

CMMCP WEEKLY SURVEILLANCE REPORT



EPI week #30
July 24-30, 2022

Frank Cornine, Staff Biologist
Curtis Best, Staff Entomologist
Timothy McGlinchy, Director of Operations
Timothy Deschamps, Executive Director

**Central Mass. Mosquito Control Project
Weekly Report- 7/24/22-7/30/22
EPI Week #30**

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	34	494	106	106	358	1,798
Total Specimens	67	26,463	462	1,106	2,648	33,037
No. Pools WNV +	0	0	0	0	0	0
No. Pools EEE +	0	0	0	0	0	0

Weather Summary (Northborough, MA): The weather for this particular week averaged 76.94°F with a recorded high temperature of 99.50°F and a recorded low temperature of only 56.30°F. For this week there was also a total of 0.16 inches of rain observed. Compared to the previous week, it was approximately 3.32°F cooler on average, and rained about 0.29 inches less. There has been 1.74 inches of rain accumulated in July, after 2.57 inches for the month of June.

CMMCP Mosquito Summary-

Target Species	Δ From Last Week	Δ From Last Year	Predominant Trap Site(s)
----------------	---------------------	---------------------	--------------------------

<i>Aedes vexans</i>	+40.00%	-95.35%	Leominster
<i>Coquilleltidia perturbans</i>	+6.84%	-35.20%	Auburn, Milford, Lancaster
<i>Culiseta melanura</i>	-35.29%	+168.1%	Boxborough, Webster, Littleton
<i>Ochlerotatus canadensis</i>	-82.61%	-45.01%	Westford, Chelmsford, Boylston
<i>Culex</i> Species	-28.64%	+2.82%	Shrewsbury, Marlborough, Billerica
All Species	+2.27%	-36.12%	Auburn, Milford, Lancaster

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

General narrative:

The temperatures for EPI week 30 averaged approximately 3.32°F cooler than the previous week, with only 0.16 inches of precipitation observed. After a single week decline, surveillance trap collections of *Coquilleltidia perturbans* increased by 6.84% compared to EPI week 29. *Coquilleltidia perturbans* was again the most abundant mosquito species for the week, still followed by *Culex*. *Aedes albopictus* surveillance using ovitraps has continued, with 8,640 eggs collected and submitted so far. All mosquito pools submitted in EPI week 29 to MDPH for arbovirus testing were negative.

Ae. albopictus egg collections:

Epi week#	# eggs Collected	Epi week#	# eggs Collected
23	0	31	
24	1,016	32	
25	1,580	33	
26	621	34	
27	1,823	35	
28	1,177	36	
29	1,074	37	
30	1,349	38	
	TOTAL	8,640	
No ATM detections to date			

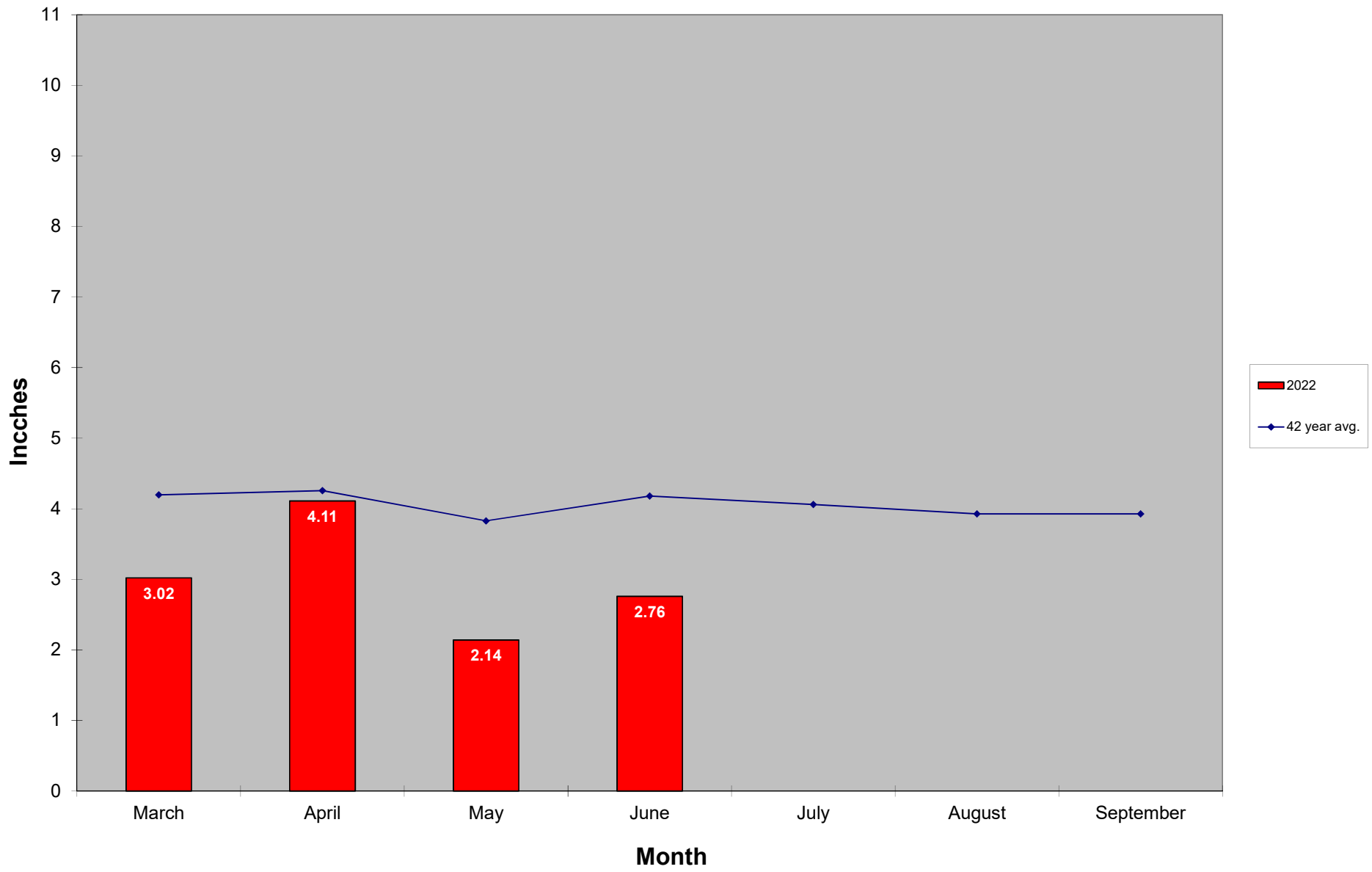
Operational notes:

Service requests are in line with the 19-year average but a 26.9% decrease over 2021 numbers to date. We began accepting service requests on May 31 and 9,419 requests have been closed from 10,086 total (7% open). Average temps have stabilized as have the *Cq. perturbans* populations so service calls have continued to drop off. Work crews began performing catch basins treatments for *Culex* control on May 16. 8,093 basins were treated in Epi week 30, with 70,357 catch basins treated to date intended to suppress *Culex* populations and lower risk of transmission from WNV by this species.

Enhanced larval control over 1,500 acres of *Cq. perturbans* habitat using Natular® G (spinosad) was done May 24 & 25 in 12-member communities designated as “Critical” risk from EEE in 2019. Adult and larval *Cq. perturbans* surveillance was conducted this season in these habitats in both treated and untreated areas. An advanced decrease was observed in the areas treated with Natular G, but all locations experienced gradual decreases in both larvae present and adult emergence. Between natural emergence and the drought conditions, new specimens have become near zero, and so these collections have ceased for 2022.

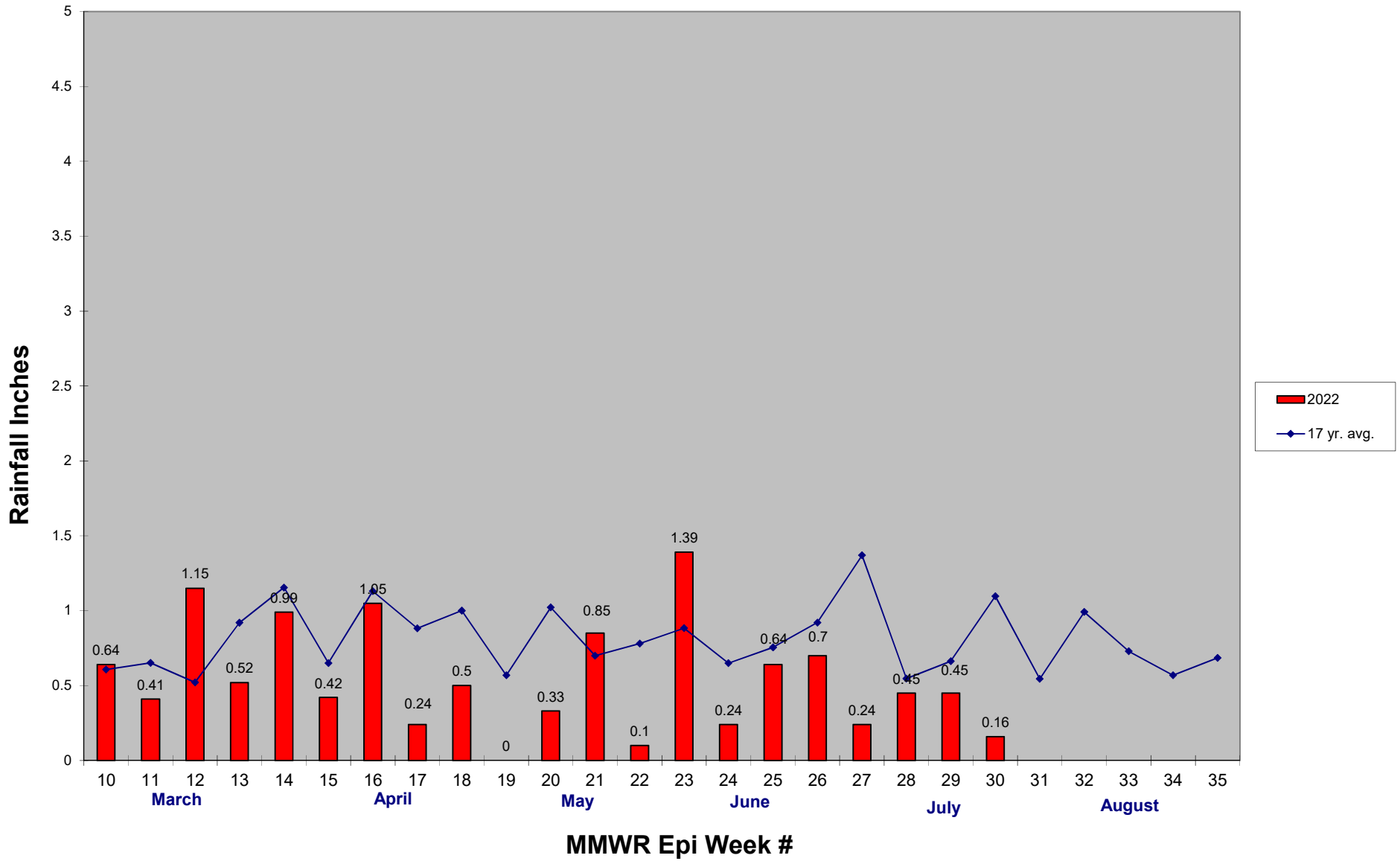
Recently conducted ULV efficacy trials in conjunction with Tufts School of Veterinary Medicine using CDC and BG-Counter traps indicate over 70% control following an application of Zenivex® E4. Specimens are currently being age-graded which could help identify whether mosquitoes collected post-spray are newly emerged and not present at the time of treatment. The results of this analysis could increase the degree of control achieved in the application. Initial comparisons of the BG-Counter traps with the CDC traps were very favorable. Additional ULV efficacy trials are scheduled for this season.

2022 Mass. Rainfall Data vs. 42 Year Average*



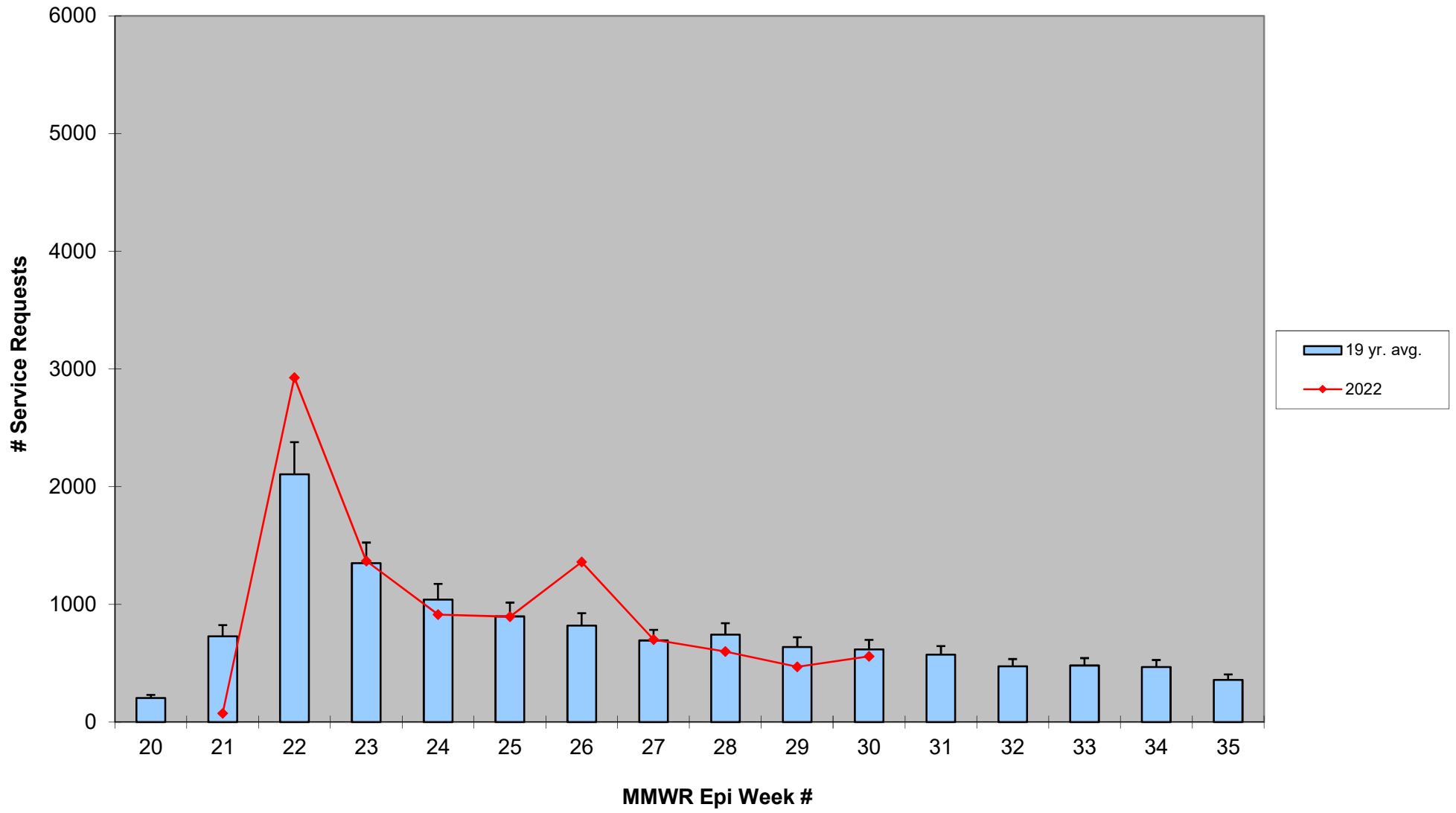
*source: <http://www.nrcc.cornell.edu/regional/tables/tables.html>

2022 CMMCP Weekly Rainfall vs. 17 Year Average*

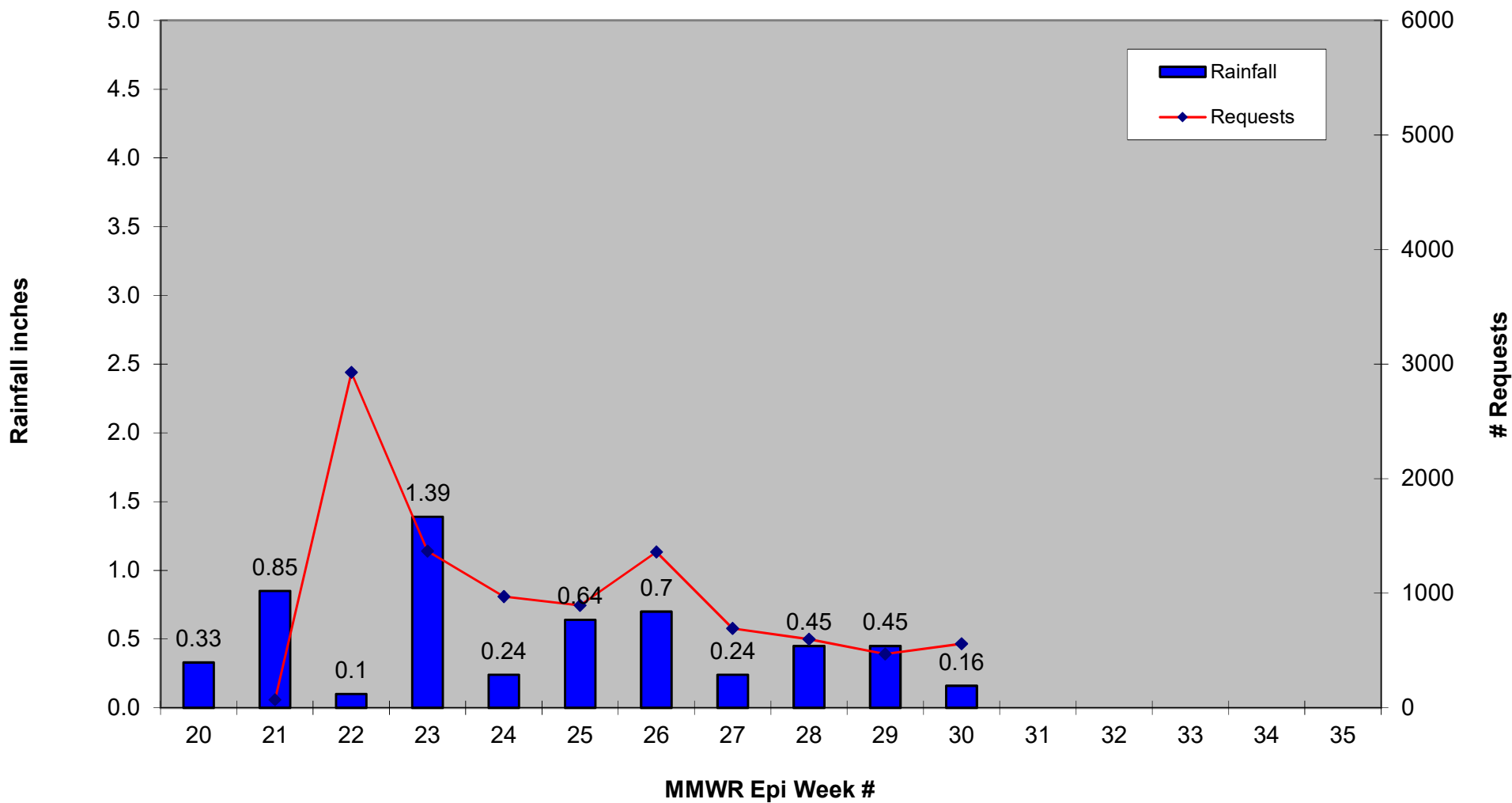


*source: CMMCP weather station Northborough, MA

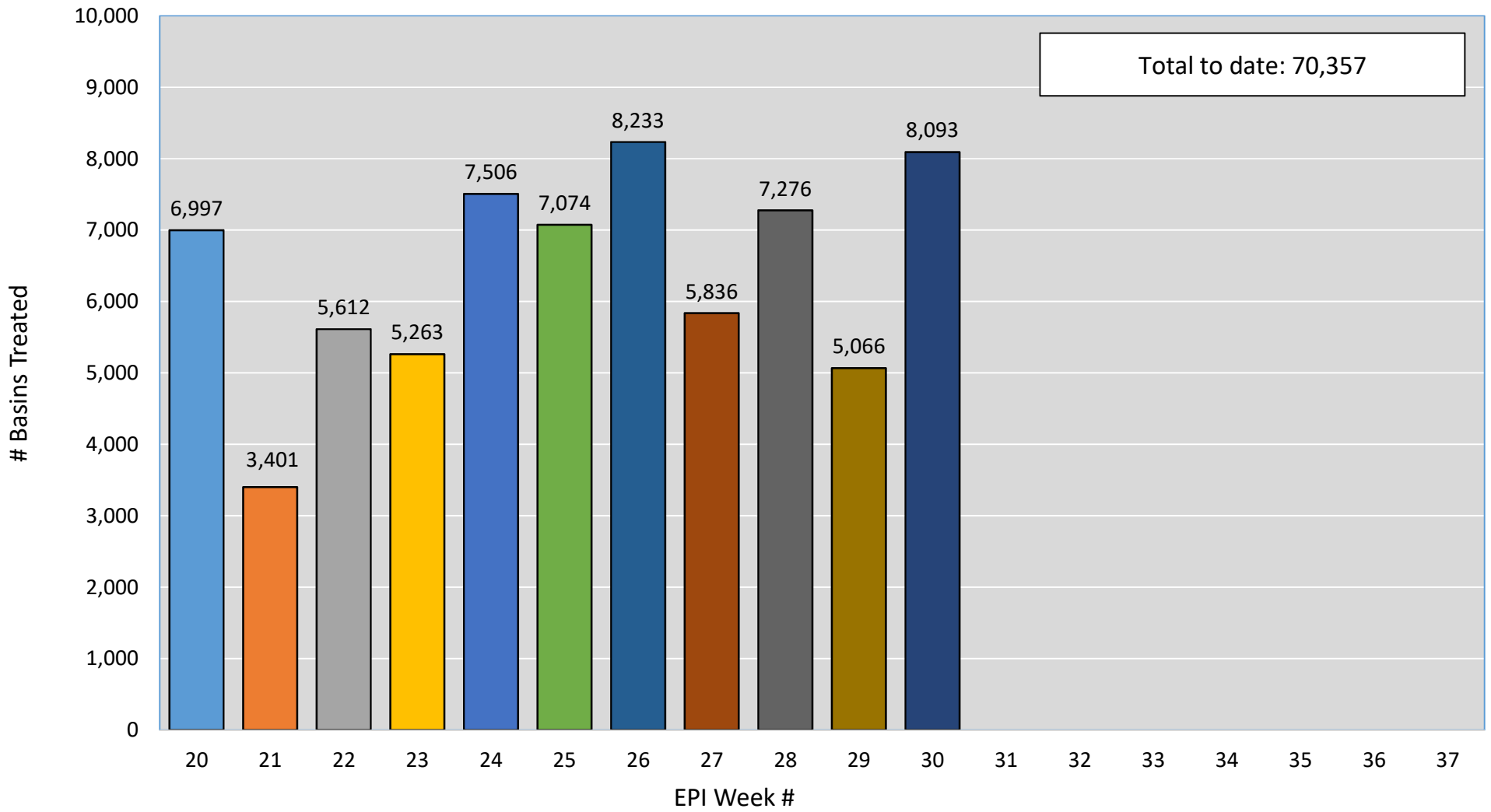
ULV Service Request History 2003-2022



2022 Rainfall vs. Requests



2022 Catch Basins Treated



2022 Mosquito Pools Submitted for Virus Testing

