

CMMCP WEEKLY SURVEILLANCE REPORT



EPI week #29
July 16-22, 2023

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

Central Mass. Mosquito Control Project
Weekly Report- 7/16/23-7/22/23
EPI Week #29

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	177	228	29	222	433	2259
Total Specimens	2476	11719	78	4616	11106	36678
No. Pools WNV +	0	0	0	0	1 [†]	1 [†]
No. Pools EEE +	0	0	0	0	0	0

[†]Pool of WNV+ *Culex* collected in Worcester on 7/7/23

Weather Summary (Northborough, MA): The weather for this particular week averaged 74.46°F with a recorded high temperature of 90.50°F and a recorded low temperature of only 60.40°F. For this week there was also a total of 2.75 inches of rain observed. Compared to the previous week, it was approximately 1.30°F cooler on average, and rained about 0.21 inches more. There has been 7.91 inches of rain accumulated in July, after 3.50 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>	-54.72%	+3800%	Gardner, Westborough
<i>Coquillettidia perturbans</i>	-4.850%	-66.04%	Dracut, Lancaster
<i>Culiseta melanura</i>	+00.00%	-92.34%	N/A
<i>Ochlerotatus canadensis</i>	-20.68%	+238.0%	Gardner, Littleton
<i>Culex</i> Species	-22.47%	+354.2%	Worcester, Westford, Blackstone
All Species	-3.620%	+1.300%	Dracut, Worcester, Gardner

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

General narrative:

The temperatures for EPI week 29 averaged approximately 1.30°F cooler than the previous week, with 2.75 inches of precipitation observed. Overall surveillance trap collections decreased slightly this period compared to the last, with all target species decreasing. Despite the weekly decrease, overall collection numbers are now higher this year compared to the 2022 season. *Coquillettidia perturbans* is now the most abundant mosquito for the week, followed by *Culex*. *Aedes albopictus* surveillance using ovitraps has continued, with 21,006 eggs collected and submitted so far. *Aedes albopictus* was detected through this surveillance at a trap location in Ayer. The CMMCP ATM control protocol was initiated, see details in the operational notes. All mosquito pools submitted in EPI week 28 to MDPH for arbovirus testing were negative.

Ae. albopictus egg collections:

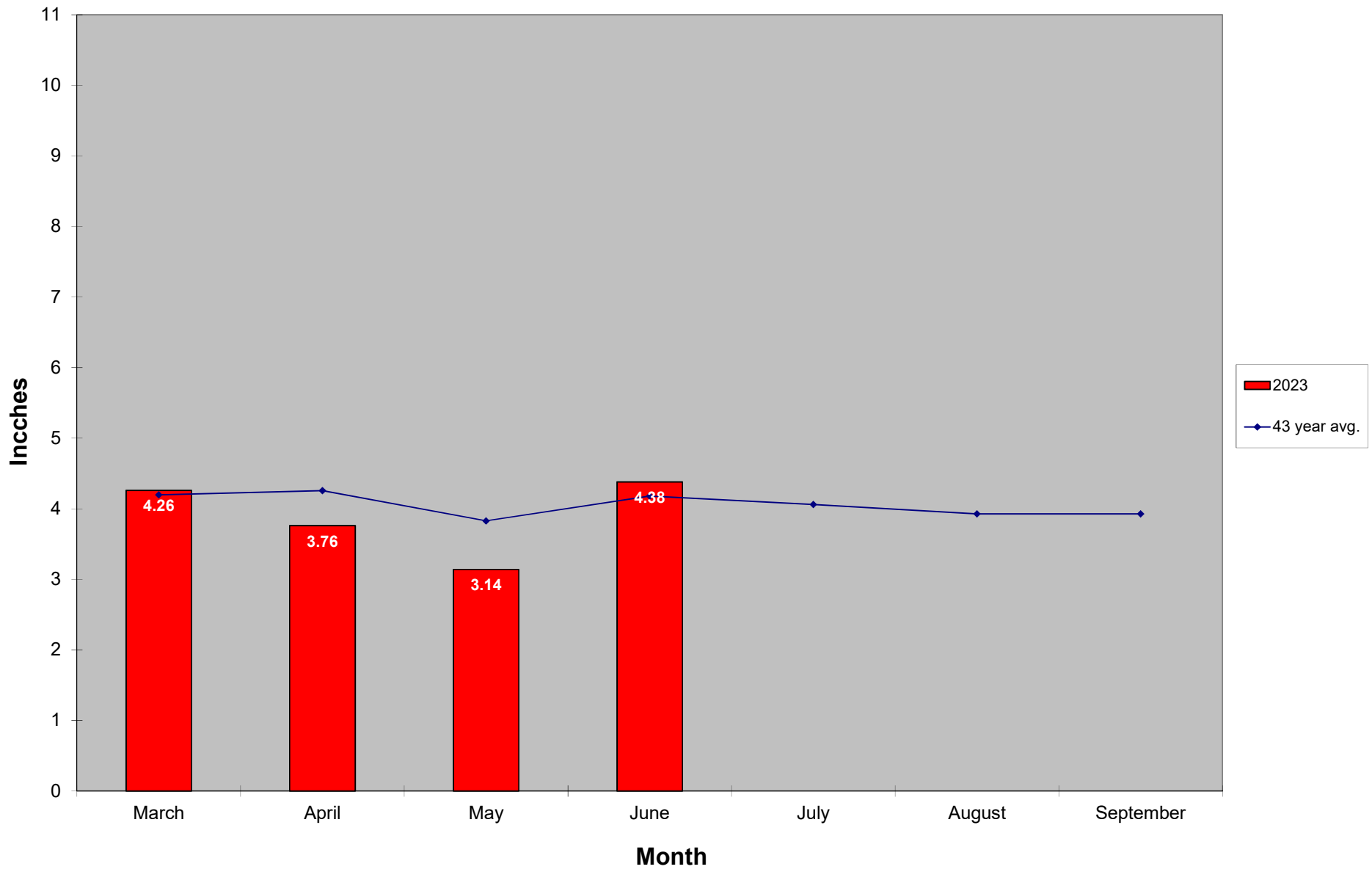
Epi week#	# eggs Collected	Epi week#	# eggs Collected
23	0	32	
24	0	33	
25	649	34	
26	3,306	35	
27	4,928	36	
28	3,563	37	
29	8,560	38	
30		39	
31		40	
	TOTAL	21,006	
Two ATM detections to date			

Operational notes:

Service requests are 22.9% below the 20-year average and a 23.9% decrease over 2022 numbers to date. Request numbers increased 29.6% from the week prior. Work crews began performing catch basins treatments for *Culex* control on May 22. 6,672 basins were treated in Epi week 29, with 64,134 catch basins treated to date intended to suppress *Culex* populations and lower risk of transmission from WNV by this species.

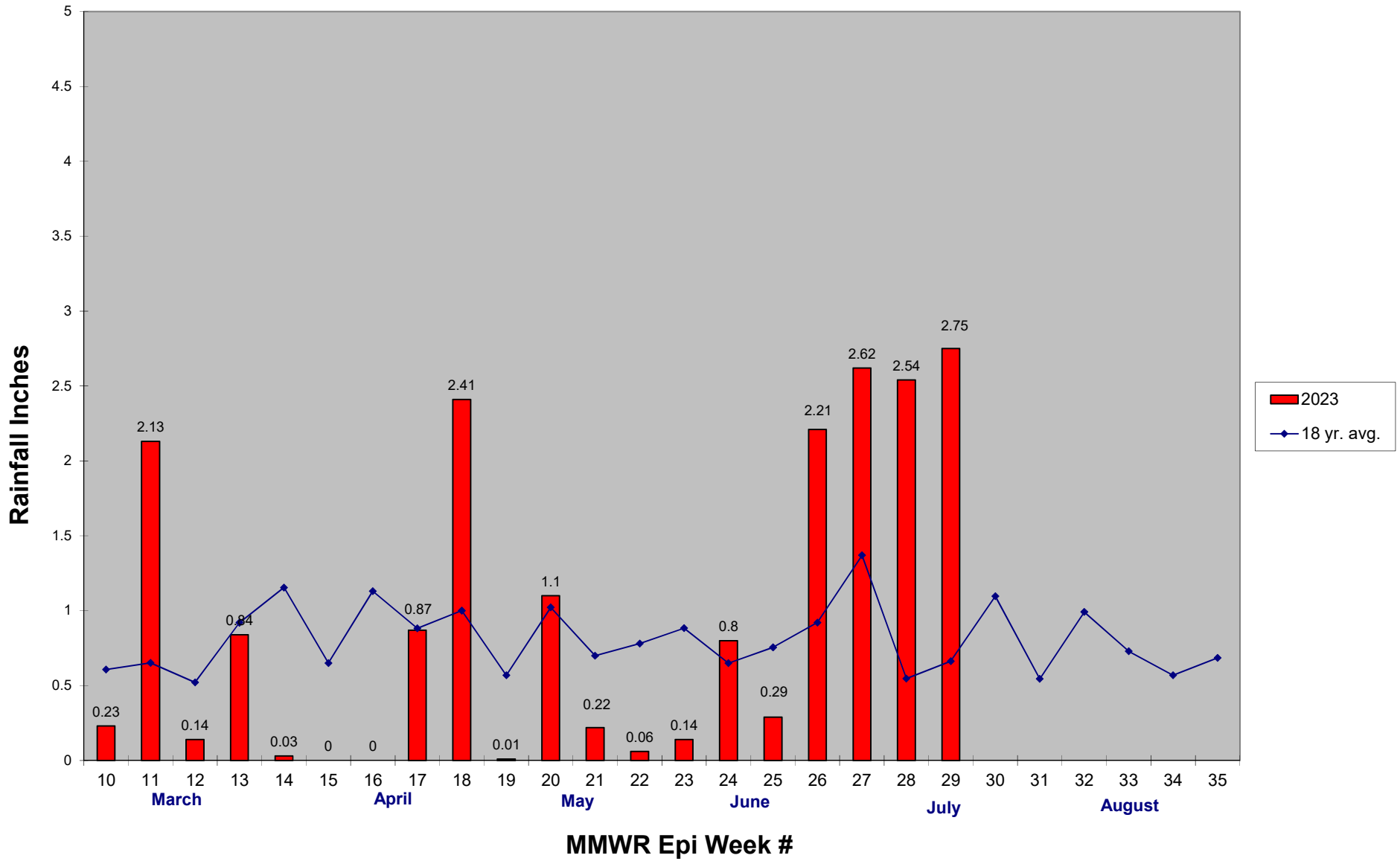
With the confirmation on July 12 of WNV in the Burncoat section of Worcester, CMMCP coordinated with local health officials and the area received ULV spraying on July 18, 2023 after sunset. With the confirmation of *Aedes albopictus* (ATM) in Ayer, we ULV sprayed the area on July 20 and will follow up with another round of ULV spraying on July 24. Field crews scouted the area on July 21 and noted several areas of larval activity that were treated with Bti. Additional ovitraps as well as light traps were deployed in the area to determine if we have a possible established colony. Larval control will be repeated as necessary.

2023 Mass. Rainfall Data vs. 43 Year Average*



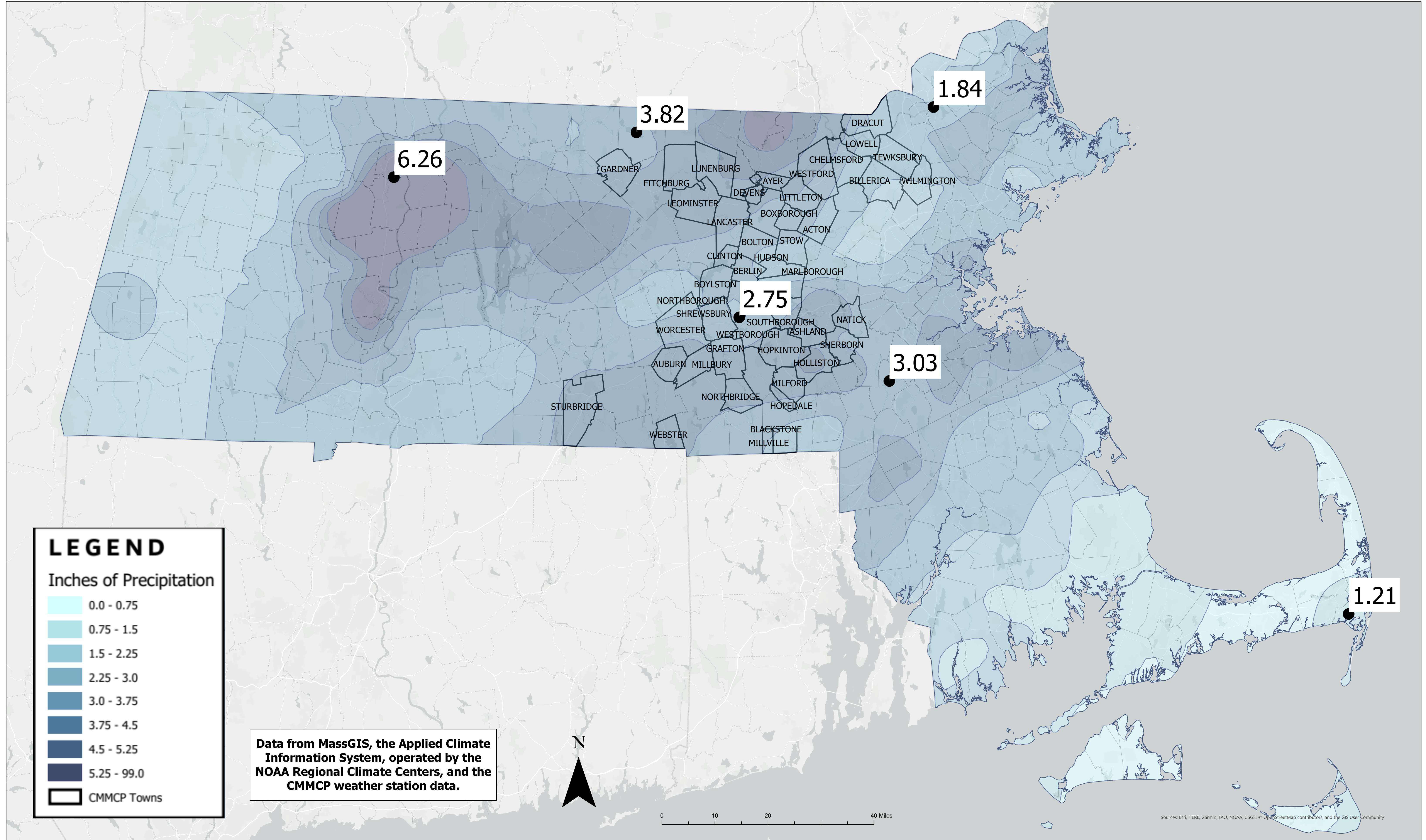
*source: <http://www.nrcc.cornell.edu/regional/tables/tables.html>

2023 CMMCP Weekly Rainfall vs. 18 Year Average*



*source: CMMCP weather station Northborough, MA

Precipitation in CMMCP Towns for EPI Week 29 (7/16-7/22/23)



6.26

3.82

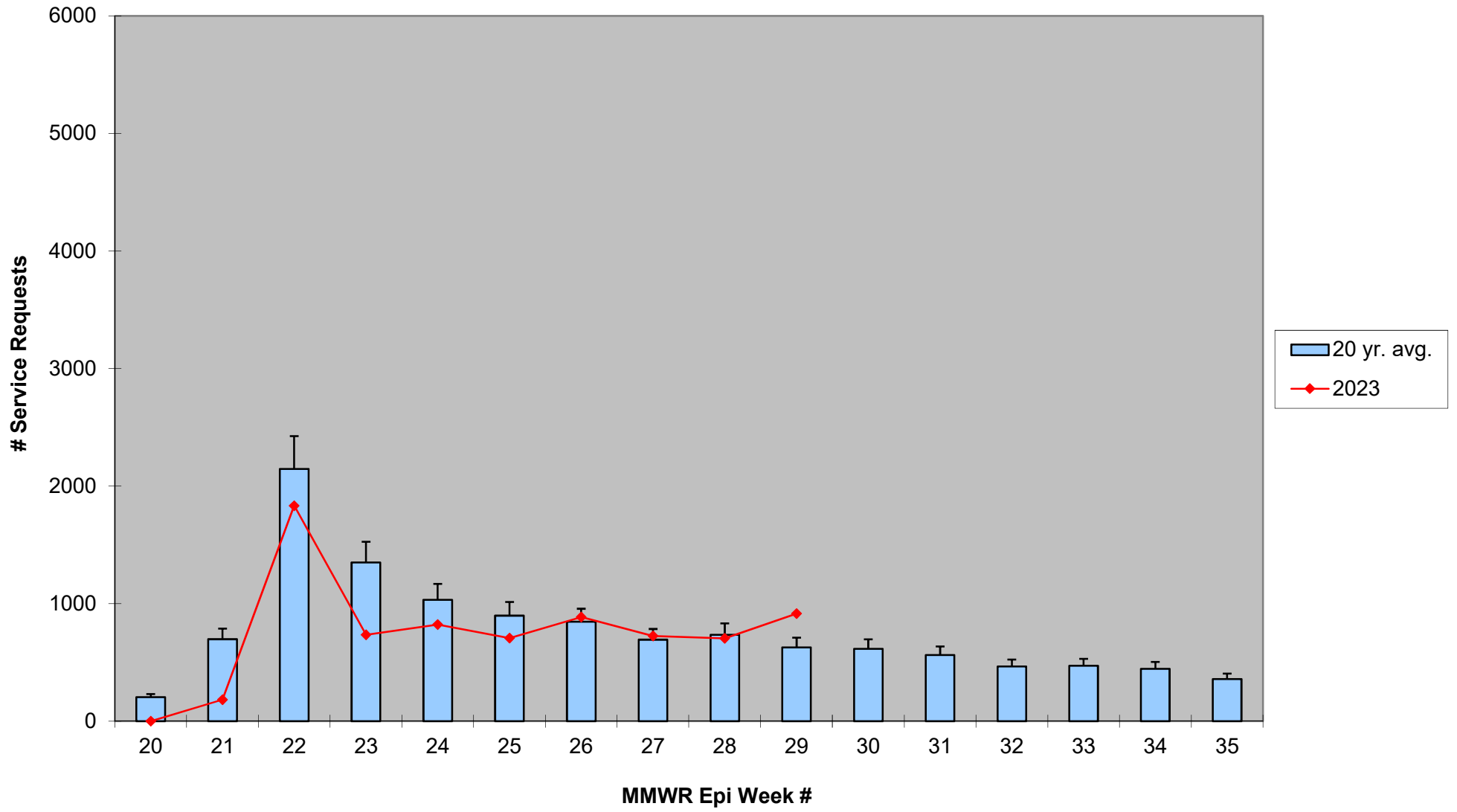
1.84

2.75

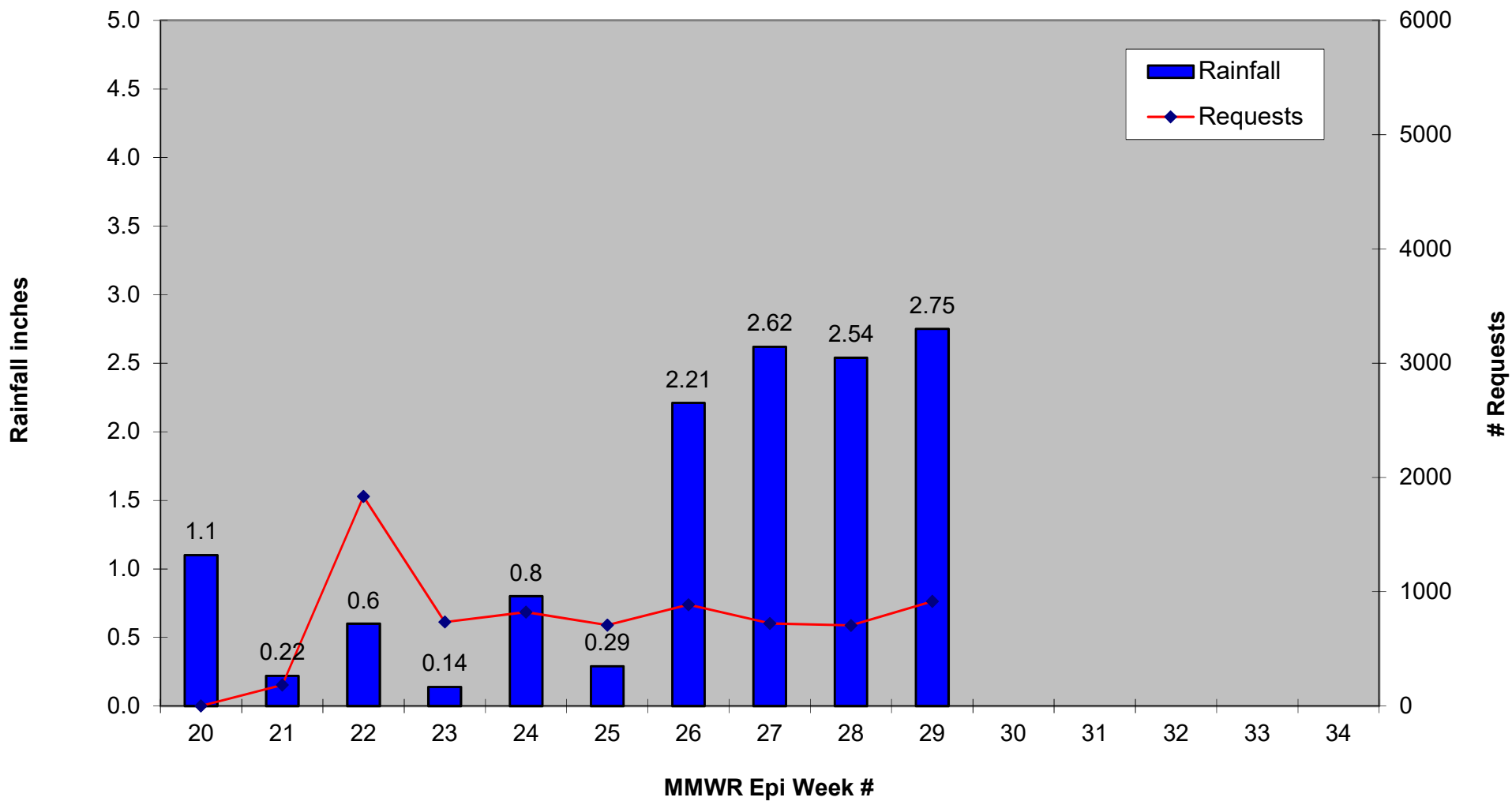
3.03

1.21

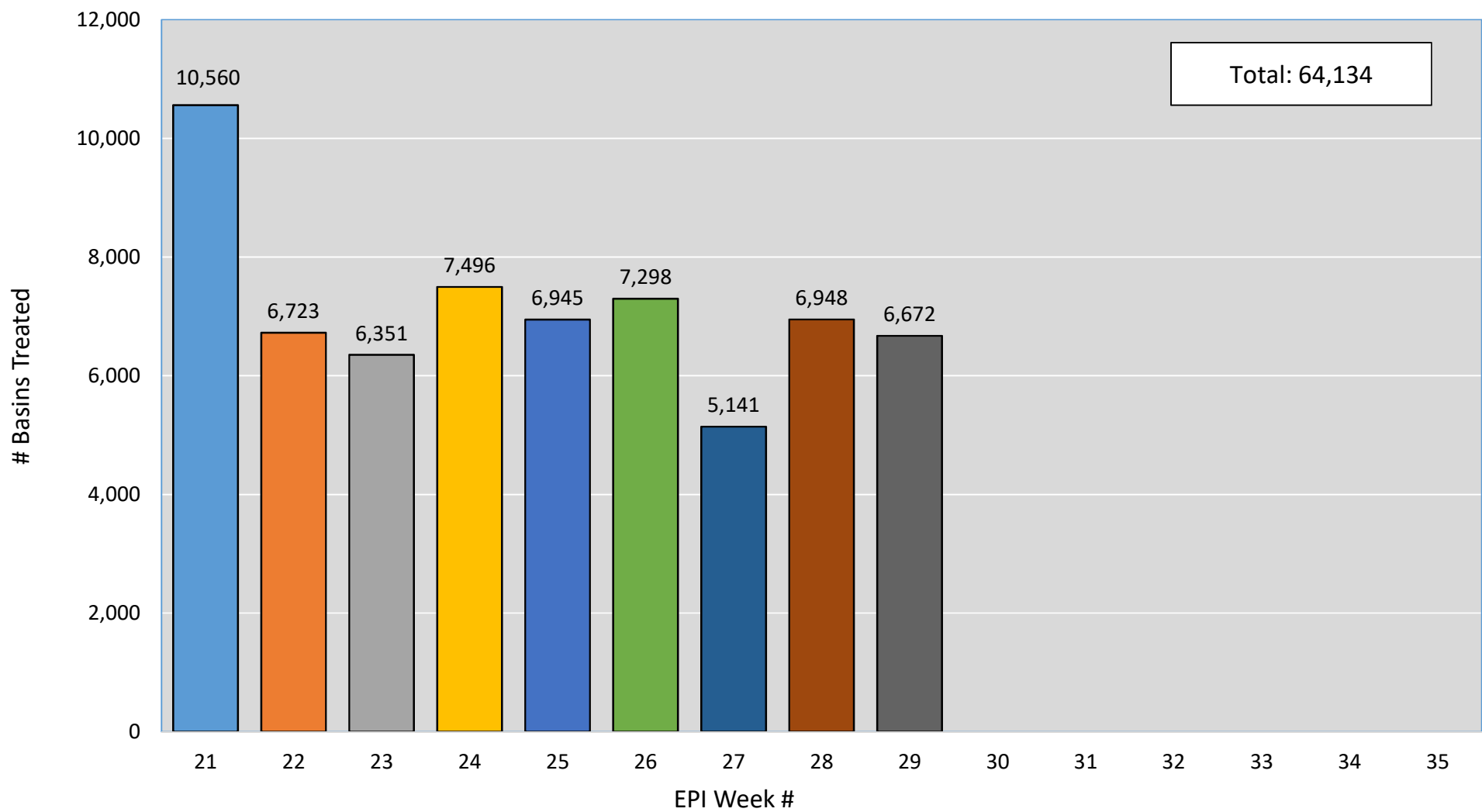
ULV Service Request History 2003-2023



2023 Rainfall vs. Requests



2023 Catch Basins Treated



2023 basins treated vs. 5 yr. avg.

