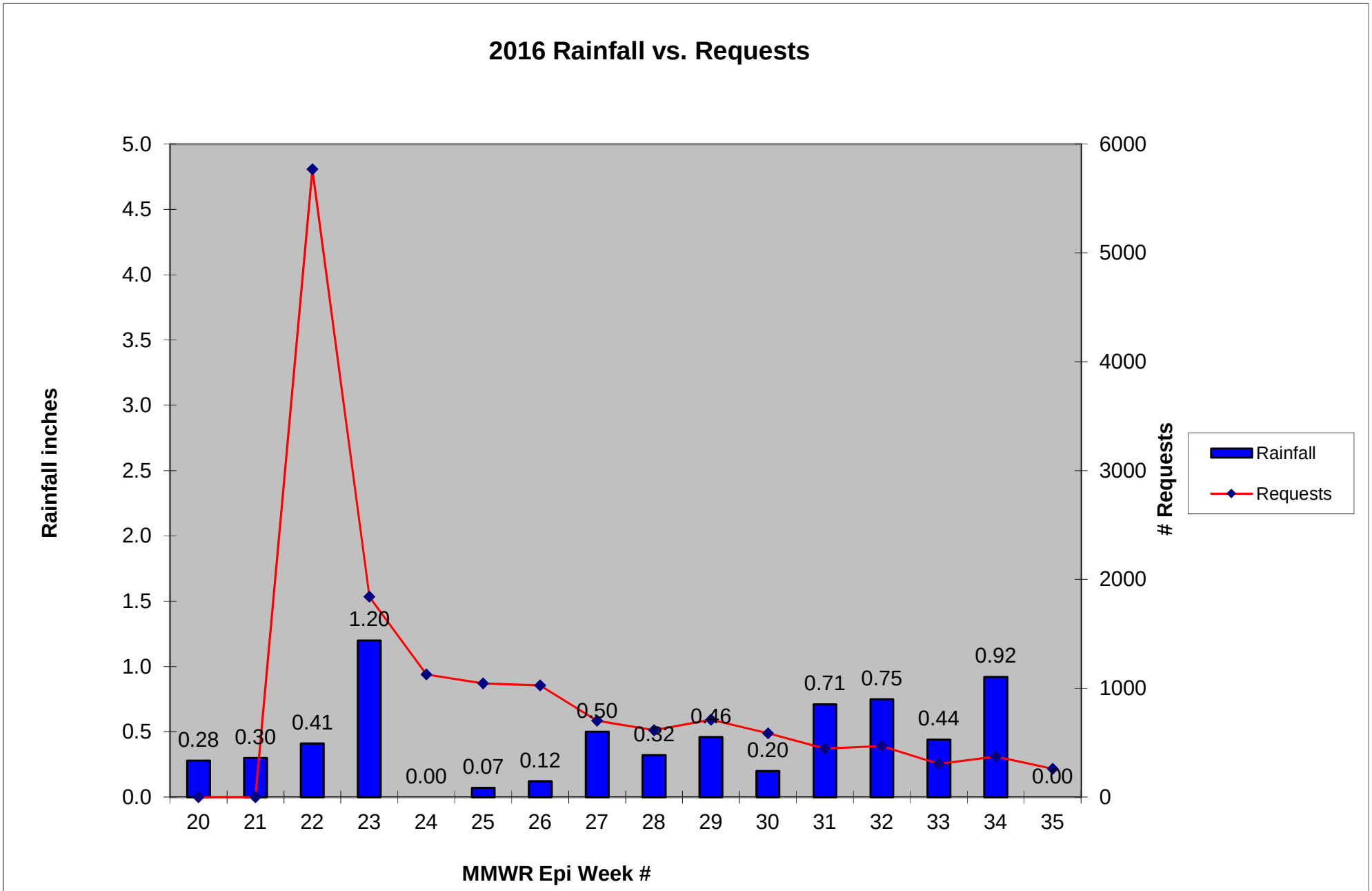
*source: http://www.nrcc.cornell.edu/regional/tables/tables.html

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
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
0.00
20
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