

CMMCP WEEKLY SURVEILLANCE REPORT



EPI week #34
August 22-28, 2021

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**Central Mass. Mosquito Control Project
Weekly Report- 8/22/21-8/28/21
EPI Week #34**

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	318	757	116	338	791	4183
Total Specimens	3050	46897	314	4013	9601	76227
No. Pools WNV +	1 [†]	0	0	0	2 [†]	3 [†]
No. Pools EEE +	0	0	0	0	0	0

[†]Pool of WNV+ *Culex pipiens* collected in Worcester on 8/13/21

[†]Pool of WNV+ *Aedes vexans* collected in Worcester on 8/13/21

[†]Pool of WNV+ *Culex pipiens/restuans* complex collected in Billerica on 8/20/21

Weather Summary (Northborough, MA): The weather for this particular week averaged 75.13°F with a recorded high temperature of 96.60°F and a recorded low temperature of only 60.20°F. For this week there was also a total of 1.04 inches of rain observed. Compared to the previous week, it was approximately 1.92°F warmer on average, and rained about 1.09 inches less. There has been 3.95 inches of rain accumulated in August, after 9.53 inches for the month of July.

CMMCP Mosquito Summary-

Target Species	Δ From Last Week	Δ From Last Year	Predominant Trap Site(s)
<i>Aedes vexans</i>	+19.87%	+67.62%	Devens, Northbridge, Ayer
<i>Coquillettidia perturbans</i>	-44.63%	+44.90%	Hopkinton, Grafton, Millbury
<i>Culiseta melanura</i>	+57.14%	+5.020%	Millville, Lowell
<i>Ochlerotatus canadensis</i>	-25.24%	+55.53%	Boylston, Lancaster, Worcester
<i>Culex</i> Species	-14.10%	+153.6%	Grafton, Millbury, Worcester
All Species	-13.80%	+62.41%	Westford, Grafton, Millbury

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

General surveillance narrative:

The temperatures for EPI week 34 averaged approximately 1.92°F warmer than the previous week, with 1.04 inches of precipitation observed. *Culex* was again the most abundant mosquito for the week, followed by *Coquillettidia perturbans*. For target mosquitoes, only *Aedes vexans* and *Culiseta melanura* were more abundant in EPI week 34 compared to the previous week. Overall mosquito population numbers were down in EPI week 34. Compared to the 2020 season, overall mosquito surveillance numbers are up this year, primarily due to increases in *Coquillettidia perturbans* and *Aedes vexans*. One submitted mosquito pool from EPI week 33 tested positive for West Nile virus, a *Culex pipiens/restuans* collection from Billerica. *Aedes albopictus* surveillance using

ovitraps has continued, with an additional 629 eggs submitted to the Massachusetts Department of Public Health.

Ae. albopictus egg collections:

Epi week#	# eggs Collected	Epi week#	# eggs Collected
23	0	29	46
24	43	30	21
25	530	31	928
26*	512	32	546
27	399	33	319
28	362	34	629
TOTAL		4,335	
*ATM detected in Lowell			

Operational notes:

Service requests are 39.01% greater than the 18-year average but a 4.1% decrease over 2020 numbers to date. Requests decreased 20.1% from the previous week. Work crews are performing wetland inspections and catch basins treatments for *Culex* control during daytime hours but seasonal staff have been switched to adult mosquito surveillance, and the catch basin program is winding down for the season as *Culex* begin to enter diapause. 1,865 catch basins were treated in Epi week 34, bringing the total to 84,283 basins.

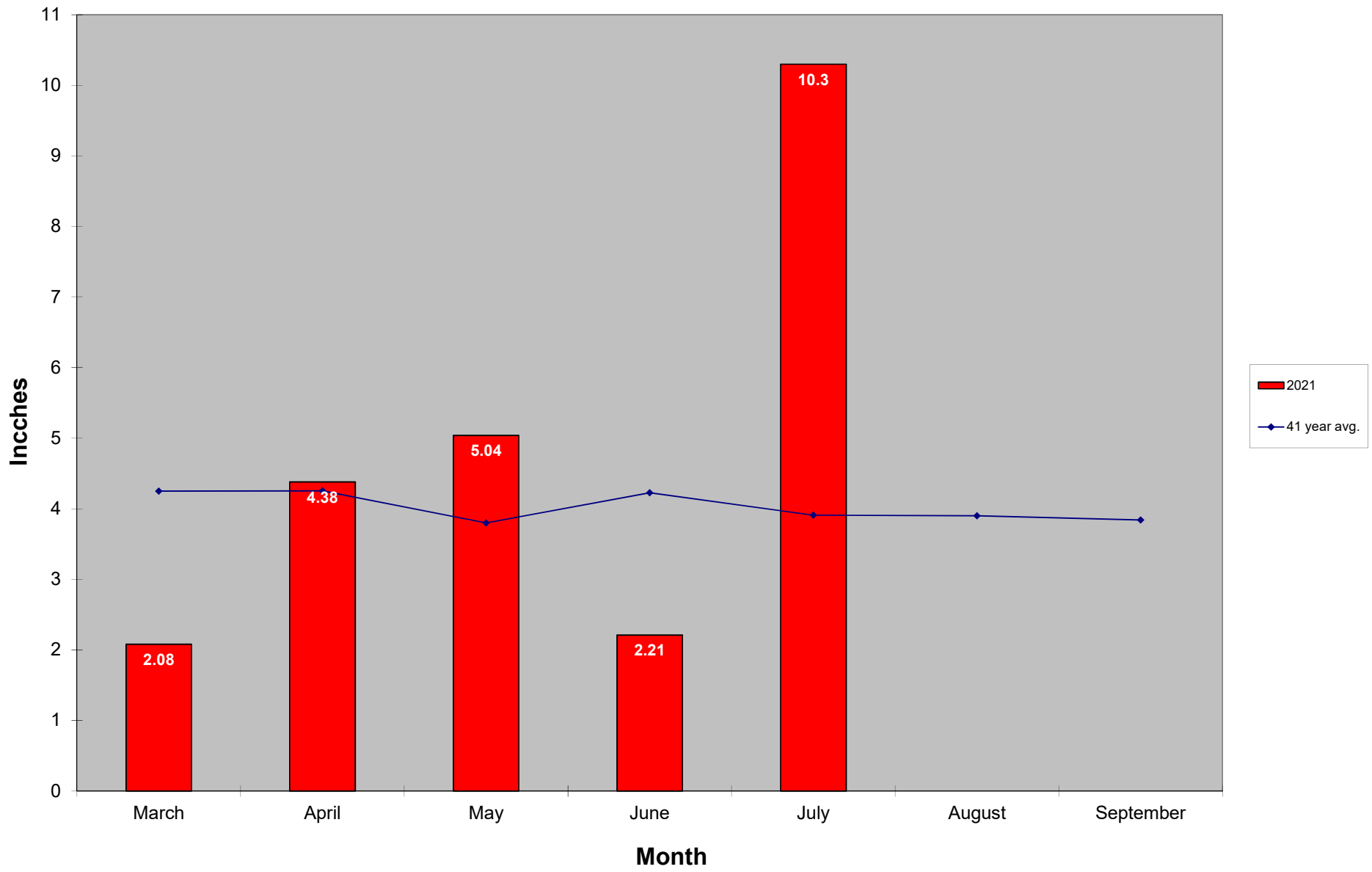
Two submitted mosquito pools from EPI week 32 tested positive for West Nile virus in Worcester, one *Aedes vexans*, the other *Culex pipiens*. ULV spraying was done in the affected area on August 18 after coordination with the Worcester Dept. of Health and the City Manager’s office. One pool of *Culex pipiens/restuans* tested positive for West Nile virus in Billerica; targeted ULV spraying was performed August 26 in the affected area after coordination with the LBOH.

Our Asian Tiger Mosquito (ATM) control protocols were instituted in Epi week 28 in Lowell after confirmation of a positive specimen from one of our ovitraps. To date no additional ATM has been identified in this area, and we will continue to monitor for this invasive species throughout the remainder of the season.

Results of the water sampling and bioassays during our enhanced larval control program in May showed that Spinosad is only minimally penetrating the *Cs. melanura* crypt habitat, and the control effect declines quickly both inside and outside of the crypts. Data is being collected and analyzed from emergence traps in *Cq. perturbans* habitat but initial results

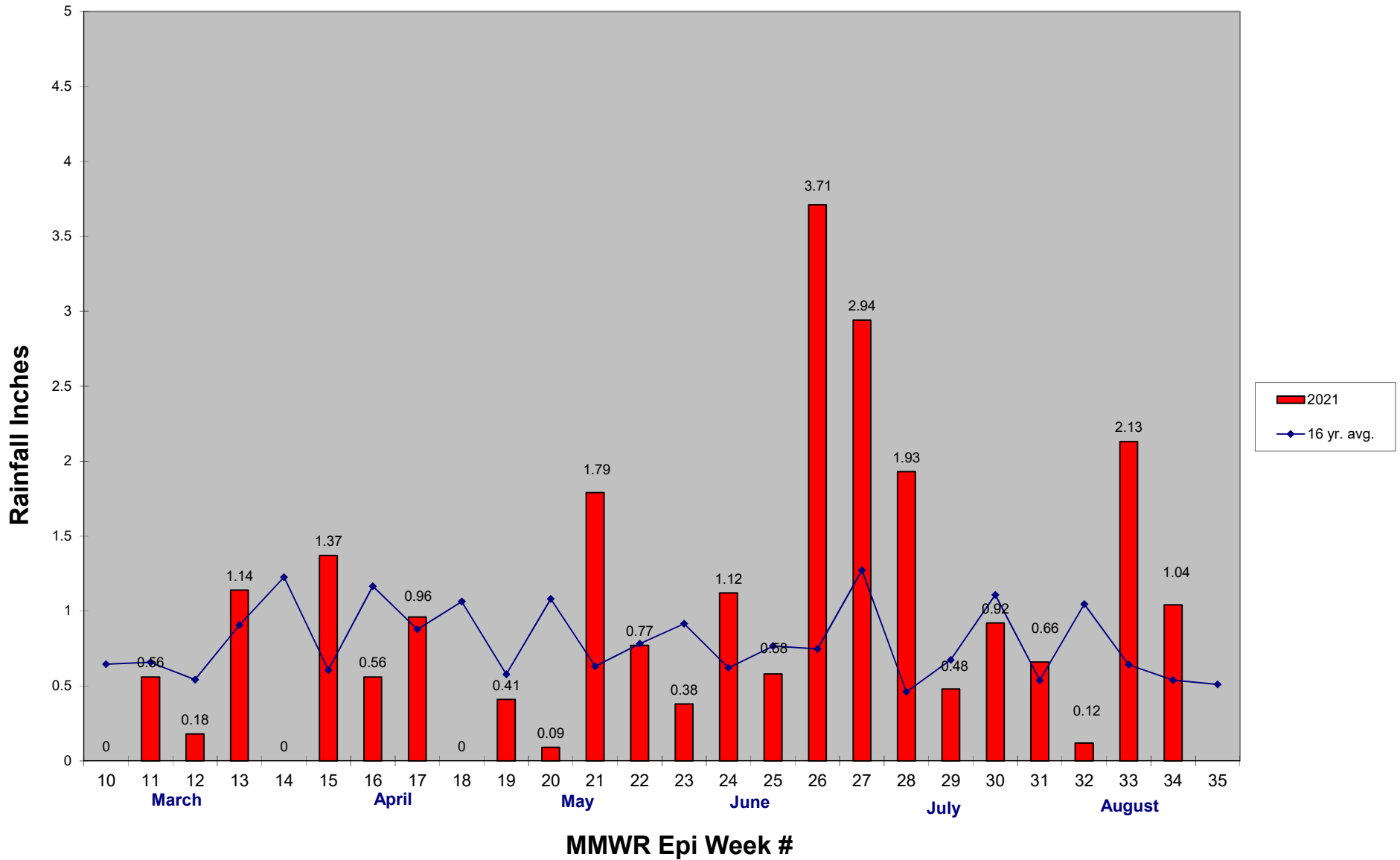
are showing efficacy. Additional applications using Spinosad for *Cq. perturbans* control are planned in mid-September in areas of high light trap collections from 2021.

2021 Mass. Rainfall Data vs. 41 Year Average*



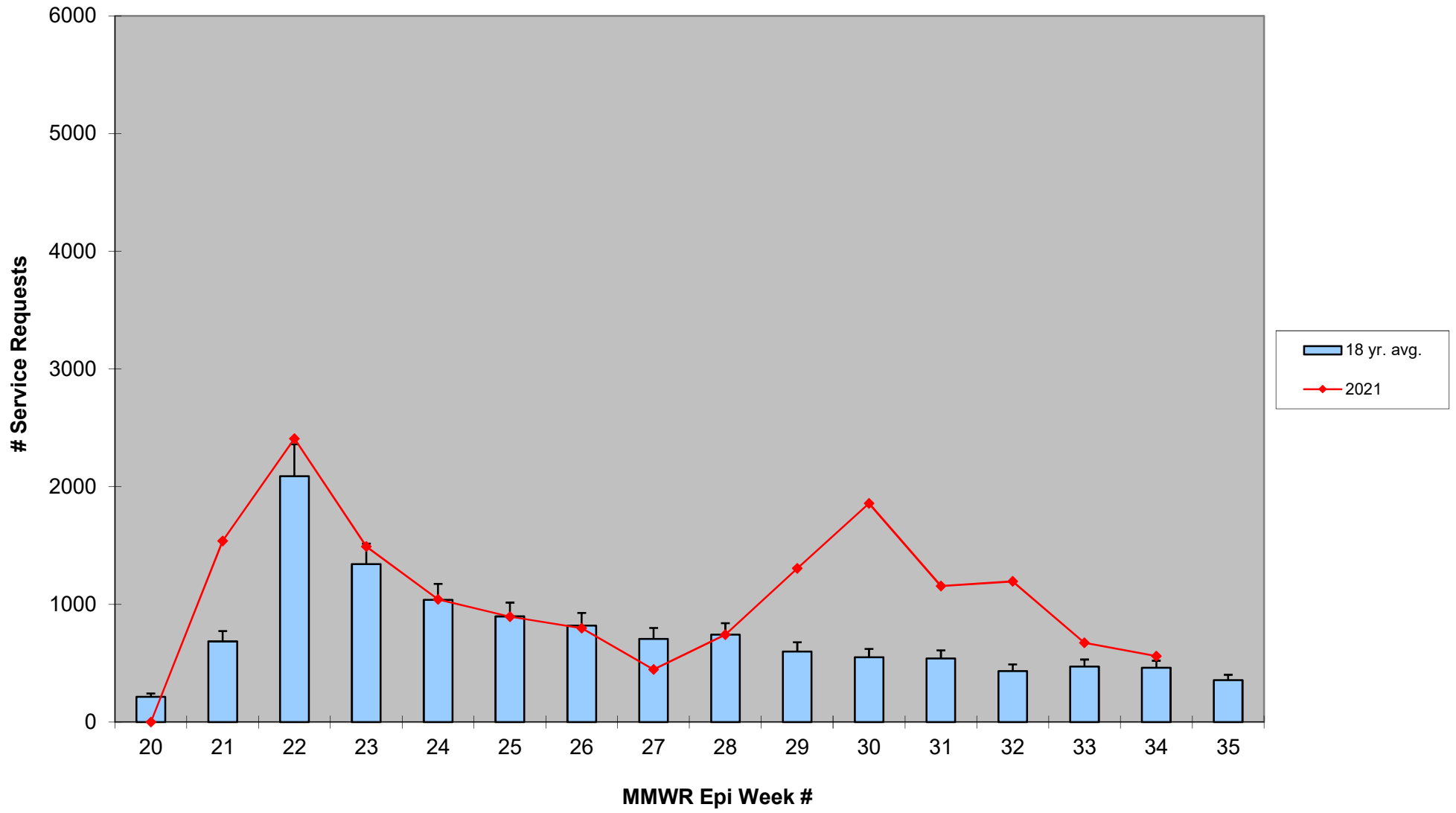
*source: <http://www.nrcc.cornell.edu/regional/tables/tables.html>

2021 CMMCP Weekly Rainfall vs. 16 Year Average*



*source: CMMCP weather station Northborough, MA

ULV Service Request History 2003-2021



2021 Rainfall vs. Requests

