

July 2025 Massachusetts Precipitation

National Weather Service Offices
Boston/Norton MA, Albany NY, Upton NY

Preliminary Precipitation Data (inches) by County

Precipitation Data through July 2025

Includes CoCoRaHS data

Includes StageIV Data

MA 1-Month Jul 2025

County	Rainfall	Departure	Percent	Normal
Barnstable	2.14	-0.65	77	2.79
Berkshire	3.20	-1.43	69	4.63
Bristol	3.20	-0.15	96	3.35
Dukes	2.50	-0.25	91	2.75
Essex	1.86	-1.72	52	3.58
Franklin	1.94	-2.39	45	4.33
Hampden	3.76	-0.48	89	4.24
Hampshire	3.72	-0.59	86	4.31
Middlesex	2.38	-1.34	64	3.72
Nantucket	0.84	-1.69	33	2.53
Norfolk	4.88	1.34	138	3.54
Plymouth	3.56	0.23	107	3.33
Suffolk	3.55	0.00	100	3.55
Worcester	2.94	-1.01	74	3.95

MA 2-Month Jun 25-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	3.72	-2.54	59	6.26
Berkshire	6.57	-2.93	69	9.50
Bristol	4.51	-2.86	61	7.37
Dukes	4.34	-1.77	71	6.11
Essex	3.64	-4.14	47	7.78
Franklin	6.10	-2.99	67	9.09
Hampden	6.93	-1.92	78	8.85
Hampshire	7.39	-1.58	82	8.97
Middlesex	4.47	-3.42	57	7.89
Nantucket	1.23	-4.26	22	5.49
Norfolk	6.84	-0.88	89	7.72
Plymouth	5.05	-2.15	70	7.20
Suffolk	5.31	-2.30	70	7.61
Worcester	5.43	-2.82	66	8.25

MA 3-Month May 25-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	8.68	-1.01	90	9.69
Berkshire	13.70	0.10	101	13.60
Bristol	11.83	0.92	108	10.91
Dukes	10.65	1.06	111	9.59
Essex	10.19	-1.28	89	11.47
Franklin	15.34	2.27	117	13.07
Hampden	15.36	2.64	121	12.72
Hampshire	16.62	3.70	129	12.92
Middlesex	11.99	0.49	104	11.50
Nantucket	4.22	-4.53	48	8.75
Norfolk	14.77	3.45	130	11.32
Plymouth	12.99	2.19	120	10.80
Suffolk	12.71	1.53	114	11.18
Worcester	14.09	2.22	119	11.87

MA 4-Month Apr 25-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	13.34	-0.59	96	13.93
Berkshire	18.01	0.50	103	17.51
Bristol	15.41	-0.13	99	15.54
Dukes	14.88	0.99	107	13.89
Essex	14.21	-1.45	91	15.66
Franklin	19.60	2.51	115	17.09
Hampden	19.37	2.52	115	16.85
Hampshire	20.77	3.83	123	16.94
Middlesex	15.94	0.27	102	15.67
Nantucket	7.69	-5.32	59	13.01
Norfolk	18.55	2.75	117	15.80
Plymouth	16.86	1.46	109	15.40
Suffolk	16.39	0.87	106	15.52
Worcester	18.58	2.61	116	15.97

MA 5-Month Mar 25-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	17.39	-1.34	93	18.73
Berkshire	21.31	-0.07	100	21.38
Bristol	19.62	-1.18	94	20.80
Dukes	19.19	0.29	102	18.90
Essex	17.89	-2.41	88	20.30
Franklin	23.40	2.38	111	21.02
Hampden	23.08	2.19	110	20.89
Hampshire	24.48	3.63	117	20.85
Middlesex	19.56	-0.51	97	20.07

Nantucket	10.59	-7.29	59	17.88
Norfolk	23.21	2.62	113	20.59
Plymouth	20.82	0.07	100	20.75
Suffolk	20.72	0.48	102	20.24
Worcester	22.53	2.34	112	20.19

MA 6-Month Feb 25-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	20.84	-1.47	93	22.31
Berkshire	24.36	-0.05	100	24.41
Bristol	23.27	-1.07	96	24.34
Dukes	22.53	0.11	100	22.42
Essex	21.87	-1.81	92	23.68
Franklin	26.94	2.78	112	24.16
Hampden	26.55	2.58	111	23.97
Hampshire	27.94	4.01	117	23.93
Middlesex	23.68	0.38	102	23.30
Nantucket	13.24	-8.20	62	21.44
Norfolk	27.17	3.24	114	23.93
Plymouth	24.64	0.25	101	24.39
Suffolk	24.78	1.17	105	23.61
Worcester	26.44	3.09	113	23.35

MA 7-Month Jan 25-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	22.57	-3.90	85	26.47
Berkshire	25.95	-2.10	93	28.05
Bristol	25.04	-3.52	88	28.56
Dukes	24.25	-2.33	91	26.58
Essex	23.61	-3.74	86	27.35
Franklin	28.37	0.56	102	27.81
Hampden	27.63	0.08	100	27.55
Hampshire	29.14	1.64	106	27.50
Middlesex	25.41	-1.52	94	26.93
Nantucket	14.03	-11.53	55	25.56
Norfolk	28.93	1.04	104	27.89
Plymouth	26.75	-1.93	93	28.68
Suffolk	26.49	-0.98	96	27.47
Worcester	28.06	1.09	104	26.97

MA 12-Month Aug 24-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	40.13	-7.61	84	47.74
Berkshire	42.50	-8.30	84	50.80

Bristol	42.45	-8.29	84	50.74
Dukes	41.25	-6.58	86	47.83
Essex	38.37	-9.63	80	48.00
Franklin	44.20	-6.03	88	50.23
Hampden	41.57	-8.22	83	49.79
Hampshire	43.93	-5.83	88	49.76
Middlesex	40.53	-7.30	85	47.83
Nantucket	26.28	-20.09	57	46.37
Norfolk	45.06	-4.54	91	49.60
Plymouth	45.12	-5.88	88	51.00
Suffolk	42.28	-6.29	87	48.57
Worcester	42.69	-5.71	88	48.40

MA 24-Month Aug 23-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	90.93	-4.67	95	95.60
Berkshire	96.99	-4.72	95	101.71
Bristol	104.76	3.15	103	101.61
Dukes	93.45	-2.33	98	95.78
Essex	94.11	-2.01	98	96.12
Franklin	101.95	1.38	101	100.57
Hampden	101.23	1.54	102	99.69
Hampshire	102.77	3.14	103	99.63
Middlesex	99.83	4.05	104	95.78
Nantucket	62.08	-30.78	67	92.86
Norfolk	108.31	8.99	109	99.32
Plymouth	104.53	2.40	102	102.13
Suffolk	98.87	1.61	102	97.26
Worcester	103.90	6.99	107	96.91

MA 36-Month Aug 22-Jul25

County	Rainfall	Departure	Percent	Normal
Barnstable	141.33	-2.01	99	143.34
Berkshire	152.67	0.16	100	152.51
Bristol	160.25	7.90	105	152.35
Dukes	140.40	-3.21	98	143.61
Essex	145.60	1.48	101	144.12
Franklin	159.36	8.56	106	150.80
Hampden	158.29	8.81	106	149.48
Hampshire	161.52	12.13	108	149.39
Middlesex	155.47	11.86	108	143.61
Nantucket	98.06	-41.17	70	139.23
Norfolk	164.80	15.88	111	148.92
Plymouth	160.91	7.78	105	153.13
Suffolk	151.71	5.88	104	145.83

Worcester	163.08	17.77	112	145.31
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How This Report Was Generated

Monthly precipitation totals by County are derived through a blend of observational data and gridded analysis techniques. Precipitation observations from multiple regional networks—including the Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS), the National Weather Service Cooperative Observer Program (COOP), and Automated Surface Observing Systems (ASOS)—are first quality-controlled and then interpolated to two separate grids using distinct methodologies:

- Barnes Interpolation, a smoothing technique that accounts for the spatial distribution of observations
- Inverse Distance Weighting (IDW), which estimates values based on proximity to known observations

These two interpolated grids are then combined with NOAA’s Stage IV precipitation analysis, a radar- and gauge-based dataset produced operationally by the National Weather Service. The three grids are averaged to produce a final observed precipitation field.

Using this gridded product, spatial averaging is performed over each County polygon to compute region-specific monthly totals through geographic information system (GIS) techniques.

Monthly precipitation normals (long-term averages) for each County are sourced directly from the NOAA Stage IV climatology dataset.

Note: COOP and ASOS stations are official National Weather Service observation networks. CoCoRaHS is a volunteer-driven network that provides high-resolution, local-scale precipitation reports.