

CMMCP WEEKLY SURVEILLANCE REPORT



EPI week #36
Sept. 3-9, 2023

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**Central Mass. Mosquito Control Project
Weekly Report- 9/3/23-9/9/23
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	383	593	53	400	1006	5144
Total Specimens	5389	25405	132	6583	25252	83154
No. Pools WNV +	0	3 [†]	0	0	6 [†]	9 [†]
No. Pools EEE +	0	0	0	0	0	0

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

†Pool of WNV+ *Culex* collected in Worcester on 7/20/23

†Pool of WNV+ *Culex* collected in Chelmsford on 8/10/23

†Pool of WNV+ *Culex* collected in Northbridge on 8/10/23

†Pool of WNV+ *Culex* collected in Milford on 8/16/23

†Pool of WNV+ *Coquillettidia perturbans* collected in Lowell on 8/25/23

†Pool of WNV+ *Coquillettidia perturbans* collected in Lowell on 8/25/23

†Pool of WNV+ *Coquillettidia perturbans* collected in Lowell on 8/25/23

†Pool of WNV+ *Culex* collected in Worcester on 9/1/23

Weather Summary (Northborough, MA): The weather for this particular week averaged 75.79°F with a recorded high temperature of 96.60°F and a recorded low temperature of only 61.60°F. For this week there was also a total of 1.01 inches of rain observed. Compared to the previous week, it was approximately 8.40°F warmer on average, and rained about 0.79 inches more. There has been 1.02 inches of rain accumulated in September, after 6.49 inches for the month of August.

CMMCP Mosquito Summary-

Target Species	Δ From Last Week	Δ From Last Year	Predominant Trap Site(s)
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<i>Aedes vexans</i>	-3.13%	+2833%	Natick, Sherborn, Holliston
<i>Coquillettidia perturbans</i>	+54.46%	-38.04%	Boxborough, Holliston, Billerica
<i>Culiseta melanura</i>	+44.44%	-81.47%	Webster, Littleton, Ayer
<i>Ochlerotatus canadensis</i>	-65.93%	+413.5%	Sherborn, Billerica, Holliston
<i>Culex</i> Species	-58.13%	+634.6%	Westborough, Billerica
All Species	-7.95%	+82.65%	Boxborough, Billerica, Millbury

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

General narrative:

The temperatures for EPI week 36 averaged approximately 8.40°F warmer than the previous week, with 1.02 inches of precipitation observed. Overall surveillance trap collections decreased slightly this period compared to the last, with all target mosquitoes decreasing except for *Coquillettidia perturbans* and *Culiseta melanura*. However, only

Coquillettidia perturbans and *Culiseta melanura* remain at lower levels compared to this point last season. *Coquillettidia perturbans* was the most abundant mosquito species, followed by *Psorophora ferox*. *Aedes albopictus* surveillance using ovitraps has continued, with 2,881 eggs previously collected in EPI week 35. Supplemental control measures continue to be taken in response to the collection of *Aedes albopictus* eggs and adult specimens in Ayer. One mosquito pool submitted to MDPH in EPI week 35 tested positive for West Nile virus. These were *Culex* specimens, collected from Worcester on 9/1/23.

Ae. albopictus egg collections:

Epi week#	# eggs Collected	Epi week#	# eggs Collected
23	0	32	5,246
24	0	33	5,177
25	649	34	3,024
26	3,306	35	2,881
27	4,928	36	
28	3,563	37	
29	8,560	38	
30	5,019	39	
31	7,049	40	
	TOTAL	49,402	
10 ATM detections to date			

Operational notes:

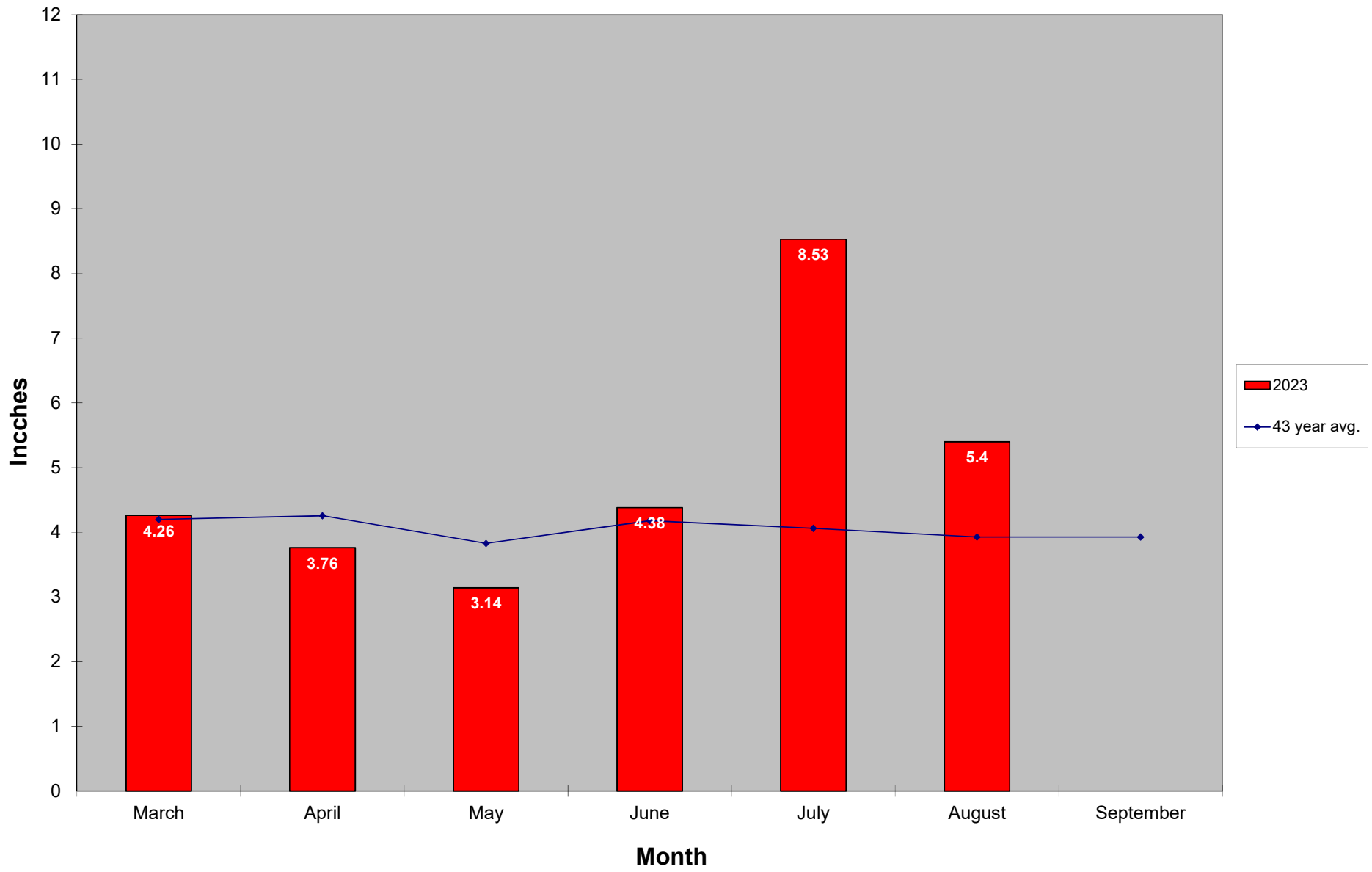
Service requests ended the year 7.26% below the 20-year average and a 1% increase over 2022 numbers. Request numbers dropped significantly from the week prior and the residential spray program ended Aug. 31. Work crews began performing catch basins treatments for *Culex* control on May 22. In total, 90,988 catch basins treated intended to suppress *Culex* populations and lower risk of transmission from WNV by this species.

West Nile Virus was confirmed in Lowell in human-biting species, and after consultation with local health officials these affected areas were ULV sprayed. This brings our total to date to 8 WNV confirmation, 5 in *Culex* and 3 in *Cq. perturbans*.

Ae. albopictus continues to be found in Ayer but the numbers may have peaked. We will continue surveillance and control efforts as long as possible. Barrier spraying was done again on August 30 with several days in the forecast without rain.

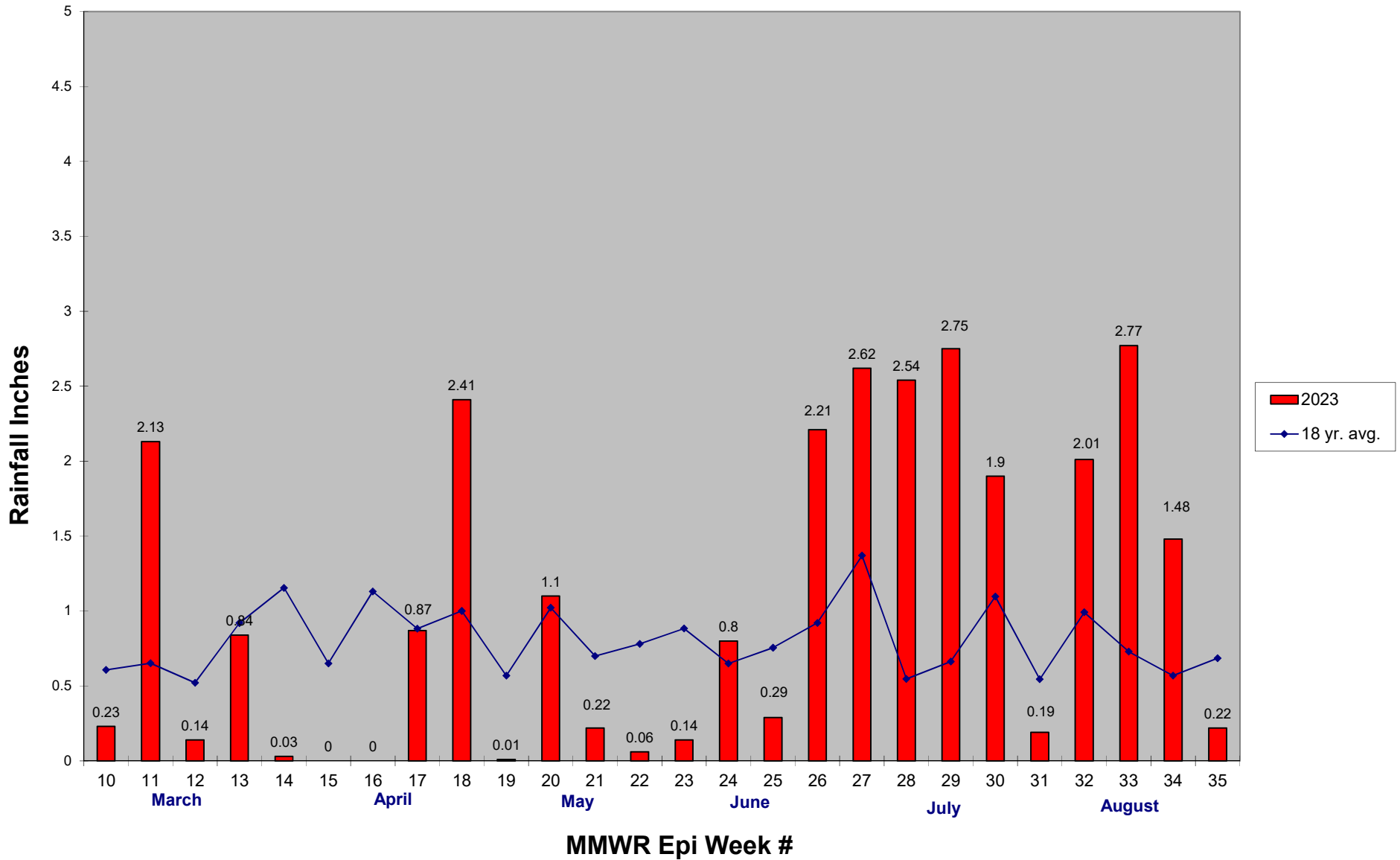
EEE in Southbridge and Douglas has raised the risk level to Moderate in the southern part of our service area. Additional trapping is in place in member communities and MDPH has submitted additional pools in the non-member towns for testing. We have reached out to Sturbridge and Webster to give them an update on our surveillance efforts and offer control options. No additional EEE confirmations were found in our supplemental traps but a MDPH trap in Southbridge confirmed a pool of *Ae. cinereus* positive with EEE.

2023 Mass. Rainfall Data vs. 43 Year Average*



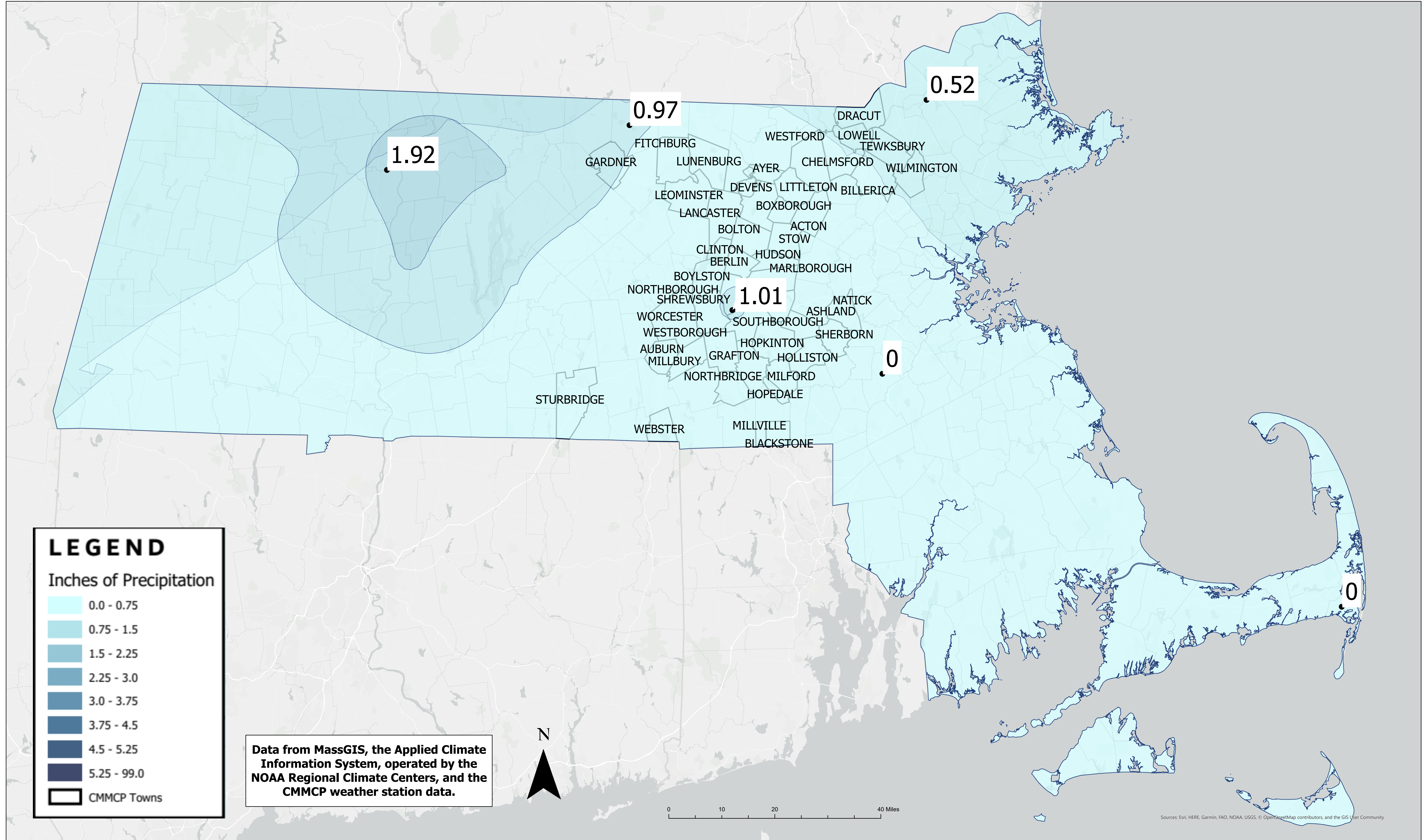
*source: <http://www.nrcc.cornell.edu/regional/tables/tables.html>

2023 CMMCP Weekly Rainfall vs. 18 Year Average*



*source: CMMCP weather station Northborough, MA

Precipitation in CMMCP Towns EPI Week 36 (9/3-9/9/2023)



1.92

0.97

0.52

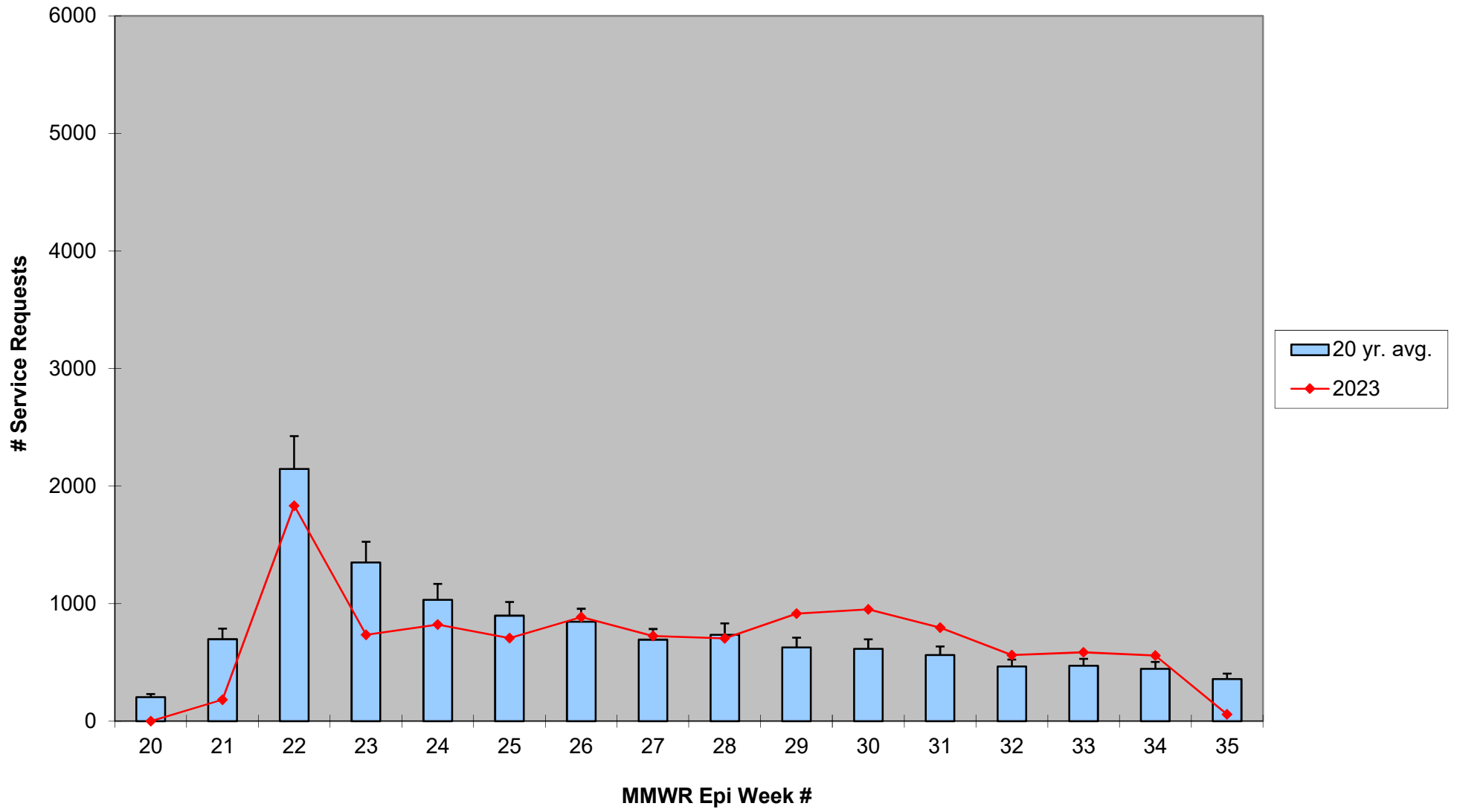
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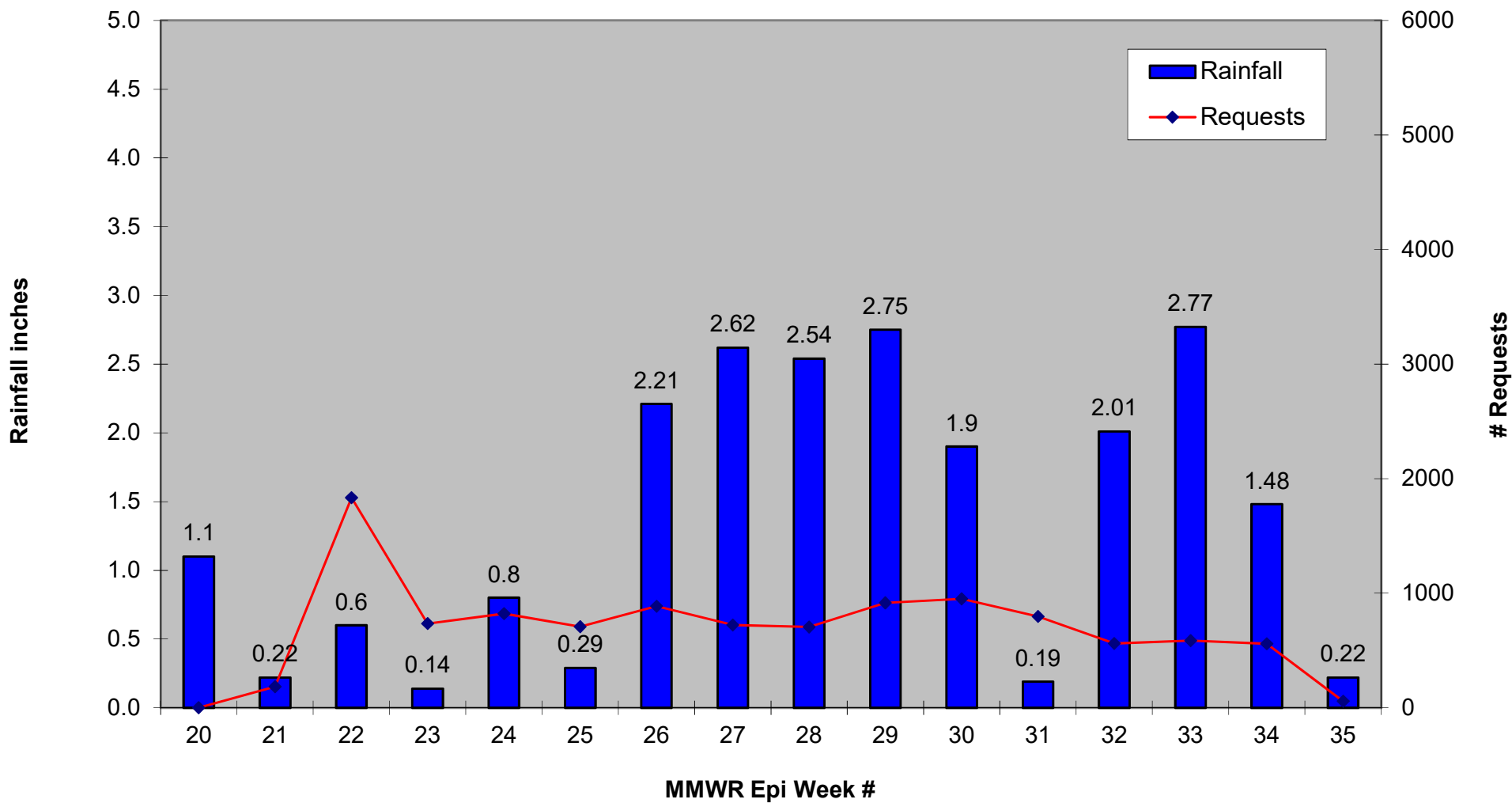
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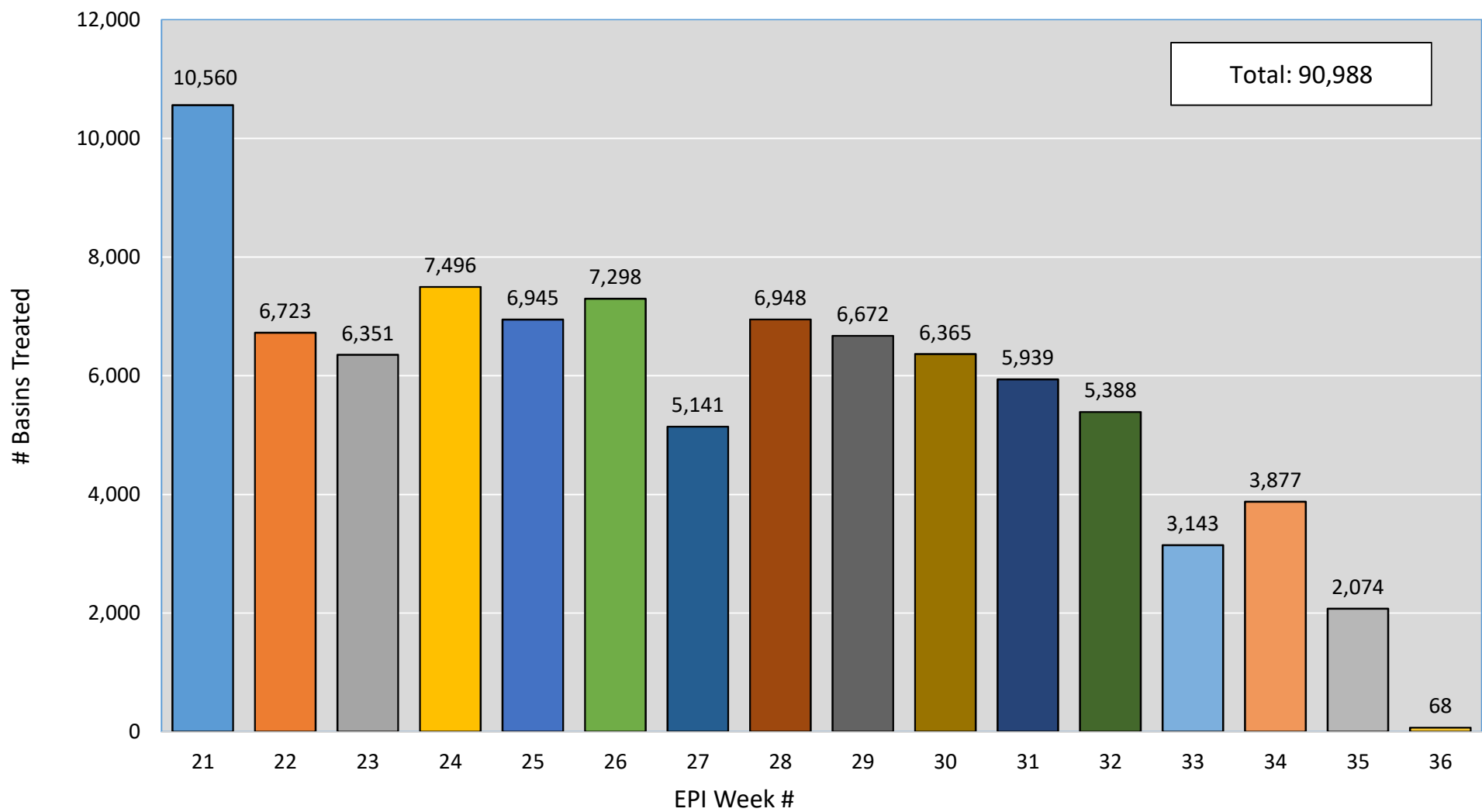
ULV Service Request History 2003-2023



2023 Rainfall vs. Requests



2023 Catch Basins Treated



2023 basins treated vs. 5 yr. avg.

