

CMMCP WEEKLY SURVEILLANCE REPORT



EPI week #36
Sept. 4 – 10, 2016

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Central Mass. Mosquito Control Project
Weekly Report- 9/4/16-9/10/16
EPI Week #36

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	48	520	31	100	612	1627
Total Specimens	705	51009	570	4822	13215	76321
No. Pools WNV +	0	2 [†]	0	0	9 [†]	11 [†]
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

[†]Pool of WNV+ *Culex* species collected in Millbury on 9/1/16

Weather Summary (Northborough, MA): The weather for this particular week averaged 69.64°F with a recorded high temperature of 90.40°F and a recorded low temperature of only 50.80°F. There was 0.33 inches of precipitation observed this week. Compared to the previous week, it was approximately 0.37°F cooler on average, and rained 0.33 inches more. There has been 0.33 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)
<i>Aedes vexans</i>	-87.05%	+56.25%	Webster, Shrewsbury, Blackstone
<i>Coquillettidia perturbans</i>	-90.16%	-70.73%	Sturbridge, Webster
<i>Culiseta melanura</i>	+300.0%	-42.86%	Tewksbury
<i>Ochlerotatus canadensis</i>	+00.00%	+00.00%	Webster
<i>Culex</i> Species	+00.00%	+38.89%	Hudson, Berlin, Tewksbury
All Species	-76.48%	+8.49%	Hudson, Webster

The predominant mosquito for the week was *Culex* species
followed by *Aedes vexans*.

*Low late season numbers may contribute to these comparisons being not as significant as they appear

The temperature for EPI week 36 averaged approximately 0.37 degrees cooler than the previous week, with only 0.33 inches of precipitation observed. At the CMMCP historical surveillance trap sites, the overall collection numbers decreased (-76.48%) over EPI week 35. A large decrease in *Aedes vexans* and *Coquilleltidia perturbans* largely accounted for this drop in mosquito specimens. The only target species to increase in population this surveillance period was *Culiseta melanura*, although this increase represented only a few individuals over a very low previous week for the species. The long-term surveillance locations once again showed an overall increase when compared to the 2015 season. The elevated levels of *Culex* species and *Ae. vexans* influenced this yearly change. *Culex* species are currently the most abundant target mosquito in the CMMCP service area, with *Ae. vexans* now the second most abundant species, replacing *Cq. perturbans*. Fifteen egg papers were collected from CMMCP ovitraps this week. These produced only 27 eggs which will help gauge the presence of *Aedes albopictus* in central Massachusetts.

Enhanced Surveillance for *Aedes albopictus* - Ovitrap Collections

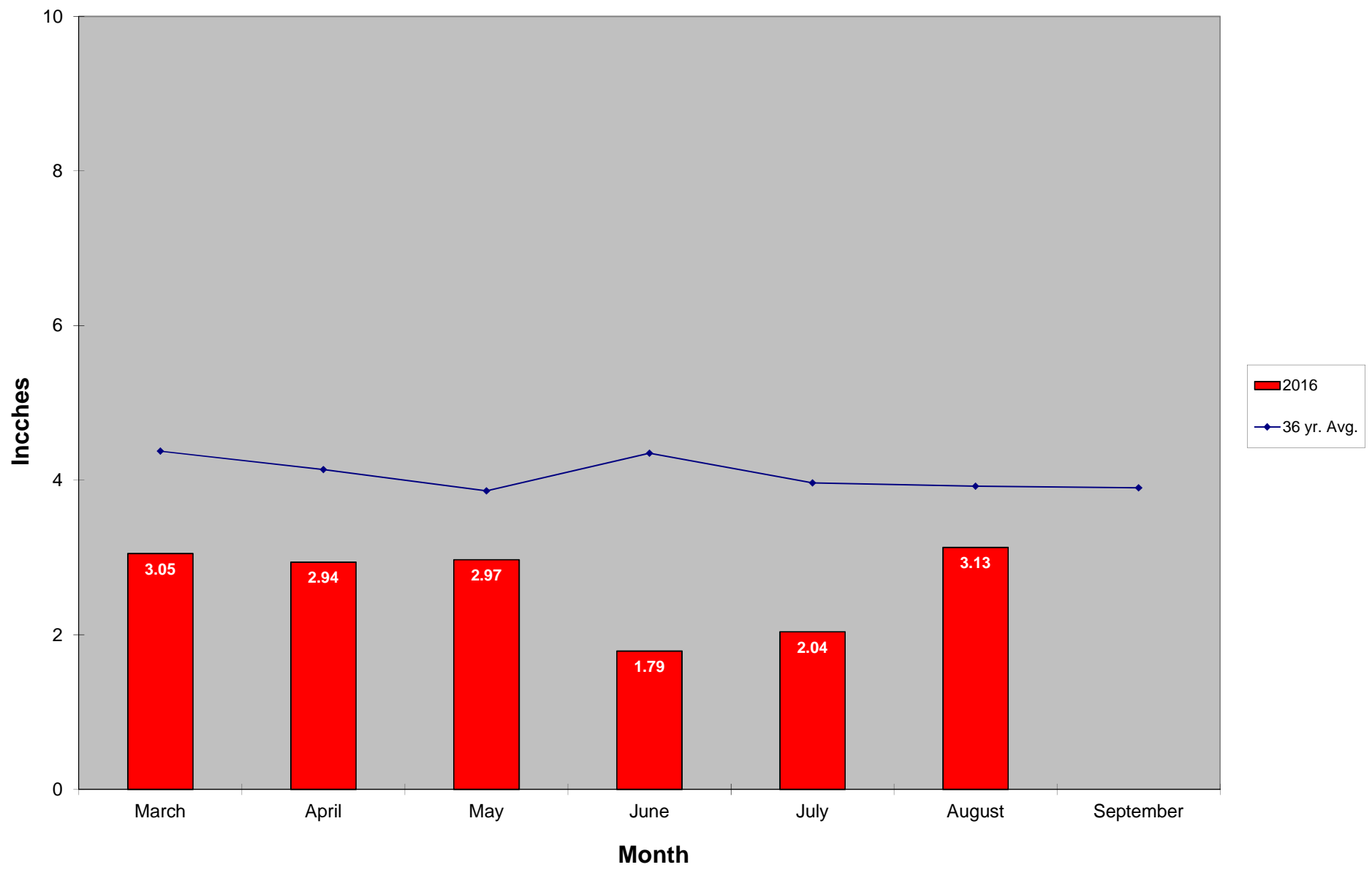
	# Ovitrap	# Egg Papers	# Eggs
EPI Week #22	15	7	0
EPI Week #23	-	-	-
EPI Week #24	5	2	49
EPI Week #25	15	6	93
EPI Week #26	17	17	19
EPI Week #27	25	19	1180
EPI Week #28	25	25	1020
EPI Week #29	10	7	62
EPI Week #30	15	12	632
EPI Week #31	15	10	524
EPI Week #32	20	19	985
EPI Week #33	10	10	147
EPI Week #34	35	33	1929
EPI Week #35	30	20	263
EPI Week #36	15	15	27
2016 Totals	252	202	6930

One virus confirmation (WNV) was received in Epi week 36 in Millbury. The area was sprayed September 8 after consultation with the LBOH. The Boylston WNV application was delayed by the LBOH to get the word out to the public. Impacts from TD Hermine delayed the application and it was done Sept. 8. 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. 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.

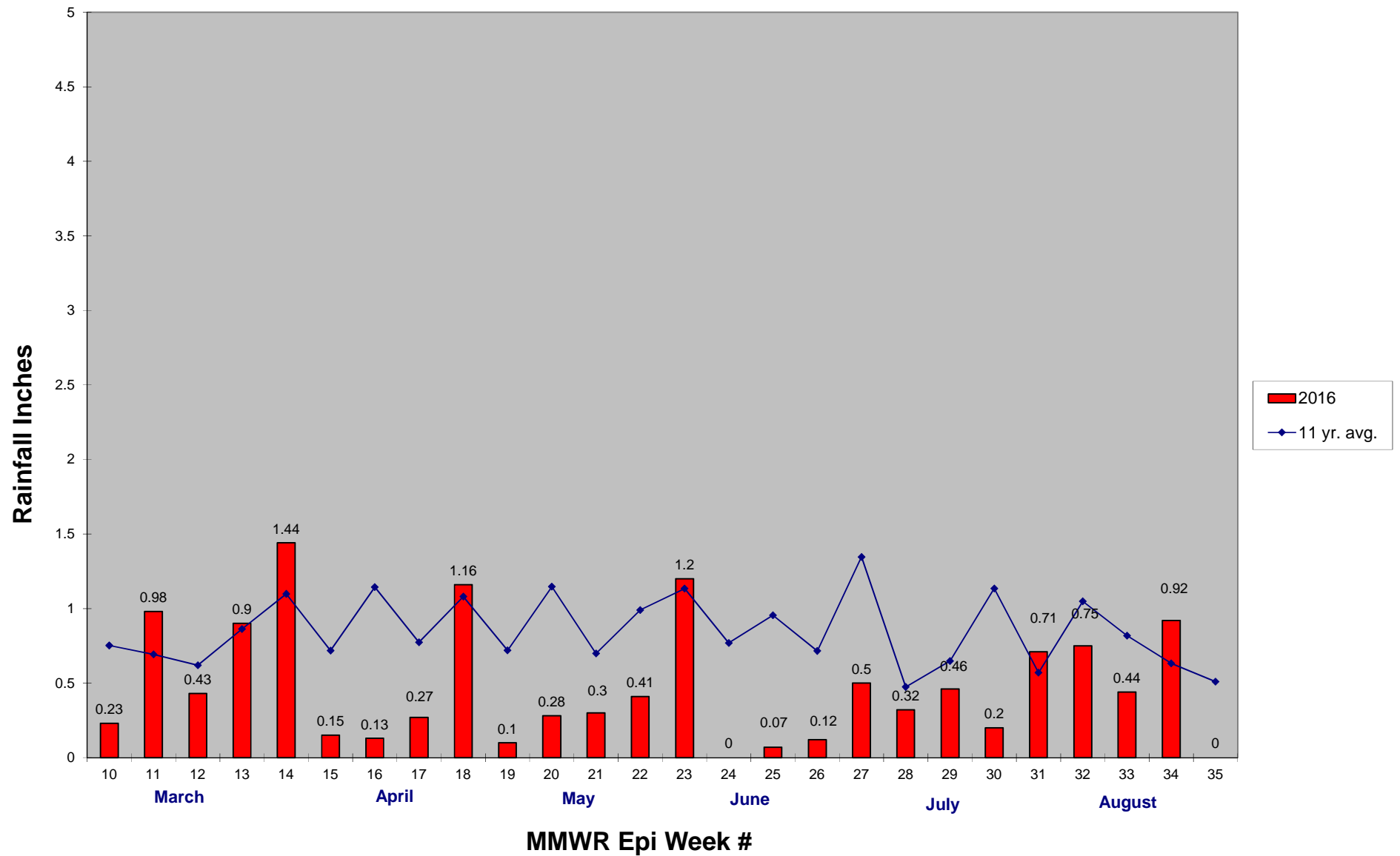
Standard catch basin treatments (currently totaling 72,907) will continue in all member communities and will wind down next week. With scattered reports of rain in our region, we have been pushing the message through social media and other outlets to “Dump and Drain” to minimize larval populations that 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*



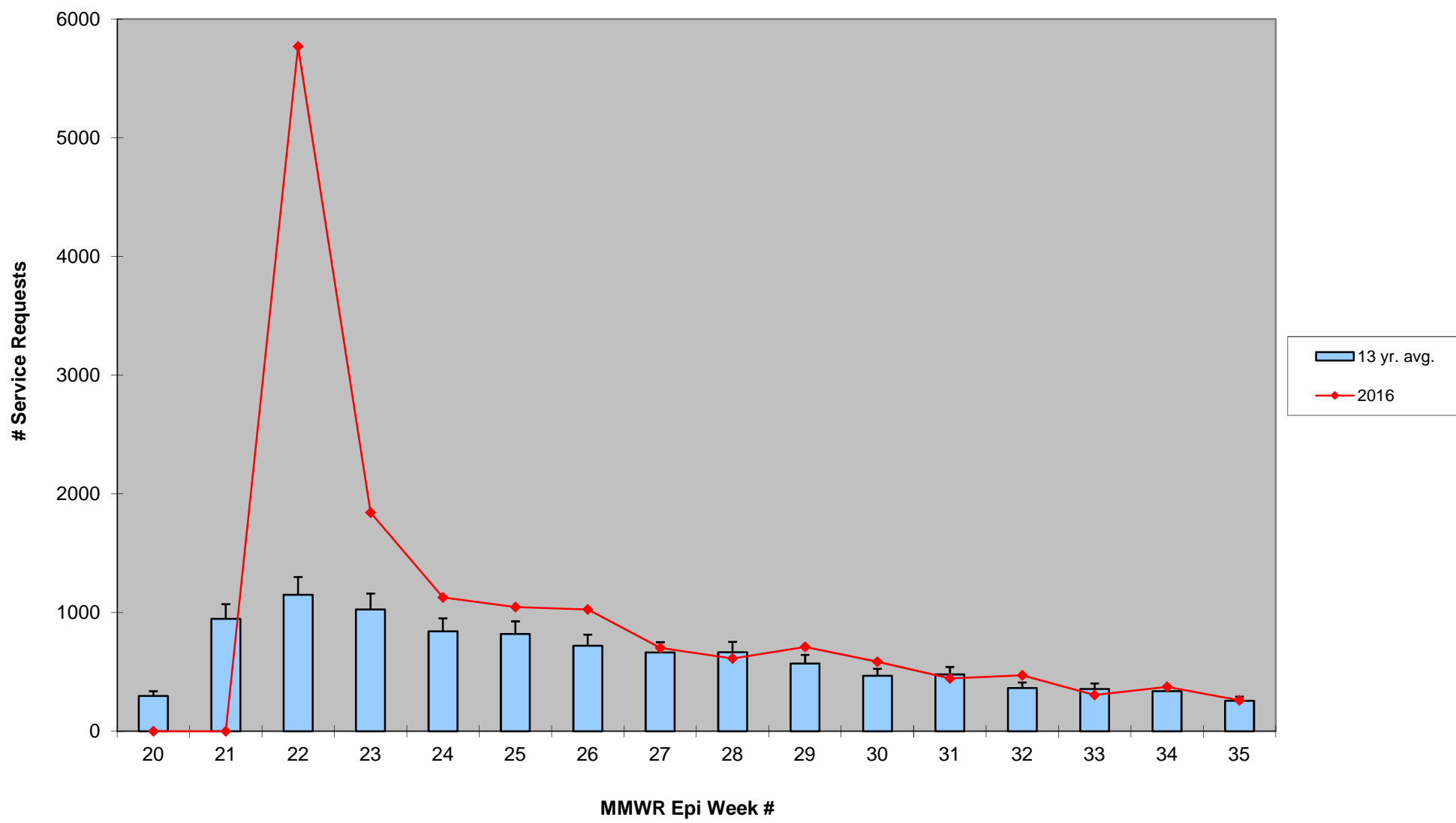
*source: <http://www.nrcc.cornell.edu/regional/tables/tables.html>

2016 CMMCP Weekly Rainfall vs. 11 Year Average*



*source: CMMCP weather station Northborough, MA

ULV Service Request History Comparison 2003-2016



2016 Rainfall vs. Requests

